


CANAL RECORD

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CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, AUGUST 26, 1914.

No. 1.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,

THE CANAL RECORD.

Balboa, Canal Zone.

Isthmus of Panama.

No communication either for publication or requesting information will receive attention unless signed with the full name and address of the writer.

NOTES OF PROGRESS.

Empire District to Close September 1.

The Governor has approved the recommendation of the Chief Quartermaster that the Empire district be closed on September 1, or as soon thereafter as possible. The removal of the offices of the Accounting Department from Empire to the new Administration Building on Balboa Heights, has resulted in the transfer of most of the gold bachelor employees out of the district. There were 82 families occupying regularly assigned quarters for gold employees at Empire on August 1, but of this number, it is expected that about 60 families will have been given permanent assignments in the Corozal and Ancon-Balboa districts by September 1. The occupants of family quarters remaining unassigned after that date will be transferred temporarily to Culebra. The transfer of these employees will permit of the closing of the hotel, commissary, and district quartermaster's office, and will allow the Health Department to close the offices of the district physician and the sanitary inspector, and the police and fire division to withdraw its representatives.

The labor camp at Cunette, near Empire, will also be closed on September 1, and the present occupants of houses there will be temporarily transferred to the camps at Cerro, Lirio, and Rio Grande. There are no colored bachelor employees at present at the Cunette camp, and but very few colored married employees. With the closing of the Empire district, the labor train to that point will be discontinued, but it will probably continue to be operated to Culebra until the removal of the employees in that district to the Pacific end, or elsewhere, has been effected.

Improvement of Additional Block at La Boca.

Another block, to be known as Block A, is to be added to the improved area at the La Boca silver settlement. Some of the houses now standing at Porto Bello are to be removed

to this site, and later on, it is probable that the present European laborers mess hall and the commissary at East Balboa will be reerected in this locality. With the houses now available, and those to be removed from Porto Bello, it is thought that there will be sufficient accommodations for all families of silver employees on the permanent force. The water and sewer work, and the necessary curbing in Block A, will be performed at once, and if funds are available, the streets will be macadamized also. The new extension is on the side toward East Balboa, and comprises two blocks, A and B, but nothing will be done in the way of improving Block B at present.

First Foreign Vessel Through the Canal

The *Daldorch*, a cargo steamer, belonging to J. and M. Campbell of Glasgow, Scotland, loaded with 11,500 tons of wheat, arrived at Balboa on Thursday, August 20, and passed through the Canal bound for Limerick, Ireland, on Saturday, August 22. It left Tacoma, Washington, on the day of the outbreak of hostilities in Europe, intending to sail around South America. At Cape San Lucia, the captain received a radio message instructing him to use the Canal, which will probably effect a saving of about 40 days in its voyage.

Eight vessels passed through the Canal southbound, and seven northbound, during the week ending 8 a. m., August 22.

Canal Tolls in July.

The tolls collected by the captain of the port of Balboa during the month of July aggregated \$4,688.40; at Cristobal, \$2,970, a grand total of \$7,658.40. Collections on account of pilotage amounted, as follows: Cristobal, \$1,240; Balboa, \$332; total, \$1,572. Total revenues, \$9,230.40. During July, the work of measuring the following vessels was in progress: *Acajutla* and *Salvador* of the Salvador Railway Company; *Hualлага* of the Compañia Peruana de Vapores; *Limari* and *Palena* of the Compañia Sud-Americana de Vapores; and *Santa Clara* and *Santa Catalina* of W. R. Grace and Company. The measurements for the steamships *Acajutla* and *Limari* were practically completed at the close of the month. Two Navy warrant officers, a carpenter and a machinist, have been employed as measurers.

Moving to Balboa.

The occupation of the Administration Building on Balboa Heights has been begun, and by September 15, it is expected that nearly all of the offices now quartered in the administration buildings at Culebra and Ancon will have been transferred to the new location. The pay roll, voucher, injury claim, and property sections of the Accounting Department at Empire was moved on Friday, August 21, and the remainder of the Auditor's office on Monday, August 24. The Paymaster's office was transferred on Tuesday, August 25, and the Collector's office on Wed-

nesday, August 26. The work of moving the offices in the administration building at Culebra will be begun on August 30, and will be carried out in accordance with the schedule published in circular letter form in another part of this issue. Moving the offices of the Executive Office in the administration building at Ancon—Division of Civil Affairs, police and fire division, schools, posts, and THE CANAL RECORD, was begun on Wednesday, August 26. The offices of the Division of Canal Transportation, Health Department, and Quarantine Service, in the same building, will not be moved until some time next month.

Hydraulic Grader at Work in Culebra Cut.

The hydraulic grader, No. 1, was towed from the wharf at Paraiso on Monday, August 24, to the north side of Gold Hill and has been placed at work on the east side of Culebra Cut sluicing off lumps in the irregular surface of a dead slide, north of the east Culebra slide. The material which is washed into the Canal will be removed later by dipper and ladder dredges.

Paving of B Street Extension Completed.

The work of paving the extension of B street in Panama City, from Ancon avenue to the intersection of the Zone boundary road with the old Balboa road, a distance of 1,560 feet, was begun on May 25, by forces of the Division of Municipal Engineering, and completed on August 13. The appropriation made for this improvement was \$12,000, approximately one-third of which was borne by the Panama Tramways Company, and the remainder by the Municipality of Panama. The proportion of the cost charged to the tramways company is comprised in the paving of the space occupied by the tracks, 42 inches in width, and 18 inches on each side of the rails, a total width of six feet six inches. The width of the street is irregular, but averages about 21 feet for the newly paved section; it is widest between Ancon avenue and Eighteenth street, 24 feet. The work performed by the engineering force consisted in the preparation of the subgrade, and the spreading over it of a concrete pavement six inches thick. In addition, the grade of the street and car tracks were changed to conform to standard requirements, a new curb was installed on the north side of the street, parallel with Pinel Brothers' new property addition, and the turn into Twentieth street was widened to facilitate the passage of vehicles. B street is now entirely paved from Central avenue to the old Balboa road.

Charge for Quarters at Culebra.

Effective September 1, a charge will be made for quarters at Culebra that may be occupied by gold employees who have received special assignments for quarters at Empire and Culebra. No rental will be charged employees who have received regular assign-

ments under the rules at Culebra. This decision was reached in view of the fact that the commissary and delivery services will have to be continued, and the fire and police forces, and the offices of the district physician and sanitary inspector maintained in practically the same manner as at present, although they will serve a much smaller population.

Sanitary Census of Panama and Colon.

The Governor has authorized the Chief Health Officer to take a census of the cities of Panama and Colon, the work to be done under the supervision of the health officers of the two cities. It was regarded as desirable to have the work performed by enumerators who were employed at the time of taking the Canal Zone census in 1912, but it was found that most of the men had left the Isthmus, therefore, the enumeration will be made by the sanitary inspectors. The census of Panama was begun on August 13 by the health officer and two of the inspectors. The count in the more thickly populated districts of Guachapali, Marañon, the barrio of Calidonia, and Chorrillo, will be completed first. The census is made at this time, in order to arrive at a basis for future estimates in connection with health statistics, and only questions pertaining to the population will be asked; these comprise the number of persons in a room, male or female, and color. No separate count will be taken of the children. The census at Colon has not yet been begun, but it will be carried out along the same general lines. Until the tabulation of the census returns for the two cities are completed, which will probably be a month or more, the Chief Health Officer has been authorized to add 15,000 to the present estimate of 47,172 as the population for Panama city, or a total estimated population of 62,172. The estimate for the city of Colon, 20,302, will be allowed to stand, as owing to the decrease in Canal work at the Atlantic end, the city has not been growing as rapidly as Panama. The recent police census of the Canal Zone, which showed a population of 37,702, will be adopted as a basis for future health statistics in that territory.

Canal Excavation in July.

The grand total of Canal excavation to August 1, 1914, was 224,073,363 cubic yards, leaving 14,772,224 cubic yards remaining to be excavated, according to the revised estimate as of August 1, 1914, which increased the estimate of July 1, 1913 by 6,527,593 cubic yards.

The total excavation in July was 964,994 cubic yards, as compared with 1,167,870 cubic yards in June. The output of the dredges constituted all but a fraction of the amount excavated, and little more than one-half of the total was taken out in the Culebra Cut section from slides. The dry excavation in July was entirely confined to terminal operations at Balboa, and amounted to 47,314 cubic yards.

Material excavated by dredges, apart from the Culebra Cut section, consisted of 57,678 cubic yards removed at the Atlantic entrance, 35,248 cubic yards at the Cristobal coaling plant site, 28,679 cubic yards from the Pacific entrance, and 311,067 cubic yards taken out of the Balboa terminal basin, and used for the fill of the swamp between Corozal, Ancon, and Balboa.

Hydraulic operations at Gold Hill resulted in the removal of 53,374 cubic yards.

No concrete was placed in the locks, dams,

or spillways during July, and no additional fill was made to dams.

The detailed figures of excavation, by sections, follow:

ATLANTIC SECTION.

LOCALITY.	"Work" Excavation.	"Plant" Excavation.	Total Excavation.
Dry excavation—			
Locks, dam and spillway.....	Cu. Yds.	Cu. Yds.	Cu. Yds.
Mindí.....	.....	.....	.....
Terminal.....	.....	.....	.....
Total.....	.....	.....	.....
Wet excavation—			
Atlantic entrance.....	57,678	.....	57,678
Locks, dam and spillway.....	.....	.....	.....
Terminal coal plant.....	35,248	.....	35,248
Total.....	92,926	.....	92,926
Total wet excavation.....	92,926	.....	92,926

CENTRAL SECTION.

Wet excavation—			
Culebra Cut, hydraulic.....	53,374	.....	53,374
Chagres section, dredging.....	431,634	.....	431,634
Total.....	485,008	.....	485,008
Total wet.....	485,008	.....	485,008

PACIFIC SECTION.

Dry excavation—			
Locks, dams and spillways.....			
Terminal.....	47,314	.....	47,314
Prism.....	.....	.....	.....
Total.....	47,314	.....	47,314
Wet excavation—			
Pacific entrance.....	28,679	.....	28,679
Miraflores Locks.....	.....	.....	.....
Diversions.....	.....	.....	.....
Terminal.....	311,067	.....	311,067
Total.....	339,746	.....	339,746
Total wet and dry excavation.....	387,060	.....	387,060

TOTAL CANAL EXCAVATION.

Dry excavation ..	47,314	.....	47,314
Wet excavation ..	917,680	.....	917,680
Total	964,994	.....	964,994

Mean rainfall along Canal (nine stations), 5.69 inches.

By "Work" excavation is meant excavation actually made for one of the constituent parts of the Canal, such as prism, diversions, locks, etc.; that is, it represents material taken from the area to be occupied by the Canal and constitutes excavation useful for the completed Canal.

By "Plant" excavation is meant excavation outside any of the constituent parts of the Canal, such as prism, diversions, locks, etc. It includes material necessary to be excavated for construction purposes only, and is chargeable against the particular plant item for which it is performed, such as prism, diversions, locks, etc.

Mrs. McPherson of Gatun has organized a class of girls for Scotch dances and physical

culture. The class meets in the Gatun clubhouse on Tuesday and Thursday afternoons in each week.

Obituary.

Thomas McLaughlin, an American living at Corozal, employed as a locomotive engineer in the Transportation Department, died at Ancon Hospital at 10 a. m., on Saturday, August 22. He was 35 years of age, and is survived by his wife, and a son who were on the Isthmus at the time of his death. He came from Rochester, N. Y., on August 27, 1906.

Mrs. Lillian Boyd, wife of Oscar Boyd, residing at Ancon, died at Ancon Hospital at 4.40 p. m., on Monday, August 24, after a short illness. She was born in New York City, was 35 years of age, and had been on the Isthmus about two years, coming here from Jersey City, N. J. She is survived by her husband, a child, 15 months old, and two stepchildren.

Mrs. Edith L. Donnelly, wife of J. W. Donnelly, residing at Empire, died at Ancon Hospital, on Saturday, August 15. She was 31 years of age, and had been on the Isthmus four years, coming here from Washington, D. C. The body was shipped to the United States for interment, on the *Tenadores*, on Wednesday, August 19.

Metal Trades Council.

The next regular meeting of the Metal Trades Council of Panama will be held at the Balboa clubhouse on Sunday, August 30, at 1 p. m.

H. A. S. LEVERING, *Secretary*.

BALBOA, C. Z., August 24, 1914.

Pythian Sisters.

It is requested that all communications and correspondence regarding Canal Zone Temple, No. 1, Pythian Sisters, be addressed to Mrs. Marian L. Stanner, mistress of records and correspondence, Box 209, Gatun, C. Z. The regular meetings of the lodge are held at Ancon hall.

Missing Men.

Any one having knowledge of the whereabouts of A. W. Terrell, last heard of in Panama city, is requested to communicate with the American Consulate General, Panama.

Any one having information regarding the whereabouts of John Vallentine Brown, who is supposed to be on the Isthmus, is requested to communicate with the American Legation, Panama.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Beckford, L.	53049	Jamaica.....	Panama.....	Fortifications..	August 17.
Cellenette, Antonio.....	53352	Guadeloupe.....	Naos Island.....	Fortifications..	August 15.
Herbert, George.....	48652	Barbados.....	Panama.....	Second Division.	August 10.
Ricketts, Thomas.....	53156	Jamaica.....	Panama.....	Fortifications..	August 17.
Bouquety, Emanuel.....	26400	Martinique.....	Chorrillo.....	Mech. Div.....	August 15.

The estates of these deceased employees of the Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Ancon, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

SOCIAL LIFE OF THE ZONE.

Cristobal Woman's Club.

The executive board of the Cristobal Woman's Club held a meeting in the clubhouse on Wednesday afternoon, August 26, for the purpose of preparing for the opening of the club in September. The adjourned annual meeting will be held on September 2, when officers for the year will be elected, and on Wednesday afternoon, September 15, the annual reception to the outgoing and incoming officers will take place. Plans for the year will be decided upon at these meetings. The club will enter upon the eighth year of its existence in October.

Church Notes.

The Corozal Union Sunday school held a picnic on Saturday, August 22, which was attended by about 80 children and adults, this number including the pupils of the school and the neighborhood children. The party left Corozal for Panama on the early morning train and proceeded from the railroad station by tram cars to Bella Vista bathing beach, where the day was spent. Mrs. A. L. Hackenberg had charge of the outing, assisted by other ladies from the village.

On Sunday evening, August 23, Mrs. D. Fulton was the speaker at the meeting of the Cristobal Union Church. Her subject was "Strong womanhood."

The Ladies' Aid Society of the Cristobal church will hold its first meeting of the season in the church on Wednesday afternoon, September 2, at 3 o'clock. An interesting program is promised; there will be a special speaker.

The Woman's Altar Guild of St. Luke's Hospital chapel will meet in the chapel for a corporate communion on Tuesday morning, September 1, at 8 o'clock. The service will be followed by a short business meeting.

Mission Work Among the San Blas Indians.

Letters have been received on the Isthmus from Miss Annie Coope, the American missionary now located as a teacher in the San

Blas country, giving details of her work. Miss Coope has an assistant, one of the members of the Christian Mission Church in Providence, Rhode Island, and the two women conduct a day school of 15 children and a night school composed of 50 men. Donations recently sent to Miss Coope were six blackboards and a supply of chalk, a reclining chair, a small tea table, a dozen Spanish-English Bibles, several packages of Perry pictures, and magazines and books.

Cristobal Bible Students' League.

The Cristobal Bible Students' League has been recently organized, under the leadership of the Rev. A. B. DeRoos. Its membership is made up of men and women who have expressed a determination to study and work for definite results. The league is interdenominational.

PERSONAL.

Hon. Levi M. Kagy, American member of the Joint Land Commission, sailed for New York on the *Cartago* on Wednesday, August 19, on a short business trip to his home in Salem, Ill.

The Rev. Harry Compton, pastor of the Methodist Episcopal Church in Panama, sailed for New York for six weeks vacation, on Saturday, August 22. During his absence the work will in charge of the Rev. C. W. Ports, assistant pastor of the church.

Improved Order of Red Men.

A special meeting of the chiefs and brethren of Panama Tribe, No. 8, of the Improved Order of Red Men, will be held at the Ancon lodge hall on Saturday evening, August 29, at 8 o'clock. There will be the raising of chiefs, initiation of new brethren, and a "Smoker," followed by corn and venison. A cordial invitation is extended to all chiefs and brethren to attend.

R. H. HULL,

Chief of Records.

BALBOA, C. Z., August 24, 1914.

EXECUTIVE ORDER

Relating to the Customs Service.

By virtue of the authority vested in me, I hereby establish the following Order for the Canal Zone:

1. If the master of a vessel, arriving at any port in the Canal Zone from a foreign port, shall fail or refuse to produce to the proper officer of the customs, upon demand by him, the ship's manifest and copies thereof, or shall fail or refuse to give a true account of the destination of such vessel, he shall be subject to a fine of not exceeding \$500.

2. If any merchandise be found on board any vessel arriving in the Canal Zone from a foreign port, which is not included in her manifest, the master of such vessel shall be liable to a penalty equal in amount to the value of the merchandise not manifested, and all such merchandise, belonging to or consigned to the officers or crew of the vessel, shall be forfeited, provided, however, that the penalty authorized by this section shall not be imposed if it should be made to appear to the chief customs officer, at the port of entry, or to the court in which the trial shall be held, that no part of the cargo has been unladen, except as accounted for in the master's report, and that the errors and omissions in the manifest were made without fraud or collusion; in such case the master may be allowed to correct his manifest by means of a post-entry. It shall not be lawful to grant a permit to unload any such merchandise, so omitted from the manifest, before such post-entry or addition to report or manifest has been made.

3. If sea stores are found on board of a vessel arriving at the Canal Zone from a foreign port, which are not specified in the list furnished the boarding officer, or if a greater quantity of such articles is found than that specified in such list, or if any of the articles are landed without a permit being first obtained from the customs officer for that purpose, all of such articles omitted from the list or manifest, or so landed, shall be seized and forfeited, and the master of the vessel shall be liable to a penalty of treble the value of the articles so omitted or landed.

4. The officers of the Bureau of Customs are authorized to administer oaths, and to certify invoices covering shipments of merchandise from the Canal Zone to the United States. In the performance of this duty they shall be governed by the United States Consular regulations, and by the circular instructions concerning the certification of invoices issued to consuls of the United States, in so far as they are applicable, provided, however, that any special instructions heretofore issued, or which may be issued by the Treasury Department, concerning the certification of invoices in the Canal Zone, shall be complied with.

5. Any person violating any of the customs laws, or the customs rules and regulations established, or to be established, by the Governor of The Panama Canal in conformity with existing laws and orders, shall be subject to a fine not exceeding \$500 for each violation of such regulations.

6. This Order shall take effect from and after this date.

WOODROW WILSON.

THE WHITE HOUSE,
August 8, 1914.

[No. 2016.]

CANAL EXCAVATION TO AUGUST 1, 1914.

By French Companies.....		78,146,960
French excavation useful to present Canal.....		29,903,000
By Americans—		
Dry excavation.....	130,160,048	
Dredges.....	93,914,884	
Total.....		224,074,932
May 4 to December 31, 1904.....	243,472	
January 1 to December 31, 1905.....	1,799,227	
January 1 to December 31, 1906.....	4,948,487	
January 1 to December 31, 1907.....	15,765,290	
January 1 to December 31, 1908.....	37,116,735	
January 1 to December 31, 1909.....	35,096,166	
January 1 to December 31, 1910.....	31,437,677	
January 1 to December 31, 1911.....	31,603,899	
January 1 to December 31, 1912.....	30,269,349	
January 1 to December 31, 1913.....	27,177,960	
January 1 to July 31, 1914.....	8,616,660	

SECTIONS.	Amount excavated.	*Remaining to be excavated.
<i>Atlantic—</i>		
Dry excavation.....	8,858,977	90,600
Wet excavation.....	41,350,981	3,104,329
Total.....	50,209,958	3,194,929
<i>Central—</i>		
Culebra Cut.....	103,252,128	4,581,692
All other points.....	12,945,824	251,000
Total.....	116,197,952	4,832,692
<i>Pacific—</i>		
Dry excavation.....	11,210,058	113,186
Wet.....	46,455,395	6,631,417
Total.....	57,665,453	6,744,603
Grand total.....	224,073,363	14,772,224

*Revised figures as of August 1, 1914.

HOLLOW CONCRETE BLOCKS.

Corozal Plant Has Produced over 100,000 per Month for Nine Months.

The plant at Corozal for the manufacture of hollow concrete blocks for use in the permanent Canal buildings completed its ninth month of service on August 10. Operations began there on November 10, 1913, and have been carried on continuously since, both day and night shifts having been employed practically all the time. Up to August 10 the plant turned out a total of 902,308 blocks, an average of over 100,000 per month.

Now that the greater part of the erection of the new buildings authorized at this time has been accomplished, the demand for the larger blocks, used principally in exterior walls, has dropped off, and the principal present demand is for three, four, and 6-inch blocks (all 12 inches wide by 12 inches long), for use in interior columns and partitions.

Work on the smaller blocks is being carried on to the capacity of the machines equipped with molds of these sizes. The output of the Pauley machines originally installed in the plant is being supplemented by the use of four hand operated machines for smaller blocks, which use what is known as the dry process, and were constructed for field use when the building operations were in full swing.

During the height of construction of the new Administration Building, the permanent quarters, and the electric substations, the output from the Corozal plant was not sufficient to meet the demand, and additional equipment for making similar hollow concrete blocks by the dry process was installed on the townsite at Balboa in the form of eight portable molding machines. Two of these machines made blocks three by 12 by 14 inches; two made blocks three by 12 by 12 inches, and four made blocks four by 12 by 12 inches. The blocks made by the two machines first mentioned were for the columns in the new Administration Building; this size is not being used now. This field plant produced a total of 30,000 blocks. In addition, terra cotta blocks, three, four, and six inches thick, to the number of 100,000, were requisitioned from the United States.

The field machines have since been transferred to Corozal to be operated in connection with the Pauley process plant. They are wooden structures, devised by concrete foremen and carpenters at Balboa, and each occupies a space about six feet long, four feet high, and four feet deep. Each contains a trough, with removable ends and partitions, in which are set the molds for four blocks, each three by 12 by 12 inches. The moistened concrete material is poured into the molds from above by hand, and tamped by means of a mallet and a steel bar. Each machine is operated by two laborers, the material being mixed by another in an adjacent trough. The output is about 150 blocks per machine in each 8-hour shift. Materials are used in the same proportions as for the wet process, namely, three parts of cement, four and one-half parts of sand, and six parts of screenings. The blocks turned out have been generally satisfactory, though showing less uniformity and greater breakage than those manufactured by the wet process.

Several improvements have been made in the methods of operating at the plant, which have made it possible to reduce the force of laborers by about one-half. One is the substitution of a power driven tumbler or rattler for hand labor in removing particles of concrete from the cast iron palettes, which, inserted at the bottoms of the molds, form the bases on which the blocks are hauled until they harden, when the palettes are loosened by a hammer. Two laborers operate the tumbler and do work for which 14 men were formerly required.

Another device which has given general satisfaction is a washer for cleaning screenings. The screenings are shoveled from the cars into an inclined trough, about 10 feet long, at both ends of which are powerful jets which throw the screenings into motion. As they slide down the flume they fall on inclined screens, the particles of rock passing through into a pile, while the finer particles of earth are carried away by the water, through a discharge flume. In addition to cleansing the screenings mechanically, and allowing a reduction of force of 12 laborers, the washer has done away with dust, which was formerly very objectionable. Moreover, as the finer particles are carried away and settle, a quantity of sand can be skimmed off the top. This is used to a great extent in place of Chame sand and effects considerable saving in the cost of material.

Blocks are now shipped to the permanent quarters at Balboa, the office building for Balboa shops, and the substations at Cristobal and Balboa. The substations are still using all sizes, but at the other points the consumption is almost entirely confined to the smaller sizes. The distribution of the blocks manufactured at the Corozal plant up to August 10 is shown in the following tabulation:

DESTINATION.	3x12x12	4x12x12	6x12x12	8x12x12	8x12x16	12x12x18	Total.
Permanent quarters.....	29,233	79,722	52,566	98,520	63,873	17,441	341,355
Administration Building.....	36,316	39,900	22,867	53,683	15,731	18,621	187,118
Miraflores substation.....	8,443	18,016	6,006	16,020	.....	10,105	58,590
Gatun substation.....	8,088	12,516	4,253	12,989	1,032	10,381	49,259
Shops office building.....	6,825	14,224	4,779	8,395	6,256	3,108	43,587
Cristobal substation.....	9,869	11,729	8,539	8,404	1,099	7,432	47,072
Balboa substation.....	4,291	10,851	2,756	11,768	2,190	5,526	37,382
Total shipped.....	103,065	186,958	101,766	209,779	90,181	72,614	764,363
In storage.....	6,226	4,958	2,311	80,707	32,148	11,595	137,945
Grand total.....	109,291	191,916	104,077	290,486	122,329	84,209	902,308

Postal Savings Transactions.

A statement of postal savings transactions at Canal Zone post-offices for the month of July, 1914, follows:

OFFICE.	Amount issued.	Amount paid.
Ancon.....	\$46,323	\$25,099
Balboa.....	45,561	38,154
Corozal.....	46,561	34,315
Cristobal.....	49,422	30,586
Culebra.....	15,397	13,458
Empire.....	7,367	10,048
Gatun.....	32,679	21,249
Las Cascadas.....	4,021	3,695
Paraiso.....	26,645	19,104
Pedro Miguel.....	18,152	9,493
	\$291,758	\$205,201
Balance on hand July 1....	\$498,481	
Deposited during July.....	291,758	
Withdrawn during July.....		\$205,201
Balance on hand Aug. 1....		585,038
	\$790,239	790,239

Changes in United Fruit Company's Steamship Services.

The local office of the United Fruit Company makes the following announcements concerning its services to and from Colon:

The regular service with New Orleans, changed slightly during the past two months by the temporary retirement of the steamship

Atenas for repairs, has been resumed in completeness; two vessels sail from Colon for New Orleans every Thursday, one going direct, and the other by way of Bocas del Toro and Havana.

The direct service with New York by means of the steamships *Calamares*, *Pastores*, and *Tenadores* has been cancelled. The last sailing in this service was that of the *Tenadores*, from Colon on Wednesday, August 19. The weekly connection with New York, by way of Kingston, will be maintained, as before, by the steamships *Almirante*, *Metapan*, *Santa Marta*, and *Zacapa*.

There will be absolutely no increase in rates, passenger or freight, on account of the present European war.

The service of Elders and Fyffes, Limited, represented on the Isthmus by the United Fruit Company, between Colon, and Bristol, England, will be suspended indefinitely, after the sailing of the steamship *Bayano* from Colon on Saturday, September 5.

The Lighthouse Service.

Panama railroad barge No. 2 has been transferred to the Division of Canal Transportation, and after some alterations, will be used in connection with the launch *Balboa* as a lighthouse tender. The old Atlantic Division motor car house at Gatun has been reerected at one end of the concrete dock for small boats on Gatun Lake, for use of the master of the lighthouse tender as a storehouse and office. A preliminary survey of Bona Island on the Pacific coast of the Isthmus was made in July, with a view of es-

tablishing a fourth order light thereon. In the Atlantic and Pacific sections of the Canal, the 1-foot burners on the lighting buoys have been changed to $\frac{1}{2}$ -foot; in the lake area they have been changed from one foot to three-fourths of a foot, and the moorings of a part of the buoys have been lengthened.

Award for Placing Backfill.

Bids were opened at the office of the Chief Quartermaster on August 10 for the placing of 42,000 cubic yards of backfill at Fort Amador, and 16,825 cubic yards of backfill on Perico Island, the material to be obtained from the Balboa dump in the vicinity of the new radio station. Six proposals were received, as follows: R. W. Hebard, \$1.09 per cubic yard; Pritchett and Johnson, 63 $\frac{1}{2}$ cents per cubic yard for backfill at Fort Amador only; Ralph M. Elder, 50 cents per cubic yard at Fort Amador, and 80 cents per cubic yard at Perico Island; William Bodette, 49 cents per cubic yard; C. J. Alberts, 43 $\frac{3}{4}$ cents per cubic yard; D. J. McCauley, 42 cents per cubic yard. The contract was awarded to the low bidder, D. J. McCauley, who has made bond for the successful performance of the work in the sum of \$2,500.

OFFICIAL CIRCULARS.

Schedule for Occupying New Administration Building.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 20, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The following recommendations of the Chief Quartermaster are approved, and it is directed that steps be taken immediately to prepare for the move along the lines recommended by him:

"I beg to submit the following schedule for the removal of the offices from the Administration Building at Culebra and the Auditor's Office at Empire to the new Administration Building at Balboa:

Auditor's Office, Empire, August 20 to 25.

ADMINISTRATION BUILDING, CULEBRA.

First move, August 30 to 31.

Governor's office—Colonel Goethals, Mr. McIlvaine, Mr. Copeland, 30 clerks.

Colonel Hodges' office—Colonel Hodges, Mr. C. J. Embree, Mr. Carlson, five clerks, five draftsmen.

Mr. Rousseau's office—Mr. Rousseau, two clerks.

Cable office—Two clerks, one inspector.

Second move, September 2 to 3.

Chief Quartermaster's office—Captain Wood, three inspectors, one veterinarian, 20 clerks.

Costkeeping accountant—Mr. Faure, Mr. Smith, 19 clerks.

Building Division—Mr. Holmes, Mr. Cook, Mr. Kritz, Mr. Hearn.

Fortifications—Lieutenant Acher, one engineer, two clerks, four draftsmen.

Third move, September 6 to 7.

Mr. F. H. Cooke's office—Mr. Cooke, three clerks, 16 draftsmen, one supervisor.

Mr. Kuentz's office—Mr. Kuentz, one clerk, eight draftsmen.

Building Division (balance)—Twelve draftsmen.

Fourth move, September 9 to 10.

Mr. F. C. Nichols' office—Mr. Nichols, one draftsman.

Assistant Engineer Nichols' office—Mr. A. B. Nichols, one office engineer, one assistant engineer, one engineer, four clerks, two draftsmen.

Fifth move, September 12.

Mr. Malsbury's office—One engineer, three draftsmen.

Landscaping Architect's office—No employees in office at present.

Sixth move, September 13 to 14.

Clubhouses—One superintendent, one secretary.

Hydraulics—Five office employees.

Surveying Officer—One surveying officer, one clerk.

"In making up this schedule, I have taken the Executive offices first, and the designing and drafting forces last. I think a short interval should be left between the move of each section in order to get desks records and personnel straightened out in the new building. Moreover, there is a considerable quantity of records, office furniture, etc., that there would be confusion if the whole forces were moved at once.

"I would not recommend the removal of the Panama railroad offices until the close of the month. First, to allow the personnel to get straightened out in the new building; second, to give us an opportunity to have bachelor quarters available. We ought to be able to make some reduction in the building force by the first of October, and the vacancies thus created will take care of the forces of the Panama railroad. Details of the program of the moves will be submitted later.

"Instructions should be issued to the chief clerks or heads of the offices that all files and records not needed in the transaction of current business should be prepared for shipment and removal as quick as possible. These records can be turned over to the district quartermaster at any time between August 20 and 25, and shipped between the 25th and 28th.

"Heads of each office should make up lists of the good married and bachelor employees of their offices, furnishing copies of this list to the district quartermasters at Ancon, Corozal, and Culebra. These lists should be furnished at least one week in advance of the removal of the offices. The employees, after securing their assignment, should notify the district quartermaster at Culebra when they wish their personal effects removed to Ancon, Balboa, or Corozal."

GEO. W. GOETHALS,
Governor.

Distribution and Sale of Water.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 5, 1914.

CIRCULAR No. 682:

The following regulations governing the distribution of and certain charges for domestic and industrial water supply within the Canal Zone will become effective September 1, 1914:

1. All water mains, together with all laterals leading

from same, shall be installed and maintained by the Division of Municipal Engineering.

(a) This shall include all water lines on the docks of the Panama railroad in the Canal Zone, all lines within the Balboa shop district, the 4-inch line to the Naos Island fortification reservation boundary, the 6-inch line to the fortification boundary at Margarita Point, and the detached water supply system at Frijoles and Monte Lirio.

(b) This shall not include the water supply system at Toro Point or the water supply system at Darien.

2. In general, the cost of installations, maintenance and repairs of water mains and laterals, as described above, will be borne by the Division of Municipal Engineering.

(a) In certain cases of special installations, the distribution of initial costs will be authorized by the Governor.

(b) The original cost of water lines installed within the shop district at Balboa by the Mechanical Division, and on the docks in Balboa and Cristobal by the Panama railroad, shall be charged to the Division of Municipal Engineering.

3. All departments and divisions of The Panama Canal, including the Panama railroad, except as specifically excepted below; fortifications; radio stations; and artillery and infantry posts lying within the maintenance districts above outlined, shall be charged monthly at cost for all water consumed.

(a) The monthly consumption shall be based on metered flow for all principal lines.

(b) The flow from smaller lines may be estimated and charged for at a flat rate.

(c) For the present, the Panama railroad will continue to receive water consumed in Cristobal without charge.

4. The Division of Municipal Engineering will install, maintain, and repair all water meters, and take and record the readings of same.

5. The sale of water over docks to ships and to individuals and companies will be handled by the Division of Municipal Engineering.

6. Water will be delivered to ships upon request of the captain of the port, to whom a statement of amount of water delivered and total amount of charge for same will be given.

7. Water sold to ships will be charged for at a flat rate per thousand gallons, with a minimum fixed charge. Water sold to private companies and to individuals, other than employees of the United States Government, will be charged for at a flat rate per thousand gallons, plus the cost of labor in installing water meters where necessary.

8. Bill covering sales to individuals and companies will be made out by the Division of Municipal Engineering and turned over to the Auditor for collection.

GEO. W. GOETHALS,
Governor.

Prices to be Charged for Water.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 14, 1914.

CIRCULAR No. 682-1:

The following rates are fixed for water sold to individuals, companies, and others:

1. Water delivered to vessels at docks—Twenty-five cents per thousand gallons, with a minimum charge of \$3. This rate to be effective August 15, 1914.

2. Water furnished nonemployees within the Canal Zone—Meter rate, 30 cents per thousand gallons, minimum charge \$1.50 per month, with a discount of 33½ per cent on either rate if bills are paid within 15 days after rendition. This rate to be effective September 1, 1914.

3. Flat rates for dwelling houses and other purposes—For each connection, with not more than three fixtures, \$1.50 per month; for each fixture in addition, 75 cents per month, with a discount of 33½ per cent if bills are paid within 15 days after rendition. This rate to be effective September 1, 1914.

GEO. W. GOETHALS,
Governor.

Rendition of Bills for Manufacturing and Repair Jobs, and Miscellaneous Services.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 1, 1914.

CIRCULAR No. 659-1:

1. Bills rendered against individuals and companies for manufacturing and repair jobs, or miscellaneous services, will contain a description of the work done or service rendered and the total charge therefor without showing any detail, such as labor, material, or surcharges.

2. The same rule will apply to separate bills rendered against the Panama Railroad Company, the Canal Zone Government, and other branches of the United States Government.

3. The amount of the charge against individuals and

companies will be determined from the cost records by adding to the actual cost a surcharge sufficient to cover the general overhead expenses and a margin of profit.

4. The charges against other branches of the United States Government, employees for their personal use, and against charitable and religious institutions, and social and fraternal organizations of employees, will be the actual cost of the work done or service rendered as determined by the cost records, plus a surcharge equal to the percentage the general overhead expenses bear to the charges to ultimate objects for the latest month available.

5. The Auditor will fix the rate of surcharge to be added to the cost of work done or services rendered for outsiders, and may change said rate from time to time upon approval by the Governor. He will also furnish departments and divisions interested with the rate of surcharge to be added to cover general overhead expenses.

GEO. W. GOETHALS,
Governor.

Operation of Tugs, Barges, Motor Boats, and Other Small Craft in Canal Zone Waters.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 11, 1914.

CIRCULAR No. 683:

1. Attention is invited to Paragraphs 56, 195, and 196 of the Executive Order of July 9, 1914, prescribing rules and regulations for the operation and navigation of the Panama Canal, as quoted below:

56. No vessel, company, nor individual will be authorized to maintain or operate permanently any tugs, launches, lighters, or floating equipment of any kind within the Canal waters without permission from the Governor; nor shall any small craft or boat of any kind be operated without the proper authority from him.

195. All privately owned boats of every description must be registered and numbered, and the numbers must be obtained before they will be allowed to operate in any part of the Canal waters.

196. When numbers have been assigned, they shall be displayed in a conspicuous place, in the prescribed form.

2. Companies and owners will be compelled to comply therewith by September 1, 1914. Licenses and license tags must be obtained from the Board of Local Inspectors, the fee for which will be \$1. The Board of Local Inspectors will prescribe the limits within which the craft will be allowed to operate.

3. These regulations shall not be interpreted to include Canal craft, nor the boats of foreign or domestic vessels temporarily in Canal Zone waters, provided they be used solely for the ship's business and convenience.

4. The fact that any one holds a master's, mate's, pilot's, or navigator of motor boat's license, is not to be interpreted to mean that this authorizes him to operate any boat or small craft, without the boat itself has been authorized to operate; nor shall the fact that any boat has been certificated by the Board of Local Inspectors be interpreted to mean that such boat is authorized to operate before a separate and special license has been obtained to do so.

5. This license is to be considered as a special one, subject to revocation at any time. It is entirely different and should not be confused with the yearly certificate of inspection as issued by the Board of Local Inspectors.

GEO. W. GOETHALS,
Governor.

Electric Current Furnished Individuals and Companies.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., July 25, 1914.

CIRCULAR No. 676-1:

The furnishing of electric current by The Panama Canal to individuals and companies in the Canal Zone is approved, as follows:

1. All applications for service of this character shall be made on regular forms and be approved by the Governor before any work is done.

2. All secondary and interior wiring, including entrance switch, will be installed, in accordance with the rules and requirements of the National Board of Fire Underwriters of the United States, by The Panama Canal and be paid for by the applicant in accordance with existing rules and rates for labor and material furnished by The Panama Canal to individuals and companies, after which this wiring and other material shall become the property of the applicant.

3. Authorized employees of The Panama Canal must be permitted to inspect the interior and other secondary wiring at any convenient time, and the applicant shall pay The Panama Canal for any alterations which may be necessary from time to time to keep the installation in safe condition in accordance with the rules and requirements of the National Board of Fire Underwriters of the United States.

4. No additions or alterations in the secondary or

interior wiring are permitted, except on approved request to The Panama Canal and by the forces of The Panama Canal and upon the same terms as the original installation.

5. The Panama Canal will furnish at its own expense the necessary transformers. In general, any necessary extensions to the outside primary wiring circuits and pole lines to furnish the desired service will be paid for by the applicant, but the ownership thereof shall remain with The Panama Canal. Due consideration will be given in each case to any variation deemed equitable from this policy.

6. Payment for current consumed shall be made by the applicant in accordance with approved rates for individuals and companies on a flat rate basis, where the total connected load is 1,000 watts or less. If the total connected load is more than 1,000 watts, or if it is considered by the Electrical Division of The Panama Canal to be advisable, it will be arranged in advance by mutual agreement whether payment shall be made at a flat rate, or whether the current shall be metered and paid for in accordance with the approved rate per kilowatt hour, for individuals and companies. The Panama Canal will furnish meters at its own expense, where their use is considered advisable. The cost of current supplied for lamps will cover the exchange of a reasonable number of lamps for the sockets of broken lamps, and the cost of ordinary repairs to wiring, etc. (Lamp exchanges will be governed by conditions of service and by the guaranteed life of the lamp of lamps in question.)

7. The base price for charges at a flat rate shall be \$0.75. The various sizes of lamps, motors, heating appliances, etc., will be divided into classes, according to power consumed. The monthly charge for each unit will be obtained by multiplying the base price by the class number to which it belongs. A list showing the classes to which the various items belong will be furnished by the Electrical Division of The Panama Canal on request. The charge for metered current shall be \$0.08 per kilowatt hour. The minimum charge per month for any installation shall be \$3, regardless of the number of units used or the amount of current consumed.

8. A deposit shall be made with the Collector to cover the estimated cost of any installation. If the actual cost exceeds the deposit, the additional amount must be paid. Any balance will be refunded.

9. A permanent deposit shall be made with the Collector in excess of charges for two months, as fixed by the Auditor, to guarantee payment of monthly charges. This deposit will be refunded only when the Auditor has received notice from the Electrical Division that service has been discontinued, and any unpaid charges have been deducted. Notice that service is no longer required should be sent to the Electrical Engineer, and application for refund should be made to the Auditor.

10. Bills will be rendered to customers whose current is measured by meter only. No bills will be rendered to customers who are charged for current at a flat rate.

11. If the monthly charges are not paid to the Collector within 15 days after the close of the month in which the charges accrue, the amount of same will be increased by 25 per cent, the total charges for the two months will be deducted from the deposit, and the service discontinued. Service will thereafter be resumed only by authority of the Governor and after payment has been made for the cost of turning the current off and on, and a new deposit has been made.

12. Deposits may be made with the Collector to cover charges for not less than six months against which the monthly accruals will be applied.

13. Under no circumstances shall the applicant resell, sublet, or otherwise dispose of any electric current supplied by The Panama Canal, to tenants, lessees, or others at a greater price than said applicant pays for same.

14. The Panama Canal reserves the right to discontinue the service on due notice at any time and without notice if the monthly charges are not paid as stipulated above, or if any other condition of these rules is violated. By making any installation or by furnishing electric current, The Panama Canal incurs no obligation, expressed or implied, on account of interruption or discontinuance of the service, and the applicant waives all claims for loss or damage that may arise by reason of such interruption or discontinuance.

GEO. W. GOETHALS,
Governor.

Leaves of Absence.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 21, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

Several cases have recently been brought to my attention in which employees have been granted leaves of absence on recommendation of the head of a department or division, and prior to the expiration of such leave it has been found necessary to terminate their services on account of reduction in force.

From now on it is particularly desirable that heads

of departments and divisions exercise extreme care in recommending leaves of absence, and in any case where there is a possibility of the employee's service being terminated within a short period he should be so informed, and if he still desires to take the leave of absence it will be upon his own responsibility.

GEO. W. GOETHALS,
Governor.

Special Orders.

WAR DEPARTMENT,
WASHINGTON, August 4, 1914.

SPECIAL ORDERS
No. 181.

Extract.

25. Capt. Thomas J. Smith, Ordnance Department, will proceed via this city and the New York Arsenal, N. Y., for consultation with the Chief of Ordnance and the commanding officer of the New York Arsenal, to the coast defenses of Balboa and Cristobal, C. Z., for the purpose of proof firing armament installed in the coast defenses of The Panama Canal, and upon the completion of this duty will return to his proper station via the New York Arsenal. Upon arrival in the Canal Zone, Captain Smith will report to the Governor of The Panama Canal. The travel directed is necessary in the military service.

(2193478 A. G. O.)

W. W. WOTHERSPOON,
Major General, Chief of Staff.

By order of the Secretary of War.

Official:

GEO. ANDREWS,
The Adjutant General.

Uniformity in Costkeeping Forms.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 19, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

In order to secure uniformity, eliminate duplication, and unnecessary expense, any forms which may be considered desirable for costkeeping purposes by any department or division will hereafter be first submitted to the costkeeping accountant for approval before any requisition is forwarded for the printing of same.

GEO. W. GOETHALS,
Governor.

Act of Congress.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., July 18, 1914.

CIRCULAR No. 600-6:

RELIEF AND PROTECTION OF AMERICAN SEAMEN.

The extract from an Act of Congress quoted below is published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

An Act making appropriations for the Diplomatic and Consular Service for the fiscal year ending June 30, 1915.

1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums be, and they are hereby, severally appropriated, in full compensation for the Diplomatic and Consular Service for the fiscal year ending June 30, 1915, out of any money in the Treasury not otherwise appropriated, for the objects hereinafter expressed, namely:

RELIEF AND PROTECTION OF AMERICAN SEAMEN.
2. Relief and protection of American seamen in foreign countries, and shipwrecked American seamen in the Territory of Alaska, in the Hawaiian Islands, Porto Rico, the Panama Canal Zone, and the Philippine Islands, \$20,000.

Approved, June 30, 1914.

Duties of Chief Engineers of Vessels in Transit.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 14, 1914.

CIRCULAR No. 684:

1. In future, in addition to the regular engineer officers of the watch, the chief engineer of all ships shall remain on duty in the engine room during the approach to and while passing through the locks.

2. It shall be his principal duty to see that signals from the bridge, for the operation of the engines, are understood and correctly and promptly answered.

GEO. W. GOETHALS,
Governor.

Making Out Form 167 C. E.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 19, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The instructions contained in my letter of May 3,

1911, that two copies of Form 167 C. E., physical examination of applicants for employment, be executed by the examining physician, are revoked. Henceforth it will be necessary to make out only one copy of this form.

GEO. W. GOETHALS,
Governor.

Auction Sale of Over and Unclaimed Freight.

THE PANAMA CANAL,
THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT.

On September 15, 1914, at 9 a. m. the Panama railroad will dispose of at public auction, on Dock 11, Cristobal, an accumulation of over and unclaimed freight, to recover freight and storage charges. Items to be sold will consist of a miscellaneous lot of wines, liquors, tobacco, dry goods, hardware building material, household goods, iron, steel, and general merchandise.

IMPORTANT—The Panama railroad will deliver at any station, at owner's risk, free of charge, articles purchased at this sale.

C. H. MOTSETT,
Superintendent.

Misdirected Letters.

ANCON, C. Z., August 24, 1914.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts, and may be secured upon the request of the addressee:

Almeida, Manuel José	Jones, Capt. W. C. (2)
Anderson, Nick (2)	Keller, John J.
Barret, Nelson M.	Kinsella, Joseph
Barrett, W. M.	Klinge, Arthur
Bethell, J. U., Jr. (7)	Koener, Arthur W.
Buck, Prof. S. J.	Lockiby, Leo
Bunker, George C. (2)	Lynch, Mrs. Carlos C.
Burleson, Bobby	McAdams, Mrs. H.
Cornelius, E. G.	McCane, (pamphlet)
Christy, Wilson	McCombs, Mrs. Sadie
Conk, Gus.	McLarty, Eric
Crotty, Mrs. M.	McIntosh, Zadoc
Crowley, Joe	Marshall, Walter C.
Davis, S. F. (1 package)	Olsen, George C.
Delancey, John B.	Omara, Mrs. Anna
Dempsey, Edward	O'Rourke, John T. (paper)
Duffy, John A. (paper)	Osborn, Arthur W.
Dunfey, M. J.	Page, Ray M.
Ensey, C. R.	Philips, Burt
Feltman, Robert	Price, John A.
Fuller, Raymond	Pulliam, Mrs. D.
Gerins, Victor	Rawlins, Leopold
Gidding, J. H.	Rogers, Mrs.
Gowen, Mrs. J. B.	Seebt, J. T.
Gunter, Carl	Smith, Capt. F. H.
Haltman, Robert	Smith, F. W.
Hix, Dr. Ivan E.	Tarflinger, George
Holleran, Mrs. Mary	Thompson, Samuel
Holloway, Owen	Todd, F. M.
Huber, Miss Helen	Valley, Dr. J. L.
Hulsey, Cecil	Vardeman, Howard
Isherwood, A.	Walker, H.
Jaunelle, Emile A.	Walsh, Mrs. Melvin
Johnson, Mrs. J.	Wilson, P. F.
Jones, Mrs. Wm.	Wright, Stanley

LETTERS UNCALLED FOR AUGUST 17.

Achorn, George G.	Johnson, Corporal W. D.
Adams, Spencer	Johnson, Wm.
Barnum, Norman A.	Kelbel, Charlie
Bates, W. G.	Lee, Geo. B.
Bollis, W. E.	Lundie, Billy
Boyde, W. D.	McCrea, Jno. F. (2)
Bethea, W. A.	Murray, Frank
Campbell, Mrs. Chas. R.	Naylor, Wm. Graham
Dennrey, O. B.	Price, John A. (2)
Dale, J. L.	Phillips, Mrs. Ethel
Edge, Chas. E.	Patten, Aline
Francis, Richard	Rideno, Mrs. Elizabeth
Frederikson, Fred	Reynolds, Roland M.
Gillet, Henry	Sanford, R. B.
Hyfordan, Wm.	Svenson, C.
Hyde, Stella V.	Schildener, William R.
Huntoon, Robert J.	Swiger, Carl A.
	Siebert, August.

Family Quarters.

Applications for married quarters on file on July 31, were, as follows:

DISTRICT.	List No. 1.	List No. 2.
Ancon.....	81 (60)	426 (148)
Ancon Hospital.....	1 (1)	7
Corozal.....	23 (22)	188 (74)
Cristobal.....	1 (1)	171 (35)
Gatun.....	1	113 (2)
Paraiso.....	.....	172 (30)
Total.....	107 (84)	1,077 (289)

COMMISSARY DEPARTMENT.

Emergency Sales of Ice.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
CULEBRA, C. Z., August 19, 1914.

CIRCULAR No. 177-1:

District quartermasters and commissary storekeepers—Commissary storekeepers are authorized, when they have ice to spare, to sell small pieces to commissary patrons in emergencies. In the case of new employees or employees returning from leave, the district quartermaster may be notified and deliveries commenced at once, and the ice order card sent to Cristobal, dated far enough ahead to afford ample time for order to be handled in routine manner at Cristobal and ice to commence coming on effective date shown on card.

The ice furnished by commissary in the intervening days and all other emergency sales of ice will be covered by invoice or "G2" department sales slip and accounted for, as follows:

1. Each storekeeper will set aside five sales books and one invoice book, Com. Form 120, for use in making ice sales, and will at once notify the commissary accountant of the beginning and ending numbers of the series.

2. Each emergency sale of ice will be covered by a sales slip or invoice on which will be shown customer's name, house number, and amount of ice sold. Duplicate of sales slip or original of invoice will be given to customer. Duplicate of invoice will be forwarded to accounting office with daily reports. Originals of sales slips and triplicates of invoices will be held until the end of each month and forwarded to accountant's office, attached to a letter stating:

1. The amount of emergency ice sales during the month.
2. The quantity supplied by quartermaster.
3. The quantity supplied by commissary.

R. E. Wood,
Chief Quartermaster.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and from 3 to 6.30 p. m.

The gold departments of the Cristobal store, will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

In rush periods, all stores will remain open until 7 p. m.

Cold Storage Prices.

Retail prices of cold storage provisions for the week beginning August 27, 1914:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....	8	
Shoulder, trimmed, per pound.....	12	
Leg (8 to 10 pounds), per pound.....	19	
Cutlets, per pound.....	20	
Short cut chops, per pound.....	23	
Shoulder, chops, per pound.....	14	
Lamb—Stewing, per pound.....	10	
Shoulder, trimmed, per pound.....	15	
Leg (5 to 8 pounds), per pound.....	24	
Chops, per pound.....	29	
Shoulder, chops, per pound.....	18	
Cutlets, per pound.....	29	
Veal—Stewing, per pound.....	10	
Shoulder, for roasting (not under 4 pounds), per pound.....	13	
Chops, shoulder, per pound.....	18	
Chops, per pound.....	27	
Loin, for roasting, per pound.....	27	
Cutlets, per pound.....	31	
Beef—Suet, per pound.....	3	
Soup, per pound.....	7	
Stew, per pound.....	11	
Plate, per pound.....	12	
Corned, No. 1, per pound.....	18	
Corned, No. 2, per pound.....	15	
Chuck roast, 3 lbs., and over, special, per pound.....	12	
Chuck roast, 3 lbs., and over, choice, per pound.....	15	
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16	
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	21	
Rib roast, first cut (not under 3 pounds), special, per pound.....	19	
Rib roast, first cut (not under 3 pounds), choice, per pound.....	24	
Pot roast, special, per pound.....	24	
choice, per pound.....	25	
Rump roast, special, per pound.....	20	
choice, per pound.....	25	
Porterhouse roast, special, per pound.....	22	
choice, per pound.....	27	
Steak, chuck, special, per pound.....	13	
choice, per pound.....	16	
Round, bottom, per pound.....	13	
choice, per pound.....	17	
Round, top, special, per pound.....	19	
choice, per pound.....	20	
Rib, special, per pound.....	24	
choice, per pound.....	20	
Sirloin, special, per pound.....	20	
Sirloin, choice, per pound.....	25	

	Price.
Sirloin, choice cut, special, per pound.....	23
Sirloin, choice cut, choice, per pound.....	28
Rump, special, per pound.....	20
choice, per pound.....	25
Porterhouse (not less than 1½ pounds), special, per pound.....	23
Porterhouse (not less than 1½ pounds), choice, per pound.....	30
Porterhouse, short, Delmonico, special, per pound.....	20
Porterhouse, short, Delmonico, choice, per pound.....	25
Tenderloin, Western, special, per pound.....	35
Tenderloin, Western, choice, per pound.....	40
Pork—Hams, fresh, per pound.....	\$23
Shoulders, fresh, per pound.....	\$19
Loin, chop, or roast, per pound.....	20
Pigs' feet, each.....	7
Pigs' head, whole.....	83
Pigs' head, ½-head.....	42
Sausage, home made, per pound.....	23

MISCELLANEOUS.

Livers—Beef, per pound.....	12
Calf, each.....	62
Half, each.....	31
Steak, Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	13
Frankfurter, per pound.....	13
Lieberwurst, per pound.....	12
Pure pork, 1-lb. cartons, per pound.....	17
Sweethead, beef, per pound.....	26
Eggs, fresh, per dozen.....	35
per ½-dozen.....	18
Bluefish, per pound.....	8
Halibut, fresh, per pound.....	5
Salmon, per pound.....	7
Yeast, per pound.....	31
per cake.....	2

POULTRY AND GAME.

Chickens—Fancy roasting, milk fed, per pound.....	28
Fancy roasting, corn fed, per pound.....	25
Fowls, per pound.....	24
Fowls, light, per pound.....	20
Ducks, Western, per pound.....	22
Capons, per pound.....	33
Broilers, milk fed, per pound.....	25
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	27
Squabs, each.....	42
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, per pound.....	23
Sliced, per pound.....	30
Half, for boiling, per lb.....	25
Boiled, per pound.....	32
Hocks, per pound.....	9
Butt end, about 1½ pounds to butt, per pound.....	11
Bacon—Breakfast, sliced, per pound.....	31
Whole piece, per pound.....	30
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.45
Pigs' feet, per pound.....	7
Tongues, per pound.....	23

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	39
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream cake.....	99
Roquefort, per pound.....	35
Young America, per pound.....	22
Swiss, per pound.....	27
Edam, each.....	72
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk (certified), bottle.....	**24
Fer-mil-lac, bottle.....	**25
Ice cream, quart.....	15
½-gallon.....	50
Cream, Sheffield Farms, quart.....	**33
Cream, Sheffield Farms, pint.....	**19
Cream, Sheffield Farms, ½-pint.....	**12

VEGETABLES.

Beets, per pound.....	2
Celery, per head.....	13
Cabbage, per pound.....	2½
Carrots, per pound.....	2½
Cucumbers, per pound.....	12
Lettuce, per pound.....	19
Peas, green, per pound.....	9
Onions, per pound.....	5
Peppers, per pound.....	15
Potatoes, white, per pound.....	3
sweet, tropical, per pound.....	2
sweet, American, per pound.....	4
Yams—Tropical, per pound.....	3
Parsley, per bunch.....	2½
Eggplant, per pound.....	13½
Rhubarb, per pound.....	2½
Turnips, per pound.....	2
Tomatoes, per pound.....	14½

	Price.
Squash, per pound.....	2
Kale, per pound.....	6
FRUITS.	
Apples, per pound.....	16
Cantaloupes, each.....	6
Grape fruit—American, each.....	5
Tropical, each.....	4½
Lemons, per dozen.....	13
Limes, per 100.....	50
Oranges—American, each.....	2½
Jamaican, per dozen.....	18
Peaches, per pound.....	*6
Plums, per pound.....	17
Watermelons, each.....	†34
Bananas, per bunch.....	38
Bananas, each.....	0½
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Pears, alligator, each.....	5

* Indicates advance from preceding list.

† Indicates reduction from preceding list.

**Indicates 5 cents allowed for return of bottle.

‡ Sold only from commissaries; no orders taken for delivery.

§ Sold only from cold storage and not from commissaries.

Rainfall, August 1 to August 22, 1914, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
Pacific Section—			
Ancon.....	Ins.		Ins.
Balboa.....	1.37	7	5.32
Miraflores.....	.94	7	4.55
Pedro Miguel.....	1.72	7	6.08
Rio Grande.....	1.21	4	5.81
	2.27	12	7.18
Central Section—			
Culebra.....	1.89	12	7.10
*Camacho.....	1.10	10	6.19
Empire.....	1.93	12	6.89
Gamboa.....	1.44	6	6.19
*Juan Mina.....	1.99	8	6.87
Alhajuela.....	1.60	11	8.72
*El Vigia.....	3.49	11	8.27
Frijoles.....	2.08	12	6.37
*Monte Lirio.....	5.45	12	12.21
Atlantic Section—			
Gatun.....	6.72	12	11.27
*Brazos Brook.....	3.45	12	9.32
Colon.....	2.44	15	11.08

*Standard rain gage—readings at 5 p. m. daily. Automatic rain gage at unstarred stations—values, midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun, and Miraflores Lakes for the week ending at midnight, Saturday, August 22, 1914. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Aug. 16.....	131.90	96.90	85.13	85.05	53.98
Mon., Aug. 17.....	132.00	95.00	85.09	85.06	54.13
Tues., Aug. 18.....	132.85	97.30	84.98	85.01	53.90
Wed., Aug. 19.....	127.30	93.62	84.98	85.00	54.00
Thurs., Aug. 20.....	126.50	92.98	84.98	84.95	54.03
Fri., Aug. 21.....	127.40	93.60	84.97	84.98	53.98
Sat., Aug. 22.....	137.20	100.40	85.07	84.99	53.90
Height of low water to nearest foot.....	125.0	91.0			

Tide Table.

The following table shows the time of high and low tides at Panama for the week ending September 5, 1914:

DATE.	High		Low		
	A.M.	A.M.	A.M.	P.M.	
August 30.....	4.28	10.30	5.09	11.26	
August 31.....	5.46	11.54	6.24		
			P.M.		
Sept. 1.....	12.52	7.00	1.14	7.31	
Sept. 2.....	1.58	8.04	2.17	8.28	
Sept. 3.....	2.49	8.56	3.08	9.16	
Sept. 4.....	3.32	9.40	3.50	9.58	
Sept. 5.....	4.10	10.20	4.28	10.37	

75th meridian time.

CANAL CLUBHOUSES.

Activities of the Young Men's Christian Association.

COROZAL.

Señor Alcindo Barcellos gave an entertaining piano recital at the local clubhouse on Thursday evening, August 20. About 200 persons were present. Several selections were played by Dr. Hill of Corozal, accompanied by Señor Barcellos on the piano.

The regular weekly pictures were shown Saturday night. Music was furnished by Mrs. Shady and Mr. Sundstrum.

The following high scores were made in bowling during the week ending August 22: *Duckpins*—Davis, 105, 105, 103; Gustavson, 100; Walker, 110, 102; Brien, 107; Koontz, 107. *Tenpins*—Terittier, 202; Sims, 205; Edwards, 210; Koontz, 202.

CULEBRA.

Motion pictures were exhibited in the time office, in the Administration Building annex, on Friday, August 21. There was an attendance of 125.

GATUN.

Mrs. J. L. Caldwell sang two soprano solos at the Sunday evening service on August 23. Mr. F. G. Smith, the secretary, led the song service. One hundred and forty people were present. Mrs. A. P. Boyd will sing at the service to be held on August 30, and Dr. Hill, violinist, will play on September 6. The public of Gatun is invited to attend these services.

The bowling alleys were crowded on Saturday evening, August 22, when ladies' night was observed. The Argyle stringed orchestra furnished the music for the evening. Mr. Gilbert and Mrs. Tricker won first prize.

New students can be taken on at any time for the German class, which meets on Mondays and Wednesdays, at 7 o'clock.

Two hundred and thirty-six soldiers of Companies I and L, Tenth Infantry, have joined the Gatun Y. M. C. A.

Prof. Bermudez and Señora Bermudez will give an exhibition of mind reading at the Y. M. C. A., on Friday evening, August 27.

Instruction on the violin and piano are given at the Y. M. C. A. under competent teachers. For particulars see the secretary.

CRISTOBAL.

Following the luncheon, Friday, August 21, of the men interested in athletics, it was decided to have an athletic committee to promote and supervise the athletics of the Cristobal clubhouse. Mr. Wm. Mathues was elected chairman of all athletics. Mr. Walter Cousineau was elected chairman of the basketball committee; E. H. E. Nash, lawn tennis; Mr. A. Quinn, track team; Mr. Nat Kaunitz, handball; and Mr. Alfred Hansli, volleyball. It was decided to organize immediately a local basketball league, composed of from four to six teams.

Cristobal defeated Corozal at basketball on Saturday, August 22, by a score of 34 to 21. In the indoor baseball game that immediately followed the basketball game, Corozal defeated Cristobal, 19 to 14.

Thirty-five books were added to the library last week. A number of the books were selected to be of aid in the discussion club.

Mr. and Mrs. Grover won first place in the married folks' bowling tournament by one point. The scores follow: Mr. and Mrs. Grover, 495; Mr. and Mrs. Collins, 494; Mr. and Mrs. Buser, 486; Mr. and Mrs. Sloan, 485; Mr. and Mrs. Bevington, 475; Mr. and Mrs. Cotton, 462; Mr. and Mrs. Connor, 414; Mr. and Mrs. Blaney, 377.

Mr. Barte is in the lead in the "Ragtime" bowling tournament, with 36 games to his credit and nine lost. Mr. Collins is a close second, with 32 games won and 10 lost.

High scores in tenpins for the week were: Barte, 232, 222; Pinney, 224; Collins, 203; in duckpins: Henry, 119; Scheid, 111; Sloan, 105; Steele, 104.

An all-Isthmian checker tournament is planned for Saturday, September 5. All men interested in checkers are invited to take part.

Supplies for the Canal.

The following steamers, with supplies for The Panama Canal and Panama Railroad Company, arrived at the ports of Colon and Cristobal during the week ending August 8:

Prinz Sigismund, August 3, from New York, with 194 bundles galvanized iron pipe, 128 pieces galvanized iron pipe, for stock.

Times, August 3, from Gulfport, Miss., with 740 pieces untreated yellow pine piles, for Division of Terminal Construction.

Lewis K. Thurlow, August 4, from New York, with 8,226 pieces clay conduit, 33 sacks dowel pins, for stock; 4,745 pieces clay conduit, 16 sacks dowel pins, for Panama Railroad Company.

Advance, August 4, from New York, with one box

slate slabs, 32 cases woodwork, eight cases hardware, 40 drums hypochlorite of lime, for Division of Municipal Engineering; one propeller, one reel hoisting cable, 13 pieces castings, for Dredging Division; 13 crates steel shutters, one box mining machinery, one box magnetos for Mechanical Division; 16 galvanized boilers, one crate asbestos roofing, three cases electrical material, for Division of Fortifications; four boxes electrical material, one crate asbestos roofing, 25 barrels special governor oil, eight boxes steel plates, eight boxes transformers and oil, for Electrical Division; 98 pieces (1,318 board feet), ash lumber, seven cases brass rods, 200 bundles brooms, nine crates tin kettles, six cases sheet copper, 32 pigs stereotype metal, 350 kegs nads, 205 coils manila rope, four barrels roofing cement, five cases stationery, seven cases tacking, 65 pieces steel plates, 100 drums lubricating oil, 10 packages iron pipe fittings, for stock.

Parismina, August 5, from New Orleans, with 18 reels telephone cable, for Panama Railroad Company; two rough castings, for Dredging Division; 2,958 pieces (65,603 board feet), white oak lumber, 817 pieces (27,145 board feet) yellow pine car lumber, for Mechanical Division; 20 kegs washers, 3,800 cases kerosene, for stock.

Almirante, August 5, from New York, with three pieces steel angles, for Dredging Division; nine cases electrical machinery, 60 reels cable, 10 cases electrical material, for Electrical Division; six crates electrical machinery for Division of Municipal Engineering; four cases electrical machinery, for Panama Railroad Company; 51 cases electrical machinery, for Division of Fortifications; 70 kegs nuts, three cases metallic tubing, for stock.

Atenas, August 6, from New Orleans, with 414 pieces (13,122 board feet) poplar lumber, for Mechanical Division; 19 reels telephone cable, for Panama Railroad Company; 821 bundles doors, windows, etc., 35 packages doors, etc., for permanent buildings.

Pastores, August 7, from New York, with four cases copper sheets, three cases hardware, for permanent buildings; seven cases dredging sleeves, for Dredging Division; two cases locks, 19 boxes machinery, for Division of Fortifications; 12 kegs bolts and clips, for Division of Terminal Construction; four boxes bolt clippers and rasps, 34 boxes trucks, 50 kegs galvanized staples, nine cases talc crayons, five boxes copper wire cloth, five cases brass rods, for stock.

Invergyle, August 8, from New Orleans, with 3,952 barrels paving brick, for Division of Terminal Construction; 547 bundles (13,304 board feet) yellow pine flooring, 313 pieces yellow pine ship lap lumber, 2,836 pieces pipe, 1,500 pieces pipe, and 1,860 pieces fittings, for stock.

Movements of Vessels at Port of Balboa.

The arrivals and departures of steamships at the port of Balboa during the week ending at 8 a. m., August 22, were, as follows:

Arrivals—August 16, *Arizonian*, from Colon; August 17, *Missourian*, and *Isabella*, from Colon; August 18, *Montanan*, from San Francisco; *Quito*, from Tumaco; *Admiral Dewey*, and *Teniente Rodriguez*, from Colon; August 19, *Santa Catalina*, from Chilean ports; *Peru*, (PSN), from Callao; August 20, *Kentuckian*, from San Francisco; *Dalroch*, from Tacoma; August 21, *Pennsylvania*, from San Francisco; *Peter H. Crowell*, and *Admiral Schley*, from Colon.

Departures—August 16, *Pleiades*, and *Pennsylvania*, to Colon; *Arizonian*, to San Francisco; August 17, *Quilque*, to Guayaquil; *Huasco*, to Valparaiso; *Pachitea*, to Callao; *Missourian* to San Pedro; *Isabella*, to San Francisco; August 18, *Lasata*, to Los Angeles; *Teniente Rodriguez*, to Callao; August 19, *Admiral Dewey*, to San Francisco; August 20, *Santa Catalina*, and *Montanan*, to Colon; *Aztec*, to San Francisco; August 21, *Quito*, to Callao; *Admiral Schley*, to San Francisco; *Peter H. Crowell*, to San Francisco; August 22, *Dalroch*, to Limerick.

Legal Notice.

United States of America } In the District Court.
Canal Zone.

The following named American citizens died intestate leaving personal property within the Canal Zone to the amount stated:

Nelson Wheeler U.S.C. \$ 28.99
George Wagner 179.09

The Administrator of Estates has filed a petition for the escheat of the abovenamed estates, in accordance with Section 779 of the Code of Civil Procedure.

Notice is hereby given to all heirs or creditors of the above estates to appear before this court in the court house at Ancon, on September 26, 1914, at 9 o'clock, a. m., to establish their claims, or to show cause why the said estates should not escheat to the Government of the Canal Zone.

E. M. GOOLSBY,
Clerk of District Court.

FOUND—On special train to Balboa, August 4, a kodak. Owner please call at House 161-D, Culebra, or telephone 223, Empire.

MOVEMENTS OF OCEAN VESSELS.

The following is a list of sailings and scheduled arrivals of the Panama Railroad Steamship Line; of the Royal Mail Steam Packet Company; of the Hamburg-American Line, and the United Fruit Company's Line:

NEW YORK TO CRISTOBAL.			
	Sails.	Arrives.	
*Advance.....	P. R. R. Aug. 22....	Aug. 29	
*Panama.....	P. R. R. Aug. 28....	Sept. 3	
*Allianca.....	P. R. R. Sept. 3....	Sept. 9	
*Colon.....	P. R. R. Sept. 9....	Sept. 15	
*Advance.....	P. R. R. Sept. 15....	Sept. 22	
*Panama.....	P. R. R. Sept. 22....	Sept. 28	
*Allianca.....	P. R. R. Sept. 28....	Oct. 4	
*Colon.....	P. R. R. Oct. 5....	Oct. 11	
*Advance.....	P. R. R. Oct. 10....	Oct. 17	
*Panama.....	P. R. R. Oct. 16....	Oct. 22	
*Allianca.....	P. R. R. Oct. 22....	Oct. 28	
CRISTOBAL TO NEW YORK.			
†Colon.....	P. R. R. Aug. 27....	Sept. 2	
†Advance.....	P. R. R. Sept. 3....	Sept. 10	
†Panama.....	P. R. R. Sept. 9....	Sept. 15	
†Allianca.....	P. R. R. Sept. 15....	Sept. 21	
†Colon.....	P. R. R. Sept. 22....	Sept. 28	
†Advance.....	P. R. R. Sept. 28....	Oct. 5	
†Panama.....	P. R. R. Oct. 4....	Oct. 10	
†Allianca.....	P. R. R. Oct. 10....	Oct. 16	
†Colon.....	P. R. R. Oct. 17....	Oct. 23	
†Advance.....	P. R. R. Oct. 23....	Oct. 30	

NEW YORK TO COLON.			
*Zacapa.....	U. F. C. Aug. 19....	Aug. 26	
*Prinz Sigismund.....	H.-A. Aug. 22....	Sept. 1	
*Almirante.....	U. F. C. Aug. 26....	Sept. 2	
Tagus.....	R. M. Aug. 29....	Sept. 6	
*Prinz Joachim.....	H.-A. Aug. 29....	Sept. 7	
*Santa Marta.....	U. F. C. Sept. 2....	Sept. 9	
Metapan.....	U. F. C. Sept. 9....	Sept. 16	
Oruba.....	R. M. Sept. 12....	Sept. 20	
Zacapa.....	U. F. C. Sept. 16....	Sept. 23	
*Almirante.....	U. F. C. Sept. 23....	Sept. 30	
Trent.....	R. M. Sept. 26....	Oct. 4	
*Santa Marta.....	U. F. C. Sept. 30....	Oct. 7	
*Metapan.....	U. F. C. Oct. 7....	Oct. 14	
Orotava.....	R. M. Oct. 10....	Oct. 18	
*Zacapa.....	U. F. C. Oct. 14....	Oct. 21	
Almirante.....	U. F. C. Oct. 21....	Oct. 28	
Danube.....	R. M. Oct. 24....	Nov. 1	

COLON TO NEW YORK.			
Metapan.....	U. F. C. Aug. 27....	Sept. 3	
Oruba.....	R. M. Sept. 1....	Sept. 9	
*Prinz August Wilhelm.....	H.-A. Sept. 1....	Sept. 9	
Zacapa.....	U. F. C. Sept. 3....	Sept. 10	
*Prinz Sigismund.....	H.-A. Sept. 6....	Sept. 15	
Almirante.....	U. F. C. Sept. 10....	Sept. 17	
Trent.....	R. M. Sept. 15....	Sept. 23	
Santa Marta.....	U. F. C. Sept. 17....	Sept. 24	
Metapan.....	U. F. C. Sept. 24....	Oct. 1	
Orotava.....	R. M. Sept. 29....	Oct. 7	
Zacapa.....	U. F. C. Oct. 1....	Oct. 8	
Almirante.....	U. F. C. Oct. 8....	Oct. 15	
Danube.....	R. M. Oct. 13....	Oct. 21	
Santa Marta.....	U. F. C. Oct. 15....	Oct. 22	
Metapan.....	U. F. C. Oct. 22....	Oct. 29	
Tagus.....	R. M. Oct. 27....	Nov. 4	

NEW ORLEANS TO COLON.			
Parismina.....	U. F. C. Aug. 19....	Aug. 26	
*Atenas.....	U. F. C. Aug. 22....	Aug. 27	
Cartago.....	U. F. C. Aug. 26....	Sept. 2	
*Turrialba.....	U. F. C. Aug. 29....	Sept. 3	
Cartago.....	U. F. C. Sept. 2....	Sept. 9	
*Abangarez.....	U. F. C. Sept. 5....	Sept. 10	
Heredia.....	U. F. C. Sept. 9....	Sept. 16	
Atenas.....	U. F. C. Sept. 12....	Sept. 17	

COLON TO NEW ORLEANS.			
†Abangarez.....	U. F. C. Aug. 27....	Sept. 1	
Heredia.....	U. F. C. Aug. 27....	Sept. 3	
†Atenas.....	U. F. C. Sept. 3....	Sept. 8	
Parismina.....	U. F. C. Sept. 3....	Sept. 10	
†Turrialba.....	U. F. C. Sept. 10....	Sept. 15	
Cartago.....	U. F. C. Sept. 10....	Sept. 17	
†Abangarez.....	U. F. C. Sept. 17....	Sept. 22	
Heredia.....	U. F. C. Sept. 17....	Sept. 24	

*Will carry mail from the United States.
†Will carry mail to the United States.
‡Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.
§Sailings temporarily suspended.

Estate of Joseph Cavanaugh.

ANCON, C. Z., August 18, 1914.

The undersigned has been appointed administrator of the estate of Joseph Cavanaugh, deceased, and any claims against this estate, or any information which might aid in the recovery of money or property belonging to it, should be presented at once to E. Frederick Quimby, Ancon, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate.

E. FREDERICK QUIMBY,
Administrator of estate of Joseph Cavanaugh, deceased.

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, SEPTEMBER 2, 1914.

No. 2.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,
THE CANAL RECORD,
Balboa, Canal Zone,
Isthmus of Panama.

No communication either for publication or requesting information will receive attention unless signed with the full name and address of the writer.

NOTES OF PROGRESS.

Revised Estimate of Excavation.

The revised estimate of excavation as of July 1, 1914, brings the grand total estimate of Canal excavation up to 238,845,587 cubic yards, which is an increase of 64,178,993 cubic yards, as compared with the estimate of December 1, 1908. The following table shows the increases in estimates which have been made from time to time since that of December 1, 1808:

ESTIMATES.	Increase.	Total estimate.
	<i>Cubic yards.</i>	<i>Cubic yards.</i>
December 1, 1908.....		174,666,594
July 1, 1910.....	7,871,172	182,537,766
July 1, 1911.....	4,676,278	187,214,044
September 1, 1911.....	8,109,335	195,323,379
July 1, 1912.....	16,903,000	212,227,000
November 1, 1912.....	277,759	212,504,138
February 1, 1913.....	5,634,161	218,138,299
July 1, 1913.....	14,214,701	232,353,000
July 1, 1914.....	6,492,587	238,845,587
Total.....	64,178,993	238,845,587

Slides in the Culebra Cut section have been responsible for over 50 per cent of the yardage involved in the total increase, as shown by the following table:

ESTIMATES.	Increase due to slides.
	<i>Cubic yards.</i>
July 1, 1910.....	6,104,150
July 1, 1911.....	4,676,278
July 1, 1912.....	4,615,000
February 1, 1913.....	5,634,161
July 1, 1913.....	11,280,000
July 1, 1914.....	2,848,636
Total.....	35,158,225

Of the remainder of the material involved in the total increased estimate, the principal factors have been removal of silt from the Chagres section, excavation for the terminal improvements at the Atlantic and Pacific entrances, including coaling plants, dry docks and the inner harbor at Balboa, and silting in both entrances, the latter properly chargeable to maintenance work. The recent estimates make provision for 10,695,000 cubic yards pertaining to terminals, no quantities for

which were included in the 1908 estimate. The cost was provided for under "Contingencies."

Of the remaining excavation to be accomplished as of August 1, 1914, aggregating 14,772,224 cubic yards, including both wet and dry excavation, 62,600 cubic yards are to be removed at the Cristobal coaling plant, 28,000 cubic yards in sundry installations at Gatun Locks, and 113,186 cubic yards at the Balboa terminal. Of the excavation by dredges, 1,900,400 cubic yards remain to be removed from the Atlantic channel, 1,500,000 cubic yards of which is properly chargeable to maintenance, and 1,203,929 cubic yards, consisting of shoals in Limon Bay, excavation at the Cristobal coaling plant, and other accessories. Within the limits of the old Central Division, 4,581,692 cubic yards remain to be taken out chiefly on account of slides, and 251,000 cubic yards from the channel in the old Chagres section, north of Gamboa. At Balboa, 6,631,417 cubic yards remain to be excavated, 3,202,933 cubic yards in connection with terminal improvements, and the remainder from the Pacific channel, where the excavation will be largely of a maintenance nature.

New Canal Tugs Named.

The two Type A tugs, now under construction by the Staten Island Shipbuilding Company for use in The Panama Canal and approaches thereto, will be named the *Gorgona* and the *Tavernilla* respectively. These names were those of two important Canal Zone settlements during the construction period of the Canal, later abandoned on account of being in the Gatun Lake area.

Rules Governing Transfer of Employees from or to the Isthmian Service.

Effective September 1, the following rules will govern employees transferred to The Panama Canal Service in the United States, and *vice versa*; and employees temporarily detailed to duty in the United States or on the Isthmus.

When an employee leaves the Isthmus to work for The Panama Canal in the United States his service on the Isthmus will be terminated. He will be paid off and all obligations will be cancelled the same as though he were leaving the service altogether. He will be paid for any leave which can be commuted into cash, or he will be given such annual leave as may be due him. The same rule will apply to employees in the United States transferred to the Isthmus. If they have not used as much of their annual leave in the United States as they might have done under the rules, they will forfeit the unused part, and their services will terminate on the date they sail for the Isthmus, on which date a new employment in the Isthmian service will begin. When an employee is sent to the United States for temporary duty, he will be given a travel order setting forth the conditions of his employment in the United

States, and his service will not be broken. The same principle will apply to employees in the United States temporarily detailed to duty on the Isthmus.

Isthmus No Place for Men Seeking Work.

The Chief of Police has advised that many of the laborers discharged at the plantations of the United Fruit Company at Bocas del Toro are arriving at Colon; that there are now approximately 1,000 idle laborers in that city, and that this number, owing to the lack of work at the docks and elsewhere, is constantly augmenting. Representations have been made to the Panama Government to the effect that the laws restricting immigration be rigidly enforced, especially Article 2 of decree No. 19 of March 22, 1909, wherein it is provided that aliens shall not be permitted to land on the Isthmus unless they have a sum of money equivalent to 15 balboas in their possession, and, in addition, the American consular representatives in the West India islands have been requested to spread the information broadcast that there is no more work to be had on the Canal. The continued arrival of the unemployed at Colon, in the face of the present labor congestion menaces the welfare and security of the resident population, and it is necessary that all reasonable means be taken to curtail this undesirable immigration.

Transisthmian Duct Line Reaches Cristobal.

Excavation for the northern section of the 4-way transisthmian duct line for telephone and telegraph and railway signal cables was completed on Thursday, August 20. This section extends from Gamboa to Fourteenth street, Cristobal, at a point near interlocking tower A of the Panama railroad. On the southern section, from Gamboa to Balboa, excavation of the trench has reached Miraflores tunnel dump, and the laying of duct is in progress south of Pedro Miguel.

The laying and concreting of duct in the northern section is in progress between Mount Hope and Cristobal. From a point opposite the pumping plant of the waterworks at Mount Hope, the line is to be of doubled capacity, or 8-way, to Fourteenth street, where it connects with a 12-way line which is the permanent trunk of distribution through Cristobal and Colon. The existing duct for the distribution system at the northern terminal has been completed for about a year, but authority was granted on August 21 for an additional line, 220 feet long, to extend from the manhole beneath building No. 2, Cristobal, to the new Pier 10, and for a 3,200-foot line to extend from the Garfield House, the present end of the line in the Colon Beach district, to the Colon radio station.

A branch will be laid at Darien, and an extension built at Balboa, for the radio stations at those points. The line at Darien, branching directly off the main transisthmian line, will be about 300 feet long; a joint

duct line for all cables for the Balboa radio station will extend beyond the Balboa town-site about 3,000 feet.

The pulling of cables into the completed portion of the duct has advanced from Gamboa to Mindi, in the northern section, and has not been begun in the southern section. Two cables are at present being pulled in two of the ducts; one is a duplex cable containing 50 pairs of wires, for the telegraph and telephone service, and the other is for the electrical control of the automatic signal system of the Panama railroad. Both cables have been spliced and tested to a point about seven miles north of Gamboa. The two other spaces of the 4-way duct are not to be occupied at present. One of these has been reserved for the Central and South American Telegraph Company, for its cable service, and the other for future requirements.

Balboa Heights Money Order Office.

Effective September 1, the post-office at Balboa Heights became a money order office, for the issuance and payment of money orders.

Sash Operating Device at Ancon Commissary.

A sash operating device has been installed by the Supply Department in connection with the opening and closing of windows in the new Ancon commissary. Its chief difference from other apparatus for this purpose is the method of operation, which provides for a central control. This control is actuated by a hand wheel located at a convenient height from the floor, and is transmitted to a horizontal shaft by a worm and gear. At each window there is a rack and pinion that opens and closes the sash as the horizontal shaft is made to revolve. In this manner, the sashes in the 21 windows at the commissary are opened or closed in one operation. The apparatus has proved especially convenient at the commissary in view of the height of the windows from the floor. It is manufactured by Lord and Burnham of New York City.

Assembling the "Teredo No. 2."

The Dredging Division is constructing, out of old equipment, a drill barge to take the place of the *Teredo*, which was wrecked and sunk by an explosion at the base of Cucaracha slide. It will be known as the *Teredo No. 2*. Three drill frames salvaged from the old *Teredo* will be mounted on barge No. 7, which has been retired from the Chame sand service. Steam will be supplied by a Scotch boiler taken out of the old double-end clam-shell dredge No. 3, at the time that vessel was converted into the hydraulic grader No. 1, new high pressure boilers being installed for the heavy pumping service. Electric lighting

equipment, pipes, valves, etc., will be reclaimed for the *Teredo No. 2* from the old French ladder dredge *Badger*, which has been condemned and is being dismantled at the Cristobal dry dock.

PERSONAL.

Dr. H. T. Summersgill, superintendent of the leper and insane asylum when it was located at Miraflores, and later assistant chief medical clinic at Ancon Hospital, has recently been appointed superintendent of the University Hospital at San Francisco, as well as taking charge of the present University of California Medical School. In addition, he will aid in completing the plans for the new teaching hospital buildings, for the erection of which, friends of the university have donated \$615,000. Since separating from the Canal service in June, 1908, Dr. Summersgill has been at the head of a number of different hospitals, and at the time of his recent appointment was superintendent of the New Haven hospital.

Skiffs for Use of Lock Pilots.

Requisition has been forwarded to the United States for six skiffs, which will be stationed one at each end of each of the Canal locks for the purpose of putting pilots on board of approaching ships, and taking them off again when the vessel has passed through; also, for running lines. These boats will be about 15 feet long, light, but very strongly built, with room for two oarsmen. They will have smooth sides, plenty of beam, be of light draft, broad in the stern sheets, and fitted with a painter, boathook, two stretchers, and a rudder and yoke.

Employees' Change of Address.

In order to prevent delay in the delivery of mail to employees who have recently changed their post-office address, especially those who have moved to Balboa Heights, the Director of Posts requests that their correspondents and the publishers of newspapers and magazines to which they subscribe be advised of the change.

The superintendent of clubhouses and playgrounds has been granted the temporary use of a plot of ground between the Balboa coral and the street railway tracks for the laying out of baseball grounds.

Married.

HILL-NORTH CUTT—On Friday, August 14, at Oklahoma City, Okla., Katharine Northcutt of Columbia, Mo., to Frank M. Hill of Memphis Tenn., the Rev. R. E. Goodrich of St. Luke's Church officiating. Canal Zone residence Balboa.

SEELEY-ENSMINGER—On August 12, 1914, at the Methodist church at Emporium, Pa., Miss Maria Luisa Enslinger, formerly of Panama, to Mr. Morris M. Seeley of Balboa. Residence, Ridgway, Pa.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Anderson, Thomas.....	18757	Jamaica.....	New Gatun....	Panama railroad	August 24.
Jones, Eleazer A.....	49657	Barbados.....	Panama.....	Balboa terminals	August 19.
McLaughlin, Thomas.....	2443	U. S. A.....	Corozal.....	Trans. Dept....	August 22.
Nurse, Henry.....	46586	Barbados.....	Panama.....	Perm. buildings..	August 25.

The estates of these deceased employees of the Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Ancon, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

ZONE ATHLETIC TEAM.

Plan to Organize one for the San Francisco Exposition Meet.

The project of sending a team of athletes to the San Francisco exposition to represent The Panama Canal has been approved by the Governor, providing sufficient funds can be raised, and the amateur status of the athletes composing the team can be established with the Amateur Athletic Union.

While there are no Government funds available for this purpose, permission has been given for the raising of money by subscription and entertainments in the clubhouses, and it is thought that in this way sufficient money can be secured to defray at least a portion of the expenses of the team. A series of vaudeville entertainments is now under consideration, the receipts of which will be used for this purpose.

The tentative plans contemplate the sending of a team of between 10 and 12 men, to be chosen, as follows:

The forming of a team will be placed in the hands of a committee. Three experts in athletic work, will be appointed by the superintendent of clubs and playgrounds and approved by the Executive Secretary; these two officials, or their representatives, will be the members of the committee. This committee will analyze the results of various athletic meets held in the Zone, and select the strongest team of athletes now on the Isthmus. These athletes will compete in the Corozal meet on Labor Day, under the title of "Exposition team." The results of the Labor Day meet will be analyzed by the same committee and changes made in the team if, in the opinion of the committee, a stronger one can be formed. The team will, in turn, compete as a team in a meet to be held on Thanksgiving Day, when the results will again be analyzed and the same procedure followed in the Washington Birthday meet, in 1915, immediately after which the committee will make final decision as to the team to represent the Canal Zone at the exposition.

Although records for swimming events on the Isthmus have not been carefully preserved, a comparison of Panama Canal records made in open water, with tank records, indicates that the Zone swimmers will be able to compete in the open water events at San Francisco.

A meeting of the tentative San Francisco exposition team, chosen for a tryout in the Labor Day meet, was held at the Hotel Tivoli on Saturday evening, August 29. The athletes all agreed to the plan outlined for the gradual forming of a team in a series of meets, and consented to sign articles of training. A committee has been appointed to select a coach and trainer. The team will meet once a week for practice, in addition to individual training. It is estimated that about 100 entries have already been received for the athletic meet on Labor Day. The games committee have decided to hold entries open until Friday. They should be in the hands of the clerk of the course by Friday noon.

Sanitary Census of Colon in Progress.

Enumeration for the sanitary census of the city of Panama was completed on Saturday, August 29, and the compilation of returns is being made at the office of the Health Officer of Panama. Enumeration in the city of Colon was begun on Monday, August 31, by two of the three sanitary inspectors who made the canvass in Panama.

EXECUTIVE ORDER

To Amend the Executive Order of April 15, 1913, entitled "Executive Order to Provide Maritime Quarantine Regulations for the Canal Zone, and the Harbors of the Cities of Panama and Colon, Republic of Panama."

By virtue of the authority vested in me, I hereby establish the following Order for the Canal Zone:

I. The certificate to the form of original bill of health prescribed by Section 1 of the Executive Order of April 15, 1913, entitled "Executive Order to provide maritime quarantine regulations for the Canal Zone, and the harbors of the cities of Panama and Colon, Republic of Panama," is hereby amended to read, as follows:

I hereby certify that the vessel has complied with the quarantine rules and regulations of The Panama Canal, and that the vessel leaves this port bound for _____, Canal Zone, or _____, Republic of Panama, via _____.

Given under my hand and seal this _____ day of _____, 191—.

(SEAL)

(Signature of Consular Officer.)

II. The certificate to the form of supplemental bills of health prescribed by Section 1 of the abovementioned Executive Order is hereby amended to read, as follows:

I certify also that with reference to the passengers, effects, and cargo taken on at this port the vessel has complied with the quarantine rules and regulations of The Panama Canal.

Given under my hand and seal this _____ day of _____, 191—.

(SEAL)

(Signature of Consular Officer.)

III. Section 1 of the above mentioned Executive Order is hereby amended by adding the following paragraph to said section:

Vessels clearing from a foreign port to a port in the United States or one of their dependencies, and touching at any port of the Canal Zone, or Panama, or of Colon, Republic of Panama, shall not be required to obtain an additional bill of health under the quarantine rules and regulations of The Panama Canal, but it shall be sufficient that such vessel obtain extra copies of the bill of health and of the supplemental bill of health, if any, issued in the foreign port by the officer authorized by the quarantine laws of the United States. Such extra copies of the bill of health, or of the supplemental bill of health, as the case may be, shall be delivered by the captain of the vessel to the quarantine officer of The Panama Canal upon arrival of the vessel in ports of the Canal Zone, or the ports of Panama or Colon, Republic of Panama.

IV. Section 16 of the said Executive Order is hereby amended by adding thereto the following paragraph:

The baggage of cabin passengers embarking at infected ports shall be treated as provided in this section for baggage of steerage passengers.

V. The second paragraph of Section 19 of the abovementioned Executive Order is hereby amended to read, as follows:

(a) Vessels from the United States or their dependencies; (b) Vessels from foreign ports; (c) Vessels with sickness

aboard; (d) Vessels from Panamanian ports where any quarantinable disease prevails; (e) Vessels from Panamanian ports carrying passengers or articles suspected by the quarantine officer as being capable of conveying the infection of a transmissible disease.

VI. Section 26 of the abovementioned Executive Order is hereby amended to read, as follows:

Section 26. The quarantine officer, after his inspection of the vessel and its documents, shall decide whether said vessel or its personnel or passengers, or any article aboard said vessel is liable to convey any of the following diseases: Plague, yellow fever, cholera, smallpox, typhus fever, or leprosy; and, if so, such vessel shall be placed in quarantine and forbidden entry until free from such liability of conveying any such diseases, and he shall take such measures in respect to the vessel, its passengers or personnel, or of cargo as in his judgment may be required to prevent the entry of such diseases into the Canal Zone, or the cities of Panama or Colon, Republic of Panama.

VII. Section 34 of said Executive Order is hereby amended to read, as follows:

Any person violating any of the provisions of these regulations shall be punished by a fine not exceeding Five Hundred Dollars (\$500), or by imprisonment in jail not exceeding ninety (90) days, or both such fine and imprisonment at the discretion of the court. The punishment herein prescribed shall be imposed by the district court of the Canal Zone.

VIII. This Order shall take effect from and after the date upon which the Panama Canal is officially and formally opened for use and operation by the proclamation of the President of the United States.

WOODROW WILSON.

THE WHITE HOUSE,

August 14, 1914.

[No. 2020.]

Changes in Police Districts.

In accordance with a general order issued from the office of the chief of police and fire division, approved by the Governor, effective September 1, the number of police districts in the Canal Zone has been reduced to two, namely, Balboa and Cristobal. The boundaries of these districts are coextensive with the boundaries of the judicial subdivisions of the Canal Zone, established by Executive Order of the President, dated March 12, 1914, and effective April 1, 1914.

The police district of Empire has been abolished, effective August 31, 1914, and that part of the district lying within the Balboa judicial subdivision has been absorbed in the Balboa police district, and that part lying within the Cristobal judicial subdivision, has been absorbed in the Cristobal police district.

The boundary limits of the Culebra sub-district include now only that territorial section of the Canal Zone lying between the Canal and the west boundary of the Canal Zone, the north boundary of Pedro Miguel subdistrict, and the south boundary of the Cristobal police district.

That part of the Canal Zone lying east of the Canal, between the Chagres River and

the present north limits of the Pedro Miguel police subdistrict, is designated as included within the Pedro Miguel subdistrict. The subdistrict of Paraiso has been abolished and absorbed within the other subdistricts named.

The Balboa police district central station is to be located at Ancon until further orders, and will have the following substations and call stations:

Substations—Culebra, Pedro Miguel, Corozal, Las Sabanas, and Naos Island.

Call stations—Balboa dock.

The Cristobal police district central station is located at Cristobal, and has the following substations and call stations:

Substations—Gatun, Gamboa, Frijoles, and Monte Lirio.

Call stations—Colon Hospital, and Margarita Island (Coco Solo Point).

The usual transfer of office property and records of stations affected has been made. The police records at Empire central station were packed in cases, each case being distinctly marked, describing contents, and sent to the Culebra substation for storage.

New Pastor of Union Church.

The Rev. William Flammer, the new minister of the Union Church of the Canal Zone, will sail from New York for Colon on September 8. He will be accompanied by his wife and three children. The parsonage for his residence, a Type-17 house removed from Culebra, is being erected at Balboa, and the committee expects to have it ready for occupancy on his arrival. Immediately after the minister takes charge, the schedule of the pastoral work in connection with the church will be outlined.

Canal Zone Motorcycle Club.

The Canal Zone Motorcycle Club was organized on August 23, with headquarters at Ancon. A second meeting of the club was held at the Ancon lodge hall on August 30. The club will hold a sociability run on Labor Day, September 7. All riders are invited to attend whether members of the club or not. The start will be made at 8.30 a. m., from McIntyre's garage, on the right hand side of the road just after crossing the railroad tracks at Panama, below the Hotel Tivoli. It is requested that participants bring their lunches.

Obituary.

Ray M. Page, a nonemployee, living at Mount Hope, died on August 24 at Santo Tomas Hospital. He was 32 years of age, single, and is survived by his cousin, Fred Harman, living at Mount Hope.

Funeral services in connection with the death of Charles Irving Evans, son of Dr. and Mrs. Forrest M. Evans of Balboa, will be held at St. Luke's Hospital chapel, Ancon, on Sunday morning, September 6, at 11.15 o'clock. Rev. C. W. Ports will officiate, and the Balboa Union Sunday school will be present. The child died on Tuesday, August 28. He was five years of age, and was born at Bocas del Toro.

Resolutions of Sympathy.

At the last regular meeting of Isthmian Canal Rebekah Lodge, No. 1, of Ancon, resolutions of sympathy and respect were passed on the death of Mrs. Helen Wago, one of its members, formerly residing at Corozal.

CANAL SIGNALS.

Code Adopted for Use in Operating Vessels in the Canal and the Locks.

A signal code has been adopted in connection with the operation of vessels through the Canal, and approaches thereto, together with instructions as to its use, as follows:

Vessels should hoist their designation signal when approaching and entering the terminal ports, and when passing Gamboa signal station.

The signal stations at the terminal ports and at Gamboa will be prepared to make and answer signals by the International Code; in addition, the station at Gamboa will be equipped with shapes and lanterns for making special signals by day and night.

The ends of the approach walls at each lock will be fitted with a signal apparatus for directing the movements of vessels in making the approach.

All vessels in transit through the Canal must abide by the orders conveyed by signals, or otherwise; and any violation of these rules will make the vessel liable for damages for such violation.

Vessels should be ready in advance to make or answer signals to the signal stations, or answer those made from the locks. The interrogatory and answering pennant of the International Code may be used by vessels in conjunction with the special signals in use at the locks and Gamboa signal station.

All signals made by locks or signal stations, be they special or otherwise, when understood, shall be answered by hoisting the answering pennant of the International Code.

During daylight, a vessel passing through the Canal will fly its colors at all times, and on coming in sight of the signal station at Gamboa or a terminal port, will immediately hoist its designation signal and keep it flying until answered; in case no instructions to the contrary be given, it will continue on its course.

SPECIAL CODE AT GAMBOA SIGNAL STATION.

The following code will be used at the Gamboa signal station, and at any others that may be established later:

The shapes at signal stations will be a sphere and a cone, as illustrated herewith:



At night, a white lantern will replace the sphere and a red lantern the cone.

Signals will be hoisted at yard arms; during the day, a red cone at the masthead will refer to vessels bound to the northward, from Balboa to Colon, and a black sphere to vessels bound the other way; at night, a red light at the masthead will refer to northbound vessels, and a white light to southbound vessels.

SPECIAL CODE.

Spheres and cones in the order named.

FROM SIGNAL STATION.

One sphere—"Proceed."

Two spheres—"Proceed at half speed."

Three spheres—"Proceed cautiously, keep sharp lookout for Canal craft, steamers, or obstructions."

One cone—"Moor at this station."

Two cones—"Moor at next station, unless otherwise ordered."

Three cones—"Slow down or stop for communications or orders."

FROM SIGNAL STATION TO CANAL CRAFT.

Three cones—"Wish to communicate, have orders or message for you."

FROM VESSELS TO SIGNAL STATION.

One cone—"Will moor at this station, unless otherwise ordered."

Two cones—"Will moor at next station unless otherwise ordered."

Three cones—"We wish to communicate."

One sphere and one cone—"Our engines and steer-gear are disabled, require a tug."

Two spheres and one cone—"We are aground, require assistance."

One sphere, one cone, and one sphere—"We have fire on board (or are leaking badly.) Request that salvage tug be sent."

One sphere and two cones—"Passed a vessel (or Canal craft) apparently in distress. Advise reporting it and sending tug."

One cone and one sphere—"Request medical assistance at next lock or terminal."

Two cones and one sphere—"Our radio is out of order and not working."

FROM EITHER ONE TO THE OTHER.

One cone and two spheres—"Do not understand your signals."

SIGNALLING VESSELS AT THE LOCKS.

A scheme of signalling has also been adopted in connection with the passing of vessels through the Canal locks. A large red arrow will be placed near each end of each middle approach wall, which will be used in giving the following signals:

Arrow pointed vertically upward—"Not ready, keep away," meaning that lockage cannot take place for several hours.

Arrow pointed upward at an angle of 45 degrees—"Keep away, but be ready to enter on signal."

Arrow pointed downward at an angle of 45 degrees—"Moor against approach wall near outer end."

Arrow in a horizontal position—"Enter."

In the last three signals, the head of the arrow points toward the lock chamber to be used. In addition to the arrow, the "Answering" and "Interrogatory" pennants of the International Code will be used in connection with ships' signals.

Employees Suffering from Malaria.

The Chief Health Officer has recommended to the Governor that severe measures be resorted to, if necessary, to enforce compliance with recently promulgated regulations for persons suffering with malaria.

The following notice has been placarded prominently all over the Canal Zone:

1. Patients suffering from malaria often retain the germ of the disease in their blood after all the symptoms have disappeared, so that they are apparently well. Such cases are a danger to the community, in that they infect the mosquitoes and through them other people. Besides this, such cases are not permanently cured and will relapse whenever their resisting power is lowered from any depressing cause.

2. As patients naturally do not desire to remain in hospital after they feel well enough to work, it is necessary that they should continue under treatment in quarters until they are permanently cured. It is, therefore, directed that employees suffering from malaria shall, when discharged from the hospital, report to their district physician for treatment, and shall continue to report for treatment for at least one month and until pronounced cured.

3. Any employee who wilfully fails to comply with this regulation shall be suspended without pay, or be discharged from the service.

4. Heads of departments and divisions, hospital and district physicians, foremen and others concerned, are directed to do all in their power to assist in enforcing this order.

Approved:

GEO. W. GOETHALS,
Governor.

CHAS. F. MASON,
Chief Health Officer.

Despite this notice, and instructions given all malarial patients on their discharge from the hospital, the reporting to district physicians has not been carried out satisfactorily. While great progress has been made in controlling malaria on the Isthmus, so that the

general rate among employees is lower than in any preceding year, it is now felt that not much more progress can be made until all carriers of the disease are brought under treatment.

Noncompliance with the instructions has been almost entirely confined to silver employees. They have apparently either not understood the instructions, or have not comprehended the importance of complying with them.

Award for Trench Excavation.

Bids for the excavation of the trench for the new water main between Gamboa and Miraflores were opened at the office of the Chief Quartermaster on August 10. Three proposals were received, as follows: R. W. Hebard, 77 cents per cubic yard for the earth excavation, and \$2.84 for the rock; C. J. Alberts, 74 cents per cubic yard for the earth, and \$1.58 per cubic yard for the rock; A. B. deObarrio, 60 cents per cubic yard for the earth, and \$1.60 per cubic yard for the rock. On the combined bid for rock and earth excavation, A. B. deObarrio was the lowest, and has been awarded the contract, making bond in the sum of \$12,000.

The contractors' forces have begun work in the rock section, south of Gamboa. No excavation for the trench will be permitted in the sections where soft material predominates until the pipe laying gang is ready to begin work. A quantity of the pipe has been received and is being distributed.

Motor Car House near New Administration Building.

Forces of the building division of the Supply Department are erecting a motor car house just east of the temporary station of the Panama railroad at Balboa, at the foot of the hill on which the new Administration Building stands. The foundation will be of concrete and the superstructure will be of wood. It will be 82 feet eight inches in greatest length by 39 feet eight inches in greatest width, and the central portion will be two stories in height. It will be equipped with four tracks, connecting with a spur from the main line of the railroad, and each track will run over a concrete repair pit. Adjoining the main room will be rooms for the storage of gasoline and oil; for a small repair shop, equipped with a lathe, a milling machine, a drill press, etc., and for quarters for a hostler. On the second floor will be family quarters for the machinist in charge, who will also be a chauffeur for emergency calls. These quarters will consist of a living room, three bedrooms, kitchen, and bath, and will have porches in front and rear.

Excavation for the foundation was begun on July 29. The foundation, floors, the four repair pits, and most of the frame work have been completed. The finishing work is in progress and it is expected that the house will be ready for use within a short time.

Order of Isthmian Conductors.

The next regular meeting of the Order of Isthmian Conductors will be held at Ancon lodge hall on Sunday, September 6, at 9.30 a. m. GEO. B. ALLEN, Secretary-Treasurer.

CRISTOBAL, C. Z., August 31, 1914.

Contract has been entered into with Mr. Thomas M. Blake of New York City, for furnishing 1,000,000 pounds of No. 1 timothy hay at the rate of \$1.10 per hundredweight.

CANAL WORK IN JULY.

Monthly Report of the Governor to the Secretary of War.

CULEBRA, C. Z., August 25, 1914.

The Honorable the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of operations on the Isthmus for the month of July, 1914:

Department of Operation and Maintenance.

The Division of Erection was abolished on July 15, and the work of continuing the erecting of machines, etc., was taken over by the superintendents of the locks.

Six towing locomotives were received, making 27 received up to July 31. Work on all guard valve machines was completed. The transformer rooms at Gatun were completed. Twenty-three thousand seven hundred and twenty feet of cable were pulled into ducts, making a total to date of 2,406,134 feet. Mechanical and electrical installation of chain fender machines was advanced to within 20 per cent of completion. Of the 22 fender chains on order, four complete chains have been received and installed, and the installation of others is advancing as rapidly as the material is received.

Twenty-one lockages were made at Gatun, 26 at Pedro Miguel, and 26 at Miraflores.

Electrical Division—The hydroelectric station at Gatun was regularly operated on load after July 13, and the steam station was closed. The output of the hydroelectric station was 416,460 kilowatt-hours. The output of all the other stations was 2,258,367 kilowatt-hours, of which 1,898,580 were from Miraflores steam plant. This division took over what work remains on the transisthmian transmission line, and on the permanent substations, on July 15.

Municipal engineering—Maintenance and repair work, and some construction for the Panama Government, were carried on in both the northern and southern districts. Construction of the new waterworks for Panama city and the Pacific terminus of the Canal was advanced, and work on the Gamboa pump station was continued.

Meteorology and hydrography—Rainfall was below station averages for all stations, except one, the totals ranging from 2.42 inches at Trinidad, to 10.74 inches at Colon. The total yield for Gatun Lake watershed was 67 per cent below the 25-year normal for July. There was no increase or decrease in storage during the month, the elevation of the lake on July 1 and July 31 being 84.85 feet above sealevel.

Division of Terminal Construction.

PACIFIC TERMINALS.

Dry dock and entrance basin—Studies and designs of the dry dock were continued, and the cross section of the entrance basin wall was decided upon, and work on the design was continued. Three shovels continued excavation, removing 42,930 cubic yards. Excavation in the entrance basin amounted to 1,737 cubic yards, and the work there is almost completed.

Quay wall and piers—Design included a study for the installation of tide gages on pier No. 1, tracing of the gangway for Quay Wall i-j-m-n, study of guides for the pontoons, and designing of floor slabs. Construction included the placing of 3,291 cubic yards of concrete in the floor and 241 cubic yards in the substructure of pier No. 1, the laying of railroad track on the pier, the continuation of caisson

sinking for Quay Wall e-f, and the completion of anchorages for Quay Wall f-g.

Coaling plant—Design work included supports for the berm cranes and internal retaining wall, plans for the modification of the berm cranes, studies for the foundations, floor slabs, decking, curtain walls, and piers of the unloader wharf; and studies for the foundation and general layout of the reloader wharf. Construction included the placing of 1,604 cubic yards of concrete, and of 8,498 cubic yards of backfill in connection with the berm crane supports and the retaining wall. Work was begun on the piers for the unloader wharf.

Permanent shops—Design and construction were continued, and maintenance work was done.

ATLANTIC TERMINALS.

Coaling plant—The erection of construction trestles was continued. The west bridge track wall was practically completed. Caisson work advanced satisfactorily; 30 caissons have been driven to rock under the reloader wharf, and driving has commenced on 29 caissons for the unloader wharf. About 600 linear feet of the east shore of the site have been riprapped with hard rock brought from the dry dock site at Balboa.

BREAKWATERS.

Naos Island—Settlement on the breakwater was very slight and confined to a short stretch of the mole. Fill was not pushed as rapidly as in past months, and only 19,980 cubic yards of material were dumped. A measured line was laid out along the mole and from it there was begun a survey which will show the condition of the breakwater and the surrounding harbor bottom.

East breakwater, Colon—Construction of trestle was continued, 245,472 feet of pile having been driven during the month. Wash borings and resistance tests were continued, and the survey on the breakwater site was completed.

RADIO STATIONS.

At Darien, the contractor proceeded with the erection of tower No. 1, and at the end of the month it had been erected as high as the 150-foot level. Design of the electrical substation was advanced.

FUEL OIL PLANTS.

Bids from 26 bidders on special oil pumps, manifold fittings, oil line pipe, and pipeline fittings were canvassed, and recommendations for awards were made. An estimate of the total cost of the plants at both entrances was prepared.

Preliminary drawings, including general layout of foundations for boilers, pumps, buildings, etc., at the Pacific terminus, were prepared. Surveys were made to determine the route best adapted to gravity flow of oil from storage tanks to the handling plant. Dredging of the oil ship berth was completed, and work on the design of a landing for oil boats was advanced.

At the Atlantic entrance, the location of the handling plant was determined, and a preliminary survey for excavation purposes was begun.

LANDSCAPE ARCHITECT.

Work in connection with the new village at Balboa and Balboa Heights was continued. Experiments with Telford base for roads instead of MacAdam proved successful, the former taking the asphaltum coat perfectly. Roads under the new system are being constructed at greatly reduced cost.

Dredging Division.

The status of dredging on July 31 was, as follows:

LOCATION.	July Excavation. Cu. yds.	Remaining, July 31. Cu. yds.
Miraflores Locks to Pacific..	28,679	1,638,733
Miraflores Lake		306,434
Culebra Cut	431,634	4,581,692
Gatun Lake		51,090
Gatun Locks to Atlantic	57,678	448,700
Total Canal prism	517,991	7,026,559
Balboa terminals	311,067	
Atlantic terminals	223,390	
Gravel	37,950	
Sand	22,209	
Grand total	1,122,598	

Culebra Cut—The excavation in Culebra Cut during the month was, as follows:

LOCATION.	Earth. Cu. yds.	Rock. Cu. yds.	Total. Cu. yds.
Empire slide			
Gamboa dike		3,674	3,674
Culebra slide, east	62,836		62,836
Culebra slide, west	56,320		56,320
Cucaracha slide	47,997	260,807	308,804
Total	47,997	383,637	431,634

Mechanical Division.

At Balboa shops, the work continued to be on the repair of dredge parts, construction of pontoons and caissons, rebuilding of Lidgerwood cars, and general manufacturing in all the shops. At Cristobal, eight vessels were docked, construction of caissons for the Cristobal coal plant was continued, and repairs to floating equipment were carried on. At Paraiso, the work was almost exclusively on repairs to dredging equipment.

Shop orders authorized during the month numbered 756, completed 807, uncompleted at end of month, 436. The output of the foundry was 226,701 pounds of iron, 47,488 pounds of steel, and 10,602 pounds of brass. Hostling was done on 5,568 pieces of equipment; shop repairs were made on 695 cars, and field repairs on 4,811.

Division of Canal Transportation.

Routine work of the lighthouse service, issuing of licenses to navigators and chauffeurs, inspection and certification of vessels, inspection of boilers, and appraisal of vessels, was done. A general survey of the floating equipment at the Atlantic and Pacific entrances to the Canal was made. An investigation was made of the accident to the drill barge *Teredo* in Culebra Cut on July 20.

The Board of Admeasurement rendered decisions on the following questions: As to the measurement of

1. Irregularly piled deck loads.
 2. Rooms originally built for carrying passengers, but used for ship's officers, ship carrying freight only.
 3. Dining saloon under No. 2.
 4. Locker space, underneath stairs, used for medicine and cleaning gear.
 5. Open space underneath stairs, leading from passageway to deck above, used only by officers of the ship.
 6. Deck lockers used for boatswain's stores.
 7. Space occupied by clerks, pursers, stewards, cooks, on ships carrying freight only.
- Ninety-six vessels arrived at, and 95 departed, from the port of Cristobal. Of these, 52 were British, four French, 14 German, 18 American, one Spanish, three Dutch, one Italian, three Norwegian. Twenty-eight vessels arrived at, and 26 departed, from Balboa. Of these, seven were American, 13 British, three Chilean, four Peruvian, and

one Panamanian. The collections for tolls amounted to \$7,658.40, and for pilotage, to \$1,572.

Supply Department.

FORCE AND QUARTERS.

The force reports for the fourth Wednesday in July showed 32,437 employees of The Panama Canal and the Panama Railroad Company at work, of whom 4,712 were white Americans, 1,349 were European laborers, and the balance were West Indian laborers and artisans. The occupants of Government quarters numbered 7,558 Americans, men, women, and children; 1,339 Europeans, and 8,618 West Indians.

BUILDINGS.

Work at the settlement on Balboa Heights is rapidly nearing completion; all building authorized at LaBoca, except the mess hall, is completed, and plans are under way for moving a number of buildings from Porto Bello.

MATERIALS AND SUPPLIES.

The value of materials received during the month was \$818,483.28. It came forward in 39 steamers, and the weight of cargo, exclusive of lumber, piles, and ties, was 20,313 tons.

COMMISSARY AND SUBSISTENCE.

Subsistence operations during the month resulted in a net profit of \$2,661.29.

Accounting Department.

The cash balance in Canal appropriations on July 31 was \$3,219,752.48, which includes deficits in seven items, amounting in all to \$107,090.30. The cash balance in fortifications appropriations was \$4,402,215.76. The rolls for July, not including Panama railroad and fortification rolls, amounted to \$1,192,866.07; fortification rolls, \$63,481.42.

Payments were made by the disbursing clerk, Washington, in the amount of \$1,347,176.36, and by the Paymaster on the Isthmus, \$2,867,600.06, a total of \$4,214,776.42, of which \$199,431.90 was paid to the commissary. Collections on the Isthmus amounted to \$696,200, of which \$421,058.16 was repaid to appropriations, \$200,145.07 was trust funds, and \$74,996.77 was deposited as miscellaneous receipts. The latter amount includes \$11,606.69 collected as tolls.

Health Department.

Although it is not yet apparent, the large increase in the numbers of employees living in Colon and Panama cities will unquestionably have an effect on the vital statistics. In February, 1912, at the time of the last Canal Zone census was taken, only 9,872 employees out of 42,174 lived in the terminal cities, while now over one-half of the employees are living there. The number of names on the rolls during July was 46,616, the admissions to hospitals numbered 1,424, including patients treated in quarters, a rate of 366.57 per thousand per annum, as compared with 513.87 for July, 1913. The total number of deaths from all causes among employees was 27, of whom 16 died from disease, a rate of 4.12 per thousand per annum, as compared with 5.38 for July, 1913. The death rate by disease for black employees was 4.56 per thousand per annum, and for whites, 1.69 per thousand per annum. These data are based upon the police census taken in June, which confirms the opinion previously held that the estimated population of the Canal Zone and the terminal cities was higher than the facts warranted.

Executive Department.

Civil affairs—Among the questions taken

up with the Government of Panama during the month were routine postal matters, segregation of stables in the city of Panama, measures to reduce infant mortality in the cities of Panama and Colon, and the provision in Colon for houses for the people who must leave the village of New Gatun by December 31, 1914, in accordance with the approved plan of depopulation. The customs affairs were administered, a summary of the arrivals and departures of vessels will be found under the caption, "Division of Canal Transportation." Thirty-two estates were settled during the month, and at the end of the month, 40 were in course of settlement. Licenses were issued, as follows: For automobiles and motorcycles, 18; bicycles, 134; hunting, and carrying of firearms, 160.

Division of Posts—Money order sales for July amounted to \$360,049.82; receipts from stamp and card sales, \$6,727.76; deposits in postal savings accounts, \$290,558; withdrawals, \$205,301.

Police and prisons—Arrests made numbered 603, of whom 26 were women; deportations of criminal characters, nine; commitments to the penitentiary, three; discharged from penitentiary, 10; confined in penitentiary at end of month, 68.

Fire protection—Eleven fires occurred during the month, loss to Government, \$365.

Courts—In the district courts, seven civil cases, 27 criminal, and 37 probate were settled during July. Eight civil cases, 37 criminal, and 43 probate cases were filed. One hundred and three cases of all kinds were pending on July 31. In the Magistrate's court for the town of Balboa, 12 civil and 354 criminal cases were tried; Cristobal, 10 civil and 238 criminal cases.

Panama Railroad.

Traffic congestion continued during July, necessitating the handling of considerable cargo by barge. At Colon, 128,000 tons of cargo were handled, including 29,000 tons rehandled. Eighty-five ships entered at Cristobal and Colon, the Panama railroad having five ships arriving, with 850 first-class and 37 steerage passengers; and six ships departing, with 518 first-class and 101 steerage passengers. Eight empty and nine loaded barges were dispatched through the Canal southward, and 15 loaded barges were received from Balboa at Cristobal, the aggregate tonnage handled in both directions being about 10,000 tons.

Cristobal terminal docks—Pier No. 9 was completed during July. Work was continued on pier No. 7, on the driving of false work trestle. On pier No. 10, concrete side walls were rubbed and finished, steel doors were erected and painted, 129 cubic yards of concrete truss protection were placed, and 1,985 square yards of paving were laid.

Telephone and signal—The 9-position switchboard at the new Administration Building at Balboa was 50 per cent completed, and wiring was 90 per cent completed during the month. In the construction of the transisthmian duct line, 60,292 trench feet were completed during the month, and the whole line was 62 per cent completed at the end of the month.

Respectfully,

GEO. W. GOETHALS,

Governor.

The office of the Resident Engineer of the Division of Municipal Engineering, now at Gatun, will be moved to Balboa Heights on September 14.

WORK ON CHIRIQUI RAILROAD.

Grading Completed for a Distance of Seven Miles
—Track Laying to Start this Month.

Grading on the new railroad in the province of Chiriqui has been completed for a distance of about seven miles, four miles between the port of Pedregal and the city of David, and three miles on the La Concepción branch of the road. This branch line, extending from David to the village of La Concepción, a distance of about 18 miles, will be the first to be completed.

About 25,000 Oregon pine creosoted ties have been delivered to date; these cost, laid down, about \$1 each. The contractors, R. W. Hebard and Company, are preparing specifications and conditions under which native ties, delivered at any point on the line, will be purchased. It is anticipated that 25,000 native hardwood ties can be obtained locally. The contractors are purchasing from The Panama Canal all the old 70-pound rail in good condition that can be spared, in addition to a miscellaneous lot of other equipment, including two small Porter locomotives, used in the construction of the Canal locks. Most of this equipment is to be used in the railroad construction work, and a part of it, namely, a number of dump and flat cars, and piledrivers is now undergoing repairs at the Balboa shops.

The force at present employed on the grading work consists of 25 gold, and 200 silver employees, and is being gradually increased with the expansion of operations. An office building and storehouse have been erected, and barracks are being built for the silver employees, all of whom will be housed and furnished free medical attendance. A mess will be maintained for the gold employees. There will be no commissary; all supplies are purchased from local dealers in David.

The most difficult piece of construction on the David-Boquete line will be the descent into the Boquete valley, through which flows the Caldera River. This valley is a deep gash in the mountains, and the descent into it is very abrupt. When the wagon road was built into the valley, it was constructed on so steep a grade as two require two pairs of oxen to pull an ordinary cartload of freight up the incline. The contractors have planned to excavate the track bed along the face of the cliff getting to the floor of the valley on a 5-per cent grade. The terminus of the Boquete road will be on the south bank of the Caldera River, near one end of the cable bridge that furnishes a means of communication to the Panamanian post-office at Lino, and the coffee plantations of the Boquete highlands.

The European war has as yet placed no difficulties in the way of continued construction of the Chiriqui road, and it will be proceeded with along the lines originally planned. Rail is being forwarded by each steamer, and it is intended to start track laying at the port of Pedregal in the latter part of September, and lay a line to the site of the first steel bridge at the Cristobal River, a distance of eight miles. The contractors calculate on being able to work 1,000 laborers during the next dry season.

Theft from Post-Office at Toro Point.

A thief, or thieves, broke into the commissary store at Toro Point in the night of August 15-16 and stole stamps and coin, belonging to the post-office, to the value of \$18.61.

DREDGE "CULEBRA" RETIRED.

Dug Nearly 19,000,000 Cubic Yards During Its Period of Service.

The seagoing suction dredge *Culebra* has been retired from service. It has been moored alongside the wharf at Paraiso, and forces of the Dredging Division have covered the funnel, removed the tools and portable equipment and furniture, treated the machinery with preservatives, and otherwise completed its preparation for indefinite storage.

The retirement of the *Culebra* follows the practical completion of the work it is best suited to do, in the Pacific entrance and at the lake level. Its sister ship, the *Caribbean*, now at work in the Atlantic entrance, will be able, it is thought, to handle the maintenance work of removing silt, in both entrances. The remainder of the heavy work in the Pacific entrance will be done by ladder, dipper, and pipeline suction dredges. Construction work in the Atlantic entrance was completed in December, 1913, and subsequent work has been confined to the removal of silt.

The *Culebra* was built by the Maryland Steel Company, and sailed from its yards at Sparrows Point on October 9, 1907, for Balboa, by way of the Strait of Magellan. The vessel arrived at Balboa on December 28, and was placed in commission on January 21, 1908. It worked in the Pacific entrance channel and in the slips alongside the wharves at the Pacific terminus until January 20, 1914, when it was transferred to the Gatun Lake level and put at work removing gravel washed into the Canal channel near Gamboa by the Chagres River. It was transferred to the dry dock at Mount Hope for overhauling early in June, and on June 14, was returned to Balboa, where it was engaged alongside the steel pier and in the entrance channel until the time of its retirement. Following is a summary of its output up to July 1, 1914, by fiscal years:

FISCAL YEAR.	Cubic yards.	Days out of commission.
1907-1908.....	2,174,954	
1908-1909.....	3,960,153	21
1909-1910.....	3,099,029	22
1910-1911.....	2,993,788	16
1911-1912.....	2,414,297	39
1912-1913.....	1,785,166	70
1913-1914.....	2,481,153	9
Total.....	18,908,540	177

Value of Material Received in July.

The total value of material received during the month of July was \$818,483.28, distributed, as follows:

Mount Hope (stock).....	\$316,007.06
Division of Erection.....	53,296.51
Division of Terminal Construction.....	32,515.63
Erection force, locks.....	37,595.11
Engineer of Maintenance.....	9,843.66
Dredging Division.....	17,899.56
Mechanical Division.....	65,205.24
Electrical Division.....	10,144.88
Canal transportation.....	4,111.40
Municipal engineering.....	25,902.59
Permanent buildings.....	24,396.59
Panama railroad.....	138,614.17
Fortifications.....	69,171.70
Executive Secretary.....	5,531.98
Auditor.....	1,085.21
Total operation and maintenance.....	\$811,321.34
Sanitary Department.....	7,161.94
Grand total.....	818,483.28

Election of Officers of Tivoli Club.

At the meeting of the Tivoli Club, held at the Hotel Tivoli in the forenoon of Sunday, August 20, the following were elected officers for the ensuing year: President, Mr. Walter Emery; first vice-president, Mr. William K. Jackson; second vice-president, Dr. H. C.

Clark; secretary and treasurer, Mr. Seymour Paul; members of the board of governors, the above *ex officio*, and Lieut. W. H. Wilbur and Mr. A. S. Zinn.

Customs Inspection at Cristobal Docks.

In order to maintain a closer supervision over the movements of individuals at the Cristobal docks, and to prevent the unauthorized introduction of parcels and packages, it has been decided to issue annual customs passes to those who have occasion to use the small boat landing between Dock 8 and Pier 9 regularly. One-trip permits may be issued by those in authority to men in the military and naval service of the United States who may desire to bring in parcels and packages; all others will be required to submit their property to inspection before they will be allowed

to leave the dock enclosure. It has been customary in the past to land laborers employed in the fortification work on Toro Point at these docks. This practice has been discontinued, and, hereafter, the employees will be landed at Dock 13 on the French canal, which will be nearer to the camp where most of them live. The employment of a customs inspector, whose duty it will be to see that the above regulations are carried out, has been authorized.

I. B. of S. S. and D. M.

The next regular meeting of the International Brotherhood of Steamshovel and Dredgemen will be held in Ancon lodge hall on Sunday, September 6, at 1.30 p. m.

R. G. WARREN, Secretary-Treasurer.

COROZAL, C. Z., August 26, 1914.

LABOR FORCE AND QUARTERS IN JULY.

The force report of July 22 shows the actual working force of The Panama Canal on that date to have been 27,044; of the Panama Railroad Company, 5,314, and of the contractors, 79, a total effective working force of 32,437. This is an increase of 2,269, as compared with the statement of June 24, and a decrease of 10,047, as compared with the force report of July 30, 1913. The gold force on the Canal work, composed almost exclusively of white Americans, was 4,712, divided, as follows: The Panama Canal, 4,198; Panama Railroad Company, 508; contractors, six, an increase in the total gold force over the preceding month of 601. Detailed figures of the total force employed on the Isthmus, by departments and divisions, are given below:

DEPARTMENT OR DIVISION.	SILVER EMPLOYES*												Total silver	Total gold.	Grand total.
	Artisans.					European labor.		Laborers.							
	Monthly.	Special.	22 cents.	18 cents	15 cents.	12 cents.	Special.	16 cents.	13 cents.	10 cents.	7 cents.	5 cents.			
Operation and Main- tenance (main office).	35	1	1	1	1	1	4	727	404	546	13	34	3,585	355	3,940
Terminal Construct'n	645	40	217	776	179	1	7	1	199	128	10	10	1,131	226	1,857
Erection.....	65	43	191	394	183	1	7	1	36	125	2	24	471	186	657
Electrical.....	65	15	21	37	72	100	1	47	43	561	2	24	1,847	74	1,921
Municipal Eng.....	197	60	220	381	312	1	1	20	112	310	8	16	3,097	276	2,178
Dredging.....	1,697	2	5	10	47	6	1	12	132	310	8	16	3,097	1,151	4,228
Mechanical.....	267	23	90	257	934	1,028	1	12	132	310	8	16	3,097	1,151	4,228
Canal Transporta'on	91												91	16	107
Fortifications.....	128	6	56	143	360	77	5	17	469	90	1	8	1,355	95	1,450
General Construct'n	18		3	6	8	1	1	7	58		2	2	107	20	127
Total.....	3,208	46	319	1,082	2,972	1,885	16	831	1,363	1,760	24	97	13,603	2,425	16,028
Supply: (Main office).....	4												4	40	44
Commissary.....	826		2	1	7	9	218	2		112	11		1,188	300	1,488
Subsistence.....	603		2										605	24	629
Quartermaster.....	969	145	287	549	1,137	455	151	264	1,011	1,418	2	32	6,420	640	7,060
Accounting.....	28												28	140	168
Health.....	421			1	4				13	339	2	41	821	207	1,028
Executive.....	174	1		2									177	422	599
Panama railroad.....	512	46	100	227	347	595	893	252	674	1,017	11	38	4,806	508	5,314
Contractors.....									1	72			73	6	79
Total.....	6,745	332	710	1,862	4,467	2,944	1,278	1,349	3,062	4,718	50	208	27,725	4,712	32,437
Month previous.....	6,334	722	1,038	1,583	3,850	1,947	1,164	1,638	2,921	4,523	152	175	26,057	4,111	30,168
Changes.....	+401	-390	-328	+279	+617	+997	+114	-289	+141	+195	-102	+33	+1,668	+601	+2,269

*The wages are stated in United States currency.

QUARTERS.

A report of Canal and Panama railroad quarters occupied on July 31, follows:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Children	Men	Women	Children	Men	Women	Children
Ancon ¹	752	320	286				668	42	4
Balboa.....	632	38	24	376 ²	15	25	1,526 ³	446	551
Corozal.....	807	209	260	217			670 ⁵	46	54
Cristobal ⁴	928	345	298	155			1,250 ⁶	170	378
Culebra ⁴	520	303	292	33	19	31	528	280	406
Gatun.....	355	164	178	227	5	16	423 ⁷	40	47
Paraiso.....	281	70	86	113	5	17	314	88	146
Pedro Miguel.....	187	104	112	85			232	4	8
Toro Point.....	7						297		
Total.....	4,469	1,553	1,536	1,206	44	89	5,908	1,116	1,594

(1) Includes eight Asiatics. (2) Includes eight American negroes, and 11 Panamanians on the gold roll. (3) Includes Sabanas police station, Taboga Island, Naos Island, Culebra Island, and Palo Seco. (4) Includes Miraflores. (5) Includes 50 Panamanians. (6) Includes Empire, Las Cascadas, and Bas Obispo. (7) Includes eight American negroes. (8) Includes Colon Beach and Colon Hospital. (9) Includes 35 East Indians, 15 American citizens, and 181 Panamanians. Gold force of contractors (included above), 34 bachelors.

JOINT LAND COMMISSION.

Awards.

Award No. 56, docket No. 45, July 15, 1914—In the matter of the claim of Ildefonso Pinto for improvements on lands of Miraflores—An award is hereby made against the United States, in favor of Ildefonso Pinto, for the settlement of all rights, claims, or other interests in all growing crops, fruit trees and buildings, all other improvements of every kind, and all other rights and claims in lands designated as "Miraflores" on the property map of the Canal Zone, which the said Pinto may have, in the total sum of \$250, United States currency. This award shall be paid to the claimant above-named on or before the 15th day of September, 1914, and if payment, or tender of payment, of this award is not made on or before that date, said award shall thereafter bear interest at the rate of six per centum (6%) per annum until paid.

FEDERICO BOYD, LEVI MONROE KAGY, S. LEWIS, Commissioners.

NOTE—The full commission heard and passed upon the above claim, but on account of the illness and subsequent death of Commissioner Marks, his signature hereto was not obtained.

Award No. 57, docket numbers as noted, July 15, 1914—In the matter of sundry claims—An award is hereby made against the United States, in favor of the persons hereinafter named, in the sum of \$720, United States currency. This award shall be paid to the respective claimants hereinafter named, in the amounts hereinafter specified, on or before the 15th day of September, 1914, and if payment, or tender of payment, of any items of this award is not made on or before that date, such items shall thereafter bear interest at the rate of six per centum (6%) per annum until paid.

Diaz, Juan, docket No. 361, for all rights, claims and other interests in growing crops, fruit trees, house without tax number, and any other buildings and any other improvements, which the said Diaz may possess or may have possessed on the lands of Balde Ospino, near Tabernilla, the sum of \$70, United States currency.

Melendez, Pascual, docket No. 169, for all rights, claims and other interests in growing crops, fruit trees, buildings, and any other improvements, which the said Melendez may possess or may have possessed in the public lands of the United States in the Trinidad valley, the sum of \$200, United States currency.

Skipper, Catherine, docket No. 29, for all rights, claims and other interests in growing crops, fruit trees, house without tax number, and any other buildings and any other improvements, which the said Catherine Skipper, or her husband, William A. Skipper, deceased, may possess or may have possessed on the public lands of the United States on the western side of the relocated line of the Panama railroad, and on the south side of the Frijoles River, the sum of \$200, United States currency. It is directed that this award be paid to Catherine Skipper, as administratrix of the estate of William A. Skipper, deceased.

Williams, Samuel, docket No. 33, for all rights, claims and other interests in growing crops, fruit trees, house without tax number, and any other buildings and any other improvements, which the said Williams may possess or may have possessed on the slopes of the Cerro Pelado, Cuarto Calles land, the sum of \$250, United States currency. Total, \$720, United States currency.

FEDERICO BOYD, LEVI MONROE KAGY, S. LEWIS, Commissioners.

NOTE—The full commission heard and passed upon the above claim, but on account of the illness and subsequent death of Commissioner Marks, his signature hereto was not obtained.

Rules of Dismissal.

Rule of dismissal No. 130, docket Nos. 147 and 202, July 15, 1914. In the matter of the claims of Pablo Surita for property located at Las Palmas, Trinidad valley—Pablo Surita was a possessor in good faith of a portion of national public lands of the Republic of Panama at the mouth of the Siri River in the Trinidad River valley, upon which he had entered prior to 1903. As such, he was entitled to compensation for his improvements before being ejected therefrom, in accordance with Article 2 of Law 48 of 1882, and by virtue of Article VI of the Treaty ratified February 26, 1904, between the United States and the Republic of Panama. On the 19th day of May, 1911, the improvements, which are now under water, were purchased by the Panama Railroad Company. Subsequent to this sale of his improvements, Surita went further away and started new cultivations at Las Palmas, in the same valley of the Trinidad River. These cultivations, for which he now claims compensation, are also outside of the 10-mile strip granted to the United States for Canal purposes, but within the auxiliary lands ultimately covered by the waters of Gatun Lake. To this claim, a general denial is filed by Counsel for the United States.

The question raised by this claim is very important

involving the status of the claimants in the valley of the Trinidad River, who had been paid for earlier improvements and afterward started new cultivations; and it becomes necessary to enter into an analysis of the situation.

FIRST FINCA, AT THE MOUTH OF THE SIRI RIVER.

On the 20th day of September, 1910, the Isthmian Canal Commission requested the authorities of the Republic of Panama to "Withdraw from right of preemption and settlement all the public lands which may likely be finally flooded" by Gatun Lake, and which were comprised up to elevation 100 feet above mean sealevel. In response to this request, the Republic of Panama issued Decree 89 of November 10, 1910, whereby it was provided:

"Article 2. Be it provisionally declared that the intervening pieces of national lands remaining above water within the perimeter of the lands of the Republic of Panama, outside the Canal Zone, and which in future may be flooded by the Gatun Lake, as well as those lands lying immediately around the same, which, for any reason, might be found to be absolutely necessary for the use or policing of the lake, are withdrawn from adjudication."

As a consequence of this provision, thenceforth all the portions of the public lands in the valley of the Trinidad River lying below elevation 100 feet above mean sealevel were provisionally withdrawn from adjudication.

Article 5 of the same decree provided:

"The rights of private persons already legitimately acquired in the sections of land to which the delimitation of the lake will extend, in the Republic of Panama, shall be respected."

The law governing the adjudication of the public land in the Republic of Panama was at that time Act No. 19 of May 29, 1907, and by Article 81 thereof, it was established:

"The rights to public lands acquired by private persons in conformity with legal dispositions prior to the present law shall be respected, although they may be without titles."

The rights referred to in the abovequoted article were those secured by the Colombian Laws No. 61 of 1874, and No. 48 of 1882, since 1907 abrogated by the new Panamanian legislature, regulating the public lands. The Colombian cultivator's law granted to the cultivator of public lands privileges corresponding to possessors in good faith, entitling them to be indemnified to the extent of the value of their improvements which were on the land, before being dispossessed thereof. The finca, which Surita had at the mouth of the Siri River, was thereby thoroughly protected by Decree 89 of November 10, 1910, and Article 81 of Law 19 of 1907.

On the 19th day of May, 1911, Surita's improvements at this location were purchased by the Panama Railroad Company, and consequently all the right that Surita had to compensation for same became extinguished so far as he was personally concerned.

SEGUNDO FINCA AT LAS PALMAS.

Subsequent to the sale made to the Panama Railroad Company, Surita went further up the Trinidad valley, and started a new cultivation at Las Palmas, for which he now appears before the Joint Land Commission and claims compensation, the improvements for which he claims being under water at this time. The circumstances of their being under water clearly show that Surita had settled in the region provisionally withdrawn from adjudication by Decree 89 of 1910 and although he does not pretend to seek adjudication of the land which he had cultivated at Las Palmas, he does pretend to have entered upon such lands and cultivated them in good faith.

Almost a year after the new cultivation of Surita's was started—on March 16, 1912—the authorities of the Canal Zone, in a communication to the Secretary of Foreign Affairs of the Republic of Panama, stated that the lake to be formed between Gatun and Pedro Miguel for Canal purposes would embrace an area greater than the prescribed width of the Canal Zone, and, inasmuch as that portion of the land under the jurisdiction of the Republic of Panama would become covered by water, asked that the occupation of the portion of land by private persons be prohibited, and that permission be granted for the establishment thereon of police service to enforce that prohibition on the part of the Zone authorities. In accordance with this request, the Government of the Republic of Panama, through the Secretary of Government and Justice, issued, on the 29th day of March, 1912, resolution No. 22, of which the pertinent part reads, as follows:

"Be it resolved, that the Government of the United States of America is hereby authorized to proceed through its representatives in the Canal Zone to the occupation of the territory outside of the Zone which may be necessary to complete the formation of the Gatun Lake, which constitutes one of the most salient features of the Isthmian Canal. In consequence, the Government of the Republic of Panama will cease in the exercise of all authority in that territory, which, in fact, comes

under the control of the American Government."

On April 30, 1912, the Head of the Department of Civil Administration of the Canal Zone, acting under instructions of the Chairman and Chief Engineer of the Isthmian Canal Commission, made the following presentation to the Panama Government:

"In relation to this matter, I have the honor to advise Your Excellency that I am in receipt of a letter from the Chairman and Chief Engineer of the Commission, dated the 22nd instant, in which he advises me, as follows:

"For the proper maintenance, operation, sanitation, and protection of the Canal, the United States needs a strip of land around Gatun Lake, which may be tentatively fixed by the 100-foot contour. The acquisition under Article Second of the Treaty between the United States and Panama of this strip of land around Gatun Lake having been once agreed to by Panama, the matter would be clearly and definitely outlined."

"In view of the present situation, it is desired that proper representations be made to the Panamanian Government, with a view to the issuance of a decree that will resolve the matter along the foregoing lines."

The Republic of Panama thereupon issued decree No. 46 of May 17, 1912, Articles 1 and 2 of which are, as follows:

"Article 1. There is hereby recognized, in pursuance of Article II of the Hay-Bunau-Varilla Treaty, the right of the United States to the use, occupation, and control of the area (or extension) of land which will be covered by Gatun Lake, and of that part of the shores of said lake which reach an elevation of 100 feet above sea-level, for the purposes herein above indicated."

"Article 2. Settlement or entry upon the National public lands included in the belt three miles in width, surrounding and immediately contiguous to the 100-foot contour line above mentioned, is hereby temporarily prohibited."

Therefore, from the middle of the year 1907, and up to the time when the United States began to exercise over the area of the Trinidad valley below the 100-foot contour line, "All the rights, power, and authority which the United States would possess and exercise if it were the sovereign of the territory to the entire exclusion of the exercise by the Republic of Panama of any such right, power, or authority," the Law No. 19 of May 29, 1907, was in force therein.

In accordance with such law, as is stated in Article III

"The occupation of National public lands is not permitted, except under the conditions which this law establishes."

Surita could not go upon said lands without first complying with the obligations set forth in the following provisions of said law:

"Article 71. The licenses for transitory cultivation will be granted for two years, and the tax upon these licenses shall be paid in advance at the rate of 20 cents, balboa (B.O.20) in the current year, and will be increased gradually 10 cents, balboa (B.O.10) each year until it reaches one balboa (B.O.100) a hectare in the ninth year, remaining so in the future. These licenses will not be given for a piece of land greater than eight hectares."

"Article 72. The municipal alcaldes in the districts where there is no national land office will issue these licenses in stub books by power conferred by the respective agent of lands after the corresponding tax has been paid in the respective municipal tax office."

"Article 73. The licenses in question shall contain:

- (a) The number of the order which corresponds to them;
- (b) The name of the person in whose favor it is issued;
- (c) The proof of having paid the tax;
- (d) The area of the land and its situation, and
- (e) The proof of its having been issued without prejudice to a third person."

The evidence before the Commission shows:

First—That Pablo Surita began the second cultivation in 1911.

Second—That the entrance of Surita in 1911 upon said lands could only have been made subject to the provisions of Law 19 of 1907.

Third—That the said Surita did not obtain the license referred to in Article 71 of said Law 19.

Fourth—That he was on lands embraced by his cultivation at Las Palmas in contravention with Article III of said Law 19.

In view of the facts herein set forth, we have reached the conclusion that no rights had accrued in favor of Pablo Surita for his illegal occupation of the lands at Las Palmas, therefore, he is not entitled to any award against the United States, and his claim is accordingly dismissed.

FEDERICO BOYD, S. LEWIS, Commissioners appointed by the Republic of Panama.

LOST—On August 20, one pair of aluminum frame spectacles in case, while getting on the 5.10 p. m. train from shops, about 150 feet south of roundhouse at Balboa. Finder is requested to leave same at district quartermaster's office, Balboa. Liberal reward.

OFFICIAL CIRCULARS.

Panama Canal Library.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 24, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

In connection with the consolidation of records, a library is being established in the new Administration Building at Balboa to provide for the accumulation of official books, documents, reports, etc., which are indiscriminately kept in the various offices on the Isthmus at present.

It is desired that all available books not required for immediate need of other offices be forwarded to the library, in order that the collection there may be as complete as practicable with matters of interest to the Canal. If a receipt is desired for any books turned in to the library, you should submit a duplicate copy of your letter of transmittal.

A catalogue file will form part of the library and every effort will be made to keep it as complete and up-to-date as the demands of the service require. Steps will be taken to have the library placed on the mailing lists of various manufacturers handling equipment and supplies, etc., of interest to the Canal. If there are any special catalogues of interest to your work which should be placed in the library, please advise this office. You are also requested to send in any catalogues, which have not become obsolete, and which you think should be kept in the library.

Shipments of books, etc., should be directed to "The Panama Canal Library, Administration Building, Balboa Heights."

GEO. W. GOETHALS,
Governor.

Customs Regulations.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z. July 14, 1914.

CIRCULAR No. 679:

1. *Article 1.* There is hereby established a Bureau of Customs for The Panama Canal which shall be charged with the following duties:

2. The entry and clearance of vessels at the ports of the Canal Zone and in transit through the Panama Canal.

3. The custody of goods, wares, and merchandise introduced into the Canal Zone, pending the release thereof on presentation of evidence in due form that said goods, wares, and merchandise are entitled to free entry, or that the import duties due to the Republic of Panama have been paid, or that payment has been waived.

4. The enforcement of the immigration laws and regulations of the Canal Zone, except as this duty is assigned by law or Executive Order to the Chief Quarantine Officer.

5. The certification of invoices covering shipments from the Canal Zone to the United States.

6. Such services to seamen as are commonly rendered by shipping commissioners in American ports, or by American consuls in foreign ports.

7. *Article 2.* The Executive Secretary of The Panama Canal shall be charged with the supervision of the Customs Service. The captains of the ports of the Canal Zone shall be, *ex officio*, officers of the Customs Service for the purpose of entering and clearing vessels. There shall be employed such inspectors and other subordinate officers as may be necessary to carry on the work of the bureau as determined by competent authority. Employees of The Panama Canal, or of the Panama Railroad Company on the Isthmus, whose duties relate to vessels using the Panama Canal and its terminal ports, or to cargo discharged in the Canal Zone, may be appointed customs officers for special and defined purposes, and they shall discharge their duties as such without additional compensation.

8. *Article 3.* Subject to the direction of the Executive Secretary, and except as otherwise provided for in these regulations, inspectors of customs shall perform the duties heretofore performed by deputy collectors of customs in the Canal Zone.

9. *Article 4.* Vessels may enter and clear at either the port of Balboa or the port of Cristobal. If they desire to pass through the Canal without stopping at the opposite terminal port, they may clear from the port of entry, but should they stop at the opposite port for the purpose of taking on or discharging freight or passengers, or taking stores, provisions, supplies, coal, fuel, or water, they may be compelled to enter and clear from both ports.

10. *Article 5.* When a vessel arrives at the port of Balboa, or the port of Cristobal, or at the Panama Canal in transit, the master thereof shall furnish to the boarding officer representing the Bureau of Customs, or if no customs officer shall come aboard, to the captain of the port, on a blank form which will be furnished for that purpose, a report of arrival, which shall include such statistical data relating to the vessel, its

cargo and passengers, as may be required by the various departments of The Panama Canal.

11. *Article 6.* There shall be also furnished to the boarding officer a full manifest of the cargo, in writing, signed by the master and specifying the marks, kinds, and quantities thereof, the port or ports where the cargo was shipped, the different ports to which it is consigned or intended to be entered, and the names of the consignees. Any form of manifest in substantial compliance with these requirements will be accepted, and it may be in English, or in the language of the nation to which the vessel belongs. If in a foreign language, the master or agent of the vessel must furnish a translation. If the regular manifest does not substantially comply with the requirements, then a statement shall be furnished for statistical purposes, containing the information specified.

12. *Article 7.* An additional copy of the manifest must be furnished by the master or agent of the vessel for each port in the Canal Zone at which cargo is discharged; provided, that in lieu of a copy of the complete manifest there may be furnished, at the option of the master or agent, a copy of only such portions of the manifest as relate to the cargo to be so discharged.

13. *Article 8.* There shall also be furnished to the boarding officer the clearance issued to the vessel at the last port of call, a copy of the passenger list, which shall distinguish between passengers in transit and passengers to be landed in the Canal Zone, a copy of the crew list, list of sea stores, purser's statement, certificate of discharge from quarantine, and, in case of vessels of the United States, the register and articles.

14. *Article 9.* The master shall certify under oath that the manifest, passenger list, and other documents delivered by him to the boarding officer are complete and true.

15. *Article 10.* No vessel shall be permitted to enter until the master or agent shall produce a certificate of discharge from quarantine.

16. *Article 11.* Before an entry is made of a vessel of the United States, the register and articles must be produced to the customs officers, and these papers are to be retained until a clearance is granted.

17. *Article 12.* It is not necessary for the captain or master of any vessel of war or public vessel owned or chartered by a foreign government to report and enter on arrival at the Panama Canal, at either of the terminal ports, unless engaged in the transportation of merchandise in the way of trade, but such vessel shall be subject to the quarantine regulations and to the regulations relative to the payment of tolls and of bills for material, supplies, repairs, harbor, pilotage, towage, wharfage, and other services furnished to vessels by The Panama Canal, and such public or chartered vessels, other than men of war, may be required to certify as to the number of passengers or troops on board, and the character and kind of cargo, when requested by the Canal authorities to do so.

18. *Article 13.* The Bureau of Customs shall have exclusive control over all goods, wares, and merchandise, including passengers' baggage and packages of every kind and nature introduced into the Canal Zone, pending the release thereof on presentation of evidence in due form that such goods, wares, and merchandise are entitled to free entry, or that the import duties due to the Republic of Panama have been paid, or that payment has been waived. No such goods, wares, or merchandise shall be released for delivery to consignees or for reexport, except upon the order of a customs officer.

19. *Article 14.* A copy of a manifest of cargo landed at any point in the Canal Zone shall be delivered by the Bureau of Customs to the customs authorities of the Republic of Panama.

20. *Article 15.* The master of a vessel clearing from the Panama Canal, or any port of the Canal Zone, shall be required to furnish to the Bureau of Customs a manifest of all goods, wares, and merchandise, including packages of every kind and description, accepted for shipment from the Canal in said vessel, showing the kinds, quantities, value, and destination thereof, and also a list of all passengers embarked in the Canal Zone, or if no cargo has been accepted for shipment and no passengers have embarked, a statement to that effect. But with the consent of the Bureau of Customs, previously obtained, these documents may be furnished through an agency on the Isthmus within 48 hours after the clearance of the vessel. The manifests, passenger lists, and statements submitted in compliance with the article shall be subscribed and sworn to by the master or agent of the vessel.

21. *Article 16.* Vessels leaving the Panama Canal, the port of Balboa, or the port of Cristobal, shall be cleared by the port captain at the port of departure.

22. *Article 17.* The captain of the port will not issue a clearance until he has ascertained:

(a) That the documents and statistical data in regard to cargo and passengers, as required by these and other regulations governing the use of the Panama Canal, have been furnished by the master of the vessel, or that

satisfactory arrangements have been made to furnish same through an agency on the Isthmus.

(b) That all tolls, and bills for materials, supplies, repairs, harbor pilotage, towage, or wharfage, furnished to vessels by The Panama Canal, or the Panama Railroad Company, have been paid, or that their payment has been secured.

(c) That the vessel has complied with the quarantine and immigration laws and regulations of the Canal Zone.

(d) That the laws and regulations governing the shipment and discharge of seamen, and for the protection of seamen, have been complied with.

23. *Article 18.* The Executive Secretary charged with the supervision of the Customs Service of the Canal Zone shall, in person or through such assistants as he may designate, perform the duties of a shipping commissioner, and he shall render such services to American seamen as are commonly rendered by shipping commissioners in the United States, and by American consuls abroad. In the performance of these duties, he shall be governed by the Navigation Laws of the United States, and by the United States Consular Regulations, in so far as they are applicable.

24. *Article 19.* Questions which may arise in the administration of the Customs Service of the Canal Zone which are not specifically provided for in these regulations shall be decided in accordance with the Customs Regulations of the United States, in so far as the latter regulations are not locally inapplicable.

GEO. W. GOETHALS,
Governor.

Act of Congress.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z. July 18, 1914.

CIRCULAR No. 600-8:

WAR VESSELS ATTENDING PANAMA-PACIFIC EXPOSITION
—RADIO STATIONS.

The extracts from an Act of Congress quoted below are published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

AN ACT making appropriations for the fiscal year ending June 30, 1915, and for other purposes.

1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* that the following sums be, and they are hereby, appropriated, to be paid out of any money in the Treasury not otherwise appropriated, for the naval service of the Government for the year ending June 30, 1915, and for other purposes:

PAY, MISCELLANEOUS.

* * * * *

CONTINGENT, NAVY.

* * * * *

2. That the sum of \$104,000, or so much thereof as may be necessary, be expended, on the approval and authority of the Secretary of the Navy, for entertaining the officers and crews of foreign fleets which may be sent to attend and participate in the Panama-Pacific International Exposition in consequence of the invitation of the President of the United States, extended in pursuance of the authority contained in the joint resolution of Congress, approved February 15, 1911, and of the authority contained in the Act making appropriations for the naval service for the fiscal year ending June 30, 1912, and for other purposes, approved March 4, 1911, and for defraying such other expenses incident to the visit of the said foreign fleets as the Secretary of the Navy may deem proper, and the said sum shall be available until November 15, 1915.

3. That the tolls that have been or may be prescribed by the President, in pursuance of the authority contained in the Panama Canal Act, approved August 24, 1912, to be levied by the Government of the United States for the use of the Panama Canal, shall not be assessed against nor collected from any war vessel of any foreign nation which may pass through the Panama Canal *en route* to or in returning from the Panama-Pacific International Exposition: *Provided*, that such vessel has been sent by its Government to attend and participate in the said exposition in consequence of the invitation of the President of the United States, extended in pursuance of the authority contained in the joint resolution of Congress, approved February 15, 1911, and of the authority contained in the Act making appropriations for the naval service for the fiscal year ending June 30, 1912, and for other purposes, approved March 4, 1911.

4. The Secretary of the Navy is hereby authorized and empowered to define and establish suitable anchorage grounds in Hampton Roads, Virginia, and the adjacent waters for the combined fleets of the United States and foreign Governments which may rendezvous there prior to proceeding to the Panama-Pacific International Exposition, to be held in the city and county of San Francisco, California, in the year 1915, as well as to define and establish suitable anchorage grounds

in the Bay of San Francisco and the approaches and waters adjacent thereto during the continuance of the said Panama-Pacific International Exposition, and the Secretary of the Navy is hereby further authorized to make such rules and regulations regarding the movements of all vessels in all of the waters named as may be necessary, in order to insure the proper and orderly conduct of such features as may be planned for the combined fleets, and to provide for the safety of the vessels participating therein; and such rules and regulations when so issued and published shall have the force and effect of law.

* * * * *

BUREAU OF STEAM ENGINEERING.

* * * * *

5. Toward the purchase and preparation of necessary sites, purchase and erection of towers and buildings, and the purchase and installation of machinery and apparatus of high power radio stations (cost not to exceed \$1,000,000), to be located, as follows: One in the Isthmian Canal Zone, one on the California coast, one in the Hawaiian Islands, one in American Samoa, one on the island of Guam, and one in the Philippine Islands, \$400,000, to be available until expended.

Approved June 30, 1914.

Division and Field Accounting for Property.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., July 20, 1914.

CIRCULAR No. 656-2. (Superseding Circular No. 656):

1. *Voucher numbers*—Foremen's orders, requisitions, inspection calls, or other evidences of debits against accountable officers; also, credits to accountable officers' accounts, will be given voucher numbers.

2. *Debits to responsible officers*:

(a) Accountable officers shall, upon receipt of debit papers, Form PC 907, Form PC 924-1 (Q. M. D. 4), and inspection calls, immediately forward two copies of each to the responsible officer, who shall immediately acknowledge receipt of the property on one copy, which will be returned to the accountable officer for his file, and retain the other copy for his file, as a debit to his responsibility.

(b) Foremen's orders for nonexpendable property shall be made in sextuplicate, and shall be signed only by responsible officers or their material foremen, four copies to be sent to the storehouse issuing the material, and two copies to be retained in the foreman's order book. One of the two remaining copies shall be signed by the responsible officer as a receipt and forwarded to the accountable officer, immediately upon receipt of the property, and the other copy retained as a debit to the responsible officer's account. When the quadruplicate copy is received from the Auditor by accountable officers, both copies will be given voucher number and the responsible officer notified of the number given and any changes that may have been made in designation. Debit will be entered on the responsible officer's record under these voucher numbers. In writing foremen's orders, pencil carbon must be used and each employee authorized to draw foremen's orders shall provide himself with a metal backing up sheet. Storekeepers will not honor foremen's orders unless all copies presented are legible, and shall see that prices and additional descriptions are also plainly entered on all copies.

3. *Credits to responsible officers*—One copy of all credit papers shall be furnished to the responsible officer whose account is to be credited, and filed by him under their respective voucher numbers, as credits to his responsibility.

4. *Record of responsibility*:

(a) An abstract of the debits and credits to each responsible officer's account shall be kept by the accountable officer on Form PC 935 (Q. M. D. 7); provided, that this shall not be construed to mean that records already written up on existing forms shall be rewritten immediately; they may be continued on their present forms until such time as it becomes necessary to rewrite the record.

(b) Accounts with foremen and others who actually have property in use shall be kept by the responsible officer in the same manner and on the same form.

5. *Transfers between responsible officers*—Transfers of property between responsible officers within a division must be made on Form PC 395. Receipts for property transferred between responsible officers will be numbered serially by accountable officers, and consecutive file kept by accountable officers so that ready reference can be had for inspection.

6. *Memorandum receipts*—Responsible officers, on receipt of property, shall take receipt for same on Form PC 401, from the employee actually having the property in his possession, giving one copy to the employee signing the receipt. Foremen and others charged with property, when transferring any of their property to another foreman or employee under the same responsible officer within a division, must take receipt for same on Form PC 401, furnishing copy to employee to whom the property is transferred, copy to the responsible officer, and retain

one copy. The same form shall be used in crediting foremen for property returned to responsible officers. The property for which any employee is responsible must be checked at least once every six months.

7. *Property handled by tool rooms*—These instructions will not apply to property issued from tool rooms on shop checks, but accountable or responsible officers will take receipts from tool room foremen as prescribed in Paragraphs 2 and 6, and tool room foremen will, in turn, issue tools on metal checks as at present, except in cases where gangs are on detached service, when Form PC 401 must be secured, as provided for in Paragraph 6.

8. *Property on locomotives*—The property on locomotives of The Panama Canal and the Panama railroad must be standardized, where same has not already been done, and a copy of the standard list of property assigned to each locomotive will be posted in locomotive cab. Locomotive engineers will be held responsible for the property shown on this list while in charge of any particular locomotive, and no receipts will be required as provided for in Paragraph 6.

9. *Supply Department property*—Property in use by families will be held on memorandum receipt given district quartermasters, and district quartermasters will not use Form PC 401, except where property is issued to foremen, sanitary inspectors, and others, in which cases the same procedure will be followed as provided for in Paragraphs 2 and 6.

10. *Property releases*—All gold employees leaving the service or entering on leave will be required to secure releases from property and quarters, which, for Panama Canal employees, must be presented to the Auditor of The Panama Canal, or to the branch of his office at Cristobal or Ancon, before final payment will be made.

11. *Property entrusted to silver employees*—Responsible officers will be required to see that property for which they are responsible and which may be in the possession of silver employees, is satisfactorily accounted for before such employees leave the service.

12. *Release of accountable officers*—Final payments to accountable officers will be withheld in the Auditor's office until such time as an audit of property accounts is made or a transfer effected to some other accountable officer, after which a release will be issued by the Auditor.

13. *Release of responsible officers*—Releases to responsible officers will be issued by accountable officers, and releases to all other gold employees will be issued by responsible officers.

14. *General*—The Auditor of The Panama Canal will have general supervision over division and field accounting for property, and is charged with the responsibility for the proper compliance with the provisions of this circular.

GEO. W. GOETHALS,
Governor, The Panama Canal,
President, the Panama Railroad Company.

Charges for Patients in Insane Asylum Wards.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., July 31, 1914.

CIRCULAR No. 618-2:

The schedule of charges attached to Circular 618-Revised is amended by adding the following:

ORDINARY CARE AND TREATMENT, INSANE ASYLUM WARDS, PER DAY.

Families and servants of employees:	
Salary of employees \$50 or less—	
Male or female.....	\$0.50
Salary of employee more than \$50—	
Family—Male or female.....	1.00
Servants—Black.....	.50
White.....	1.00
Employees of contractors under The Panama Canal:	
Salary of employee \$50 or less.....	.50
Salary of employee more than \$50.....	1.00
Army, Navy, and Marine Corps:	
Officers and enlisted men.....	1.00
Families of same.....	1.00
Civilian employees.....	1.00
Other employees of the United States.....	1.00
American seamen.....	1.00
Private pay patients.....	2.00
Republic of Panama:	
Pay patients.....	.75

GEO. W. GOETHALS,
Governor.

Examinations by Board of Local Inspectors.

THE PANAMA CANAL,
BOARD OF LOCAL INSPECTORS,
ANCON, C. Z., August 29, 1914.

The Board of Local Inspectors will conduct examinations at the administration building, Ancon, on Wednesday, September 9, 1914, beginning promptly at 2 p. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Ancon, forms of application and information re-

specting the filling out of same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles, with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the regular examination, at 2 p. m., at the administration building, Ancon; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the administration building, Ancon.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. The test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; the deputy inspector will be present at the Panama railroad station at Gamboa at the hour abovementioned.

By direction of the chairman of the board.

W. H. HYDE,
Clerk to the Board.

Rainfall, August 1 to August 29, 1914, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Ancon.....	1.37	7	6.06
Balboa.....	.94	7	5.19
*Miraflores.....	1.72	7	7.29
Pedro Miguel.....	1.21	4	6.82
Rio Grande.....	2.27	12	7.84
<i>Central Section—</i>			
Culebra.....	1.89	12	8.09
*Camacho.....	1.10	10	7.30
Empire.....	1.93	12	7.98
Gamboa.....	1.44	6	7.63
*Juan Mina.....	1.99	8	11.43
Alhajuela.....	1.60	11	11.92
*El Vigia.....	3.49	11	12.75
Frijoles.....	2.08	12	9.36
*Monte Lirio.....	5.45	12	16.85
<i>Atlantic Section—</i>			
Gatun.....	6.72	12	15.01
*Brazos Brook.....	3.45	12	14.33
Colon.....	2.44	15	15.88

*Standard rain gage—readings at 5 p. m. daily. Automatic rain gage at unstarred stations—values, midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun, and Miraflores Lakes for the week ending midnight, Saturday, August 29, 1914. All heights are in feet above mean sealevel:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Aug. 23.....	128.65	94.62	84.95	84.99	53.83
Mon., Aug. 24.....	127.65	94.05	85.00	85.00	53.96
Tues., Aug. 25.....	131.50	96.50	85.00	85.01	53.87
Wed., Aug. 26.....	132.20	96.95	85.00	84.99	53.95
Thurs., Aug. 27.....	128.45	96.25	85.00	85.00	54.02
Fri., Aug. 28.....	127.40	93.67	85.09	85.00	54.00
Sat., Aug. 29.....	126.60	93.01	84.99	84.96	53.72
Height of low water to nearest foot.....	125.0	91.0			

Tide Table.

The following table shows the time of high and low tides at Panama for the week ending September 12, 1914:

DATE.	Low	High	Low	High	Low
	A.M.	A.M.	A.M.	P.M.	P.M.
Sept. 6.....	4.44	10.57	5.03	11.12	
Sept. 7.....	5.17	11.33	5.36	11.47	
		P.M.			
Sept. 8.....	5.48	12.08	6.06		
Sept. 9.....	12.20	6.18	12.42	6.36	
Sept. 10.....	12.53	6.48	1.16	7.05	
Sept. 11.....	1.25	7.19	1.53	7.39	
Sept. 12.....	2.01	7.56	2.36	8.23	

75th meridian time

COMMISSARY DEPARTMENT.

Special Sales.

The following special sales are announced:

DRY GOODS.

Complete sale at Cristobal, until close of business September 8.

SHOES.

At Corozal, until close of business, September 8.

MEN'S AND WOMEN'S FURNISHINGS.

At Corozal, until close of business, September 8.

HATS.

At Corozal and Cristobal until close of business, September 8.

HARDWARE.

At Cristobal, week beginning September 4.

PIPES.

Special sale at all big commissaries.

Oranges from Costa Rica.

The commissary department received recently an experimental shipment of Costa Rica oranges, which were placed on sale at some of the principal stores. They were larger in size than the average California orange, have a much thinner skin, and are very juicy, the pulp being of a reddish color, and possessing a flavor distinct from either the native or imported varieties. They command a higher price than the native or Jamaican orange, retailing at the commissaries at 30 cents a dozen. The shipment was supplied by the United Fruit Company.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and from 3 to 6.30 p. m.

The gold departments of the Cristobal store, will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

In rush periods, all stores will remain open until 7 p. m.

Cold Storage Prices.

Retail prices of cold storage provisions for the week beginning September 3, 1914:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....	*10	
Shoulder, trimmed, per pound.....	*16	
Leg (8 to 10 pounds), per pound.....	*25	
Cutlets, per pound.....	*26	
Short cut chops, per pound.....	*30	
Shoulder, chops, per pound.....	*18	
Lamb—Stewing, per pound.....	*13	
Shoulder, trimmed, per pound.....	*19	
Leg (5 to 8 pounds), per pound.....	*30	
Chops, per pound.....	*36	
Shoulder, chops, per pound.....	*23	
Cutlets, per pound.....	*36	
Veal—Stewing, per pound.....	*13	
Shoulder, for roasting (not under 4 pounds), per pound.....	*17	
Chops, shoulder, per pound.....	*23	
Chops, per pound.....	*35	
Loin, for roasting, per pound.....	*35	
Cutlets, per pound.....	*40	
Beef—Suet, per pound.....	*03½	
Soup, per pound.....	*08	
Stew, per pound.....	*12	
Plate, per pound.....	*14	
Corned, No. 1, per pound.....	*20	
Corned, No. 2, per pound.....	*17	
Chuck roast, 3 lbs., and over, special, per pound.....	*13	
Chuck roast, 3 lbs., and over, choice, per pound.....	*17	
Rib roast, second cut (not under 3½ pounds), special, per pound.....	*18	
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	*24	
Rib roast, first cut (not under 3 pounds), special, per pound.....	*22	
Rib roast, first cut (not under 3 pounds), choice, per pound.....	*27	
Pot roast, special, per pound.....	*23	
choice, per pound.....	*28	
Rump roast, special, per pound.....	*23	
choice, per pound.....	*28	
Porterhouse roast, special, per pound.....	*25	
choice, per pound.....	*31	
Steak, chuck, special, per pound.....	*15	
choice, per pound.....	*18	
Round, bottom, per pound.....	*15	
choice, per pound.....	*19	
Round, top, special, per pound.....	*17	
choice, per pound.....	*22	

	Price.
Rib, special, per pound.....	*23
choice, per pound.....	*27
Sirloin, special, per pound.....	*23
Sirloin, choice, per pound.....	*28
Sirloin, choice cut, special, per pound.....	*26
Sirloin, choice cut, choice, per pound.....	*32
Rump, special, per pound.....	*23
choice, per pound.....	*28
Porterhouse (not less than 1½ pounds), special, per pound.....	*26
Porterhouse (not less than 1½ pounds), choice, per pound.....	*34
Porterhouse, short, Delmonico, special, per pound.....	*23
Porterhouse, short, Delmonico, choice, per pound.....	*28
Tenderloin, Western, special, per pound.....	*40
Tenderloin, Western, choice, per pound.....	*46
Pork—Hams, fresh, per pound.....	*26
Shoulders, fresh, per pound.....	*22
Loin, chop, or roast, per pound.....	*23
Pigs' feet, each.....	*08
Pigs' head, whole.....	*05
Pigs' head, ½-head.....	*48
Sausage, home made, per pound.....	*26

MISCELLANEOUS.

Livers—Beef, per pound.....	12
Calif, each.....	62
Half, each.....	31
Steak, Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	13
Frankfurter, per pound.....	13
Liebowurst, per pound.....	12
Pure pork, 1-lb. cartons, per pound.....	17
Sweetbread, beef, per pound.....	26
Eggs, fresh, per dozen.....	35
per ½-dozen.....	18
Bluefish, per pound.....	8
Halibut, fresh, per pound.....	5
Salmon, per pound.....	7
Yeast, per pound.....	31
per cake.....	2

POULTRY AND GAME.

Chickens—Fancy roasting, milk fed, per pound.....	28
Fancy roasting, corn fed, per pound.....	25
Fowls, per pound.....	24
Fowls, light, per pound.....	20
Ducks, Western, per pound.....	22
Capons, per pound.....	33
Broilers, milk fed, per pound.....	25
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	27
Squabs, each.....	42
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, per pound.....	23
Sliced, per pound.....	30
Half, for boiling, per lb.....	25
Boiled, per pound.....	32
Hocks, per pound.....	9
Butt end, about 1½ pounds to butt, per pound.....	11
Bacon—Breakfast, sliced, per pound.....	31
Whole piece, per pound.....	30
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.45
Pigs' feet, per pound.....	7
Tongues, per pound.....	23

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	39
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream cake.....	09
Roquefort, per pound.....	35
Young America, per pound.....	22
Swiss, per pound.....	*33
Edam, each.....	72
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk (certified), bottle.....	*24
Fer-mil-lac, bottle.....	*25
Ice cream, quart.....	125
½-gallon.....	150
Cream, Sheffield Farms, quart.....	*33
Cream, Sheffield Farms, pint.....	*19
Cream, Sheffield Farms, ½-pint.....	*12

VEGETABLES.

Beets, per pound.....	2
Celery, per head.....	3
Cabbage, per pound.....	2½
Carrots, per pound.....	12
Cucumbers, per pound.....	2
Lettuce, per pound.....	9
Peas, green, per pound.....	17
Onions, per pound.....	13½
Peppers, per pound.....	5
Potatoes, white, per pound.....	3
sweet, tropical, per pound.....	2
sweet, American, per pound.....	4
Yams—Tropical, per pound.....	3
Spinach, per pound.....	11

	Price.
Parsley, per bunch.....	2½
Eggplant, per pound.....	3½
Rhubarb, per pound.....	2½
Turnips, per pound.....	2
Tomatoes, per pound.....	4½
Squash, per pound.....	2
Kale, per pound.....	6
FRUITS.	
Apples, per pound.....	6
Cantaloupes, each.....	6
Grape fruit—American, each.....	*7
Tropical, each.....	4½
Lemons, per dozen.....	*23
Limes, per 100.....	50
Oranges—American, each.....	2½
Jamaican, per dozen.....	18
Peaches, per pound.....	*8
Plums, per pound.....	*8
Watermelons, each.....	125
Bananas, per bunch.....	38
Bananas, each.....	0½
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Pears, alligator, each.....	5

* Indicates advance from preceding list.

† Indicates reduction from preceding list.

**Indicates 5 cents allowed for return of bottle.

‡ Sold only from commissaries; no orders taken for delivery.

§ Sold only from cold storage and not from commissaries.

Canal Supplies.

The following steamers, with supplies for The Panama Canal and Panama railroad, arrived at the ports of Colon and Cristobal during the week ending August 15:

Panama, August 10, from New York, with five cases paper, 40 cases polish, 80 cases lard oil, 63 bundles brooms, three boxes rubber hose, five cases paint, nine cases copper, 10 drums lubricating oil, three carboys ammonia, 17 bundles shovels, 41 cases cotton fire hose, for stock; 3,007 bags lime, 407 barrels plaster, 13 cases hardware, one case machinery, 27 barrels paint, 10 packages tile, for permanent buildings; 116 packages medical supplies, for Health Department; one box screws, one box wire cloth, 23 crates building paper, for Division of Fortifications; one package repair parts, one package pulleys, 13 packages steel couplings, four cases engine parts, for Dredging Division; one package badges, for Canal Zone Government; one box stationery, one package drawing paper, one box blueprint paper, for Executive Office, Culabra; one package repair parts, 59 cases glass, one box tools, five crates asbestos roofing, two boxes chemicals and chemical apparatus, for Division of Municipal Engineering; one package gears, one case ebony wood, four packages grille frames, for lock erection; six boxes electrical material, for Electrical Division; four cases brass checks, for Accounting Department; five pieces castings, five pieces steel billets, for Supply Department; three cases velocipedes, 30 reels telephone cable, for Panama railroad; one box magnetos, one transfer car, 35 brake shoes, one case hardware, 37 packages steel shutters, for Mechanical Division; and a miscellaneous cargo, the whole consisting of 4,333 packages, weighing approximately 295 tons.

Ancon, August 12, from New York, with 12,040 bags Portland cement, 15 cases paint, for stock; 1,667 crates tile, for permanent buildings; 12 boxes coupon books, for Accounting Department; one box rubber hose, 12 empty cylinders, for Mechanical Division; one box transformers, nine cases electrical material, for Electrical Division; two reels wire, 21 cases electrical material, for Division of Fortifications; two electric towing locomotives, four cases electrical material, for lock erection; and a miscellaneous cargo, the whole consisting of 125,812 packages, weighing approximately 6,349 tons.

Turrialba, August 12, from New Orleans, with 500 pieces (16,619 board feet) yellow pine lumber, one box hammers, 30 boxes paint, for stock; 279 pieces car castings, 587 pieces (17,231 board feet) yellow pine lumber, for Mechanical Division; 14 cases brass bolts, for lock erection; 15 boxes polished marble, for permanent buildings.

Santa Maria, August 13, from New York, with 75 boxes window glass, eight cases magnesia boiler covering, one box brass fittings, for stock; one box brass fittings, for Division of Municipal Engineering.

Abangares, August 13, from New Orleans, with six cases skylight glass, 124 pieces dressed white oak lumber, for stock; 43 pieces rough white oak lumber, three crates wire screens, one box hardware, 1,208 sacks silica sand, for Mechanical Division; 39 reels telephone cable, for Panama railroad.

Tenadores, August 14, from New York, with 399 bundles shovels, 19 boxes bronze wire cloth, one case files, one case saw sets, for stock; nine crates steel boxes, for Electrical Division.

Olaf, August 14, from Fernandina, Fla., with 65,793 pieces (1,346,222 board feet) yellow pine lumber, 194 pieces (10,051 board feet) cypress lumber, for stock.

Chancellor, August 14, from Liverpool, with six reels wire rope, one box pinions, one wheel, for Dredging Division.

CANAL CLUBHOUSES.

Activities of the Young Men's Christian Association.

GENERAL.

Members who are now located in towns where no privileges are available should communicate with the general secretary relative to adjustment of ticket.

BALBOA.

A new Hires fountain has been received from the United States and will be installed in the refreshment parlor. A number of plants have been received from the district quartermaster and placed in front of the clubhouse.

The "Voyage of the Discovery," by Capt. Robert E. Scott, in two volumes, has been added to the library; also, a new Rand-McNally atlas.

A number of the local checker players will go to Cristobal next Saturday night to play in the tournament to be held there. A series of games between the two clubhouses will be arranged shortly to decide the championship.

COROZAL.

High scores in bowling during the past week were made by the following men: *Duckpins*—Ryan, 104; Ruggles, 112; Gustavson, 104. *Tenpins*—White, 205, 209, 222; Territtier, 219; Boisen, 203; Oettli, 200.

The local league basketball games the past week were fast. The "French" defeated the "Germans" by a score of 36 to 13, and the "English" defeated the "Russians," 25 to 16. The following are the lineups for the teams:

"Germans"—Doherty, Capt.; Howe, Hartshorne, Roberts, Territtier, Souder.

"French"—Whiston, Capt.; Violet, Connant, Mitchell, Hutchings, Cautliers, Gerchow.

"English"—Plank, Capt.; Bessey, Morrison, Dwell, E. C., Parkis, Ridge, L.

"Russians"—Owens, Sims, Huldquist, Capt.; Koontz, Otis, Ross, Sommers.

The Corozal boys were visited by the Pedro Miguel boys, who defeated them at indoor baseball, but Corozal won the basketball and bowling.

PEDRO MIGUEL.

Prof. Magnocci gave an entertainment in sleight of hand and ventriloquism at the Pedro Miguel clubhouse on Tuesday, August 18.

Mr. Russell, secretary of the Pedro Miguel clubhouse is in Ancon Hospital, but expects to be out in 10 days. Mr. P. T. Woolworth is in charge of the clubhouse during his absence.

A "Southern social" will take place on Thursday night, September 3. A banquet, consisting of popular Southern dishes, will be served.

CULEBRA.

In the final chess tournament between Culebra and Ancon players, played at Culebra, the result was: Culebra, 17; Ancon, 12.

On account of the removal of all offices to Balboa Heights, effective September 5, the Culebra clubhouse will be open only in the evening from 6 o'clock to 10 o'clock on week days. It will remain open, however, all day on Sundays and holidays. For the present, motion pictures will be continued in the old time office. Newspaper and periodical subscriptions expired on September 1.

GATUN.

The special entertainment given on Friday evening, August 27, was attended by about 300 civilians and soldiers. The program comprised motion pictures, sleight of hand feats, ventriloquism, and an exhibition of expert rifle shooting by Prof. Aros Satam and Paqu'ita Tomaski.

Mrs. Boyd sang at the song service on Sunday evening August 30. Mr. Kjellander led the choral singing.

Dr. Hill, violinist, of Corozal, will play on September 7.

Entry blanks for the Labor Day meet may be procured from the secretary or the physical director.

CRISTOBAL.

Mr. S. P. Verner has been elected chairman of the discussion club, and Mr. N. Rohden, secretary. At the regular meeting of the club, on Thursday, August 27, Messrs. Hipp, Rohden, Weaver, Larsen, Stevens, Stevenson, and Kromer were selected as the committee on programs, and Messrs. Fox, Fluery, Male, Wentzinski, and Bouton, as the committee on publicity.

The men are showing interest in the newly organized athletic association. Under the leadership of Mr. Quinn, the men are practicing every evening in the lot adjoining the clubhouse for the field meet at Corozal on Labor Day. Twelve men have registered for a total of 35 entries.

The basketball committee met and organized four teams for the local league on Thursday, August 27. The opening game of the schedule was played on Tues-

day, September 1. The lineup of teams was, as follows:

"Senators"—Huber, Simons, Wilson, Patrick, Saunders, Neeson, and Wright.

"Naps"—Fraser, Duffy, Cousineau, Hughes, Kautz, Fitzpatrick, and Roberts.

"Yankees"—Luce, Ashton, Haasli, Croxford, Warburton, Jurs, and Strong.

"Athletics"—Burgoon, D. Raymond, J. Raymond, Pring, Cotton, Whitver, Mathues.

The men interested in lawn tennis met on Monday, August 31, under the leadership of Mr. Nash, and planned for a local tennis tournament.

The "You'uns" defeated the "We'uns" at basketball on Saturday, August 29, by a score of 38 to 34.

At the single folks' bowling tournament held on Monday, August 24, Mr. Henry and Miss Lillian Cotton won by rolling the high total of 567 pins.

The other teams were, in the order of their scores: Mr. Russell and Miss Stevens, Mr. Gibson and Miss G. Butler, Mr. Drew and Miss Bevington, Mr. Smith and Miss Pearson, Mr. D. Raymond and Miss Cori, Mr. Steele and Miss C. Madison, Mr. Scheid and Miss Ragsdale, Mr. Nash and Miss M. Butler, Mr. Ashton and Miss L. Madison, Mr. Prager and Miss Holland.

The following high scores were rolled during the week ending August 29:

Duckpins—Henry, 120; E. Cotton, 109; Scheid, 105; Collins, 103; Pinney, 102; Smith, 100; Mrs. Bevington, 100.

Tenpins—Strong, 223; Collins, 222; Burns, 108; Barte, 207; Russell, 200.

Cristobal took all three games from Corozal at tenpins on Saturday, August 29. Scores follow:

Cristobal.			Corozal.		
Rusty.....	174	152	161	Gustavson..	161
Burns.....	136	162	208	Terittier....	128
Strong.....	212	162	144	Hodges.....	151
Peterson....	178	160	145	Boeser.....	166
Collins.....	157	183	204	White.....	170

Totals.... 907 819 862 776 794 832

All men interested in checkers are invited to participate in the all-isthmian checker tournament to be held at the Cristobal clubhouse on Saturday, September 5.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., August 31, 1914.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Abston, J. M.	Marden, Wm. C.
Galyean, G.	O'Brien, Edward F. (2)
Lane, William	Pulliam, Miss Caroline
Lasswell, Miss A.	Williams, C. (pamphlet)

Movements of Ocean Vessels at the Port of Balboa.

The following vessels arrived at, or departed from, the port of Balboa during the week ending 8 a. m., August 29:

Arrivals—August 24, *Ecuador*, from Guayaquil; August 25, *Mexican*, from Colon; August 26, *Palena*, from Valparaiso; *Nebraskan* from San Pedro; August 27, *Quito*, from Guayaquil; *Montaro*, from Callao; August 28, *Carolyn*, from Colon; *Erbuna*, from Colon; *Barracouta*, from San Francisco; *L. Luckenbach*, from San Francisco.

Departures—August 24, *Monari*, to Guayaquil; *Ancon*, to Colon; *Kentuckian*, to Colon; *City of Sydney*, to San Francisco; August 25, *Isthmian*, to San Francisco; *Pern*, to Callao; *Teniente Rodriguez*, to Callao; *Mexican*, to San Francisco; August 26, *Niagara*, (yacht) to Colon; August 28, *Nebraskan*, to Colon; *Carolyn* to Colon; August 29, *L. Luckenbach*, to Colon; *Erbuna*, to Japan.

During the week, three vessels passed through the Canal southbound, and six northbound.

Legal Notice.

United States of America } In the District Court.
Canal Zone.

The following named American citizens died intestate leaving personal property within the Canal Zone to the amount stated:

Nelson Wheeler.....	\$ 28.99
George Wagner.....	179.09

The Administrator of Estates has filed a petition for the escheat of the abovenamed estates, in accordance with Section 779 of the Code of Civil Procedure.

Notice is hereby given to all heirs or creditors of the above estates to appear before this Court in the courthouse at Ancon, on September 26, 1914, at 9 o'clock, a. m., to establish their claims, or to show cause why the said estates should not escheat to the Government of the Canal Zone.

E. M. GOOLSBY,
Clerk of District Court

MOVEMENTS OF OCEAN VESSELS.

The following is a list of sailings and scheduled arrivals of the Panama Railroad Steamship Line; of the Royal Mail Steam Packet Company; and the United Fruit Company's Line:

NEW YORK TO CRISTOBAL.

	Sails.	Arrives.
*Panama.....	P. R. R. Aug. 28	Sept. 3
*Allianca.....	P. R. R. Sept. 3	Sept. 9
*Colon.....	P. R. R. Sept. 9	Sept. 15
*Advance.....	P. R. R. Sept. 15	Sept. 22
*Panama.....	P. R. R. Sept. 22	Sept. 28
*Allianca.....	P. R. R. Sept. 28	Oct. 4
*Colon.....	P. R. R. Oct. 4	Oct. 11
*Advance.....	P. R. R. Oct. 10	Oct. 17
*Panama.....	P. R. R. Oct. 16	Oct. 22
*Allianca.....	P. R. R. Oct. 22	Oct. 28
*Colon.....	P. R. R. Oct. 29	Nov. 4

CRISTOBAL TO NEW YORK.

†Advance.....	P. R. R. Sept. 3	Sept. 10
†Panama.....	P. R. R. Sept. 9	Sept. 15
†Allianca.....	P. R. R. Sept. 15	Sept. 21
†Colon.....	P. R. R. Sept. 22	Sept. 28
†Advance.....	P. R. R. Sept. 28	Oct. 5
†Panama.....	P. R. R. Oct. 4	Oct. 10
†Allianca.....	P. R. R. Oct. 10	Oct. 16
†Colon.....	P. R. R. Oct. 17	Oct. 23
†Advance.....	P. R. R. Oct. 23	Oct. 30
†Panama.....	P. R. R. Oct. 29	Nov. 4
†Allianca.....	P. R. R. Nov. 4	Nov. 10
†Colon.....	P. R. R. Nov. 10	Nov. 16

NEW YORK TO COLON.

*Almirante.....	U. F. C. Aug. 26	Sept. 2
Tagus.....	R. M. Aug. 29	Sept. 6
*Santa Marta.....	U. F. C. Sept. 2	Sept. 9
Metapan.....	U. F. C. Sept. 9	Sept. 16
Oruba.....	R. M. Sept. 12	Sept. 20
Zacapa.....	U. F. C. Sept. 16	Sept. 23
*Almirante.....	U. F. C. Sept. 23	Sept. 30
Treat.....	R. M. Sept. 26	Oct. 4
*Santa Marta.....	U. F. C. Sept. 30	Oct. 7
*Metapan.....	U. F. C. Oct. 7	Oct. 14
Orotava.....	R. M. Oct. 10	Oct. 18
*Zacapa.....	U. F. C. Oct. 14	Oct. 21
Almirante.....	U. F. C. Oct. 21	Oct. 28
Dapube.....	R. M. Oct. 24	Nov. 1
Santa Marta.....	U. F. C. Oct. 28	Nov. 4
*Metapan.....	U. F. C. Nov. 4	Nov. 11
Tagus.....	R. M. Nov. 7	Nov. 15
*Zacapa.....	U. F. C. Nov. 11	Nov. 18

COLON TO NEW YORK.

Zacapa.....	U. F. C. Sept. 3	Sept. 10
Almirante.....	U. F. C. Sept. 10	Sept. 17
Trent.....	R. M. Sept. 15	Sept. 23
Santa Marta.....	U. F. C. Sept. 17	Sept. 24
Metapan.....	U. F. C. Sept. 24	Oct. 1
Orotava.....	R. M. Sept. 29	Oct. 7
Zacapa.....	U. F. C. Oct. 1	Oct. 8
Almirante.....	U. F. C. Oct. 8	Oct. 15
Danube.....	R. M. Oct. 13	Oct. 21
Santa Marta.....	U. F. C. Oct. 15	Oct. 22
Metapan.....	U. F. C. Oct. 22	Oct. 29
Tagus.....	R. M. Oct. 27	Nov. 4
Zacapa.....	U. F. C. Oct. 29	Nov. 5
Almirante.....	U. F. C. Nov. 5	Nov. 12
Essequibo.....	R. M. Nov. 10	Nov. 18

NEW ORLEANS TO COLON.

Cartago.....	U. F. C. Aug. 26	Sept. 2
*Turrialba.....	U. F. C. Aug. 29	Sept. 3
Cartago.....	U. F. C. Sept. 2	Sept. 9
*Abangarez.....	U. F. C. Sept. 5	Sept. 10
Heredia.....	U. F. C. Sept. 9	Sept. 16
*Atenas.....	U. F. C. Sept. 12	Sept. 17
Cartago.....	U. F. C. Sept. 16	Sept. 23
*Turrialba.....	U. F. C. Sept. 19	Sept. 24

COLON TO NEW ORLEANS.

†Abangarez.....	U. F. C. Aug. 27	Sept. 1
Heredia.....	U. F. C. Aug. 27	Sept. 3
†Atenas.....	U. F. C. Sept. 3	Sept. 8
Parismina.....	U. F. C. Sept. 3	Sept. 10
†Turrialba.....	U. F. C. Sept. 10	Sept. 15
Cartago.....	U. F. C. Sept. 10	Sept. 17
†Abangarez.....	U. F. C. Sept. 17	Sept. 22
Heredia.....	U. F. C. Sept. 17	Sept. 24

*Will carry mail from the United States.

†Will carry mail to the United States.

Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.

Panama Railroad Company's steamers sail from Piers 8, 9, and 11, Cristobal, at 3 p. m.

Lost—On Monday, August 24, between the Empire electric plant and o'd Panama railroad station, Pedro Miguel, probably on train No. 40, or on road between Pedro Miguel and Paraiso, a watch fob bearing a gold Maltese cross, with K. P. emblem set in center and monogram "J. F. M." on reverse side. Reward, if returned to house No. 117-A, Pedro Miguel, or to Mrs. L. M. Watson, house No. 152, Ancon.

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, SEPTEMBER 9, 1914.

No. 3.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,

THE CANAL RECORD,

Balboa, Canal Zone,

Isthmus of Panama.

No communication either for publication or requesting information will receive attention unless signed with the full name and address of the writer.

NOTES OF PROGRESS.

Effects of the European War on the Prices of Commodities.

The effect of the war in Europe has begun to be felt on the commissary prices. Meat is the first item to be seriously affected. This is due to the fact that the beef contract is based on a sliding scale, which varies according to the wholesale prices in the Chicago market. Prices on beef and other meats have materially advanced within the past 30 days. The commissary is protected by its contract on groceries and canned goods up to September 30. The new contract will become effective October 1, and it is probable that there will be some advance in the prices on certain commodities.

Flour has advanced in price but not materially. The price of rice is advancing rapidly. Sugar has advanced in price more than any other commodity. Granulated sugar is selling at retail in Chicago for 10 to 12 cents per pound at the present time.

The supply of glassware and china from Europe will be shut off, and there will be some difficulty in obtaining shipments from England. The commissary has on hand a large supply of glassware, and a fair supply of ordinary kitchen and table ware. Arrangements are being made to replace the aluminum cooking utensils, formerly purchased abroad, with stock from the United States.

There is a good stock on hand of woollens and linens, and about two months' supply of boots and shoes. Prices on these are rising rapidly in the United States, and it is anticipated that on new purchases there will be an advance in price.

The supply of cheap hosiery, formerly purchased in Germany, has been entirely cut off.

No particular advance in the prices of cigars and tobacco is anticipated. There will probably be difficulty in obtaining English tobaccos and cigarettes, and they will be replaced by those of domestic manufacture.

Shipments from Germany are entirely suspended, and, owing to the difficulty in ne-

gotiating New York drafts in London, the English shippers are refusing to make deliveries. Efforts are, however, being made to overcome this difficulty.

General Overhauling for the "Vulcan."

The rock breaker *Vulcan* was removed from the dry dock at Mount Hope in the morning of Wednesday, September 2, after undergoing a general overhauling. The principal repair work was strengthening the well in the center of the hull, through which the ram is dropped for breaking rock. The angle bars which formed the original reinforcement of the well were supplanted by steel channels. While this work was in progress, the loose rivets in the hull were renewed, the wooden wearing strips on the bottom were replaced, the bottom and sides of the hull were repainted, the boiler was retubed, and minor repairs were made to pipes and machinery.

This is the first time the *Vulcan* has been on the ways for general repair since it was placed in service five years ago. It was shipped, knocked down, from the Lobnitz yards in Scotland, and erected at the marine shops at Balboa.

Steamship Company Increases Passenger Rates.

The Royal Mail Steam Packet Company has issued a notice that, owing to the increased cost of operating its ships, on account of the European war, rates to Trinidad, Barbados, and the northern islands have been increased 25 per cent for all classes of passengers. The old rates to New York and Kingston, Jamaica, and the special repatriation rate for deck passengers from Colon to Barbados granted to Panama Canal employees remain unaltered.

Portable Gang Plank at Gatun Locks.

A portable gang plank will be installed on the center wall at Gatun Locks for the purpose of facilitating the disembarkation of the pilot, the special Canal passage crew for handling lines in the locks, and others, from a vessel on the down lockage. The gang plank can be run out while the water is equalizing thereby affording, without delay in the lockage, an opportunity for those on board to go ashore. The pilot will be able to handle his vessel from the lock wall when it is leaving the locks, as the water will be at low level, and 30 minutes, or more, in time will be saved in getting ready for the next lockage, by having the pilot already on the wall.

Many vessels passing through the Canal do not have sufficient men to handle the lines in the locks properly. For these vessels it is required that they take on additional men at the entering terminal port, which crew is discharged at the other end.

For ships going directly to sea, or which do not dock at the second port, it is necessary to provide some form of transportation from

ship to shore, and it must be larger than an ordinary pilot launch.

The gang plank will allow this crew to disembark at Gatun, thus avoiding the water transportation. The same considerations apply in the case of passengers who may have obtained permission to pass through the Canal, the main items of interest lying, of course, between, and at the Atlantic and Pacific locks.

Special Ancon-Balboa Street Car Service.

In view of an increasing demand for a later street car service between Ancon and Balboa at night than was formerly furnished, the Panama Tramways Company, on Monday, September 7, began the operation of a special service, following the completion of the regular schedule for the day. As this arrangement creates an added expense to the tramways company, it has been granted authority by the Governor of the Panama Canal to increase the fare collected from passengers carried on the cars operated on this special schedule within the Canal Zone from five to 10 cents per person, making the fare from the Zone boundary at Chorrillo, or "Limit" as it is known, to the end of the line at Balboa, 10 cents, United States currency, and from Ancon to Chorrillo, 10 cents, or double the day rate from Ancon to Balboa. For the present, only one car will be operated in this service, making three round trips between the termini of the line at Balboa and Ancon. The car does not run to the station in the Ancon Hospital grounds, for the reason that it is not considered safe to cross the railroad track in the Tivoli district at that time of the night, but, instead, will stop at the road crossing to the Hotel Tivoli. It takes a car about 40 minutes to make the round trip, and on this basis, the following schedule has been placed in effect:

CARS TO LA BOCA.

From	First trip.	Second trip.	Third trip.
	A.M.	A.M.	A.M.
Tivoli.....	12.05	1.05	1.55
Santa Ana.....	12.20	1.10	2.00
Chorrillo.....	12.25	1.15	2.05

CARS TO ANCON.

From	First trip.	Second trip.	Third trip.
	A.M.	A.M.	A.M.
La Boca.....	12.40	1.30	2.20
Chorrillo.....	12.48	1.38	2.28
Santa Ana.....	12.55	1.45	.....

On Sundays and holidays the cars will leave each station 20 minutes later than shown in the above table.

Library of Reference Works and Catalogues.

A general reference library is to be established in the new Administration Building at Balboa, for the primary purpose of collecting at one known and easily accessible place books and catalogues which may be of use to employees in their work.

The nucleus of the collection will be the books of general engineering interest now in

the various offices of the organization. The offices will retain such books as deal with their special provinces and are frequently consulted, but will send to the general library the works of wider range for which they have less use. The books of general nature will be of more value in the common library than highly specialized books, for the reason that an employee who is seeking especially technical information would do better to consult directly the department which makes a specialty of the matter he is studying.

A collection of catalogues from manufacturers and distributors of goods used in the Canal work, in connection with complete files of the principal American and foreign technical magazines, with their advertising matter, will be one of the most valuable features of the library. This is expected to make advanced information in the various branches of engineering accessible to all, and to facilitate the purchase of the most satisfactory goods.

Manufacturers and distributors who think there may be use for their goods in the varied work of the Canal are invited to send catalogues to "The Panama Canal Library, Balboa Heights, Canal Zone." They are requested to send catalogues in duplicate. One copy is to be placed in the files of the library, and the other will be available for circulation among the various offices which may send requests to the library for catalogues on specific subjects. This invitation applies to all, irrespective of whether they have been heretofore in communication with any divisions of the Canal organization. It is desired to keep the catalogue library as complete and up-to-date as possible, and it is believed it will be an efficient way of keeping producer and consumer in touch.

PERSONAL.

Hon. Levi Monroe Kagy of the Joint Land Commission, accompanied by the new member, Hon. Nicholas Cornett of Lawrenceburg, Ind., will sail from New York on the *Ancon* on September 10.

Mr. Dan E. Wright sailed for New York on the *Panama* on Wednesday, September 9, on special leave of absence.

Cristobal Dancing Club.

The monthly dance of the Cristobal Dancing Club will be held in the Cristobal clubhouse on Saturday evening, September 12.

The Panama railroad passenger station at Colon will be repainted, and necessary repairs made to the window frames. The work will be done by forces of the Supply Department.

OPENING OF ZONE SCHOOLS.

Thursday, October 1, the Appointed Date—Arrangements for Attendance.

The public schools of the Canal Zone will open on Thursday, October 1, 1914.

All children residing in the Canal Zone, whether of employes or nonemployes, and all children of nonresident employes of The Panama Canal are entitled to free school privileges. No child will be admitted, however, who will not be six years old on or before February 1, 1915.

Schools for white children will be opened at the following places: Balboa Heights, Grades 1 to 12; Ancon, Grades 1 to 8; Corozal, Grades 1 to 8; Pedro Miguel, Grades 1 to 7; Paraiso, Grades 1 to 4; Culebra, Grades 1 to 8; Las Cascadas, Grades 1 to 8; Gatun, Grades 1 to 8; Cristobal, Grades 1 to 10.

Schools for colored children, Grades 1 to 8, will be opened at the following places: La Boca, Ancon, Paraiso, Gatun, Mount Hope, and Cristobal.

All pupils on the Balboa side of the nurses' quarters (house No. 152), and the insane asylum, will attend school at Balboa Heights; and all pupils on the Ancon side of these designated buildings will attend school at Ancon. Pupils who live at East Balboa will attend school at Balboa Heights. Eighth grade pupils living at Pedro Miguel will attend school at Corozal. Fifth, sixth, and seventh grade pupils living at Paraiso will attend school at Pedro Miguel, and eighth grade pupils will attend at Corozal. Another year of high school work may be offered at Cristobal if conditions warrant.

Schools for white children will open and close according to the following schedule:

WHITE SCHOOLS.	A.M.	P.M.
Balboa Heights.....	8.00-11.00	1.00-3.00
Ancon.....	8.00-11.00	1.00-3.00
Corozal.....	8.00-11.00	1.00-3.00
Paraiso.....	8.00-11.00	1.00-3.00
Culebra.....	8.00-11.00	1.00-3.00
Las Cascadas.....	8.00-11.00	1.00-3.00
Gatun.....	9.00-12.00	2.00-4.00
Cristobal—		
Grades one to three, inc.	8.30-11.30	1.30-3.30
Other grades.....	9.00-12.00	2.00-4.00

Eighth grade pupils from Paraiso and Pedro Miguel will take the train arriving at Corozal at 7.49 a. m., and return on the train leaving Corozal at 3.11 p. m. Fifth, sixth, and seventh grade pupils from Paraiso will have brake service to Pedro Miguel and return. Pupils living between Pedro Miguel and Gatun, and attending elementary school at Gatun, or high school at Cristobal, will take train arriving at Gatun and Cristobal at 9.05 a. m., and 9.20 a. m., respectively. They will return on

train leaving Cristobal and Gatun at 4.25 p. m., and 4.40 p. m., respectively. High school pupils attending school at Balboa Heights, and living on the Las Cascadas-Panama shuttle line, will take the train arriving at Balboa Heights at 7.55 a. m., and return on the train leaving Balboa Heights at 3.05 p. m. Those living on the Colon-Panama line will take the train arriving at Balboa Heights at 8.45 a. m., and return on the train leaving Balboa Heights at 5.35 p. m.

The sessions in all colored schools will be from 8 to 11 a. m., and from 1 to 3 p. m.

Wherever practicable, the first grade in all schools will dismiss 30 minutes earlier than the other grades in the morning; and the first, second, and third grades will dismiss 30 minutes earlier in the afternoon.

BRAKE SERVICE SCHEDULE.

There will be one brake in the Paraiso-Pedro Miguel service. It will leave Paraiso for Pedro Miguel in the forenoon at 7.45, returning at 11 o'clock. In the afternoon, the brake will leave Paraiso at 12.45, and leave on its return at 3 o'clock.

There will be two brakes in the Colon Beach-Cristobal service operated on the following schedule:

COLON BEACH TO SCHOOL—FORENOON SESSION..

A.M.
For Grades 1 to 3..... 8.15
For upper grades..... 8.45

SCHOOL TO COLON BEACH—FORENOON SESSION.

For Grades 1 to 3..... 11.30
For upper grades..... 12.00

COLON BEACH TO SCHOOL—AFTERNOON SESSION.

P.M.
For Grades 1 to 3..... 1.15
For upper grades..... 1.45

SCHOOL TO COLON BEACH—AFTERNOON SESSION.

For Grades 1 to 3..... 3.30
For upper grades..... 4.00

Requests should be made to the office of the superintendent of schools, Balboa Heights, immediately for railroad transportation for all white children living in communities where schools of appropriate grades, or brake service, are not provided.

Additional Accommodations at Palo Seco.

Owing to an increased number of inmates at the Palo Seco leper asylum, an additional wooden building for housing the male patients has been authorized. It will be one story in height, 30 by 70 feet in plan, containing five rooms, each 12 by 18 feet in plan, with a window at the end of each room opening on a 6-foot porch, which will extend along the sides of the building for its full length. The roof will be of galvanized iron, and the foundations will be wooden posts resting on concrete footings. The work will be done by the male patients, six or seven of them having some knowledge of carpentry. The number of patients at the asylum on September 1 was 51, divided, as follows: Males, 39; females, 12.

Ordering Eye Glasses for Patients.

The chief of the eye and ear clinic at Ancon Hospital has been authorized to order eye glasses for those of his patients who desire him to do so. Under this plan, eye glasses will be furnished at actual cost plus an amount necessary to cover breakage and other losses.

Team service will hereafter be furnished Canal employes living in Panama city, in the same manner as in the Zone settlements, when the district quartermasters find it feasible to comply with the requests, and providing no extra expenses need be incurred.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Gill, St. Clair.....	35644	Barbados.....	Panama.....	Op. and Mtce..	August 31.
Lawrence, Thomas.....	37717	Jamaica.....	Camp Biedr....	Panama railroad	August 23.
Leacock, Fitz.....	85111	Barbados.....	New Gatun.....	Panama railroad	September 3.
Johnson, Uriah.....	57774	Jamaica.....	Panama.....	Panama railroad	September 1.
Seales, St. Clair, alias S. Sealy.	203509	Barbados.....	Rio Grande.....	Supply Dept....	August 18.

The estates of these deceased employes of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Ancon, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

SOCIAL LIFE OF THE ZONE.

Federation of Societies of Women for Christian Work.

A meeting of the executive board of the Panama Federation of Societies of Women for Christian work will be called the first week in October, on the return of the vice-president and other officers to the Isthmus. The object of this meeting will be to prepare for a convention to be held in October, this being the time of the second anniversary of the first general missionary convention of women to be held in the Canal Zone. The first was held by the Ladies' Aid Society at Empire on October 25, 1912.

Church Notes.

Meetings of the Woman's Altar Guild of St. Luke's Hospital chapel, Ancon, were resumed, with a corporate communion and a short business meeting on Tuesday morning, September 1. Eight names were presented for membership in the guild. The meetings will hereafter be, as follows: On the first Tuesday morning in each month, corporate communion at 8 o'clock, followed by a business meeting; on the third Tuesday in each month, in the afternoon at 3.30 o'clock, at the homes of members, by invitation. The first of these afternoon meetings will be held at the residence of Mrs. S. T. Darling, Ancon Hospital grounds, on Tuesday, September 15. The library will be installed in the Sunday school room in the chapel and placed in circulation as soon as possible. Library rules will be made public through these columns.

The junior auxiliary of St. Luke's church tendered a farewell reception to its president at the residence of the chaplain on Wednesday afternoon, September 2. Preceding the reception, a business meeting was held, when reports of all the committee were read. As the president is leaving the Isthmus, it was necessary to elect new officers, and the following were chosen: President, Julia Heald; secretary, Lillian McGeachy; treasurer, Ruth Cummings. The office of vice-president was abolished. Louise Dexter, the retiring president, was elected honorary president. The auxiliary voted a gift of \$10 to the church mission work among the Oneida Indians in Wisconsin, a portion of their property having recently been destroyed by a hurricane. The next meeting of the auxiliary will be at Ancon Hall on Wednesday afternoon, September 9, for physical culture and folk dancing. All meetings are held from 3.45 to 4.45 p. m.

St. Luke's Sunday school will hold a picnic on Thursday, September 10. A launch has been chartered, and the party will spend the day at Taboga. Tickets for the round trip will be 50 cents, United States currency. Those attending will be expected to take their own lunch.

Camp Fire Girls.

A camp fire girls organization has been formed at Corozal, with Mrs. J. H. Hackenberg as guardian. There are about 12 members. Two of these girls were members of the original camp fire on the Isthmus, which was organized at Gatun in 1912, with Mrs. William L. Sibert as guardian. The meetings of the Corozal camp fire are held at the home of Mrs. Hackenberg weekly.

An organization similar to the camp fire, but not to be affiliated with the central organization in New York, is under consideration

for the young girls in Pedro Miguel. Out of this organization, will no doubt be developed the regular camp fire, but it is not considered desirable to form a permanent organization until later in the year.

Red Cross Lectures for Women.

The course of Red Cross lectures for women, which was begun on July 17, will be completed with the lecture on Friday afternoon, September 18. The examination, following the completion of the course, will be given by Dr. Harry E. Ford, Captain, Medical Corps, United States Army, of Camp Otis.

Address on Prohibition.

Mrs. D. E. Fulton, the American lecturer who has been speaking at various public meetings in churches and halls, delivered an address on prohibition in the Government clubhouse, Cristobal, on Thursday evening, September 3. She made an appeal for worldwide prohibition for the building up of the nations.

Patriotic Exercises at Seawall Methodist Church.

The pupils of the Panama Methodist college, are preparing for a special patriotic exercises to be held in the seawall church on Sunday morning, September 13. The occasion is the celebration of the centenary of the publication of the national anthem, "The Star Spangled Banner."

Men's Catholic Club of Balboa.

The men's Catholic club of Balboa elected officers for the new year at a recent general meeting. A program was carried out, consisting of addresses by Mr. J. P. Corrigan, the retiring president of the club, and the Rev. Father McDonald, priest in charge and founder of the society. The newly elected officers are: President, Patrick Moran; vice-president, J. Sweny; recording secretary, Frank Sheenan; financial secretary and treasurer, Father McDonald; sergeant-at-arms, James E. Hawkey. The club meets at the Balboa lodge hall. The committee in charge is composed of Messrs. J. E. Hawkey, chairman; F. Sheenan, F. L. Maney, Charles F. Williams, J. O'Rourke, and James Ormsby.

American Institute of Electrical Engineers.

The September meeting of the Panama section of the American Institute of Electrical Engineers will be held at Bella Vista beach, Panama, on the evening of September 19. A special street car will leave the Panama station of the Panama railroad at 6.30 p. m., and will go direct to the beach.

The paper of the evening will be entitled the, "Electrical and mechanical characteristics of the loose wheel drive, as applied to the operation of street cars" and will be presented by Mr. H. K. Ovalle, superintendent of the Panama Tramways Company.

After the meeting we will hold a beach party. All members and their friends (including the ladies) are urged to be present. Refreshments can be obtained at the pavilion. Visitors are welcome.

C. J. EMBREE,
BALBOA, C. Z., Secretary-Treasurer.
September 8, 1914.

Obituary.

Henry Ehrman, a nonemployee, died on August 29 at his home in Colon. He was 44 years of age, and had been on the Isthmus 26 years, coming here from New Orleans, La. He is survived by his wife living in Colon.

A PROCLAMATION

By the President of the United States of America.

NEUTRALITY—BELGIUM AND GERMANY.

Whereas, the United States is in fact aware of the existence of a state of war between Belgium and Germany; And, Whereas, the United States is on terms of friendship and amity with the contending powers, and with the persons inhabiting their several dominions:

And, Whereas, there are citizens of the United States residing within the territories or dominions of each of the said belligerents and carrying on commerce, trade, or other business or pursuits therein;

And, Whereas, there are subjects of each of the said belligerents residing within the territory or jurisdiction of the United States, and carrying on commerce, trade, or other business or pursuits therein;

And, Whereas, the laws and treaties of the United States, without interfering with the free expression of opinion and sympathy, or with the commercial manufacture or sale of arms or munitions of war, nevertheless impose upon all persons who may be within their territory and jurisdiction the duty of an impartial neutrality during the existence of the contest;

And, Whereas, it is the duty of a neutral government not to permit or suffer the making of its waters subservient to the purposes of war;

Now, Therefore, I, WOODROW WILSON, President of the United States of America, in order to preserve the neutrality of the United States and of its citizens and of persons within its territory and jurisdiction, and to enforce its laws and treaties, and in order that all persons, being warned of the general tenor of the laws and treaties of the United States in this behalf, and of the law of nations, may thus be prevented from any violation of the same, do hereby declare and proclaim that by certain provisions of the Act approved on the 4th day of March, A. D. 1909, commonly known as the "Penal Code of the United States" the following acts are forbidden to be done, under severe penalties, within the territory and jurisdiction of the United States, to-wit:

1. Accepting and exercising a commission to serve either of the said belligerents by land or by sea against the other belligerent.

2. Enlisting or entering into the service of either of the said belligerents as a soldier, or as a marine, or seaman on board of any vessel of war, letter of marque, or privateer.

3. Hiring or retaining another person to enlist or enter himself in the service of either of the said belligerents as a soldier, or as a marine, or seaman on board of any vessel of war, letter of marque, or privateer.

4. Hiring another person to go beyond the limits or jurisdiction of the United States with intent to be enlisted as aforesaid.

5. Hiring another person to go beyond the limits of the United States with intent to be entered into service as aforesaid.

6. Retaining another person to go beyond the limits of the United States with intent to be enlisted as aforesaid.

7. Retaining another person to go beyond the limits of the United States with intent to be entered into service as aforesaid. (But the said act is not to be construed to extend to a citizen or subject of either belligerent, who, being transiently

within the United States, shall, on board of any vessel of war, which, at the time of its arrival within the United States, was fitted and equipped as such vessel of war, enlist or enter himself or hire or retain another subject or citizen of the same belligerent, who is transiently within the United States, to enlist or enter himself to serve such belligerent on board such vessel of war, if the United States shall then be at peace with such belligerent.)

8. Fitting out and arming, or attempting to fit out and arm, or procuring to be fitted out and armed, or knowingly being concerned in the furnishing, fitting out, or arming of any ship or vessel with intent that such ship or vessel shall be employed in the service of either of the said belligerents.

9. Issuing or delivering a commission within the territory or jurisdiction of the United States for any ship or vessel to the intent that she may be employed as aforesaid.

10. Increasing or augmenting, or procuring to be increased or augmented, or knowingly being concerned in increasing or augmenting, the force of any ship of war, cruiser, or other armed vessel, which, at the time of her arrival within the United States, was a ship of war, cruiser, or armed vessel in the service of either of the said belligerents, or belonging to the subjects of either, by adding to the number of guns of such vessels, or by changing those on board of her for guns of a larger calibre, or by the addition thereto of any equipment solely applicable to war.

11. Beginning or setting on foot or providing or preparing the means for any military expedition or enterprise to be carried on from the territory or jurisdiction of the United States against the territories or dominions of either of the said belligerents.

And I do hereby further declare and proclaim that any frequenting and use of the waters within the territorial jurisdiction of the United States by the armed vessels of a belligerent, whether public ships or privateers, for the purpose of preparing for hostile operations, or as posts of observation upon the ships of war, or privateers, or merchant vessels of a belligerent lying within or being about to enter the jurisdiction of the United States, must be regarded as unfriendly and offensive, and in violation of that neutrality which it is the determination of this Government to observe; and to the end that the hazard and inconvenience of such apprehended practices may be avoided, I further proclaim and declare that from and after the eighteenth day of August, instant, and during the continuance of the present hostilities, no ship of war, or privateer, or any belligerent shall be permitted to make use of any port, harbor, roadstead, or waters subject to the jurisdiction of the United States from which a vessel of an opposing belligerent (whether the same shall be a ship of war, a privateer, or a merchant ship) shall have previously departed, until after the expiration of at least 24 hours from the departure of such last mentioned vessel beyond the jurisdiction of the United States. If any ship of war, or privateer, of a belligerent shall, after the time this notification takes effect, enter any port, harbor, roadstead, or waters of the United States, such vessel shall be required to depart and to put to sea within 24 hours after her entrance into such port, harbor, roadstead, or waters, except in case of stress of weather or of her requiring provisions or things necessary for the subsistence of her crew, or for repairs; in any

of which cases, the authorities of the port or of the nearest port (as the case may be) shall require her to put to sea as soon as possible after the expiration of such period of 24 hours, without permitting her to take in supplies beyond what may be necessary for her immediate use; and no such vessel which may have been permitted to remain within the waters of the United States for the purpose of repair shall continue within such port, harbor, roadstead, or waters for a longer period than 24 hours after her necessary repairs shall have been completed, unless within such 24 hours a vessel, whether ship of war, privateer, or merchant ship of an opposing belligerent, shall have departed therefrom, in which case the time limited for the departure of such ship of war, or privateer, shall be extended so far as may be necessary to secure an interval of not less than 24 hours between such departure and that of any ship of war, privateer, or merchant ship of an opposing belligerent which may have previously quit the same port, harbor, roadstead, or waters. No ship of war, or privateer, of a belligerent shall be detained in any port, harbor, roadstead, or waters of the United States more than 24 hours, by reason of the successive departures from such port, harbor, roadstead, or waters of more than one vessel of an opposing belligerent. But if there be several vessels of opposing belligerents in the same port, harbor, roadstead, or waters, the order of their departure therefrom shall be so arranged as to afford the opportunity of leaving alternately to the vessels of the opposing belligerents, and to cause the least detention consistent with the objects of this proclamation. No ship of war, or privateer, of a belligerent shall be permitted, while in any port, harbor, roadstead, or waters within the jurisdiction of the United States, to take in any supplies, except provisions and such other things as may be requisite for the subsistence of her crew, and except so much coal only as may be sufficient to carry such vessel, if without any sail power, to the nearest port of her own country; or in case the vessel is rigged to go under sail, and may also be propelled by steam power, then with half the quantity of coal which she would be entitled to receive, if dependent upon steam alone, and no coal shall be again supplied to any such ship of war, or privateer, in the same or any other port, harbor, roadstead, or waters of the United States, without special permission, until after the expiration of three months from the time when such coal may have been last supplied to her within the waters of the United States, unless such ship of war, or privateer, shall, since last thus supplied, have entered a port of the government to which she belongs.

And I do further declare and proclaim that the statutes and the treaties of the United States, and the law of nations, alike require that no person, within the territory and jurisdiction of the United States, shall take part, directly or indirectly, in the said wars, but shall remain at peace with all of the said belligerents, and shall maintain a strict and impartial neutrality.

And I do hereby enjoin all citizens of the United States, and all persons residing or being within the territory or jurisdiction of the United States, to observe the laws thereof, and to commit no act contrary to the provisions of the said statutes or treaties, or in violation of the law of nations in that behalf.

And I do hereby warn all citizens of the United States, and all persons residing or being

within its territory or jurisdiction that, while the free and full expression of sympathies in public and private is not restricted by the laws of the United States, military forces in aid of a belligerent cannot lawfully be originated or organized within its jurisdiction; and, that while all persons may lawfully and without restriction by reason of the aforesaid state of war, manufacture and sell within the United States arms and munitions of war, and other articles ordinarily known as "Contraband of war," yet they cannot carry such articles upon the high seas for the use or service of a belligerent, or attempt to break any blockade which may be lawfully established and maintained during the said wars, without incurring the risk of hostile capture and the penalties denounced by the law of nations in that behalf.

And I do hereby give notice that all citizens of the United States and others who may claim the protection of this Government, who may misconduct themselves in the premises, will do so at their peril, and that they can in no wise obtain any protection from the Government of the United States against the consequences of their misconduct.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done in the City of Washington, this 18th day of August in the year of our Lord one thousand nine hundred and fourteen, and of the independence of the United States of America the one hundred and thirty-ninth.

WOODROW WILSON.

By the President:

W. J. BRYAN, *Secretary of State.*

[No. 1276.]

Assistants in Charge of Panama Canal Exhibit.

Mr. Ralph W. Roberts, who has been in charge of the sightseeing service of the Panama railroad since the resignation of Mr. W. M. Baxter, Jr., has been appointed to take charge of the Panama Canal exhibit at the International Panama-Pacific Exposition in San Francisco. He is allowed two assistants in this work, and the positions have been filled recently by the appointment of Mr. W. S. Clough of the office of the Governor to one, and of Mr. Homer G. Cornthwaite, assistant chief hydrographer in the Division of Meteorology and Hydrography, to the other. Mr. Roberts' duties will consist in giving lectures on the method of operating the Canal, and other features of interest, aided by a Canal model. One of the other appointees will assist him in this work, taking his place during his absence. The other assistant will attend to all of the clerical and stenographic work. The men will not leave for the United States until all of the details necessary to be worked out on the Isthmus have been attended to.

Service of Elders and Fyffes, Limited.

Correcting a notice previously given out, that the service of Elders and Fyffes, Limited, between Colon and Bristol, England, would be cancelled after the sailing of the steamship *Bayano*, from Colon on September 5, the United Fruit Company announces the receipt of later advice that the steamship *Chagres* will call at Colon on Saturday, September 19, and sail for Bristol on the same day. Notice of future sailings in the Elders and Fyffes service will be given when advice is received by the United Fruit Company from its head office.

JOINT LAND COMMISSION.

Rules of Dismissal.

(Continued from last week.)

Specially concurring rule of dismissal No. 130, docket Nos. 147 and 202, July 15, 1914. In the matter of the claim of Pablo Surita, for property located at Las Palmas in Trinidad valley—Pablo Surita was a possessor in good faith of a portion of the public lands of the Republic of Panama at the mouth of the Siri River, in the Trinidad valley at the time the Treaty was entered into between the United States and the Republic of Panama.

As such occupant, under the terms of the Treaty, he was entitled to compensation for his improvements, before being ejected from the premises occupied by him, and his rights were recognized by the United States Government and he was paid for his improvements.

Subsequent to the payment for these improvements, Surita went further away and started a new cultivation at what is called Las Palmas, which cultivation later on was covered by the waters of Gatun Lake. This second cultivation, as well as his first one, was outside of the 10-mile strip of territory granted to the United States by the Republic of Panama by the Treaty between these two countries, but was within the limits of other lands outside of the said Zone granted by the said Treaty to the United States, and within the territory now occupied by Gatun Lake.

A general denial is filed by the Counsel for the United States, denying all liability on the claim for any damages on account of this second cultivation made by Surita.

We are unable to agree with the very learned and able opinion filed by our colleagues on this claim as to certain matters of fact found by them and as to the law in force in the territory in which this second cultivation of Surita was located at the time Surita made the second improvement. We, however, concur in the conclusion reached by our colleagues, that there is no liability on the part of the United States on this claim and file this, our specially concurring opinion.

We hold that at the time claimant made his second cultivation, on which he bases this claim, the lands occupied by him were United States territory and were not subject to settlement; and that he had no right to make his second improvement; and that his occupancy of the lands covered by the second improvement was an unauthorized, post-Treaty occupancy of said lands; and that, therefore, no liability on the part of the United States accrued; and that he is not entitled to any award against the United States; and, with our colleagues, we agree that his claim should be and is accordingly dismissed.

LEVI MONROE KAGY, American member of the Joint Land Commission.

NOTE—The above opinion was concurred in by Commissioner Marks, but on account of his illness and subsequent death, his signature hereto was not obtained.

Rule of dismissal No. 132, July 15, 1914, docket numbers as shown. In the matter of sundry claims—With reference to the claims for improvements of the persons hereinafter named, the evidence before the Commission is that previous payments have been made. A careful examination has been made of all cases in which payment has been reported, and the commission has reached the conclusion that the claimants have no property for which an award could be sought from this commission which is not covered by the previous payments hereinafter noted:

Brice, Edward, docket No. 213. The property included in this claim was covered by payment of the Panama Railroad Company to the claimant on September 19, 1911, for a "House and miscellaneous fruits and cultivations on land owned by the Panama Railroad Company in the valley of the Chigres River, which are situated below contour line of 87 feet above sealevel."

Desir, E. P., docket No. 140. The property included in this claim was covered by award No. 44 of September 22, 1913. It appears that in writing up said award No. 44, the house tax number was erroneously stated as 648, while it should have been 618.

Rincon, Adelina, docket No. 46. The property included in this claim was covered by payment of the Disbursing Officer of the Isthmian Canal Commission in February, 1912, Voucher 18650, for "House tax number 1864, all fruit trees and growing crops and all other improvements in or near Calmito, Canal Zone."

White, Alexander, docket No. 216. The property covered by this claim was covered by payment of the Panama Railroad Company to the claimant on September 19, 1911, for a "House and miscellaneous fruits and cultivations on land owned by the Panama Railroad Company in the valley of the Chigres River, which are situated below a contour line of 87 feet above sealevel."

In view of the payments herein noted, no claim against the United States of America can be recognized

by the Joint Land Commission, and these claims are accordingly hereby dismissed.

FEDERICO BOYD, LEVI MONROE KAGY, S. LEWIS, Commissioners.

NOTE—The full commission heard and passed upon the above claim, but on account of the illness and subsequent death of Commissioner Marks, his signature hereto was not obtained.

Rule of dismissal, No. 131, docket numbers as noted, July 15, 1914. In the matter of sundry claims in the Trinidad valley—The claims submitted to the commission by the persons hereinafter named show that the claimants were occupiers of auxiliary public lands in the Republic of Panama, in the valley of the Trinidad River, outside of the Canal Zone, required for Canal purposes, and that they had been paid for earlier improvements thereon and had afterward started new cultivations in said region below the 100-foot contour line, for which they now claim compensation.

In the opinions rendered by the commission on the 15th day of July, 1914, relating to the case of Pablo Surita, the commission arrived at the same conclusion by different means, and said:

"In view of the facts herein set forth, the commission has reached the conclusion that no rights had accrued in favor of Pablo Surita for his illegal occupation of the lands of Las Palmas, therefore, he is not entitled to any award against the United States, and his claim is accordingly dismissed."

On the basis of this conclusion, the claims of the following persons are hereby dismissed for the reasons stated in the opinions covering the cases of Pablo Surita:

Docket	Claimant.	Location.
148-161	Juan Chiru.....	Siri Grande.
162....	Nemiso Gonzalez....	La Tagua.
163....	Juan Arias.....	Cuchirvo.
166....	Juan Mendoza.....	Mouth of the Trinidad.
167....	Juan Melendez.....	Cuchirvo.
172....	Pedro Fernandez.....	Las Cruces.
173....	Juan Navarro.....	El Cuipo.
179....	Teleforo Dominguez.....	Las Cruces.
181....	José Fulgencio Ovalle.....	San Antonio.
184....	Guillermo Diaz.....	Agua Clara.
185....	Antonio Rodriguez.....	Los Pastos.
186....	Severo Sanchez.....	Las Cruces.
188....	Andres Gonzalez.....	San Antonio.
193....	Nicolas Gonzalez.....	El Astillero.
194....	Cristobal Aguilar.....	La Leona.
195....	Casimiro Sanchez.....	Calle Larga.
198....	Octavio Mendoza.....	Las Cruces.
200....	José de Jesus Navarro.....	Calle Larga.
206....	Inez Benites.....	El Astillero.

FEDERICO BOYD, LEVI MONROE KAGY, S. LEWIS, Commissioners.

NOTE—The full commission heard and passed upon the above claims, but on account of the illness and subsequent death of Commissioner Marks, his signature hereto was not obtained.

Rule of dismissal No. 133, docket No. 354, July 15, 1914. In the matter of the claim of David Kerr, for property on Tabernilla lands—The records of the commission show that in some cases more than one statement of claim has been filed covering the same property. In the following instance, duplicate claim has been filed with the commission, covering property for which prior claim has already been disposed of as hereinafter shown:

Kerr, David, docket No. 354. This claim covering improvements on property on the Tabernilla lands is a duplicate of docket No. 1206, dismissed by the commis-

sion of 1913, under rule of dismissal No. 37, dismissing claims already settled.

In view of the facts referred to above, this claim calls for no further action on the part of the commission, and is accordingly dismissed.

FEDERICO BOYD, LEVI MONROE KAGY, S. LEWIS, Commissioners.

NOTE—The full commission heard and passed upon the above claim, but on account of the illness and subsequent death of Commissioner Marks, his signature hereto was not obtained.

Rule of dismissal No. 134, docket No. 375, July 15, 1914. In the matter of the claim of Santos Vagambre for improvements near Frijoles—The claim of Santos Vagambre for improvements said to have been located on the Juana Maria estate near Frijoles, is dismissed for the reason that the evidence submitted to the commission is not such as would justify an award being made.

FEDERICO BOYD, LEVI MONROE KAGY, S. LEWIS, Commissioners.

NOTE—The full commission heard and passed upon the above claim, but on account of the illness and subsequent death of Commissioner Marks, his signature hereto was not obtained.

Auction Sale of Over and Unclaimed Freight.

On September 15, 1914, at 9 a. m., the Panama railroad will dispose of at public auction, on Dock 11, Cristobal, an accumulation of over and unclaimed freight, to recover freight and storage charges.

Items to be sold will consist of a miscellaneous lot of wines, liquors, tobacco, dry goods, hardware, building material, household goods, iron, steel, and general merchandise.

IMPORTANT—The Panama railroad will deliver at any station, at owner's risk, free of charge, articles purchased at this sale.

C. H. MOTSETT,
Superintendent.

August Rainfall for Three Years.

STATIONS.	1912	1913	1914	Station Av.	Years of record	Rainy days, 14
<i>Pacific Section—</i>						
Ancon.....	6.33	8.20	6.09	7.49	18	24
Balboa.....	6.79	6.74	5.19	7.35	16	22
Miraflores.....	11.35	4.23	7.61	8.11	6	22
Pedro Miguel.....	9.51	5.46	7.60	8.21	7	25
Rio Grande.....	13.19	7.68	9.11	9.95	10	22
<i>Central Section—</i>						
Culebra.....	12.88	9.76	9.73	10.50	23	22
Camacho.....	13.77	10.13	8.22	10.15	9	20
Empire.....	10.53	10.46	9.90	9.80	11	21
Gamboa.....	16.64	16.45	7.97	12.20	32	23
Juan Mina.....	11.04	10.34	12.26	11.63	4	24
Alhajuela.....	12.87	10.92	12.36	12.90	16	24
El Vigia.....	14.96	10.24	12.98	12.83	6	21
Frijoles.....	13.63	14.75	9.66	12.68	3	26
Trinidad.....	7.68	13.39	4.97	10.68	7	20
Monte Lirio.....	8.15	10.42	16.85	11.85	7	20
<i>Atlantic Section—</i>						
Gatun.....	11.98	12.32	15.15	14.20	9	27
Brazos Brook.....	14.42	16.93	14.70	14.94	9	28
Colon.....	9.87	17.91	16.01	15.10	44	25
Porto Bello.....	14.15	25.35	21.30	19.27	7	26

WEATHER CONDITIONS, CANAL ZONE, AUGUST, 1914.

The rainfall for the month was generally below normal, except at stations along the Atlantic coast. Monthly totals ranged from 4.97 inches at Trinidad to 21.30 inches at Porto Bello. The maximum precipitation recorded in one day was 7.10 inches at Agua Clara on the 12th.

An unusually heavy rain fell in the vicinity of Gatun on the 12th. The maximum fall in one hour at Gatun amounted to 4.72 inches.

Monthly mean air temperatures were everywhere above the station averages, while the average hourly wind movement was the highest of record for the month of August at all stations.

No fogs were observed during the month at either coast station, and but few at the interior stations. Of the fogs observed, 79 per cent were dissipated by 6.30 a. m.; 97 per cent by 7.30 a. m., and 100 per cent by 8.30 a. m.

The following table summarizes the weather conditions for the month:

STATION.	Press're (reduced to mean of 24 hourly).	Temperature.					Mean relative humidity.	Precipitation.			Wind.				
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days of .01 inch or more.	Total movement (miles).	Prevailing direction.	Max. velocity in (miles).	Direction.	Date.
Colon.....	29.839	81.0	88	Aug. 5	74	Aug. 12	88	16.01	15.10	25	7.983	N.	28	W.	Aug. 23
Culebra.....	29.830	80.4	91	Aug. 30	69	Aug. 28	94	9.73	10.50	22	5.694	N.W.	31	N.E.	Aug. 28
Ancon.....	29.802	81.8	94	Aug. 3	70	Aug. 28	90	6.09	7.49	24	5.555	N.W.	35	N.E.	Aug. 7

Elevations of Gatun Lake, (feet above mean sea level)—Mean for the month 84.93 feet; maximum, 85.06 feet on the 17th; minimum, 84.78 feet on the 4th. Evaporation from lake surface 4.684 inches.

OFFICIAL CIRCULARS.

Organization for the New Administration Building Offices.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 24, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

1. The organization of the offices in the new Administration Building will be, as follows:

2. The *Personnel Bureau* will check all personnel papers, such as employments, promotions, changes of rating, requests for leave, and routine personnel inquiries, and prepare them for the action of heads of departments and divisions.

3. The *Record Bureau* will index and file all papers, and will furnish files and records upon request of proper officials; it will also attend to the mailing of communications, and will have charge of the library.

4. *Property and requisitions*—For the various departments and divisions which will move into the new Administration Building at Balboa, one requisition and property clerk will be allowed to each department or division carrying a separate account for property (four for the Supply Department, which takes care of property for quartermaster's, subsistence, commissary, permanent buildings, fortifications, and Governor's office.) All these requisition and property clerks will be given desk room in room No. 310 on the third floor. Room No. 314 will be reserved until it is

"Confidential"), addressed to heads of departments or divisions in the Administration Building will be opened and distributed by the Chief Clerk of the Executive Office. Where necessary, previous correspondence will be attached, and papers sent to the bureau or official who should give the matter first attention.

8. The following additions to the Executive Office, to be selected from the departments and divisions indicated, will be authorized, these transfers to be made on the date of moving into the new building.

Please furnish immediately the names of those selected for these positions. All others should be notified of discharge account of reduction of force. Aliens and non-Civil Service clerks occupying classified positions must be selected first for such discharge.

GEO. W. GOETHALS,
Governor, The Panama Canal,
President, Panama Railroad Company.

Certificates to be Furnished Silver Employees When on Leave.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 29, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

In view of the reduction in the silver force and the large number of unemployed laborers on the Isthmus, steps have been taken by the British authorities to prevent, so far as possible, further immigration from the British West Indies.

Hereafter, any silver employee granted a leave of

DEPARTMENT OR DIVISION.	Correspondence bureau.		Property and requisition.		Files.	
	Clerks	Salary	Clerks	Salary	Clerks	Salary
Engineer of Maintenance (including office engineer, surveys, and hydrography).....	1 3	\$200.00 150.00	.....	.....	1 1 (two vault clerks)	\$150.00 100.00
Terminal Construction.....	1 2	200.00 150.00	.....	.....	.....	.....
Canal Transportation.....	1	175.00	1	150.00	.....	.....
Supply Department.....	2 2	150.00 137.50	1 3	175.00 125.00	1	175.00
Electrical Division.....	1	150.00	1	175.00	.....	.....
Municipal Engineering.....	1	150.00	1	162.50	.....	.....
Health Department.....	1 1	175.00 150.00	1	175.00	1	175.00
Schools.....	1	162.50	.....	.....	.....	.....
Police and fire.....	1 1 1	175.00 150.00 125.00	.....	.....	.....	.....
Civil Affairs.....	2 1 1	150.00 125.00 125.00	1	162.50	1 1	175.00 150.00
Canal Record.....	1	175.00	.....	.....	.....	.....
Fortifications.....	.....	.....	1	200.00	.....	.....
Panama Railroad Company (To be determined later.)	.....	.....	.....	.....	.....	.....

ascertained whether any additional space will be required in that room. These requisition and property clerks will continue to handle the work for their respective divisions as in the past, but it is desired to get them centralized, with the end in view of working out a plan for the centralization of that work, and a reduction in the cost of the work later on.

This force will keep the property accounts, prepare requisitions and work requests, and maintain the necessary checks on these matters.

If any additional assistance is required by these clerks for typewriting papers or writing letters, it will be furnished by the Correspondence Bureau, where the stenographers and typewriters for the entire building are to be pooled.

5. The *Correspondence Bureau* will do the stenographic, typewriting, and miscellaneous correspondence and clerical work for the entire building. A limited number of stenographers and clerks will be selected from the various offices, who are familiar with the correspondence, reports, estimates, and clerical work of those offices, and who will be assigned such work by the chief correspondence clerk, as they are best qualified by past experience to do. Each official will be given the same stenographer regularly so far as practicable. It is enjoined that correspondence be reduced to a minimum; matters between departments and divisions will be settled by conferences, records being made of conclusions reached where the importance of the subject justifies it.

6. The force carried in the bureaus named above will be carried as a part of the Executive Office, and not on the rolls of any department or division.

7. All official mail (except where marked "Personal" or

absence to be spent in the British West Indies shall be furnished a certificate to that effect, which must be presented by the employee at the British Consulate at Colon for endorsement.

GEO. W. GOETHALS,
Governor.

Important Communications to be Submitted to the Governor Before Mailing.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 3, 1914
HEADS OF DEPARTMENTS AND DIVISIONS IN THE ADMINISTRATION BUILDING:

Because of instructions that have issued to subordinates of which I had no knowledge, except through such subordinates, and as I desire to keep in close touch with the work, it is requested that to all communications signed by you relating to matters of importance a slip be attached, addressed to me to note, before they are mailed or otherwise despatched.

GEO. W. GOETHALS,
Governor.

Transfer of Gold Employees.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 2, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS:
When gold employees are transferred from one division to another, this office must be notified in suf-

ficient time to have the order of transfer issued not later than the date on which the transfer takes place.

GEO. W. GOETHALS,
Governor.

Local Agent, P. R. R., Colon.

THE PANAMA CANAL,
PANAMA RAILROAD COMPANY,
FREIGHT AND PASSENGER DEPARTMENT,
COLON, R. P., September 8, 1914.

CIRCULAR No. 119:

Effective September 8, 1914, Mr. A. B. Goodenow, station agent, Culebra, is appointed local agent, Colon, vice Mr. C. J. King, transferred.

J. C. ANGEL,
Freight and Passenger Agent.

Approved:
C. H. MOTSETT, Superintendent.

Rainfall August 1 to August 31, 1914, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Ancon.....	1.37	7	6.09
Balboa.....	.94	7	5.19
*Miraflores.....	1.72	7	7.61
Pedro Miguel.....	1.21	4	7.60
Rio Grande.....	2.27	12	9.11
<i>Central Section—</i>			
Culebra.....	1.89	12	9.73
*Camacho.....	1.10	10	8.22
Empire.....	1.93	12	9.90
Gamboa.....	1.44	6	7.97
*Juan Mina.....	1.99	8	12.26
Alhajuela.....	1.60	11	12.36
*El Vigia.....	3.49	11	12.98
Frijoles.....	2.08	12	9.66
*Trinidad.....	1.01	14	4.97
*Monte Lirio.....	5.45	12	16.85
<i>Atlantic Section—</i>			
Gatun.....	6.72	12	15.15
*Brazos Brook.....	3.45	12	14.70
Colon.....	2.41	15	16.01
Porto Bello.....	4.28	12	21.30

*Standard rain gage—readings at 5 p. m. daily. Automatic rain gage at unstarred stations—values, midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun, and Miraflores Lakes for the week ending midnight, Saturday, September 5, 1914. All heights are in feet above mean sealevel:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Aug. 30.....	126.50	92.71	84.93	84.92	53.65
Mon., Aug. 31.....	133.40	97.75	85.01	84.98	54.10
Tues., Sept. 1.....	133.80	98.00	85.00	84.99	54.13
Wed., Sept. 2.....	129.70	95.80	85.05	84.98	54.00
Thurs., Sept. 3.....	127.10	93.30	85.07	84.99	54.02
Fri., Sept. 4.....	129.10	93.22	85.09	85.00	53.89
Sat., Sept. 5.....	130.80	95.94	85.05	85.01	53.72
Height of flow water to nearest foot.....	125.0	91.0			

Tide Table.

The following table shows the time of high and low tides at Panama for the week ending September 19, 1914:

DATE.	High		Low		High
	A.M.	A.M.	A.M.	P.M.	
Sept. 13.....	.....	2.50	8.43	3.34	9.22
Sept. 14.....	.....	3.57	9.46	4.42	10.41
Sept. 15.....	.....	5.19	11.11	5.56	.....
Sept. 16.....	12.04	6.30	12.31	7.00	.....
Sept. 17.....	1.11	7.29	1.34	7.54	.....
Sept. 18.....	2.04	8.20	2.26	8.42	.....
Sept. 19.....	2.50	9.06	3.12	9.28	.....

75th meridian time.

Hotel Aspinwall Launch Service.

The launch *Louise* will sail from the dredge landing at Balboa for the Hotel Aspinwall on Taboga Island at 9.10 a. m., on Monday, Thursday, and Saturday of each week. The time of sailing permits connection to be made with train No. 3, which arrives at Panama from Colon at 8..... daily.

COMMISSARY DEPARTMENT.

Special Sales.

The following special sales are announced:

HARDWARE.

At Ancon, Balboa, and Cristobal, week beginning September 11.

DRY GOODS.

At Corozal, week beginning September 11.

HATS.

At Corozal and Cristobal, week beginning September 11.

TRUNKS AND SUITCASES.

At Corozal, week beginning September 11.

MEN'S AND WOMEN'S FURNISHINGS.

At Cristobal, week beginning September 11.

SHOES.

At Gatun and Cristobal, week beginning September 11.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and from 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

In rush periods, all stores will remain open until 7 p. m.

Cold Storage Prices.

Retail prices of cold storage provisions for the week beginning September 10, 1914:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....	10	
Shoulder, trimmed, per pound.....	16	
Leg (8 to 10 pounds), per pound.....	25	
Cutlets, per pound.....	26	
Short cut chops, per pound.....	30	
Shoulder, chops, per pound.....	18	
Lamb—Stewing, per pound.....	13	
Shoulder, trimmed, per pound.....	19	
Leg (5 to 8 pounds), per pound.....	30	
Chops, per pound.....	36	
Shoulder, chops, per pound.....	23	
Cutlets, per pound.....	36	
Veal—Stewing, per pound.....	13	
Shoulder, for roasting (not under 4 pounds), per pound.....	17	
Chops, shoulder, per pound.....	23	
Chops, per pound.....	35	
Loin, for roasting, per pound.....	35	
Cutlets, per pound.....	40	
Beef—Suet, per pound.....	03½	
Soup, per pound.....	08	
Stew, per pound.....	12	
Plate, per pound.....	14	
Corned, No. 1, per pound.....	20	
Corned, No. 2, per pound.....	17	
Chuck roast, 3 lbs., and over, special, per pound.....	13	
Chuck roast, 3 lbs., and over, choice, per pound.....	17	
Rib roast, second cut (not under 3½ pounds), special, per pound.....	18	
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24	
Rib roast, first cut (not under 3 pounds), special, per pound.....	22	
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27	
Pot roast, special, per pound.....	23	
choice, per pound.....	28	
Rump roast, special, per pound.....	23	
choice, per pound.....	28	
Porterhouse roast, special, per pound.....	25	
choice, per pound.....	31	
Steak, chuck, special, per pound.....	15	
choice, per pound.....	18	
Round, bottom, per pound.....	15	
choice, per pound.....	19	
Round, top, special, per pound.....	17	
choice, per pound.....	22	
Rib, special, per pound.....	23	
choice, per pound.....	27	
Sirloin, special, per pound.....	23	
Sirloin, choice, per pound.....	28	
Sirloin, choice cut, special, per pound.....	26	
Sirloin, choice cut, choice, per pound.....	32	
Rump, special, per pound.....	23	
choice, per pound.....	28	
Porterhouse (not less than 1½ pounds), special, per pound.....	26	
Porterhouse (not less than 1½ pounds), choice, per pound.....	34	
Porterhouse, short, Delmonico, special, per pound.....	23	
Porterhouse, short, Delmonico, choice, per pound.....	28	
Tenderloin, Western, special, per pound.....	40	

	Price.
Tenderloin, Western, choice, per pound.....	46
Pork—Hams, fresh, per pound.....	\$26
Shoulders, fresh, per pound.....	\$22
Loin, chop, or roast, per pound.....	23
Pigs' feet, each.....	08
Pigs' head, whole.....	95
Pigs' head, ½-head.....	48
Sausage, home made, per pound.....	26

MISCELLANEOUS.

Livers—Beef, per pound.....	12
Calf, each.....	62
Half, each.....	31
Steak, Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	13
Frankfurter, per pound.....	13
Lieberwurst, per pound.....	12
Pure pork, 1-lb. cartons, per pound.....	17
Sweetbread, beef, per pound.....	26
Eggs, fresh, per dozen.....	35
per ½-dozen.....	18
Bluefish, per pound.....	8
Halibut, fresh, per pound.....	5
Salmon, per pound.....	7
Yeast, per pound.....	31

POULTRY AND GAME.

Chickens—Fancy roasting, milk fed, per pound.....	28
Fancy roasting, corn fed, per pound.....	25
Fowls, per pound.....	24
Fowls, light, per pound.....	20
Ducks, Western, per pound.....	22
Capons, per pound.....	33
Broilers, milk fed, per pound.....	25
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	27
Squabs, each.....	42
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, per pound.....	23
Sliced, per pound.....	30
Half, for boiling, per lb.....	25
Boiled, per pound.....	32
Hocks, per pound.....	9
Butt end, about 1½ pounds to butt, per pound.....	11
Bacon—Breakfast, sliced, per pound.....	31
Whole piece, per pound.....	30
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.45
Pigs' feet, per pound.....	7
Tongues, per pound.....	23

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	39
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream cake.....	09
Roquefort, per pound.....	35
Young America, per pound.....	22
Swiss, per pound.....	33
Edam, each.....	72
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk (certified), bottle.....	**24
Fer-mil-lac, bottle.....	**25
Ice cream, quart.....	125
½-gallon.....	150
Cream, Sheffield Farms, quart.....	**33
Cream, Sheffield Farms, pint.....	**19
Cream, Sheffield Farms, ½-pint.....	**12

VEGETABLES.

Beets, per pound.....	2
Celery, per head.....	3
Cabbage, per pound.....	2
Carrots, per pound.....	2
Cucumbers, per pound.....	2
Lettuce, per pound.....	9
Onions, per pound.....	3½
Peppers, per pound.....	5
Potatoes, white, per pound.....	3
sweet, tropical, per pound.....	2
sweet, American, per pound.....	4
Yams—Tropical, per pound.....	3
Eggplant, per pound.....	3½
Rhubarb, per pound.....	2½
Turnips, per pound.....	2
Tomatoes, per pound.....	4½
Squash, per pound.....	2

FRUITS.

Apples, per pound.....	6
Cantaloupes, each.....	6
Grape fruit—American, each.....	7
Tropical, each.....	4½
Lemons, per dozen.....	23
Limes, per 100.....	50
Oranges—American, each.....	2½
Jamaican, per dozen.....	18
Peaches, per pound.....	8
Plums, per pound.....	8
Bananas, per bunch.....	38
Bananas, each.....	04
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23

	Price.
Pears, evaporated, per pound.....	23
Pears, alligator, each.....	5

* Indicates advance from preceding list.

† Indicates reduction from preceding list.

**Indicates 5 cents allowed for return of bottle.

‡ Sold only from commissaries; no orders taken for delivery.

§ Sold only from cold storage and not from commissaries.

Supplies for the Canal.

The following steamers, with supplies for The Panama Canal and Panama railroad, arrived at the ports of Colon, Cristobal, and Balboa, during the week ending August 22:

Alliana, August 16, from New York, with 19 boxes range parts, 206 cases paper, 125 kegs bolts and nuts, eight boxes forges, five kegs litharge, 25 kegs washers, 2,180 kegs nails, six casks lime, 19 packages miscellaneous material, two barrels webbing, 60 kegs bolts, one box tools, four pieces steel billets, nine pieces steel beams, for stock; one box magnetos, 16 castings, 18 kegs potash, four boxes hinges, five cases brake shoes, one box blueprint paper, for Mechanical Division; two boxes stationery, four packages blueprint machine apparatus, for Executive Secretary; 40 bags feed, 29 packages medical supplies, one box artificial leg, one package photographic plates, for Health Department; three packages electrical material, two barrels glassware, three crates lamps, 100 bundles pipe, one box fittings, one box electrical fixtures, for Electrical Engineer; 19 reels cable, for Panama railroad; three pieces fender chain, one box chain fender material, for Division of Lock Erection; 10 pieces pipe, one case charts, for Division of Municipal Engineering; one box engine parts, six cases rubber dredging sleeves, three pieces dredge parts for Dredging Division; 40 pieces fenders, for Division of Canal Transportation; two cases sandpaper, two cases hardware, 12 packages tiling, for permanent buildings; 3,600 bolts for Division of Terminal Construction; and a miscellaneous cargo, the whole consisting of 3,003 packages, weighing approximately 290 tons.

Tagus, August 17, from Liverpool, with three packages Lloyd's registry books, for Division of Canal Transportation.

Alm, August 17, from Mobile, Ala., with 120 bags dairy feed, for stock; 603 pieces pipe, for Division of Municipal Engineering.

Cartago, August 19, from New Orleans, with three kegs washers, for stock; one box hardware, 459 sacks silica sand, 28 pieces (2,541 board feet) rough white oak lumber, 327 pieces (14,106 board feet) yellow pine car lumber, for Mechanical Division; one reel telephone cable, for Panama railroad.

Metapan, August 19, from New York, with 500 cases raw linseed oil, two boxes paint, for stock; one steel angle for Dredging Division.

Ilerdia, August 20, from New Orleans, with 46 barrels rosin, eight pieces (1,600 board feet) rough treated lumber, 5,307 pieces (52,418 board feet; S4S yellow pine lumber, for stock; 743 pieces (15,974 board feet) rough white oak lumber, S2S, for Mechanical Division; 33 crates marble, for permanent buildings; one dredge dipper, for Dredging Division.

Pennsylvania, August 21, from San Francisco, with 831 bales alfalfa hay, for stock.

Colm, August 21, from New York, with three cases electrical machinery, 106 pieces steel angles, five crates butcher's blocks, two packages pulley blocks, three cases bronze rods, eight packages grindstones, 14 cases paint, five boxes lamps, 13 cases tissue caps, 11 crates asbestos millboard, 10 cases files, 27 pieces pipe, 10 cases lanterns, 50 barrels flour, 467 kegs bolts, 20 packages miscellaneous material, 19 pieces steel beams, 91 pieces steel channels, one box pneumatic tool parts, one box steam gage springs, 15,280 bags cement, for stock; 102 pieces rails and splice bars, two barrels paint, for Division of Terminal Construction; three cases electrical machinery, for Division of Lock Erection; one case electrical machinery, one box clock parts, four packages steel shutters, one case cotton slewing, one case compound, for Panama railroad; one box dry goods, four packages medical supplies, 422 cases medicine bottles, for Health Department; 218 cases electrical machinery, eight pieces frogs, for fortifications; 86 cases glass shades and electrical material, four crates valves, six barrels insulated wire, for Electrical Division; two cases glass globes, one case electrical machinery, one box duplicating pads, one box chisels, 16 packages steel shutters, two boxes tools, two boxes chemical apparatus, 75 kegs chlorate potash, 25 barrels molding sand, for Mechanical Division; 1,297 pieces hollow tile, 407 barrels plaster, 22 cases glass, for permanent buildings; one case supplies, two packages books, one box tags, for Executive Secretary; one box units, 15 pieces pipe and fittings, for Division of Municipal Engineering; one crate dynamo, one case drawing paper, two cases electrical material, four reels wire cable, for Dredging Division; and a miscellaneous cargo, the whole consisting of 19,414 packages, weighing approximately 494 tons.

CANAL CLUBHOUSES.

Rain Spoiled Athletic Meet at Corozal.

Owing to the heavy downpour of rain on Labor Day, which lasted nearly all of the morning, the athletic meet which was scheduled for Corozal had to be abandoned. Instead of this meet, basketball games were organized and played off during the morning in the Corozal gymnasium with the following results:

The first game was between Cristobal and Balboa, the former winning by a score of 21 to 12. The second game was between Company E of the Tenth Infantry and Corozal, the latter winning, 25 to 6. In the third game, the first half was played by Cristobal against the Coast Artillery, Cristobal winning 24 to 4. The second half was played by Corozal against the Coast Artillery, Corozal winning 13 to 5.

The line-up of the basketball teams was, as follows:
Cristobal—F. Mathues, F. W. Burgoon, C. Fraser, A. Fraser, and C. Raymond.

Corozal—Simms and Bretney, F. Huldquist, F. Howe, Cronthers, and G. Ridge.

Balboa—Dubendorff and F. Adams, C. Russell, Hulsebosch, and G. Hoff.

Company E—Scars, and F. Redmond, C. Gillis, Fisher, McNally, and G. Cabbage.

Coast Artillery Corps—Wright and F. Maxwell, G. Totten, Gilco, Vernon, and G. Howell.

A special train left Corozal at 1.30 for the aquatic meet, which was held at the lumber dock at Balboa. All the aquatic races were run as scheduled and the results were, as follows:

440-yard swim—Won by Bingham, W. Fraser, second; Porter, third; time seven minutes, 5 4/5 seconds.

880-yard swim—Won by E. Green; Bingham, second; Porter, third; time, 17 minutes 20 seconds.

One-mile swim—Won by J. W. Greene; Porter, second; Olsen, third; Murphy, fourth; time, 31 minutes, 5 1/5 seconds.

Fancy diving—Won by Hanson; Hill, second; E. A. McEwen, third; F. E. McEwen, fourth.

Plunge for distance—Won by Hansmann; Nash, second; W. Fraser, third. Distance, 47 feet four inches.

Back swim—Won by A. Fraser; Nash, second; W. Fraser, third. Time, 49 4/5 seconds.

Half-mile relay race between Cristobal and Balboa—Won by Balboa. Time 14 minutes, 39 2/5 seconds. The teams: Cristobal—Nash, McEwen, A. Fraser, W. Fraser. Balboa—Bingham, Hanson, E. Greene, W. Greene.

Throughout the day music was furnished both at Corozal and Balboa by the Tenth Infantry Band.

In view of the probability of rain, it has been decided not to attempt to run off the track and field events, which were not held on Labor Day, and the money of all who entered for these events will be refunded. Any contestant in the track and field events who does not receive his fee back should notify the general secretary, room No. 309, Administration Building, Balboa Heights.

GENERAL.

To continue the plan of selecting a team for San Francisco, weekly contests will be held at Corozal on Saturday afternoons and early evenings under the direction of Frank S. Williams, coach, and A. N. Kjellander, trainer. These men have been chosen by a committee to look after the interests of the projected San Francisco team.

Effective September 9, all communications to the superintendent of clubs and playgrounds should be addressed to room No. 309 Administration Building, Balboa Heights.

BALBOA.

Professor Satam and wife gave an exhibition of sleight-of-hand, ventriloquism, and crack shooting at the local clubhouse on Friday night, September 4.

The plot of ground to be used as a ball field near the corral is being leveled off and placed in shape to play practice games on.

CULEBRA.

All subscriptions to periodicals expired September 1, but owing to the fact that the clubhouse will be kept open evenings for the time being, a few magazines will be regularly supplied.

GATUN.

The Argyle stringed orchestra entertained the members of the local clubhouse on Friday evening, September 4.

The class in English has 12 students enrolled.

Ladies' night will be observed in the bowling alleys on Thursday evening, September 10. There will be special music. An unusually large number of participants are expected.

Motion pictures will be shown this week on Friday, September 11, instead of Saturday, September 12, as originally scheduled.

The Sunday evening song service continues to draw a good attendance. Mrs. Randolph acted as accom-

panist for Dr. Hill's violin solos on Sunday evening, September 6, and also played a violin solo.

CRISTOBAL.

The first game in the local basketball tournament was taken by the "Naps" from the "Senators" by the close score of 16 to 15. The "Athletics" defeated the "Yankees" on Thursday, September 3; score, 38 to 17.

Mr. E. H. A. Nash was elected president of the Cristobal Tennis Club at the meeting held on Monday, August 31. Mr. George Scheid was elected secretary-treasurer. A tournament in singles and doubles was agreed on to begin Wednesday, September 9. A challenge has already been issued by Ed Keeling and B. C. Poole to play the winners at doubles in this tournament.

The Cristobal tenpin team averaged 925 for the three games against Gatun on Saturday night, September 5. The scores were:

Cristobal.	Gatun.
Rosteck.... 159 226 155	O'Meara... 144 166 144
Burns..... 188 200 139	Hansel.... 134 149 151
Russell.... 193	Page..... 167 137 126
Peterson... 187 212 178	Young.... 139 160 141
Collins.... 175 179 194	Conley.... 165 158 183
Strong..... 182 268	
Totals.... 902 999 874	749 770 745

High bowling scores for the week ending September 5 were: *Tenpins*—Russell, 246; Collins, 234; Strong, 213; Rosteck, 226; Peterson, 225; Leonard, 201; Burns, 200. *Duckpins*—Henry, 119; Pinney, 108; Smith, 104; Roberts, 104; Sloan, 102; Steele, 101; Bevington, 100.

Mr. Barte proved winner in the "Ragtime" tournament by winning 39 games and losing nine.

The monthly married folks bowling tournament will be held on Monday, September 14.

Cristobal defeated the Balboa checker team on Saturday, September 5, in an interesting contest by the score of 31 wins, 26 lost, and eight draws. The scores follow:

Balboa.	IV.	L.	D.	Cristobal.	IV.	L.	D.
Clove..... 10	2	4		Larsen.... 6	6	4	
Burns..... 6	7	3		Custer.... 11	2	3	
Harris.... 4	12	0		Stevens... 4	11	1	
Wallested... 6	9	1		Dennis.... 10	6	0	
Totals.... 26	30	8		31	25	8	

Mr. G. C. Bunker, who is connected with the waterworks at Mount Hope, will speak at the meeting of the discussion club on Thursday, September 17, on the subject of water purification.

Movements of Vessels at Port of Balboa.

The arrivals and departures of steamships at the port of Balboa during the week ending at 8 a. m., September 5, were, as follows:

Arrivals—August 29, *Son José*, from San Francisco; *Californian* (yacht), from Colon; August 30, *Manavi*, from Tumaco; *Transvaal*, from North Pacific; August 31, *Huallaga*, from Callao; September 2, *Texas*, from San Francisco; *Guatemala*, from Callao; *St. Kentigern*, from Colon; September 3, *Virginian*, from Colon; September 5, *Anglo-Saxon* from Pisagua, Chile.

Departures—August 31, *Transvaal*, to Colon; *Paleno*, to Valparaiso; *Montoro*, to Callao; *Californian*, to San Francisco; *Ecuador*, to Guayaquil; September 1, *Pennsylvania*, to San Francisco; September 2, *St. Kentigern*, to Pacific ports; September 3, *Virginian*, to San Francisco; September 5, *Texas*, to Colon.

Three vessels passed through the Canal southbound and three northbound during the week ending 8 a. m., September 5.

Misdirected Letters.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Aldior, Gabriel
Alexander Fred.
Bain, W. C.
Barrows, C.
Bartell, Arthur C.

Bethem, Chas. H.
Boyle, Ed. (catalogue)
Bryson, Jas. A.
Calahan, Edward
Casis, Tobias
Cogswell, Ray
Correa, Isaac A., Jr.
Cushing, J. S.
Davis, Mrs. Gavin H.
Donoho, M. C.
Drum, Joseph
Ferebee, F. D. (catalogue)

Flowers, J. L.
Gilman, Adolph
Grant, Miss Lulu
Grayson, J. T.

King, Mrs. M. J.
Kurtz, Warren
Latimer, R. B. (2)
Lindo, Percival
Louis, Mrs. Harrett, care
D. Louis,
McCahill, Lee
McLean, Wm.
Mack, Otto W.
Miles, John
Morgan, George
Naecker, Sam
O'Connor, Joe
Oettle, Chas.
Pressill, Walter
Putnam, Mrs. Leland S.
Rawlins, Leopold
Robbins, Lt. Albert M.
(pamphlet.)
Sanford, Robert B. Jr.,
(catalogue.)
Schildener, William R.
Shuff, A. H.
Spicer, Geo. E.

MOVEMENTS OF OCEAN VESSELS.

The following is a list of sailings and scheduled arrivals of the Panama Railroad Steamship Line; of the Royal Mail Steam Packet Company; of the Hamburg-American Line, and the United Fruit Company's Line:

NEW YORK TO CRISTOBAL.

	Sails.	Arrives.
*Allianca.....	P. R. R., Sept. 3....	Sept. 9
*Colon.....	P. R. R., Sept. 9....	Sept. 15
*Advance.....	P. R. R., Sept. 15....	Sept. 22
*Panama.....	P. R. R., Sept. 22....	Sept. 28
*Allianca.....	P. R. R., Sept. 28....	Oct. 4
*Colon.....	P. R. R., Oct. 5....	Oct. 11
*Advance.....	P. R. R., Oct. 10....	Oct. 17
*Panama.....	P. R. R., Oct. 16....	Oct. 22
*Allianca.....	P. R. R., Oct. 22....	Oct. 28
*Colon.....	P. R. R., Oct. 29....	Nov. 4

CRISTOBAL TO NEW YORK.

†Panama.....	P. R. R., Sept. 9....	Sept. 15
†Allianca.....	P. R. R., Sept. 15....	Sept. 21
†Colon.....	P. R. R., Sept. 22....	Sept. 28
†Advance.....	P. R. R., Sept. 28....	Oct. 5
†Panama.....	P. R. R., Oct. 4....	Oct. 10
†Allianca.....	P. R. R., Oct. 10....	Oct. 16
†Colon.....	P. R. R., Oct. 17....	Oct. 23
†Advance.....	P. R. R., Oct. 23....	Oct. 30
†Panama.....	P. R. R., Oct. 29....	Nov. 4
†Allianca.....	P. R. R., Nov. 4....	Nov. 10
†Colon.....	P. R. R., Nov. 10....	Nov. 16

NEW YORK TO COLON.

*Santa Marta.....	U. F. C., Sept. 2....	Sept. 9
Metapan.....	U. F. C., Sept. 9....	Sept. 16
Oruba.....	R. M., Sept. 12....	Sept. 20
Zacapa.....	U. F. C., Sept. 16....	Sept. 23
*Almirante.....	U. F. C., Sept. 23....	Sept. 30
Trent.....	R. M., Sept. 26....	Oct. 4
*Santa Marta.....	U. F. C., Sept. 30....	Oct. 7
*Metapan.....	U. F. C., Oct. 7....	Oct. 14
Orotava.....	R. M., Oct. 10....	Oct. 18
*Zacapa.....	U. F. C., Oct. 14....	Oct. 21
Almirante.....	U. F. C., Oct. 21....	Oct. 28
Danube.....	R. M., Oct. 24....	Nov. 1
Santa Marta.....	U. F. C., Oct. 28....	Nov. 4
*Metapan.....	U. F. C., Nov. 4....	Nov. 11
Tagus.....	R. M., Nov. 7....	Nov. 15
*Zacapa.....	U. F. C., Nov. 11....	Nov. 18
*Almirante.....	U. F. C., Nov. 18....	Nov. 25

COLON TO NEW YORK.

Almirante.....	U. F. C., Sept. 10....	Sept. 17
Trent.....	R. M., Sept. 15....	Sept. 23
Santa Marta.....	U. F. C., Sept. 17....	Sept. 24
Metapan.....	U. F. C., Sept. 24....	Oct. 1
Orotava.....	R. M., Sept. 29....	Oct. 7
Zacapa.....	U. F. C., Oct. 1....	Oct. 8
Almirante.....	U. F. C., Oct. 8....	Oct. 15
Danube.....	R. M., Oct. 13....	Oct. 21
Santa Marta.....	U. F. C., Oct. 15....	Oct. 22
Metapan.....	U. F. C., Oct. 22....	Oct. 29

NEW ORLEANS TO COLON.

Cartago.....	U. F. C., Sept. 2....	Sept. 9
*Abangarez.....	U. F. C., Sept. 5....	Sept. 10
Heredia.....	U. F. C., Sept. 9....	Sept. 16
*Atenas.....	U. F. C., Sept. 12....	Sept. 17
Cartago.....	U. F. C., Sept. 16....	Sept. 23
*Turrialba.....	U. F. C., Sept. 19....	Sept. 24
Cartago.....	U. F. C., Sept. 23....	Sept. 30
*Abangarez.....	U. F. C., Sept. 26....	Oct. 1

COLON TO NEW ORLEANS.

†Atenas.....	U. F. C., Sept. 3....	Sept. 8
Parismina.....	U. F. C., Sept. 3....	Sept. 10
†Turrialba.....	U. F. C., Sept. 10....	Sept. 15
Cartago.....	U. F. C., Sept. 10....	Sept. 17
†Abangarez.....	U. F. C., Sept. 17....	Sept. 22
Heredia.....	U. F. C., Sept. 17....	Sept. 24
†Atenas.....	U. F. C., Sept. 24....	Sept. 29
Parismina.....	U. F. C., Sept. 24....	Oct. 1

*Will carry mail from the United States.
†Will carry mail to the United States.
‡Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.

Legal Notice.

United States of America { In the District Court.
Canal Zone.
The following named American citizens died intestate leaving personal property within the Canal Zone to the amount stated:

Nelson Wheeler.....	U.S.C.
George Wagner.....	\$ 28.99
	179.09

The Administrator of Estates has filed a petition for the escheat of the abovenamed estates, in accordance with Section 779 of the Code of Civil Procedure.

Notice is hereby given to all heirs or creditors of the above estates to appear before this Court in the courthouse at Ancon, on September 26, 1914, at 9 o'clock, a. m., to establish their claims, or to show cause why the said estates should not escheat to the Government of the Canal Zone.

E. M. GOOLSBY,
Clerk of District Court.

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, SEPTEMBER 16, 1914.

No. 4.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,

THE CANAL RECORD,

Balboa, Canal Zone,

Isthmus of Panama.

No communication either for publication or requesting information will receive attention unless signed with the full name and address of the writer.

NOTES OF PROGRESS.

Mooring Berth for Ships at Gamboa.

Test piles are being driven a short distance out from the bank of the Canal, opposite the Gamboa railroad station, preliminary to the placing of a number of pile dolphins, to which vessels passing through the Canal may moor. It was originally contemplated to construct a concrete mooring wharf at this point, the estimated cost of which, as determined by a board appointed for the purpose, was \$93,850. In addition, it was found that a certain amount of dredging would have to be done to carry out this project, which increased the total estimate to \$123,850. In view of the excessive cost of the wharf structure, and inasmuch as dolphins will serve almost equally as good a purpose, the latter were adopted.

The plan calls for the driving of a row of piles, in two sets, each set extending a distance of 300 feet along the bank of the Canal. Between the two sets of dolphins, there will be an open space 300 feet long, in the center of which a mooring buoy will be established. Mooring buoys will also be placed, one at a distance of about 150 feet from the outer end of each set of dolphins. The dolphins will serve to prevent ships that are obliged to tie up at this point from grounding on the side of Canal when moored to the buoys. In rear of the dolphins, a row of deadmen will be established for additional fasts for the ships' lines. Under the new plan, no dredging will be required, as the dolphins will be located in 30 feet of water, which will breast the ships out to a depth at keel of between 35 and 40 feet.

The main purpose of having ships passing through the Canal moor at this point is to save time. In case a vessel, upon arriving at Gamboa, finds that another ship is passing through the Culebra Cut section, it will be necessary for it to tie up until the Cut is clear. Without the mooring facilities, and in case a ship is already in the Cut, another vessel proceeding to Balboa, having passed Gatun Locks, would have to anchor in Gatun Lake

until advised that the first ship had passed out of the Cut. The mooring facilities offered at Gamboa will allow a vessel to continue on its voyage as far as that point, thereby saving two hours, or more, of time.

The End of the "Badger."

The old French ladder dredge *Badger* has been condemned on account of a defective hull. It is being stripped of serviceable equipment at the Cristobal dry dock, and the Resident Engineer of the Dredging Division has requested authority to use the hull for a boat landing at Balboa.

The *Badger* was built in Belgium in 1886, and was operated in the Pacific entrance channel by the second French canal company, and afterward beached. It was recovered by the Americans and rebuilt at the Balboa shipways in 1908, at a cost of \$58,624.50. It has been operated in the Pacific entrance almost continuously since that time, with the exception of about four months of work in Culebra Cut. Its sister dredge, the *Marmot*, which has had a similar history, is still at work in the Cut.

The hull of the *Badger* is of iron, and is 112 feet two inches long, 29 feet six inches in the beam, and 11 feet six inches deep. The ladder was equipped with 32 buckets of 15 cubic feet capacity, and capable of digging to a depth of 45 feet below the surface of the water. In its rebuilt form, the dredge burned fuel oil, under three Scotch marine boilers, 96 inches in diameter by 103 inches long. The main engines were two in number, of French make, vertical tandem compound, with 12½, 25½, and 14½-inch stroke.

Change in Service at Cristobal Hotel.

As an experiment, it has been decided to discontinue the serving of regular meals at The Panama Canal hotel in Cristobal, and substitute therefor a *a la carte* service. The change will be placed in effect as soon as the serving counters, which are being installed at one end of the hotel, have been completed, probably about the first of the coming week. In general, the new service will be conducted along the following lines: Patrons of the hotel will procure their food by entering a railed enclosure surrounding the serving counters, and making request for the dishes they want. The names of the articles on the bill of fare for that particular meal, together with prices, will be prominently posted. After having been served, they will be given a check for the amount due, which, in passing out of the enclosure with their food, they will tender along with their meal book, or commissary coupon book, to the cashier. This transaction completed, they may seat themselves at the neighboring tables, and proceed with their meal. The above plan, with minor modifications, is the same as that adopted at many restaurants and eating houses in the United States. Heretofore, at most Canal hotels, it has been the custom to provide linen covers for some of the tables, and oilcloth covers for the rest,

with the restriction that people eating at tables furnished with linen covers must wear their coats. Under the new plan at the Cristobal hotel, persons wishing to eat at the tables with linen covers will be charged a small sum extra.

Articles on the bill of fare will be sold at very reasonable rates, as for example: Soup, three cents a plate; coffee, three cents a cup; ice cream, four cents a dish, and other dishes in proportion. A special effort will be made to vary the menu as much as possible from day to day. It is not believed that the new arrangement will increase the cost of an employee's eating; on the other hand, he will have the privilege of selecting the dishes he likes best, and paying only for what he gets. Many employees, who have been on the Isthmus for a considerable period of time, have adopted a lighter diet; many do not care for more than their coffee or chocolate and bread and fruit in the morning; still others prefer more vegetables and less meat, while some are heavy meat eaters. The new service is designed to satisfy, as far as possible, individual preferences; it will be tried out under the direction of Maj. W. R. Grove, Inspector for the Supply Department, and if the plan proves satisfactory, it will probably be introduced at other Canal hotels.

Panama City Stables.

An arrangement has been concluded between The Panama Canal and Panama Government authorities whereby stables already in use in the city of Panama will not, for the present, be required to remove to other sites, provided they comply strictly with all sanitary rules and regulations. No new stables, however, shall be constructed or placed in operation, without first procuring a permit from the Health Department, such permit to designate the area within which they are to be located.

Discharged for Disregarding Regulations against Malaria.

The Governor has ordered the discharge of four employees of the Panama railroad at Gatun, and one employee of the Division of Operation and Maintenance at Pedro Miguel Lock, for failure to comply with the sanitary regulations. The specific cause of their discharge was their failure to report to the district physician after being treated in the hospital for malaria, according to notices posted over the Canal Zone and verbal instructions given them at the time of their discharge from the hospital.

The Health Department points out that its efforts to free the Isthmus from malaria are offset greatly by such neglect as these employees were guilty of, and that as a matter of fact and record the menace to life and health of residents of the Isthmus is greater from malaria than from the more generally dreaded diseases, such as typhus and yellow fever, and plague. It is only by prolonged treat-

ment that malaria can be cured, and persons often retain the germ of the disease in their blood after all the symptoms have disappeared, so that they are apparently well. While numerous uncured cases are at large to infect mosquitoes it will be impossible to bring the rate of infection from malaria much below its present level. While that level is lower now than ever before, there is still enough of the disease to cause an appreciable amount of suffering and inefficiency. Malaria is the cause of most admissions to the hospital, and since January 1, 1914, it has been the direct cause of three deaths, while it has been a contributory cause in a larger number.

Decrease of Local Cases of Typhoid Fever.

The rate of infection from typhoid fever, which was over 14 per 1,000 in 1907, has been reduced steadily. In the year 1913, it was 0.67 per 1,000, and so far in 1914, that is, to September 1, it has been 0.66. In the two months preceding September 1, only one case originated on the Isthmus, though a number were taken to Ancon Hospital for treatment from ships calling at the Canal ports. One case has originated on the Isthmus this month; it is that of a negro laborer employed at Coco Solo, who became infected from eating raw conch recovered on the beach near Coco Solo Point, which had apparently been contaminated by the discharge from the Colon sewers.

Tests of Local Materials in Making Concrete.

Samples of materials available on the Isthmus for making concrete will be sent to the United States for the purpose of determining in what proportions they can best be used, in order to secure the required strength and density at the minimum cost of production. Tests, also, have been requested in connection with the manufacture of small concrete blocks and standard mortar briquets. A shipment of these materials is being prepared, and will consist of 10 barrels of No. 1 Ancon

rock (large size), 10 barrels of No. 2 Ancon rock (small size), 10 barrels of Ancon quarry screenings, and 10 barrels of Punta Chame sand. In addition, the Panama railroad has been requested to forward 20 barrels of Chagres River gravel for similar test. In selecting the rock, sand, screenings, and gravel, only average or fairly representative samples will be taken.

White Men Seeking Work in the Interior of Panama.

Following the receipt of advices that Americans have been attempting to make their way overland from the vicinity of the Canal to David, in Chiriqui province, Panama, in the hope of securing employment on the construction of the Chiriqui railroad, attention is called to the fact that all white men used on this work, are engaged by the contractor in the city of Panama. Further, the distance to David from the city of Panama is about 180 miles by air line, or approximately twice as far by the coast or the trails through the jungle, and the country between offers practically no means of legitimate livelihood for a white man without funds. A white man out of employment will have a much better chance of procuring work and faring well in the cities of Colon and Panama than in the interior of the Republic, and as advised in THE CANAL RECORD of September 2, the Isthmus is at present no place for men seeking work.

PERSONAL.

Capt. W. H. Rose, Electrical Engineer of The Panama Canal, accompanied by his family, sailed for the United States on the *Panama*, on Thursday, September 10, on leave of absence.

Effective September 1, the Rev. Father Henry Collins was appointed honorary chaplain and assistant to the Rev. Father Daniel Quijano, chaplain at Ancon Hospital.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
1914					
Broome, Froebing E.	3450	U. S.	Corozal.	Op. and Mtce.	September 10.
Brown, James.	20454	Jamaica.	Ancon Hospital.	Health Dept.	September 7.
Dawson, Charles.	47115	Trinidad.	Panama.	Ancon Quarry.	September 8.
Estwick, William.	46461	Barbados.	Panama.	Supply Dept.	September 6.
Francis, Peter.	67625	Jamaica.	Empire.	Supply Dept.	September 8.
Johnson, Uriah.	57774	Jamaica.	Panama.	P. R. R.	September 1.
Jones, Aaron.	21239	Jamaica.	Colon.	Police Dept.	September 7.
Kirk, James.	54739	Barbados.	Camp Bied.	P. R. R.	September 3.
Mora, José.	54326	Colombia.	Colon.	Fortifications.	September 9.
Soler, Janie, Jr.	52679	Spain.	New Gatun.	Op. and Mtce.	August 30.
Stanley, Minnie.	31018	Jamaica.	Colon.	Supply Dept.	September 6.
Thompson, Dudley.	51363	Barbados.	Colon.	Term. Con.	September 8.
Murphy John J.		U. S. A.			July 15.

Insane Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of commitment.
Stephen, Harry.	161399	Trinidad.	Balboa.		Feb. 25, 1913.

The estates of these deceased or insane employes of the Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Ancon, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

POPULATION OF PANAMA CITY

Estimate of 60,000, Based on Recent Sanitary Census, Adopted as Official.

The compilation of the reports of the enumerators employed by the Health Department to take a census of the city of Panama shows a count of 56,106 persons, not including the area beyond the bull ring, in the Sabanas district. In view of the fact that the census, aiming at a fairly accurate approximation, was taken quickly, and no return calls were made for the enumeration of occupants of rooms vacant at the time of visiting; that heads of families frequently gave answers which seemed to be wrong, in the belief that the census was for the purpose of imposing new taxes, and frequently omitted the number of their children entirely; and that the Sabanas district beyond the bull ring is believed to contain between 1,700 and 1,800 people who could not be enumerated on account of the expense, the Health Officer of Panama is of the opinion that about 5,000 might be added to the enumerated total. The official figures for the population of the city of Panama, as of September 1, have, accordingly, been set at 60,000. The estimate which the Health Department had been using was 62,172.

The persons enumerated have been classified, as follows:

CLASSIFICATION.	City.	Sabanas.	Total.
Canal employes.	12,851	4	12,855
Nonemployes.	42,495	756	43,251
Total.	55,346	760	56,106
Males.	29,723	400	30,123
Females.	25,623	360	25,983
Total.	55,346	760	56,106
Whites.	13,516	46	13,562
Yellows.	1,360	11	1,371
Blacks.	33,492	199	33,691
Panamanians.	6,978	504	7,482
Total.	55,346	760	56,106

In the segregation by colors, the enumerators included under the designation "Panamanian" all persons not strictly in the other classes, but who were, in the judgment of the enumerators, natives of the country.

A census of the city, taken by the Government of Panama about the middle of the year 1911, showed a total population of 37,505. The increase in three years may be estimated, accordingly, at approximately 23,000, a gain for the period of about 60 per cent. The whites were then counted as 7,045; mestizoes, 17,319; negroes, 10,963; yellows, 1,160. As between males and females, the numbers were 19,375 males and 18,130 females. The census of the Canal Zone taken between February 1 and March 31, 1912, enumerated the number of employes of the United States Government, and Canal contractors, living in the city of Panama. They amounted then to 3,789, and their number has increased since by approximately 9,000. The first sanitary census of the city of Panama was taken in 1904, at which time the enumeration showed a population of a little over 20,000.

A contract has been entered into with the J. G. Rainwater Lumber Company of New Orleans, La., for supplying 852,314 board feet of white oak lumber, rough sawed, for freight car repairs, at \$45 per thousand feet.

Brake service at Culebra will be discontinued on October 1.

SOCIAL LIFE OF THE ZONE.

Cristobal Woman's Club.

The Cristobal Woman's Club entered upon its eighth year at an adjourned session of the annual meeting held in the Government clubhouse on Wednesday afternoon, September 2. The officers elected are: President, Mrs. Charles A. Hearne; first vice-president, Mrs. W. C. Harrison; second vice-president, Mrs. Edward Davey; recording secretary, Mrs. Numa Nunn; corresponding secretary, Mrs. J. P. Dovell; treasurer, Mrs. George Whitney. Mrs. Charles Butters was appointed chairman of the program committee. The annual reception to the outgoing and incoming officers, and new members, will be held in the Cristobal clubhouse on Wednesday afternoon, September 30.

Ladies' Aid Society of the Cristobal Union Church

The Ladies' Aid Society of the Cristobal Union Church held its opening meeting for the year at the church on Tuesday afternoon, September 8. The meeting opened with the regular business routine, and was followed by selections of music given by Mrs. Harde-man, Mrs. Wilkes, and Miss Sarah Harrison. The report of the chairman of the program committee for the year 1913-14, showed that eight meetings were held, one each month from October to May. The subjects and programs for the meetings were, as follows: October, "Home life in Japan," reader, Mrs. Harrison; November, "China," speaker, Mr. Lum, a Chinese merchant in Colon; December, "Christmas," papers by various members of the society; January, "Mexico;" February, "Our island possessions;" March, "The Salvation Army," speaker, Mrs. Grimes of the Army institute in Colon; April, "Our home missions," speaker, Mrs. Thomas Edwin Brown, Jr.; May, "The Southern Industrial Education Association," speaker, Mrs. Martha S. Gielow.

Besides the maintenance of the regular expenses of the society, the ladies' aid society contributed \$15 to the Salvation Army, and \$10 to the Southern Industrial Education Association.

The outline for the programs for the present year includes some practical subjects. There will be three mothers' meetings, with appropriate addresses, two programs for the consideration of home life in foreign countries, and one for the discussion of the work of the various religious bodies in mission fields.

The officers for the year are: President, Mrs. S. P. Verner; vice-president, Mrs. W. C. Harrison; secretary, Mrs. F. H. Townsend; treasurer, Mrs. W. M. Smith. Mrs. Harrison was elected a member of the board of the Panama Federation of Societies of Women for Christian Work.

The council of the Cristobal Union Church has asked the ladies' aid society to cooperate with it in the plans for an evening "Social" to be held in the church this month.

Centenary of "Star Spangled Banner" Observed.

Patriotic exercises in honor of the centenary of "The Star Spangled Banner" were held at the Variedades Theatre, Panama, by the Sunday school of the seawall Methodist Church and the pupils of the Panama Methodist Episcopal College, on Monday evening, September 14. The management made no charge for the use of the theatre, and the Guatemalan orchestra donated its services. The proceeds from the entertainment will go toward a fund for the education of a young

Ecuadorian girl at the Wesleyan College at Delaware, Ohio, under the patronage of the Panama Methodist Church Sunday school, and the Woman's Foreign Missionary Society. The program was, as follows:

Part 1.

Guatemalan Orchestra.

Hymn—*Star-tit flag*.....School

Invocation.

Himno Nacional de Panama.....School

"The Star Spangled Banner."

Address.

Part 2.

Orchestra.

Song—*Come let us live with our children*.....Primary classHymn—*Our festive day*.....SchoolRecitation—*The child's world*.....Thelma BurrellSong—*Playing school*.....The little onesRecitation—*La tentacion*.....Plinio RodriguezSong—*Baby girl*.....Little girlsRecitation—*Over the meadow*.....Granville HumberSong—*The band*.....Alvin Sasso, Percy Sasso,

Bolivar Avilez, Alfonso Lopez, Jeronimo

Avilez, Floy Ensminger.

Recitation—*Young soldiers*.....Eugene EisenmannSolo—*Better be good*.....Berta Ensminger

Exercise song.....Intermediate class

Orchestra.

Part 3.

Song—*Out in the beautiful garden*.....SchoolRecitation—*The battle of Blenheim*.....Rosebud Halman

Apostrophe al agua pura.....Las señoritas

Recitation—*Old Ironsides*.....Boys and girlsSong—*Jolly boys and laughing girls*.....Boys and girls

Class work.....First aid to the injured

Patriotic drill.....Sixteen girls

Flag Raising by Cristobal Boy Scouts.

On Saturday, September 12, at 6 a. m., the Cristobal Boy Scouts conducted a ceremonial flag raising, in honor of the centenary of "The Star Spangled Banner." The boys stood at salute as the flag was slowly raised, and one verse of the hymn was sung. This is the third flag raising of the Cristobal company; the first flag was presented by Colonel Goethals and raised for the first time on July 4, 1912; the second was the gift of Capt. Frank O. Whitlock, and was raised on January 1, 1913; the present flag was presented by Mr. E. C. Beck. The division has a membership of about 15 boys. Mr. William R. Anderson is the scout master.

War Relief Funds.

On Sunday evening, September 13, patriotic services were held in St. Paul's Anglican church, Panama. The litany was sung, and the service closed with the singing of the British national anthem. The offering is to be devoted to a war relief fund.

The relief fund for St. John's Ambulance Society, London, which has been raised by subscriptions among West Indians in the city of Colon, has reached the sum of \$250, United States currency. The money will be forwarded to headquarters in London, to be used for the relief of wounded British soldiers.

National Society of Craftsmen.

Members of the National Society of Craftsmen on the Isthmus interested in the formation of a craftsmen club are requested to communicate with Charles Proescher, Corozal.

Obituary.

Martin J. Dunn, a veterinary surgeon employed by the Supply Department, with residence at Culebra, died at Ancon Hospital on Sunday morning, September 13, at 9.35 o'clock. He was born at Oxford, N. Y., was 54 years of age, and had been in the Canal service since February 3, 1910, coming here from Detroit, Mich., his former home. He served as a veterinary surgeon in the Philippine Service for over five years. He is sur-

vived by his wife, two sons, Ray H. and Ernest J. Dunn, and a daughter, Miss Shellie M. Dunn, a teacher in the Canal Zone schools. Members of the family were with him at the time of his death.

Edward F. Slayback, a supervisor in the employ of the Panama railroad, residing in Panama city, died at Ancon Hospital on Saturday, September 12, from tetanus. On September 4, he stepped on a nail in the Panama railroad yards in Panama, but failed to report the injury to a physician; two days later his jaw began to trouble him, and on September 8, he sought treatment and was admitted to the hospital the following day. He was born at Lowell, Benton County, Arkansas, on October 14, 1871, and was unmarried. He came to the Isthmus on April 10, 1905, and became a bridge carpenter in the old architectural department at Cristobal. On September 20, 1905, he transferred to the Panama railroad, but left the service on December 31, 1907. He was reemployed by the Panama railroad on June 8, 1908, as a pile driver foreman, and was engaged in the relocation work until July 1, 1911, when he returned to the maintenance department as supervisor. He was a bridge carpenter from 1895 to 1899, with the Missouri Pacific Railroad at Eldorado, Kansas, and from 1899 to 1905, was with the Great Northern Railway at Everett, Washington. A sister, Mrs. Ina Kendrick, lives at Lowell, Ark.

Roebing E. Broome, an American employed as a foreman at Miraflores Locks, in the Department of Operation and Maintenance, was killed by an electric shock received from a towing locomotive, on the north end of the center wall of the locks, at 2.40 p. m., Thursday, September 10. He was born at Memphis, Tenn., March 18, 1874, and had been on the Isthmus since November 10, 1912. He was employed as an erector in the installation of miter gate machinery at the Pacific locks until December 16, 1913, when he was made a foreman. He is survived by his wife, Mrs. Edna W. Broome, and a daughter, living at No. 111 North Hermitage avenue, Trenton, N. J. The coroner's jury, appointed to investigate the accident, returned a verdict that death was caused in the manner above described.

Clubhouse for Colored Employees at La Boca.

The clubhouse at La Boca, for the use of colored employees living in that settlement, is nearing completion, and is expected to be ready for occupancy about October 1. The building was formerly the clubhouse at Porto Bello, and is being rebuilt along practically the same lines. It will be under the supervision of the Superintendent of Clubs and Playgrounds, and will have a colored secretary, a trained man, who will be furnished by the International Committee of the Y. M. C. A.

Pedro Miguel School.

The forenoon sessions at the school for white children at Pedro Miguel will be from 8 to 11, and the afternoon sessions from 1 to 3. This information was inadvertently omitted from the table of opening and closing of sessions, printed in THE CANAL RECORD of September 9.

Married.

HOWARD KULLER—in the Government chapel at Gatun, on Saturday evening, September 12, Eva Kuller, daughter of Mr. and Mrs. Benjamin F. Kuller, to Mr. E. Thurston Howard, the Rev. Edward J. Cooper officiating. Canal Zone residence, Gatun.

PANAMA TELEGRAPH LINES.

P. R. R. Forces Rebuilding Government's Route to Empire—Reconstruction of Entire System.

The work of rebuilding the Panama Government's telegraph and telephone line between Panama and Empire, which is a part of its interior system of communication extending to David in the province of Chiriqui, is being performed by the forces of the telegraph and telephone department of the Panama railroad, the Government to reimburse the railroad company for the cost.

The wires, consisting of two pairs of No. 6 copper, designed for the toll line circuits between Panama and David, and three pairs of No. 10 copper, to be used for the telegraph service and intermediate local telephone business, will be carried out of Panama city in a 15-pair, No. 13 gage, paper-covered lead cable. This cable will leave the central office in the Government post-office building, corner of Fourth street and North avenue, and follow the beach on poles, converted from iron rail, to a point in the district of Trujillo, crossing the old American wharf structures, the Panama Tramways Company car barn, and other buildings on high standards. From Trujillo, the route extends along Twelfth of October street, which leads directly to Calidonia; there it crosses over the street car company's trolley line at the foot of Calidonia bridge, and continues to the picket fence enclosing the Panama railroad's right-of-way. The cable route parallels the railroad right-of-way to a point a short distance beyond the Tivoli station where labor trains stop. Here the route changes to bare copper wires, the pole line following the old Panama railroad main line track between Corozal and Panama as far as El Diablo, where it leaves the railroad, passes over a hill and back of the town of Corozal, thence in as direct a route as possible over the old Miraflores dump to a point about 1,500 feet from the southern entrance to Miraflores tunnel. At this point, the wires will be carried into a 15-pair, No. 13 gage, paper-covered lead cable through a duct in the Miraflores-Pedro Miguel duct line to Pedro Miguel Lock, and from there through the cable tunnel beneath the upper lock chamber to the west side of the Canal. Here the bare copper wires will begin again, the pole line continuing to Empire, where it connects with the route to Chorrera and other points in the interior.

The poles to be used in the rebuilding of the section of line between Panama city limits and Empire are new; they are of iron, hollow, eight meters (about 26 feet) in length, equipped with two iron cross-arms with white porcelain insulators, and were purchased in Germany. Between the central office and city limits old iron rail has been used for poles. Along the beach these poles have been set in concrete, and, in addition, they have been armored with the same material for a height of two feet above maximum tide level to protect them from passing vehicles, as well as to prevent the corrosive action of seawater. The pole line has been completed out of Panama to a point north of Corozal, but no cable or wire have been strung to date.

The Panama Government is arranging to rebuild the greater part of its interior telegraph and telephone lines, and in pursuance of this plan, will string two pairs of No. 6 copper wire all the way to David for toll line business. Between Empire and Aguadulce, there will be a new 6-meter pole line,

equipped with three No. 10 copper circuits, in addition to the toll lines. From Aguadulce to Divisa, there will be a new 8-meter pole line, equipped with 10 No. 10 copper wires; from Divisa to Santiago, there will be four No. 10 copper wires, and from Santiago to David, a 6-meter pole line, equipped with three No. 10 copper wires, the various sections above-mentioned constituting the main Panama-David line. The No. 10 circuits are designed to handle all of the intermediate telegraph and telephone business. A branch line, equipped with four No. 10 copper wires, will be built from Divisa to the towns of Santa Maria, Parita, Chitré, Los Santos, and Las Tablas. From Santiago, through Atalaya, Ocu, Pesé, to Chitré, the existing single iron wire will be replaced by a No. 10 copper metallic circuit. It is further planned to construct a new line, equipped with two No. 10 copper circuits, from David to Boquete. To date, eight wires have been strung on the reconstructed line from Empire to Chame, and a construction force is now working toward San Carlos. New exchanges are to be installed at David, Chitré, and at Lino in the Boquete region. The exchange at David will probably be housed in a new building, which will also furnish office room for the telegraph, telephone, and postal services. At Chitré and Aguadulce, apparatus will be installed for the recharging of batteries. The Panama Government will continue the use of the magneto system of telephone equipment in its new central office installations.

The following data relative to the telegraph and telephone branch of the Panama Government were compiled by the inspector-general in charge, in January of this year: At that time there were 23 telegraph offices in the Republic. Every telegraph office is considered a telephone office, as the telegraph lines serve as telephone lines for short distances. There was a total of 40 telephone offices not including the 23 combination offices. There were about 485 miles of telegraph pole lines, and about 715 miles of wire. There was about 300 miles of telephone wire serving the 23 telegraph stations mentioned above. When the work of rebuilding the old lines, and making extensions and alterations to the present system, is completed there will be a total of 2,730 miles of copper wire in service.

Dumping of Rock on East Breakwater Begun.

The dumping of rock on the east breakwater in Limon Bay was begun on Tuesday, September 15. The rock is excavated at the Sosa Hill quarry and shipped across the Isthmus in trains of 42 Lidgerwood flat cars. Two steamshovels are engaged in the excavation at present, and five trainloads are shipped each day.

Each train is drawn by a locomotive of the 600 class, but a booster engine is used on loaded trains between Pedro Miguel and New Culebra, past the summit of the continental divide at La Pita; the rise in this 5-mile distance is about 175 feet. The returning trains of empties will be handled all the way by a single locomotive. Balboa will be the basis of transportation operations, and a train will ordinarily make the trip to Coco Solo and back in the same day.

Locomotives will begin the day's work at Balboa fully coaled; in some instances the amount which the 600-class engines carry will be sufficient for the trip over and back, but arrangements have been made for an aux-

iliary supply at Coco Solo. A 24-tonbin, with chute, has been erected near the pile yard out of material reclaimed from the larger chute used for the Toro Point breakwater. A watering tank and turning wye have been part of the Coco Solo yard equipment for some time. The machine shop there can make minor repairs, and the shops at the Cristobal dry dock are within easy access.

Dumping began at bent No. 358 of the trestle, approximately 5,925 feet from the shore. Full train lengths are being dumped by means of a Lidgerwood unloader and plow brought from Toro Point. The sounding bridge used on the Toro Point construction has been placed in service for taking measurements to determine the cross-section of the fill.

Order of Isthmian Conductors.

The next regular meeting of the Order of Isthmian Conductors will be held at Ancon lodge hall on Sunday morning, September 20, at 9.30 o'clock. All members are urged to attend, as matters of great importance will be taken up at this meeting.

GEO. B. ALLEN, *Secretary-Treasurer.*

CRISTOBAL, C. Z., September 13, 1914.

First U. S. Naval Vessel Through the Canal.

The United States transport *Buford* arrived from San Francisco on September 6, and was passed through the Canal on its way to Galveston, on September 9. This is the first United States naval vessel to navigate the Panama Canal.

Rainfall September 1 to September 12, 1914, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Ancon.....	2.37	10	3.31
Balboa.....	1.49	10	3.01
*Miraflores.....	1.10	7	2.49
Pedro Miguel.....	1.41	7	4.23
Rio Grande.....	2.11	7	4.34
<i>Central Section—</i>			
Culebra.....	2.13	7	4.37
*Camacho.....	1.80	7	3.50
Empire.....	1.66	7	3.36
Gamboa.....	2.00	7	4.28
*Juan Mina.....	1.87	10	5.14
Alhajuela.....	1.14	8	5.87
*El Vigia.....	1.48	12	7.46
Frijoles.....	.91	10	2.93
*Trinidad.....			
*Monte Lirio.....	1.40	10	4.60
<i>Atlantic Section—</i>			
Gatun.....	1.24	10	5.44
*Brazos Brook.....	2.15	7	6.00
Colon.....	1.91	7	6.55

*Standard rain gage—readings at 5 p. m. daily. Automatic rain gage at unstarred stations—values, midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun, and Miraflores Lakes for the week ending midnight, Saturday, September 12, 1914. All heights are in feet above mean sealevel:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Sept. 6.....	129.20	95.15	85.00	85.00	53.90
Mon., Sept. 7.....	140.20	102.45	85.20	85.06	54.23
Tues., Sept. 8.....	129.30	95.25	84.95	84.94	54.13
Wed., Sept. 9.....	128.60	94.58	85.08	85.02	53.92
Thurs., Sept. 10.....	135.40	99.35	85.16	85.09	54.24
Fri., Sept. 11.....	131.45	95.65	85.08	85.07	54.10
Sat., Sept. 12.....	131.00	96.10	85.15	85.08	54.10
Height of low water to nearest foot....	125.0	91.0			8

SAFETY DEVICES ON THE P. R. R.

Handling the Traffic in the Busy Construction Days—Standard Practices now in Effect.

In solving the operating problems of the Panama railroad, the standard signal practices in the United States were closely followed, although local conditions were so peculiar that many original details were incorporated into the general scheme of protection, in order to obtain the desired results.

When the old main line was in service, prior to February 15, 1912, the heaviest main line traffic was carried over double track. Trains were operated and spaced by manual block signals. This plan of handling traffic was necessary at that time, because the chief train dispatcher would not have been able to issue the "Running orders" for so many extra trains, and the flexibility of the caution aspect on the manual block signal, in addition to a rigid enforcement of the yard limit rule, allowed trains to follow each other at a less distance than could be successfully accomplished by automatic block signals. When the old main line between Gatun and Gorgona was abandoned and traffic partially shifted to the single track on the relocated line, conditions changed, and the factor of safety had to be given immediate consideration, resulting in the following program:

First—A scheme of signal aspects as simple as possible, but sufficiently flexible to care for present and future traffic.

Second—The preparation of a book of signal instructions covering such aspects, and later, the revision and rearrangement of the *Book of Rules* which included these instructions.

Third—The examination of all transportation men on the rules, and their instruction as to the use of signals.

Fourth—The protection of congested points by interlocking plants, or other mechanical signals; also, the protection of the main track on descending grades by derails located in sidings and operated from the switchstands.

Fifth—The installation of automatic block signals as fast as permanent track and reduced traffic conditions would permit.

Delays of various kinds, however, made it impossible to entirely fulfill the fourth and fifth requirements above mentioned. The signal instructions were issued to the transportation forces early in 1912, and a description of these aspects appeared in THE CANAL RECORD of November 13, 1912. The revised *Book of Rules* was distributed in December of the same year. Examinations were held at various points on the Isthmus in a baggage car assigned to that service. A committee, representing both the Isthmian Canal Commission and the Panama railroad, was appointed to conduct these examinations, and to explain the new scheme of signaling. It required approximately four months to examine and instruct the 450 transportation men. These were taken in classes of 10 or 12, and the average time required per class was eight hours. The committee's aim was to demonstrate the relation between definitions, rules, and train orders, but the real test consisted in writing 38 typical train orders on a blackboard; in this manner, 51 vital points were brought out through questions and discussions.

The protective devices now in use on the Panama railroad consist of interlocking plants, station signals, switch signals, pipe-connected derails, and automatic block signals. During the past two years, the disc signal aspect has

been eliminated, and all existing semaphore arms were changed to operate in the upper right hand quadrant. During the same period, 23 interlocking plants, with 365 active levers, 66 station signals, 18 switch signals, 26 pipe-connected derails, two staff machines, and 122 automatic, or other power operated signals were installed. Many of these have been changed or rebuilt to keepstep with the changing conditions, and within the past few months, some unnecessary apparatus has been removed.

At old Tower R, the train movement at one time averaged one train for each one and two-thirds minutes. This average for nine hours is one, it is believed, that has been rarely exceeded in the busiest terminals in the United States. Circumstances made the installation of a mechanical interlocking machine necessary, and the time element was so valuable that derails had to be left out of the combinations, in order to save the few seconds of time required to handle the additional levers. In order to expedite line ups and prevent confusion, the yardmaster, located in the upper story of the cabin, indicated all routes on an electric track diagram by the means of push buttons. Electrical adjuncts, such as indicators and power operated signals were added, in order to safely expedite train movements through the interlocked limits of old Tower R, and electrical connections to Gamboa cabin protected traffic from head end movements while on the Gamboa bridge. This plant was in operation for 17 months, and during that period no accidents or collisions occurred within the protected territory.

In March, 1913, when the heavy dirt train traffic was shifted from the Canal tracks on the lower level to the Panama railroad main line and passed through the Miraflores tunnel, it was necessary to incorporate a better system of protection through this congested territory. An absolute staff system was installed and the converging tracks at North cabin and South cabin interlocked. This apparatus was described in THE CANAL RECORD of January 11, 1913. In the above arrangement it was also necessary to omit derails on two of the tracks leading into the tunnel for the simple reason that the time required to handle even two additional mechanical levers was so valuable that it had to be considered. During the existence of the heavy traffic, it was no uncommon occurrence to pass 230 trains through the tunnel between 6 a. m. and 6 p. m., and the daily average was over 200 trains. With the maximum traffic, as enumerated above, the capacity of the tunnel and the staff system was taxed to the limit. The staff system controlled this territory for over 13 months without an accident, but on account of a recent reduction in the number of trains, it was superseded by automatic signal protection, covering the gauntlet track installed through the tunnel a short time ago.

The automatic scheme now in use at the tunnel is so designed that the automatic signals stand normally in their "Stop" position. A train approaching with the current of traffic from either end enters a clearing section 1,500 feet in advance of the signal. If all conflicting entrance points and the gauntlet are unoccupied, the signal will change to "Proceed," and allow the train to pass on through the tunnel. If not, the signal arm will remain in the horizontal position. Movements against the current of traffic are controlled in the same manner,

except the clearing sections are only 150 feet long, requiring the train to come to a full stop before entering the tunnel. The first train entering a clearing section will receive a "Proceed" aspect regardless of right, class, or direction. This change represented another compromise on the side of economy, and safely handles the present traffic without any manual assistance at either end of the tunnel.

A number of questions have come up within the past few months relative to automatic stops. When a railroad has to resort to automatic stops as an additional check upon the human element of its traffic personnel, it immediately removes the responsibility from the engineman and places it in the hands of the signal maintainer. Such a step is, according to general belief, not in accordance with the fundamental principles of good railroading, as the engineman should at all times have complete control of his train, and with the scheme of aspects on the Panama railroad and their controls there appears to be no reasonable excuse for overrunning a signal in its stop position. To fill all requirements, an automatic stop should be able to successfully cover the following:

1. It must have continuous control.
2. It must operate with the engine running either forward or backward.
3. When two or more engines are on one train, it must affect the leading engine only.
4. It must operate on both steam and electric propulsion.
5. It must comply with and stay within the theoretical clearance of both roadway and equipment.
6. It must work under all weather conditions.
7. It must stop a train should any of its parts be damaged or missing.
8. It must not be dangerous to passengers and employees.
9. It must be sufficiently rugged to withstand wear, tear, and vibrations.
10. It must be convenient for inspection and repairs.
11. It must register each train stop it has made.
12. It must allow a train to pass a "Limited speed" aspect below a predetermined speed, or stop such trains if the speed is greater than the maximum speed allowed.
13. It must make an application of the air in beginning to stop a train, regardless of speed, at not less than 4,000 feet in advance of any home or automatic signal with its arm in the horizontal position.
14. It must be so arranged that an engineman cannot cut the apparatus out of service during the trip, and, in the event an automatic stop is made, it must be necessary for him to get under engine or tank to release brakes.
15. It must be so arranged that trains cannot enter the main track at any point unless the route is unoccupied and the switch indicators show "Proceed."

With these requirements in sight, it is seen that undue complications enter into such schemes of safety devices; that they place the movements of trains subordinate to the factor of safety, shift responsibility to the wrong personnel, and reduce the actual capacity of the main track from 12 per cent to 35 per cent, according to the spacing of existing signals. The local conditions on the Panama railroad and the personnel in the train

service make automatic stops unnecessary.

INTERLOCKING PLANTS.

The protection offered by the interlocking plant is confined to a restricted territory, such as a railroad crossing, a junction, end of double track, etc. On the Panama railroad, all plants are mechanical. The locking and machines are built in the field, and all material is in accordance with the latest signal practice.

The cabin contains the machine the levers of which correspond to the outside functions, and they are so interconnected that all levers must be manipulated in a predetermined sequence. This arrangement gives the signalman complete control over all switches, derails, and signals connected to his machine. The connections from the lever to switches, derails, and detector bars are made by 1-inch pipe specially riveted and carried on antifriction pipe carriers; this pipeline has a travel of 8½ inches, and turns are made with bell cranks. All pipelines over 150 feet have to be compensated for changes in temperature. The connections to mechanical signals are made with No. 9 gage (B. W.) special galvanized steel wire, supported on wire carriers, and require no compensation in distances less than 1,200 feet. Turns are made by inserting chain in the wire line and carrying this around 10-inch sheave wheels. Switches are locked by a round plunger the end of which is sawed square, and they are so adjusted as to "Stick" if the points stand open three-sixteenths of an inch, or more.

To prevent a switch or derail from being thrown under moving equipment, a detector bar is placed alongside the rail. This bar is ¾-inch by 2¼ inches by 55 feet, supported by 14 radial links, and operates through an arc of 120 degrees when being moved in either direction. It is placed on the outside of the rail, inclines at an angle of 15 degrees toward the center of the track, and rises one and one-quarter inches above the top of the rail, when on center. The presence of car or engine wheels over the bar prevents the signalman from throwing the lock lever, and as that lever locks the switch lever both inside the cabin and at the switch proper, it is, therefore, impossible to throw a switch under a moving train.

All signals are equipped with an additional check called a bolt-lock; this works in conjunction with derails and switches in such a way that the signal cannot be brought to its "Proceed" position unless the track is properly lined up, and, on the other hand, if the signal does not respond to the lever movement and go to its stop position as the signal lever is placed normal, the route cannot be changed until the signal is placed at "Stop" by some other method.

AUTOMATIC SIGNALS.

Automatic signals differ from manual block signals in several respects. They operate automatically, as their name implies, without any manual assistance. Except at Miraflores tunnel, they operate normally clear, instead of normally danger, as with the manual block, and they provide "Space element" blocking, instead of "Time element" blocking. Automatic signals space and protect traffic at all points outside of interlocking plants, giving both head end and rear end protection, as well as offering protection against broken rails, misplaced switches, and cars beyond the fouling point in turnouts. The control of the signal arm between "Stop" and "Limited speed"

is actuated by track circuit controls ranging from four-tenths of a mile to 2.65 miles, according to grade, traffic, and other conditions.

The continuous track circuit is the fundamental factor of their automatic operation. Battery at approximately 1-volt pressure is fed to one main track rail; the current passes up this rail, through a 4-ohm track relay, and returns on the other rail to the battery. This current, in passing through the relay coils, energizes them and picks up the armature on the relay; this, in turn, relays a local current of about 10 volts that operates the signal motor, energizes its slot arm, and holds the signal in its "Proceed" position.

When a train enters the track section, its wheels and axles form a path of much less electric resistance than the relay, so the current takes that path and the relay coils being thus deprived of energy, cease to attract the armature, which opens by gravity. The local circuit is then interrupted, the slot arm disengages, and the signal arm itself falls to its "Stop" position by gravity. The act of throwing a main track switch for a turnout places the same relative conditions in effect. The switch point mechanically operates a switch box that short circuits the rails in the same manner as the wheels and axles under the equipment. In order to prevent trains, running under clear signals, from being "Side-swiped" the outer ends of all crossovers are also equipped with switch boxes, which require both ends of all crossovers to be left lined up for straight track. Every electrical and mechanical feature incorporated in the entire system is so designed that, should it break or any part of it be removed, the signal will go to "Stop", thus placing a so-called signal failure on the side of safety in all cases.

The control of the signal arm from "Limited speed" to "Normal speed" is actuated by a polarized line circuit. The signal ahead feeds battery to the line through a quick acting pole changer; this circuit is then carried through front contacts on a 4-ohm relay at each track section to a 1,000-ohm relay at the following signal. The neutral armature is actuated by current in either direction, but, in addition to this, the 1,000-ohm relay has a polarized contact that is energized and moves according to the direction of the current. These contact points on the polarized relay are used to make or break an additional local circuit that controls the signal arm between its 45-degree and its vertical position.

Automatic signals may always be distinguished by a number on the front of the mechanism case. This number indicates, in miles and hundredths, the distance from Colon. Northward signals are always given even ending numbers, and southward signals uneven ending numbers. This scheme of numbering allows changes or additions without disturbing the individual numbers on other existing signals, and allows concise and intelligent telegraphic report to be made in case of a signal failure.

In introducing automatic signals into operating problems on the Panama railroad, rapidly changing conditions and the peculiarities of the tropical climate developed many new details never before encountered, although, in general, the best signal practice followed by railroad systems in the United States has been observed. The maintenance of automatic signals on the Isthmus, however, requires considerable more work and a much

more rigid inspection than in the United States. This is due to the deterioration of battery, the corroding effects of the climate on contacts, the tendency of finished iron parts to rust, and occasional injuries of various kinds received from outside agencies.

The automatic signals between Colon and Miraflores average 210,000 arm movements per month. The reported interruptions that are chargeable to the system have averaged less than 15 per month. When the automatic signals are extended to Panama, some existing interlockings rearranged, and two additional plants installed, the factor of safety on the Panama railroad will be coordinate with its other operating problems.

Increased Emigration in August.

The report of quarantine operations at the Atlantic and Pacific terminal ports for the month of August show an excess of emigration over immigration of 701, as compared with a net emigration in July of 405. The total net emigration from the Isthmus to foreign ports since July 1, 1913 has been 16,272, the greater part of whom consisted of laborers returning to their former homes on account of the closing down of Canal work.

The total number of persons embarking at Colon and Cristobal for foreign ports during August was 3,505, consisting of 1,876 cabin, and 1,629 steerage passengers. The number of persons landing from foreign ports at these points was 2,326, consisting of 1,308 cabin, and 1,018 steerage passengers. The excess of those who embarked over those who landed was 1,179. The immigration from Europe in the steerage class has practically ceased, only 25 persons arriving from there in August. The West India islands contributed 634, as compared with 925 for the previous month; Colombia, 131; Costa Rica, 106, and Cuba, 31. A total of 740 persons entered the Atlantic terminal ports during the month from Bocas del Toro, and 261 from other coast towns of the Republic. Of the arrivals at Colon and Cristobal, 1,913 were men, 620 were women, and 288 were children. The number of persons arriving "In transit" was 1,270, as compared with 1,482 in July.

The number of persons arriving at the ports of Balboa and Panama from foreign ports during August was 923, consisting of 747 cabin, and 176 steerage passengers. The number of persons who embarked for foreign ports during the same period was 445, consisting of 332 cabin, and 113 steerage passengers. The excess of those who landed over those who embarked was 478.

Ninety-three vessels entered the Atlantic ports during August, and 31 the Pacific ports a total of 124.

Panama Canal Marine Association.

The Panama Canal Marine Association will hold its regular meeting on Sunday, September 20, 1914, at 7.30 p. m., at the lodge hall in Paraiso. Refreshments will be served. Consult time table for train service.

F. E. NEHLS, Recording Secretary.

BALBOA, C. Z., September 15, 1914.

Type-18 Quarters at Gatun to be Rented.

The recommendation that two Type-18 bachelor quarters at Gatun, which have been vacant for some time and are not now needed for unmarried employes, be rented to employes desiring nonhousekeeping quarters, has been approved.

EXECUTIVE ORDER

To Require Security for Costs In Civil Cases.

By virtue of the authority vested in me, I hereby establish the following Order for the Canal Zone:

Section 1. The plaintiff in any civil suit, or special proceeding, may be ruled to give security for the costs upon motion of the defendant, or of any officer of the court interested in the costs accruing in such suit; and if such rule be entered against the plaintiff, and he fail to comply therewith, within the time prescribed by the court or judge thereof, the suit shall be dismissed.

A new or additional undertaking may be ordered within such time as the court or judge may prescribe, upon proof that the original undertaking is insufficient security, and failure on the part of the plaintiff to comply with the order of the court, or judge, within the time prescribed, shall cause the dismissal of the suit.

This section shall apply to suits in the Magistrates' Courts, as well as in the District Court.

The security for costs required by this section may consist of a money deposit, bond of a surety company, or cost bond with two or more good and sufficient sureties, the form of such security to be determined by the judge or magistrate of the court before whom the proceedings are pending.

Section 2. All bonds given as security for costs shall authorize judgment against all of the obligors of said bonds for such costs, to be entered in the final judgment of the case or special proceedings.

Section 3. Any party to a suit who is required to give security for costs, may file with the secretary, or his assistant, or with the magistrate, as the case may be, an affidavit to the effect that he is too poor to pay the costs of the court, and is unable to give security therefor. The secretary of the district court, or his assistant, or the magistrate, as the case may be, may contest the inability of the party to pay the costs, or his inability to give security for the same, the contest to be tried before the judge of the District Court in cases pending in that court, and before the magistrate in cases pending in one of the Magistrates' Courts; and the contest shall be heard at such time as the court or magistrate may determine.

If no contest is made upon the affidavit, or if the same is admitted by the court or magistrate after the contest, it shall be the duty of the officers of the court thereafter to issue and serve all processes and perform all duties on behalf of such party as in other cases.

Section 4. The public administrator, and executors, administrators, and guardians appointed by the courts of the Canal Zone shall not be required to give security for costs in any suit brought by them in their fiduciary character.

Section 5. No security for costs shall be required of The United States, The Panama Canal, the Canal Zone Government, or any of its dependencies.

Section 6. The provisions of this Order, relating to security for costs, shall apply to an intervenor, and shall also apply to a defendant who seeks a judgment against the plaintiff on a counterclaim, after the defendant shall have discontinued his suit.

Section 7. When the costs are secured by

the provisions of an attachment or other bond, filed by the party required to give security for costs, no further security shall be required.

Section 8. All laws, orders, and decrees, or parts thereof, in conflict with this Order, are hereby repealed, provided, that this Order shall not be construed to impair the power conferred upon the courts in respect to costs by Article III of the Executive Order of September 29, 1911, "To amend Sections 51, 62, and 526, and to repeal Sections 63 and 529 of the Code of Civil Procedure of the Canal Zone."

Section 9. This Order shall take effect 60 days from this date.

WOODROW WILSON.

THE WHITE HOUSE,

August 14, 1914.

[No. 2019.]

EXECUTIVE ORDER

Regulating Operation of Street Railway Cars at Crossings.

By virtue of authority vested in me, I hereby establish the following Executive Order for the Canal Zone:

Section 1. It shall be unlawful for a motor-man or any person in control of a street railway car to run same over or upon any street crossing, road crossing, or street railway crossing, at a speed of more than five miles per hour, and without commencing to sound gong, horn, or whistle when at least 100 feet from said crossing, and continuing to sound same until the crossing has been passed.

Section 2. It shall be unlawful for a motor-man or any person in control of a street railway car to run same over or upon any railroad crossing, without bringing the car to a full stop at least 10 feet from the nearest rail, and without ascertaining from a view of the railroad track made either by himself or by the conductor that the crossing may be safely passed.

Section 3. A violation of any of the provisions of this Order shall be punished by a fine of not more than \$100, or imprisonment for not more than 30 days, or by both fine and imprisonment in the discretion of the Court.

Section 4. This Order shall take effect 30 days from and after this date.

WOODROW WILSON.

THE WHITE HOUSE,

August 22, 1914.

[No. 2026.]

EXECUTIVE ORDER

Relating to Postal Crimes in the Canal Zone.

By virtue of the authority vested in me, I hereby establish the following Order for the Canal Zone:

Section 1. The Postal Laws and Regulations of the United States, not locally inapplicable, which define crimes against the Postal Service, and prescribe punishments therefor, are hereby extended to the Canal Zone, and shall be enforceable in the courts of the Canal Zone in the manner and form prescribed for other criminal cases by the Canal Zone laws.

Section 2. This Order shall take effect from and after this date.

WOODROW WILSON.

THE WHITE HOUSE,

August 14, 1914.

[No. 2018.]

FLOATING PUMPING PLANT

Constructed of Old Equipment to Assist in Un-watering Lock Chambers.

A floating pumping plant has been constructed for use as an auxiliary to the pumping system of the floating caisson dam for un-watering lock chambers. The old iron barge No. 7, which is rectangular in plan, 125 feet long by 25 feet wide, and draws about four feet of water, was used as the pontoon on which to mount the pumping system. The main pumps are two Worthington 18-inch centrifugal dredging pumps, driven by 655-horsepower, 2,080-volt induction motors, direct-connected, and were among the units used for the removal of spoil sluiced by the hydraulic monitors in the Canal channel, south of Miraflores Locks. A 10 by 10-inch motor-driven vacuum pump is connected with the main pumps for priming service.

When a chamber is to be pumped out, the outfit will be towed inside and moored alongside the lower gate. It will lower evenly as the surface of the water falls and rest finally on the upstream portion of the sill of the gate. To provide for the discharge from this position, as well as to provide a constant head against which to pump, the outlet has been made through two vertical standpipes, rising 60 feet above the pumps, and clearing by one foot the highest gates alongside which the outfit will be used. The standpipes are held in place by wire guy ropes and are equipped with elbows at the upper ends, to carry the discharge to the other side of the gate. Each standpipe is fitted at the bottom with a ball and socket joint so it can be easily lowered when it is desired to move the outfit from one lock to another.

The main pumps were designed for heavy duty against a discharge head of 100 feet. As the head against which they are to pump in this service is approximately 63 feet, it was necessary either to change the impellers or artificially increase the head, in order to operate them with the motors with which they were equipped. The cost of changing the impellers led to the adoption of a plan for increasing the effective head. This was done by substituting a 16-inch for the original 18-inch discharge pipe, and bolting over the outlet a blind flange bored with a 12-inch aperture. The resultant increase in friction and back pressure will approximate a head of 100 feet in an 18-inch discharge pipe.

The suction lift is approximately seven feet, and when the water in the chamber has been lowered so that the barge rests on the gate sill, the suction pipes will be led into openings of the lateral culverts beneath the chamber floor, so that the floor can be kept dry.

Power will be transmitted to the barge through flexible cables leading from the lock walls. A 10 to 1 transformer has been installed on the barge to raise the potential of the regular lock circuits, 220, to the 2,200 volts required by the motors.

The outfit has been completed and is now moored at the lower end of Gatun Locks, awaiting a test of operation which will be made shortly. The pumping units have a rated capacity of delivering 17,500 gallons per minute under the conditions for which they were built originally, and it is expected that in this service they will discharge at approximately their full capacity.

OFFICIAL CIRCULARS.

Deposit of Bonds to Secure Payment of Drafts.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 19, 1914.

CIRCULAR No. 685:

By virtue of authority vested in me under Section 8 of Executive Order No. 1917, dated April 16, 1914, regulations to govern the details of the acceptance, deposit, safekeeping, sale, or return of bonds to be held to secure the payment of drafts drawn on banks in the United States for conversion into cash in payment of tolls, bills for materials, supplies, harbor pilotage, towage, and other services, are prescribed, as follows:

Section 1. Bonds will be accepted in accordance with the terms and conditions of Section 5 of Executive Order No. 1917, dated April 16, 1914, which provides that

Unless, in the opinion of the Governor of The Panama Canal, payment in cash to the Collector of The Panama Canal is necessary for Canal purposes, drafts on banks in the United States under the supervision of the Comptroller of the Currency and otherwise satisfactory to the Governor of The Panama Canal, may be accepted for conversion into cash to effect payment of tolls and for bills for materials and supplies, repairs, harbor pilotage, towage, and other services, provided the payment of such drafts is secured by deposit of high grade bonds with the official of The Panama Canal designated by the Governor of The Panama Canal, under the following conditions:

Bonds will be acceptable only from steamship companies having frequent sailings through the Canal or from the agents of several vessels or steamship companies. The bonds deposited by any one agency or company shall be sufficient to cover the tolls on a minimum number of vessels, as fixed by the Governor of The Panama Canal. Bonds of the United States, the Philippines, Porto Rico, and the District of Columbia will be accepted at their par value. If otherwise satisfactory to the Governor of The Panama Canal, or his representative, bonds of the Hawaiian Territory, the Philippine Railway Company, and those of States, municipalities, and high grade railroads, such as are legal investments for savings banks in the States of New York, Massachusetts, Connecticut, or New Jersey, will be accepted at 90 per cent of their market value, but not exceeding 90 per cent of their par value.

The Governor of The Panama Canal may refuse to accept coupon bonds and may limit exchanges of bonds by depositors.

Section 2. The Assistant Auditor of The Panama Canal is hereby designated as the agent of the Governor of The Panama Canal to accept, safely keep, provide for exchanges and withdrawals, and account for bonds deposited by steamship companies, banks, or others acting as agents of steamship companies, to secure payment of drafts as provided for in Section 1 hereof.

In the event of the absence or inability of the Assistant Auditor to perform such duty, the chief clerk to the Assistant Auditor, or such other person as the Assistant Auditor may designate, is authorized to act as the agent of the Governor for the purposes specified above.

Any bond which the Assistant Auditor may be required to give, as provided for in Section 3 hereof, shall cover the acts of the chief clerk, or any other person designated to act for him.

Section 3. When requested to do so by any depositor, the Assistant Auditor of The Panama Canal shall be required to give a bond in such penal sum as may be requested, conditioned that he will faithfully perform the duties in connection with the acceptance, safekeeping, accounting for, and return of all bonds deposited with him to secure drafts, and that he will return to the owners of said bonds all such bonds deposited, as have not been destroyed by fire, or other casualty, or by burglary, or he is not required to sell, as hereinafter specified, and that he will faithfully account for and turn over to the persons entitled thereto all money received by him by virtue of the sale of any bonds placed on deposit under these regulations. Such bond shall be so conditioned as to cover the acts of the person acting as the agent of the Governor in the absence or inability of the Assistant Auditor, as provided for in Section 2 of these regulations. The depositor will be required to pay the premium on any bond which he may request the Assistant Auditor to give.

The Governor may require the Assistant Auditor to give bond to the United States in such amount as he deems advisable.

Section 4. The Panama Canal shall rent for the use of the Assistant Auditor at some convenient place in Washington, D. C., a safety deposit box or boxes, in which the bonds to be deposited under these regulations shall be kept. The conditions governing the use of such box shall be as specified in Section 10 of these regulations. Every depositor of bonds will be required to pay to The Panama Canal the sum of five dollars (\$5) per year for every fifteen thousand dollars (\$15,000) worth of bonds deposited, to be applied in payment of the rent

a of such safety deposit box, and such other expenses as are incidental to the safekeeping of such bonds, provided that this payment may be increased or reduced as experience may require, in the discretion of the Governor.

Section 5. Steamship companies or their agents, or the agents of vessels, who desire to qualify, so as to have drafts accepted in payment of tolls and bills for material and services, shall make application to The Panama Canal, addressed to the Assistant Auditor in Washington, D. C., on a form to be provided for that purpose, to be allowed to deposit bonds to secure the payment of such drafts. The application shall give the names of vessels, their tonnage and about how frequently it is contemplated they will sail through the Panama Canal, or require supplies or services, the bank or banks in the United States on which it is proposed to have drafts drawn, the amount of drafts which such banks have agreed to accept, and a list of bonds it is proposed to deposit: *Provided, however,* That if the applicant desires to have drafts accepted for the payment of tolls on any vessel of designated lines, or for other charges against such vessels without reference to the list of vessels given, the application shall give the name and address of the agent or agents whose drafts will be accepted in payment of charges against vessels designated by such agent or agents.

Section 6. Upon receipt of the application required by Section 5 properly completed, from any steamship company or its agent, or agents of vessels authorized to qualify under Section 5 of Executive Order No. 1917, dated April 16, 1914, quoted in Section 1 hereof, the Assistant Auditor will inform such applicant of the initial amount of bonds or other securities which will be required. The minimum initial deposit of any applicant shall not be less than fifteen thousand dollars (\$15,000) worth of bonds when accepted at the values specified in Section 1 of these regulations, and more may be required if it should appear from the statements contained in the application that the amount of drafts drawn during a period of 30 days would probably be in excess of fifteen thousand dollars. Bonds or securities conforming to the requirements of Section 1 and in the amount specified in the notification of the Assistant Auditor of The Panama Canal, shall be forwarded to the Assistant Auditor of The Panama Canal, Washington, D. C. Either registered or coupon bonds, or both, will be accepted, unless notified to the contrary by the Assistant Auditor when the application is passed upon. The Assistant Auditor of The Panama Canal will dispose of maturing coupons covering interest accruing on bonds and other securities, as may be directed by the person, company, or corporation making the deposit.

Section 7. The Assistant Auditor shall determine, as a matter of fact and law, whether the bonds tendered for deposit conform to the requirements of Section 5 of Executive Order No. 1917, dated April 16, 1914, quoted in Section 1 of these regulations, and also whether such bonds have been properly registered or assigned. If the bonds are accepted, the Assistant Auditor shall issue receipt therefor, in quadruplicate one to be forwarded to the depositor, one to be placed in the safety deposit box with the bonds, one to be forwarded to the Auditor of The Panama Canal, and one to be retained by the Assistant Auditor.

When withdrawals or exchanges are made, as hereinafter provided, quadruplicate receipts shall be made and distributed as above provided. If the Assistant Auditor should hold that the bonds do not comply with the requirement of Executive Order No. 1917, dated April 16, 1914, they shall be retained, subject to the order and risk of the applicant for whose account they were tendered, and the applicant so notified.

Section 8. Immediately after the bonds have been accepted by the Assistant Auditor, he shall place them in the safety deposit box which The Panama Canal is required to rent under Section 4 of these regulations, and shall notify the applicant that his drafts will be accepted when drawn in accordance with the information given in the application submitted by him. A copy of the application, and of the notice of its acceptance, shall be sent to the Auditor of The Panama Canal, and one to the Collector of The Panama Canal. The depositor agrees not to have outstanding drafts at any time in excess of the acceptable value of the bonds on deposit.

Section 9. Bonds deposited may be withdrawn and other bonds substituted for them, provided that the bonds offered as substitutes comply with these regulations. The Governor shall have the right, however, to place limit on exchanges, if experience demonstrates that such action is necessary. Applications for changes in the list of vessels, and for the withdrawal or substitution of bonds, shall be made in the same manner and in accordance with the same rules that apply to original applications. The depositor shall not be allowed to reduce the amount of bonds on deposit, nor to close his account and withdraw all bonds without giving 30 days' notice of his intention to

close, and showing that all drafts drawn are paid: *Provided, however,* if the depositor can show that all drafts drawn are paid, and that the Auditor and Collector of The Panama Canal, and the banks on which drafts are to be drawn, have been notified of the intention to withdraw the bonds, the 30 days' notice provided herein may be waived.

Section 10. Bonds deposited under these regulations shall be kept in a safety deposit box rented for that purpose as specified in Section 4 hereof. Such box shall have a combination lock. The person, company, or corporation from whom the box is rented shall have a representative present whenever the box is opened by the Assistant Auditor. The box shall be opened only during the office hours of the person, company, or corporation from whom rented. The Assistant Auditor shall not remove any of the bonds from said box unless requested to do so by a depositor, except such as he may be authorized to sell, as hereinafter provided for.

Section 11. It is understood that all bonds deposited under these regulations, are deposited as security for the payment of drafts drawn by or for the depositor to be converted into lawful money for the payment of tolls or bills for material or services furnished by The Panama Canal, and for the payment on demand of the expenses provided for in these regulations and under Executive Order No. 1917, dated April 16, 1914. It is also understood that the face value of any draft drawn under these regulations and accepted by the Collector of The Panama Canal will be paid upon presentation at the bank upon which drawn, and that such bank shall pay said draft without any discount whatsoever, and that, if said draft is not paid in full when presented, the Assistant Auditor in whose possession the said bonds have been placed, shall have the right, with the approval of the Secretary of War, to withdraw said bonds from the safety deposit box, as provided for in Section 10 of these regulations, and sell them, or such part of them, as may be necessary to provide for the payment of said draft: *Provided, however,* That, where practicable, notice of the failure to pay a draft will be given and the steamship company, or its agent, will be allowed to deposit a sum equal to the draft to be applied in payment thereof. Care will be exercised in the sale of bonds to the best advantage, but The Panama Canal will not be responsible for losses which may result from a forced sale, inability to obtain the best prices, or other causes. The Assistant Auditor shall have the right to deliver bonds sold under these regulations to the purchaser and to do such other acts as may be necessary to confer title on the purchaser.

Section 12. The depositor guarantees that the statements contained in the application that he is required to make under Section 5 of these regulations are true. Such statements and these regulations shall constitute the conditions under which the bonds are to be accepted, held, and accounted for: *Provided, however,* that changes in these regulations may be made by the Governor of The Panama Canal. Such changes in the regulations shall become operative on depositors after notice thereof, and if the depositor is not satisfied with such changes he may withdraw his deposit under the conditions specified in Section 9 of these regulations.

Section 13. All correspondence in relation to the deposit of bonds under these regulations shall be carried on with the Assistant Auditor of The Panama Canal, and he shall render the initial decision of all questions. The Chief of the Washington Office of The Panama Canal, and the Governor of The Panama Canal, shall, however, have supervisory control over the Assistant Auditor, and questions in dispute between the Assistant Auditor and a depositor may, upon the application of the depositor, be decided by either of the above officers, and such decision, when rendered, shall be accepted as final and conclusive and given all the force and effect of the decision of an arbiter: *Provided, however,* that decisions made by the Chief of the Washington Office may, upon an application made within 30 days from the date of such decision, be reviewed by the Governor.

Section 14. The Panama Canal will accept for conversion into cash such drafts as may be drawn under these regulations and issue to the masters of vessels for which such drafts are drawn, such receipts and clearance papers as they would be entitled to if they had paid lawful money of the United States to The Panama Canal equal to the face value of such drafts, except that the receipts shall show that they were given for drafts to effect payment, identifying the drafts by number, and on what bank drawn, and, upon the payment of the drafts so accepted, such receipts shall become conclusive evidence of the payment of tolls or other bills for the amounts specified therein.

Section 15. The Collector of The Panama Canal will forward to the United States for collection, without delay, any drafts he may receive under these regulations.

Section 16. The Auditor of The Panama Canal may

require the depositor to make such reports of bonds deposited, drafts drawn and delivered to the Collector, as he may deem necessary. The Auditor shall examine or cause to be examined, the safety deposit boxes in which bonds are deposited as often as he may consider necessary to ascertain that the contents thereof are intact, and that all bonds received by the Assistant Auditor are accounted for.

GEO. W. GOETHALS,
Governor.

Notice to Mariners.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 28, 1914.

CIRCULAR No. 643-5:

1. Construction work on the east breakwater, Colon Harbor, has been carried to a distance of about 6,000 feet to seaward from its shore end, off Coco Solo Point, and is being extended at the rate of 64 feet per day. Its full length will be 11,235 feet, and when completed, the distance between its end and that of the west breakwater will be about three-eighths of a mile.

2. During the course of construction two fixed lights, one above the other, will be shown from the end of the breakwater; in addition, a black gas buoy showing a flashing white light, visible one second and eclipsed two seconds, will be moored off its seaward end and be shifted from time to time as the work progresses. Upon its completion, a structure similar to that at the end of the west breakwater, will be erected, showing a white light elevated 30 feet, visible eight miles, making a double flash in one second and then eclipsed one second. The buoy light will be visible for a distance of five miles.

GEO. W. GOETHALS,
Governor.

Launch Service.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 8, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS:

Owing to the increased demand for launch service, and with a view of eliminating all unnecessary calls on the Division of Canal Transportation, I desire that you furnish this office at once a list of employees in your department or division who are authorized by you to request launch service without your specific approval in each instance. This statement should further specify whether the employee is authorized to request launch service outside of regular working hours, and on Sundays or holidays, and, if so, the character of the work requiring such service.

For the present, at least, the captains of the ports will furnish the head of each department or division a weekly statement showing the number of calls for launch service made by employees in his department or division, and the purpose for which the service was rendered.

GEO. W. GOETHALS,
Governor.

Task Work and Work by Contract.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 10, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS:

In line with increased economy and efficiency, it is desired to perform all work as "Task work," or by contract, instead of by day's labor, where same will result in increased economy and efficiency or earlier completion. All heads of departments and divisions are required to submit a report to me not later than September 19, containing their recommendations formulated in line with this order.

GEO. W. GOETHALS,
Governor.

Charges for Launch Service.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 1, 1914.
CIRCULAR No. 686-1:

Effective September 1, 1914, the following charges will be made:

1. For launches of the *Birdena*, *Search*, and *Balboa* type—Seven dollars and fifty cents for the first hour, and \$5 for each hour or fraction thereafter.

2. For small gasoline launches—Five dollars for the first hour, and \$2.50 for each hour or fraction thereafter.

GEO. W. GOETHALS,
Governor.

Return of Material or Equipment to United States.

THE PANAMA CANAL,
THE PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 26, 1914.

CIRCULAR No. 687:

Hereafter, no material, supplies, instruments, ma-

chines, or equipment will be shipped to the United States to be disposed of, either in part payment for similar equipment, or by direct sale, before being acted upon by the Surveying Officer and approved survey obtained authorizing such shipment.

GEO. W. GOETHALS,
Governor, The Panama Canal.
President, The Panama Railroad Company.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 14, 1914.

CIRCULAR No. 70:

Effective at once, Mr. J. F. Warner is designated an accountable official of The Panama Canal, and as such will account for all nonexpendable property in use in the new Administration Building, Balboa Heights.

Officials now accountable for property contained in that building will transfer same to Mr. Warner at once.

Approved:
GEO. W. GOETHALS,
Governor.

Acting Electrical Engineer.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 8, 1914.
All concerned—During the absence on leave of Capt. W. H. Rose, Electrical Engineer, and effective September 9, 1914, Mr. Hartley Rowe, Electrical Superintendent, will perform the duties of electrical engineer.
H. F. HODGES,
Engineer of Maintenance.

Lunch Room at Administration Building.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 10, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS IN THE ADMINISTRATION BUILDING:

Commencing at noon on Tuesday, September 15, 1914, there will be opened in the basement of the Administration Building, a lunch room, where light lunches, consisting of coffee, pie, sandwiches, etc., will be served at nominal prices between the hours of 12 noon and 1.30 p. m. Commissary and hotel coupons only will be accepted.

Tables and chairs will be provided for the use of the patrons of the lunch room and employees desiring to bring their own lunches with them. Employees will not be permitted to bring lunches to the offices, or any part of the building, excepting the basement.

C. A. McILVAINE,
Executive Secretary.

Storage of Documents in New Administration Building.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 8, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS IN THE ADMINISTRATION BUILDING:

A section in the basement, next to the blueprinting room, has been set aside as a document room for the storage of extra copies of annual reports, Executive Orders, circulars, THE CANAL RECORD, Laws of the Canal Zone, Minutes of Commission meetings, hearings, and similar printed matter.

If you have any surplus copies of such publications, you should turn them over to the Record Bureau for storage, and if there are any you require for convenient reference in your office, you should note your needs on the bottom of this circular and return it to the Record Bureau.

C. A. McILVAINE,
Executive Secretary.

Transfer of P. R. R. Steamship Ticket Office.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
COLON, R. P., September 12, 1914.

CIRCULAR No. 446:

To all concerned—Effective September 16, 1914, the steamship ticket office will be transferred from the general office building to the Colon passenger station. Please notify all concerned accordingly.

C. H. MOTSETT,
Superintendent.

Billing Recovered P. C. and P. R. R. Material.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
COLON, R. P., September 12, 1914.

CIRCULAR No. 445:

To all concerned—The following instructions will govern the billing of Panama Canal and Panama railroad material recovered and shipped to depot quartermaster and other departments and divisions:

MATERIAL RECOVERED FROM PANAMA CANAL TRACKS.
Material recovered from Panama Canal tracks and

shipped to the depot quartermaster at Mount Hope should be handled on Panama Canal billing.

Material recovered from Panama Canal tracks and shipped to departments and divisions of The Panama Canal to be handled on Panama Canal billing.

Material recovered from Panama Canal tracks and shipped to the Panama railroad should be handled on company billing.

MATERIAL RECOVERED FROM PANAMA RAILROAD TRACKS.
Material recovered from Panama railroad tracks and shipped to the depot quartermaster at Mount Hope should be handled on company billing.

Material recovered from Panama railroad tracks and shipped to departments or divisions of the Panama railroad should be handled on company billing.

Material recovered from Panama railroad tracks and shipped to divisions or departments of The Panama Canal should be handled on Panama Canal billing.

Please be governed accordingly in the handling of these shipments.

C. H. MOTSETT,
Superintendent.

Examinations by Board of Local Inspectors.

THE PANAMA CANAL,
BOARD OF LOCAL INSPECTORS,
ANCON, C. Z., September 14, 1914.

The Board of Local Inspectors will conduct examinations at the administration building, Ancon, on Wednesday, September 23, 1914, beginning promptly at 2 p. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators, of motor boats. All applicants for licenses must procure from the office of the board, Ancon, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles, with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday the day previous to the regular examination, at 2 p. m., at the administration building, Ancon; on Wednesday, the day of the regular examination, at 2 p. m., at the administration building, Ancon.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. The test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa, at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be at the Panama railroad station at the hour abovementioned.

By direction of the chairman of the board,

W. H. HYDE,
Clerk to the Board.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., September 14, 1914.
The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Barrat, J.	Miller, E. S.
Burnham, W. P. (paper)	Ouellette, B.
Christobal, Thos. J.	Peterson, Fred
Dempsey, Mrs. D.	Pettis, W. R.
Evans, D. W.	Pipper, Harry
Ford, Mrs. Harry G.	Reinbold, L. A.
Fraser, Chas.	Robbins, John D.
Garon, A.	Rogers, (Pvt.) Roy A.
Haltman, Robert	Rundige, Lieut. John
Harper, Miss Edith (4)	Sanford, R.
Kuller, Mrs. Bessie	Smith, Mrs. George E.
Kurtz, Warren	Spieker, Harry
Little, C. C. (paper)	Stanner, J. F.
McLoud, O. O. (2)	Stewart, Mrs. Gilbert H.
McHone, Chas. L. (2)	Whitsett, James
	Maxwell, George

LETTERS UNCALLED FOR SEPTEMBER 7.

Grier, Harry	Stallmark, A. (catalogue)
Griffin, Miss Catherine	Street, Jesse
Hansen, M.	Trotman, Joseph
Harrold, Miss Elizabeth	Vinson, James D.
Hylund, John	Warren, Frank
Holloway, Owen	West, Thomas
Icaza, Diego, Panama de	Willis, J. B.
Jackson, Miss Sarah	Wright, Geo. T. (paper)

Hotel Aspinwall Launch Service.

The launch *Louise* will sail from the dredge landing at Balboa for the Hotel Aspinwall on Taboga Island at 9.10 a. m., on Monday, Thursday, and Saturday of each week. The time of sailing permits connection to be made with train No. 3, which arrives at Panama from Colon at 8.45 a. m. daily.

COMMISSARY DEPARTMENT.

Special Sales.

The following special sales are announced:
HARDWARE.

At Ancon, Balboa, and Cristobal, week beginning September 18.

DRY GOODS.

At Corozal, week beginning September 18.
HATS.

At Corozal and Cristobal, week beginning September 18.

TRUNKS AND SUITCASES.

At Corozal, week beginning September 18.
MEN'S AND WOMEN'S FURNISHINGS.

At Cristobal, week beginning September 18.

SHOES.

At Gatun and Cristobal, week beginning September 18.

Special Deliveries.

THE PANAMA CANAL.

SUPPLY DEPARTMENT.

BALBOA HEIGHTS, C. Z., September 10, 1914.

CIRCULAR No. 96-4:

District quartermasters and commissary storekeepers—Commissary storekeepers are authorized to send out special deliveries, C. O. D.

R. E. Wood,
Chief Quartermaster.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and from 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama rail road vessels.

In rush periods, all stores will remain open until 7 p. m.

Cold Storage Prices.

Retail prices of cold storage provisions for the week beginning September 17, 1914:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....	10	
Shoulder, trimmed, per pound.....	16	
Leg (8 to 10 pounds), per pound.....	25	
Cutlets, per pound.....	26	
Short cut chops, per pound.....	30	
Shoulder, chops, per pound.....	18	
Lamb—Stewing, per pound.....	13	
Shoulder, trimmed, per pound.....	19	
Leg (5 to 8 pounds), per pound.....	30	
Chops, per pound.....	36	
Shoulder, chops, per pound.....	23	
Cutlets, per pound.....	36	
Veal—Stewing, per pound.....	13	
Shoulder, for roasting (not under 4 pounds), per pound.....	17	
Chops, shoulder, per pound.....	23	
Chops, per pound.....	35	
Loin, for roasting, per pound.....	35	
Cutlets, per pound.....	40	
Beef—Suet, per pound.....	03½	
Soup, per pound.....	08	
Stew, per pound.....	12	
Plate, per pound.....	14	
Corned, No. 1, per pound.....	20	
Corned, No. 2, per pound.....	17	
Chuck roast, 3 lbs., and over, special, per pound.....	13	
Chuck roast, 3 lbs., and over, choice, per pound.....	17	
Rib roast, second cut (not under 3½ pounds), special, per pound.....	18	
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24	
Rib roast, first cut (not under 3 pounds), special, per pound.....	22	
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27	
Pot roast, special, per pound.....	23	
choice, per pound.....	28	
Rump roast, special, per pound.....	23	
choice, per pound.....	28	
Porterhouse roast, special, per pound.....	25	
choice, per pound.....	31	
Steak, chuck, special, per pound.....	15	
choice, per pound.....	18	
Round, bottom, per pound.....	15	
choice, per pound.....	19	
Round, top, special, per pound.....	17	
choice, per pound.....	22	
Rib, special, per pound.....	23	
choice, per pound.....	27	
Sirloin, special, per pound.....	23	
Sirloin, choice, per pound.....	28	
Sirloin, choice cut, special, per pound.....	26	

	Price.
Sirloin, choice cut, choice, per pound.....	32
Rump, special, per pound.....	23
choice, per pound.....	28
Porterhouse (not less than 1½ pounds), special, per pound.....	26
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse, short, Delmonico, special, per pound.....	23
Porterhouse, short, Delmonico, choice, per pound.....	28
Tenderloin, Western, special, per pound.....	40
Tenderloin, Western, choice, per pound.....	46
Pork—Hams, fresh, per pound.....	\$26
Shoulders, fresh, per pound.....	\$22
Loin, chop, or roast, per pound.....	23
Pigs' feet, each.....	08
Pigs' head, whole.....	95
Pigs' head, ½-head.....	48
Sausage, home made, per pound.....	26

MISCELLANEOUS.

Livers—Beef, per pound.....	*13
Calf, each.....	*71
Half, each.....	*36
Steak, Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	*14
Frankfurter, per pound.....	13
Lieberwurst, per pound.....	*14
Pure pork, 1-lb. cartons, per pound.....	17
Sweetbread, beef, per pound.....	123
Eggs, fresh, per dozen.....	35
per ½-dozen.....	18
Bluefish, per pound.....	17
Halibut, fresh, per pound.....	5
Salmon, per pound.....	16
Yeast, per pound.....	31

POULTRY AND GAME.

Chickens—Fancy roasting, milk fed, per pound.....	†25
Fancy roasting, corn fed, per pound.....	†23
Fowls, per pound.....	24
Fowls, light, per pound.....	20
Ducks, Western, per pound.....	22
Capons, per pound.....	†29
Broilers, milk fed, per pound.....	†22
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	27
Squabs, each.....	42
Partridges, per pair.....	1.30
Halibut, fresh, per pound.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, per pound.....	*24
Sliced, per pound.....	*31
Half, for boiling, per lb.....	*26
Boiled, per pound.....	*35
Hocks, per pound.....	*10
Butt end, about 1½ pounds to butt, per pound.....	*12
Bacon—Breakfast, sliced, per pound.....	*33
Whole piece, per pound.....	*32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	†1.40
Pigs' feet, per pound.....	7
Tongues, per pound.....	†21

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	39
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream cake.....	09
Roquefort, per pound.....	35
Young America, per pound.....	22
Swiss, per pound.....	33
Edam, each.....	72
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	*31
Snappy, per cake.....	9
Milk (certified), bottle.....	**24
Fer-mil-lac, bottle.....	**25
Ice cream, quart.....	†25
½-gallon.....	†50
Cream, Sheffield Farms, quart.....	**33
Cream, Sheffield Farms, pint.....	**19
Cream, Sheffield Farms, ½-pint.....	**12

VEGETABLES.

Beets, per pound.....	*2½
Celery, per head.....	*3½
Cabbage, per pound.....	2½
Carrots, per pound.....	2
Cucumbers, per pound.....	*3
Lettuce, per pound.....	*15
Onions, per pound.....	†2½
Peppers, per pound.....	†4
Potatoes, white, per pound.....	†2½
sweet, tropical, per pound.....	2
sweet, American, per pound.....	4
Yams—Tropical, per pound.....	3
Eggplant, per pound.....	†2½
Rhubarb, per pound.....	2½
Turnips, per pound.....	2
Tomatoes, per pound.....	†3
Squash, per pound.....	2

FRUITS.

Apples, per pound.....	6
Cantaloupes, each.....	†5

	Price.
Grape fruit—American, each.....	7
Tropical, each.....	4½
Lemons, per dozen.....	†17
Limes, per 100.....	†40
Oranges—American, each.....	2½
Jamaican, per dozen.....	18
Peaches, per pound.....	†7
Plums, per pound.....	*9
Bananas, per bunch.....	38
Bananas, each.....	0½
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Pears, alligator, each.....	*6

* Indicates advance from preceding list.

† Indicates reduction from preceding list.

** Indicates 5 cents allowed for return of bottle.

† Sold only from commissaries; no orders taken for delivery.

§ Sold only from cold storage and not from commissaries.

* FRESH MEATS.

Wholesale Price List.

	Per lb.
Beef, hinds, No. 1.....	\$0.19½*
Beef, carcasses, No. 1.....	.17½*
Beef hinds, No. 2 (hinds only).....	.17*
Beef hinds, No. 2 (equal number of hinds and fores).....	.16*
Beef fores, No. 2 (equal number of hinds and fores).....	.13*
Lamb carcasses.....	.19½*
Mutton carcasses.....	.15½*
Veal carcasses.....	.19½*
Pig carcasses.....	.17

* Prices of all articles on this list sold to commercial steamship lines and foreign naval vessels will be increased by 10 per cent.

Ice will be sold to commercial steamship lines and foreign naval vessels at 30 cents per 100 pounds, delivered on dock at Colon or Cristobal, and at 35 cents per 100 pounds delivered on dock at Balboa.

Price Changes.

The following changes in prices of articles in stock at the commissary stores are effective September 1, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Almonds, shelled, lb.....	\$0.43	\$0.46
Chocolate, Caracas, Fry's, cake.....	.10	.09
Chicken, roast, tin.....	.41	.39
Cocoa, all other brands, tin.....	.71	.68
Tea, Orange Pekoe, tin.....	.21	.20
Salmon, pink, tins, tin.....	.07	.09
Sardines, boneless.....	.14	.13
Sardines in oil, "No Peer," tin.....	.34	.31
Cherries, tin.....	.20	.22
Grapes, tin.....	.12	.14
Cherries in Creme de Menthe, Cresca bot.....	.26	.25
Strawberries, tin.....	.24	.14
Peaches, dehydrated, tin.....	.86	.81
Jam, strawberry, C. & B., tin.....	.12	.15
Melange, bot.....	.65	.63
Jams, assorted, American, tin.....	.12	.09
Chicken, deviled, tin.....	.17	.20
Loaf, chicken, tin.....	.23	.22
Truffle, Broses, Cresca, tin.....	.42	.41
Beef, corned, tin.....	.30	.41
Hash, corned beef, tin.....	.20	.17
Milk, unsweetened, Bernese, tin.....	.09	.10
Milk, Baby brand, bot.....	.18	.17
Milk, condensed, Eagle, tin.....	.15	.14
Ammonia, household, bot.....	.13	.14
Paper, ant, magic, hoodoo, sheet.....	.14	.12
Powder, insect, Buhach, tin.....	.47	.86
Kerosene, 5-gal tin.....	.82	.79
Gasoline in bulk, customers to furnish containers, gal.....	.25	.22
Gasoline in steel drums, (deposit of \$7 must be made for drum), gal.....	.25	.22
Vinegar, cider, gal.....	.17	.19
Onions, Pearl, Cresca, bot.....	.21	.20
Chutney, Lazenby's, bot.....	.28	.27
Sauce, tabasco, bot.....	.35	.33
Soap, special hotel, P. R. R., cake.....	.02	.03
Soap, paste, Colgate's, tin.....	.10	.08
Mace, whole, tin.....	.13	.12
Powder, chili, tin.....	1.15	1.10
Asparagus tins, tin.....	.20	.18
Beans, lima, tin.....	.09	.10
Beets, tin.....	.08	.13
Beans, haricot, vert, Cresca, tin.....	.10	.15
Carrots, tin.....	.11	.10
Pimenton, Morrone's, Cresca, tin.....	.06	.07
Pimenton, Morrone's, Cresca, tin.....	.09	.12
Pears, extra sifted, tin.....	.13	.16
Puree de spinach, Cresca, tin.....	.13	.12
Ginger Juice, Top Notch, bot.....	.13	.12
Ginger ale, Cochrane's, bot.....	.09	.08
Kola, sparkling, Cochrane's, bot.....	.09	.08
Imperial, Golafla, ea.....	.20	.19
Flechas de Oro, Bock's, Havana, ea.....	.10	.12
Pall Mall, pkg.....	.20	.23
Murad, box.....	.10	.12
Boxes, collar, leather, ea.....	1.15	1.00
Cases, cigarette, morocco, ea.....	.90	.84
Trunks, cabin, 32", No. 222, ea.....	6.35	6.10
Trunks, high, 36", No. 211, ea.....	7.90	7.60
Trunks, high, 36", No. 212, ea.....	6.70	6.45
Trunks, cabin, 36", No. 222, ea.....	7.10	6.85
Purses, pigskin, ea.....	.50	.43

ARTICLE.	PRICE CHANGE.		ARTICLE.	PRICE CHANGE.		ARTICLES.	PRICE CHANGE.	
	Old.	New.		Old.	New.		Old.	New.
Clocks, Ansonia, Simplex, ea.	2.20	1.80	Ribbons, satin, Exposition, No. 60, yd	.17	.18	Dishes, vegetable, oval, covered, 9",		
Clocks, alarm, Prompter, ea.	1.60	1.35	Yardsticks, ea. ....	.15	.12	Luria, ea.	1.50	1.25
Clocks, Big Ben, ea.	2.20	1.85	Pens, fountain, Parker, No. 9, ea.	3.25	2.75	Dishes, bakers, 8", Booth's, No. 7893,		
Pins, beauty, ea. ....	.20	.16	Envelopes, 10's, pkg. ....	.024	.02	ea. ....	.72	.69
Cream, violet, sec., Hudnut's, jar. ....	.50	.43	Paperies, Crane's, box. ....	.50	.37	Dishes, 14", Doulton, No. 3213, ea.	1.60	1.55
Cream, cold, Ricksecker's, jar. ....	.45	.40	Caps, men's, cloth, ea. ....	.45	.42	Dishes, 10", Doulton, C-4772, ea. ....	.65	.60
Extract, Eclat, Colgate's, No. 30, bot	.65	.58	Caps, tweed, No. 130, ea. ....	.45	.41	Dishes, vegetable, plain white, 9", ea	.12	.11
Powder, "Genet de Or," Pinaud's, box	.65	.59	Hats, duplex and thriller, Stetson, ea	3.70	3.20	Jugs, orange shape, Wedgwood, ea.	1.10	.67
Powder, "Marie Louise," Pinaud's,			Ties, bow, No. 224, ea. ....	.50	.41	Jugs, cream, 1-pint, Booth's, No.		
box. ....	.65	.59	Garters, Brighton, double grip, pr.	.40	.36	7893, ea. ....	.60	.49
Powder, sachet, assorted, bot. ....	.25	.22	Garters, Brighton, double grip, pr.	.45	.41	Mugs, 4", with handles, Wedgwood,		
Nail polish, Marv., Hudnut's, bot. ....	.15	.14	Suspenders, Style R, ea. ....	.55	.48	ea. ....	.80	.67
Hangers, trouser, No. 18, ea. ....	.15	.13	Leggins, khaki, canvas, pr. ....	.80	.71	Mugs, Austrian china, gold band, ea.	.15	.12
Hangers, combination, No. 23, ea. ....	.15	.13	Pajamas, "Varsity, suit.	1.65	1.45	Platters, meat, 16", Minton, G-8721,		
Hangers, garment, ea. ....	.25	.22	Pajamas, Aldine, suit.	1.10	.92	ea.	8.25	7.25
Strops, swinging, Torrey's, ea. ....	.55	.49	Coats, rain, men's, Osborne, ea.	5.00	4.90	Platters, meat, oval, 14", Minton.		
Combs, men's, white tuskanoid, ea. ....	.25	.23	Capes, rain, men's, side openings, ea.	8.15	7.20	A-4807, ea.	2.30	2.20
Scissors, nail, pair. ....	.75	.61	Capes, rain, men's, side openings, ea.	8.50	7.75	Platters, meat, oval, 16", Minton.	3.25	3.00
Scissors, buttonhole, pair. ....	.35	.30	Capes, rain, men's, side openings, ea.	8.75	7.05	Plates, 10", Doulton, No. 2312, ea. ....	.40	.34
Sponges, rubber, No. 5, ea. ....	.15	.13	Capes, rain, men's, side openings, ea.	8.00	5.80	Pots, tea, 1-quart, Luria, ea. ....	.50	.39
Syringes, nasal, ea. ....	.85	.73	Suits, white duck, ea.	6.00	5.18	Extractors, juice, glass, ea. ....	.08	.06
Bags, ice, pink rubber, ea. ....	.65	.59	Buttons, shoe, Milo, white, doz. ....	.20	.01	Cellars, salt, individual, ea. ....	.05	.03
Brooms, whisk, No. 49, ea. ....	.40	.33	Buttons, shoe, black, doz. ....	.02	.01	Dishes, butter, ea. ....	.20	.17
Brushes, hair, No. 344, ea. ....	.40	.33	Buttons, shoe, black and tan, doz. ....	.02	.01	Bowls, finger, decorated, crystal, ea.	.65	.74
Brushes, military clothes, No. 788, ea	3.00	2.50	Laces, shoe, tubular silk, pr. ....	.16	.14	Bottles, vacuum, pints, No. 308, ea.	1.65	1.15
Brushes, clothes, No. 22, ea. ....	.90	.70	Shoes, black kid, 1 strap, turn, Bliss &			Bottles, vacuum, quarts, No. 309, ea	2.40	1.85
Brushes, nail, ea. ....	.40	.32	Perry, pr.	1.55	1.50	Glass, liquor, ea. ....	.15	.14
Pins, hair, shell and amber, doz.	2.70	2.30	Shoes, G. M. blu., Bonnie Lassie,			Glass, whiskey, light, ea. ....	.04	.03
Mats, cocoa door, 26" x 42", ea. ....	.55	.51	Clark & Hutchinson, pr.	1.95	1.90	Glass, sherry, crystal, ea. ....	.17	.14
Mats, bath, Turkish, ea.	1.00	.76	Shoes, dong, tip wedge, button, Good-			Tumblers, water, half, crystal, 1-pint,		
Mats, bath, Turkish, ea.	1.30	1.05	win, pr. ....	.95	1.00	ea. ....	.05	.04
Rugs, grass, Crex, 36" x 72", ea.	6.15	5.05	Sandals, sizes 9 to 11, pr.	1.25	1.20	Pitchers, white, plain, glass, 2-quarts.		
Rugs, grass, Crex, 8' x 10', ea. ....	.65	.59	Oxfords, Russ, calf blu., Naboli, pr.	3.65	3.80	Pitchers, water, 1-quart, ea. ....	.41	.50
Cloths, sideboard, linen, 17" x 63", ea	1.06	.85	Oxfords, G. M. Snow's, pr.	3.75	3.70	Pitchers, cocktail, decorated crystal, ea	.50	.45
Cloths, sideboard, H. S. emb., ea.	1.30	1.20	Oxfords, tan, Z. Russ, S. S. last, pr.	3.75	3.90	Glasses, sauterne, decorated crystal, ea	1.50	1.35
Cloths, sideboard, emb., linen, ea.	2.75	2.40	Oxfords, vi-i, blu., S. S. last, pr.	3.75	3.90	Glasses, whiskey, decorated crystal, ea	.30	.23
Cloths, tea, linen, emb., 36" x 36", ea	1.10	.94	Oxfords, Russ., calf, blu., rubber soles,			Biscuits, butter, cream, J. & Co., tin	.33	.31
Cloths, tea, linen, 45" x 45", ea.	1.50	1.30	Clark & Hutchinson, pr.	4.40	4.35	Umbrellas, 28", ea. ....	.85	.89
Cloths, tea, H. S. emb., linen, 54" x 54",			Pumps, patent, Stetson, pr.	1.70	1.45	Cloths, San-kn-ary, ea. ....	.05	.04
ea. ....	.25	.23	Pillows, hair, ea.	1.55	1.30	Colanders, ea. ....	.05	.13
Napkins, sanitary, box. ....	.50	.47	Pillows, feather, ea.	4.50	4.30	Pans, dust, No. 15, ea. ....	.11	.12
Doilies, H. S. linen, 10", ea.	1.00	.88	Knives, porch, shellac, green, ea.	3.50	2.95	Cups, custard, ea.	1.65	1.15
Doilies, H. S. linen, 10", ea.	1.10	.91	Knives and forks, carving, 9", set.	.35	.26	Bottles, vacuum, 1-pt., ea.	2.40	1.95
Doilies, H. S. linen, 12", ea. ....	.42	.36	Knives, French, cook, 8", ea. ....	.55	.48	Bottles, vacuum, 1-qt., ea. ....	.17	.24
Doilies, H. S. linen, 12", ea. ....	.50	.42	Knives, butcher, No. 190-R, ea. ....	.50	.43	Pears, Bartlett, tin. ....	.18	.22
Doilies, H. S. linen, 8", ea. ....	.35	.26	Knives, butcher, No. 190-A, ea.	1.60	1.35	Pears, silted, tin. ....	.08	.11
Doilies, H. S. linen, 18", ea. ....	.99	.75	Pipes, briar, ea. ....	.65	.53	Salmon, pink, tal's, tin. ....	.16	.18
Doilies, H. S. linen, 6", ea. ....	.22	.20	Cleaners, pipe, ea. ....	.10	.09	Asparagus, tin. ....	.16	.18
Blankets, sylvan, ea. ....	.60	.55	Brushes, floor, ea. ....	.85	.70	Beans, navy, pea, or white, lb. ....	.05	.07
Towels, H. S. emb., linen, 15" x 24", ea	.35	.29	Brushes, stove, ea.	1.00	.08	CHANGES EFFECTIVE SEPTEMBER 14.		
Towels, emb., linen, 15" x 24", ea. ....	.30	.23	Dusters, wall, Howard, ea.	1.95	1.60	Suits, bathing, men's, suit.	2.40	2.05
Sheeting, linen, 80", ea. ....	.82	.78	Handles for wall dusters, ea. ....	.40	.31	Suits, bathing, boys, suit.	1.30	1.00
Drill, imperial linen, white, yd. ....	.55	.48	Broilers, hotel wire, ea. ....	.65	.55	Nails, upholstering, box. ....	.04	.05
Drill, striped, linen, yd. ....	.40	.36	Stoves, lamp, No. 1, ea. ....	.60	.55	Chicken loaf, tin. ....	.13	.21
Drill, white linen, No. 376, yd. ....	.60	.52	Wicks, for percolator lamps, ea. ....	.12	.09	Beets, tin. ....	.13	.15
Lawn, Persian, yd. ....	.15	.13	Biggins, coffee, 1-quart, ea. ....	.50	.44	Asparagus tips, tin. ....	.18	.21
Lawn, Persian, yd. ....	.20	.17	Kettles, Berlin, 10-quart, ea. ....	.75	.66	Cloves, whole, tin. ....	.05	.06
Linen, white, cambric, 36", yd. ....	.36	.31	Kettles, tea, ea. ....	.50	.42	Apples, tin. ....	.39	.35
Suiting, linen, crash, brown, yd. ....	.35	.29	Cups, enamel, Venetian, 1-quart, ea.	.20	.17	Sugar, yellow, No. 13, bulk, lb. ....	.05	.07
Muslin, white, fancy, yd. ....	.10	.09	Plates, soup, 9", ea. ....	.15	.13	Sugar, granulated, sack. ....	.32	.42
Voile, noblesse, mercerized, yd. ....	.22	.19	Plates, pie, tin, 8", ea. ....	.03	.02	Sugar, crystal, domino, cart. ....	.21	.25
Suiting, silk, 27/28", yd.	1.95	1.75	Dishes, soap, wall, ea. ....	.10	.09	Sugar, powdered, tin. ....	.20	.24
Alpaca, yd. ....	.85	.74	Plates, pie, shallow, 9", ea. ....	.15	.14	CHANGES EFFECTIVE SEPTEMBER 3.		
Alpaca, striped, yd.	1.30	1.15	Pots, coffee, aluminum, 1-quart, ea.	2.15	1.80	Peas, dried, green, lb. ....	.03	.034
Suiting, flannel, white, yd.	2.50	2.15	Pots, coffee, aluminum, 1 1/2-quart, ea.	2.40	2.00	Dates, stuffed, jar. ....	.24	.31
Suiting, flannel, yd.	1.60	1.45	Pots, coffee, aluminum, 1-quart, ea.	1.30	1.10	Figs, plain, jar. ....	.24	.27
Suiting, tweed, yd.	3.00	2.80	Pots, coffee, aluminum, 1 1/2-quart, ea.	1.55	1.30	Suits, Palm Beach, C. & P., suit.	6.40	5.70
Suiting, tweed, yd.	2.25	2.05	Covers for sauce pans, aluminum, 4",			Shampoo, liquid, Sanitol, bot. ....	.02	.17
Suiting, tweed, yd.	2.60	2.05	ea. ....	.12	.10	Toothpicks, wood, box. ....	.02	.03
Suiting, tweed, yd.	2.80	2.50	Covers for sauce pans, aluminum, 8",			Pots, flower, 4", ea. ....	.06	.04
Suiting, tweed, yd.	3.50	3.00	ea. ....	.32	.27	Pulleys, clothes line, ea. ....	.06	.08
Suiting, tweed, yd.	2.75	2.40	Pans, sauce, with lip, aluminum, 9",			Picks ice, ea.		
Suiting, tweed, yd.	1.90	1.75	ea.	1.65	1.40	CHANGES EFFECTIVE SEPTEMBER 11.		
Suiting, tweed, homespun, yd.	1.85	1.65	Pans, omelet, aluminum, 8", ea. ....	.60	.52	Sugar, yellow C, lb. ....	.034	.05
Serge, grand teint, yd.	1.80	1.60	Pans, poached egg, aluminum, ea. ....	.90	.75	Sugar, granulated, sack. ....	.32	.32
Serge, striped, yd.	1.90	1.70	Pans, frying, aluminum, 8 1/2", ea. ....	.75	.65	Sugar, domino, cart. ....	.18	.21
Coating, black, yd.	2.80	2.55	Pans, sauce, Berlin, covered, 10-quart,			Sugar, powdered, tin. ....	.16	.20
Serge, gray, yd.	3.00	2.50	ea. ....	.75	.68	Salmon, fresh, red Alaska, talls, tin.	.13	.16
Serge, indigo blue, yd.	2.20	1.85	Pans, dish, deep, 10-quart, ea. ....	.65	.63	Salmon, steak, flats, tin. ....	.28	.22
Suiting, blue, Herringbone, yd.	2.80	2.50	Pans, jelly cake, stamped ware, 8", ea	.64	.03	Shoes, Oxfords, gun metal, blu., pr.	3.75	3.90
Serge, cream, yd.	1.60	1.40	Pans, sauce, Berlin, 3-quart, ea. ....	.35	.32	Caps, silk, ea. ....	.61	.56
Serge, cream, yd.	2.25	1.80	Trays, silver plated, round, ea.	1.70	1.45	Drawers, jean, elastic, seam, U. S.		
Aprons, gingham, ea. ....	.30	.24	Trays, tea, Jap., black, ea. ....	.10	.08	Army, pair. ....	.51	.47
Belts, sanitary, ea. ....	.25	.15	Pans, frying, steel, 9", ea. ....	.10	.08	Beans, dried lima, lb. ....	.09	.10
Blouses, middy, short sleeves, ea.	1.05	.91	Boxes, bread, Jap., No. 4, ea. ....	.45	.34	Stoves, New Perfection, 1-burner, ea.	5.70	5.15
Blouses, middy, Bulgarian, ea.	1.50	1.30	Chimneys for Berlin student lamps, ea	.07	.05	Vinegar, cider, gal. ....	.17	.22
Capes, children's, with hoods, ea.	2.95	2.55	Lamps, electric light, tungsten, frost-			Gherkins, keg.	3.00	2.90
Suits, combination, ladies', ea.	1.50	1.30	ed, ea. ....	.25 1/2	.27	Dates, stuffed, jar. ....	.24	.26
Suits, combination, ladies', ea.	1.35	1.15	Bags, penknife, ea. ....	.07	.05	Bird seed, pkg. ....	.10	.14
Suits, bathing, ladies' and misses', ea	3.00	2.65	Cups, collapsible, hygienic, doz. ....	.05	.03	Ham, deviled, tin. ....	.23	.24
Suits, bathing, ladies' and misses', ea	2.10	1.85	Padlocks, No. 830, ea.	1.10	1.45	Carriages, baby, No. 217, ea.	7.95	7.80
Suits, bathing, children's, ea.	1.15	1.00	Padlocks, No. 850, ea.	1.70	1.45	Carriages, baby, No. 249, ea.	8.90	8.75
Rompers, children's, ea. ....	.50	.45	Padlocks, No. 801-B, ea. ....	.65	.58	Additions to Stock.		
Caps, bathing, ladies', silk, ea.	1.00	.85	Padlocks, No. 803-B, ea. ....	.85	.69	Vests, ladies', cumfy cut, ea. ....	.21	
Boning, collar, yd. ....	.05	.04	Padlocks, No. 805, ea. ....	.95	.79	Umbrellas, India frame, cloth, 3 1/2", 10 ribs, ea.	1.30	
Thread, silk, embroidery, skein. ....	.04	.03	Tool handle with tools, set. ....	.40	.32	Boards, pastry, 20" by 26", ea. ....	.48	
Elastic, silk, yd. ....	.25	.23	Paste, polishing, White Rose, tin. ....	.25	.22	Ratine, Lynton, 36", assorted colors, yd. ....	.21	
Braid, lingerie, nufashond, Art. No. 7,			Forks, Windsor, S. P., ea. ....	.14	.11	Crepe, Lynton, 40", white, yd. ....	.41	
piece. ....	.08	.06	Knives, butter, nickel silver, ea. ....	.30	.21	Crepe, L. J. B., 193-194, colored, figured. ....	.21	
Braid, lingerie, nufashond, Art. No. 8,			Spoons, coffee, Tudor, S. P., ea. ....	.17	.14	Crepe, L. J. B., white, 30", yd. ....	.11	
piece. ....	.08	.06	Bowls, salad, round, 10", Doulton, ea	1.50	1.25	Crepe, Malay, white, 36", yd. ....	.16	
Buttons, pearl, No. 18, doz. ....	.09	.08	Boats, sauce, with ladies, Booth's, No.			Crepe, K. H. G., check, white, 36", yd. ....	.19	
Buttons, pearl, No. 20, ea. ....	.10	.08	613, ea. ....	.70	.60	Crepe, Yawal, striped, 30", yd. ....	.19	
Buttons, pearl, No. 21, doz. ....	.11	.10	Cups, egg, Booth's, No. 6606, ea. ....	.08	.07	Crepe, Sylvia, 36", assorted colors, plain, yd. ....	.16	
Buttons, pearl, No. 32, doz. ....	.15	.14	Muffiniers, Booth's, No. 6131, ea. ....	.55	.53	Spoons, wood, 10", ea. ....	.06	
Buttons, pearl, No. 30, doz. ....	.12	.11	Dishes, pudding, earthen, 6", ea. ....	.10	.09	Shoes, child's, white, buck, button, wedge heel,		
Buttons, black jet, doz. ....	.06	.05	Dishes, bakers, oval, 10", Minton, G			pr.	1.30	
Buttons, black jet, doz. ....	.15	.13	8721, ea.	2.30	2.95			
Buttons, black jet, doz. ....	.22	.19	Wedgwood, 4", ea.	1.50	1.30			
Buttons, black jet, doz. ....	.10	.08	Wedgwood, 6", ea.	2.00	1.65			
Shields, garment, ea. ....	.25	.20	Dishes, oatmeal, 4 1/2", Luria, ea. ....	.10	.08			
Ribbons, satin, Exposition, No. 40, yd	.17	.16						

CANAL CLUBHOUSES.

Activities of the Young Men's Christian Association.

COROZAL.

High scores in bowling for the last two weeks were made by the following: *Tenpins*—Terittier, 204, 259; Davis, 201; White, 204, 202, 213, 236; Hanna, 212, 203; Koontz, 205, 220; Moore, 201. *Duckpins*—Kyte, 122; Richardson, 106; Ryan, 100, 101, 104, 107; Gustavson, 104, 107, 101, 100; Davis, 101, 103, 116, 114, 103; Gill, 104; Orr, 104; Parkis, 114, 100, 106; Sommers, 103; Fischer, 100, 103; Seeley, 104; Moore, 118; Ruggles, 107.

Corozal defeated the Cristobal tenpin bowlers on the local alleys on Saturday night, in three games.

Much interest is shown in the way the men turn out for basketball. Company M of the Tenth Infantry decided to remain neutral and withdrew from the league before playing their first game. Another team, calling themselves the "Japs," have entered the contest. The team lineups, were as follows:

"Germans"—M. H. Dougherty, Howe, Hartshorne, Roberts, Territtier, Souder, Russell.

"French"—Whiston, Violette, Conant, Mitchell, Hutchings, Cauthers, Gerchow.

"English"—Bessey, Plank, Morrison, E. Dwelle, Parkis, Ridge, Brehney.

"Russians"—Owens, Sims, Huldquist, Koontz, Otis, Ross, Sommers.

"Japs"—Garlington, Sawyer, Clagus, Gow, Kuntz.

The standing, including Thursday evening's games, is, as follows:

Team.	Won.	Lost.	P. C.
French.....	3	1	.750
English.....	2	1	.666
German.....	1	1	.500
Japs.....	0	0	.000
Russians.....	0	3	.000

There will be special music, piano, violin, and drum, with the regular moving pictures, on Friday evening of this week.

Corozal won two games of basketball from Cristobal on Saturday evening, September 12 by the scores of 46 to 13, and 27 to 7. The following were the lineups:

Cristobal (first team)—Mathues, Burgoon, Fraser, Strong, Roberts, Cousineau, Hulsebosch.

Corozal (first team)—Whiston, Sawyer, Huldquist, Plank, Conant, Bartholomew.

Cristobal (second team)—Neeson, Anderson, Fraser, Cousineau, Hulsebosch, Roberts, Mathues.

Corozal (second team)—Bessey, Dougherty, Morrison, Violette, Conant, Howe.

PEDRO MIGUEL.

A married folks' duckpin tournament was held on Thursday evening, September 9. The results were, as follows:

High double total for three games—Mr. and Mrs. Bartlett, 504.

High ladies' score—Mrs. Anderson, 89.

High men's score—Mr. Bartlett, 98.

Pennants will be given as prizes.

High duckpin scores for the week ending September 12 were, as follows: Davis, 103, 103, 100; Anderson, 101; Hodges, 101, Reddinger, 104.

High rubber band scores were: Holloway, 104; Whiston, 105. High score in tenpins was made by Oettli, 210.

The local pool tournament ended in a tie between Mr. Eggleston and Mr. Edwards, both winning 18 and losing two games. The tie will be played off in a short time.

GATUN.

An interesting bowling tournament was held on Friday evening, September 11. The piano was played in one corner of the room and Mrs. E. T. Gilbert played during the evening. The ten highest scores were:

Mrs. W. Tricker and Mr. E. T. Gilbert.....	190
Mrs. J. Walsh and Mr. E. T. Gilbert.....	171
Mrs. M. Conley and Mr. A. Coleman.....	167
Mrs. F. Easter and Mr. E. T. Gilbert.....	162

Vessels through the Canal.

The following vessels passed through the Canal during the week ending September 12:

SOUTHBOUND.

DATE.	Vessel	Line.	From.	To.
Sept. 7.....	<i>Pennsylvanian</i>	American-Hawaiian Co.....	Philadelphia.....	New York.
Sept. 10.....	<i>Coya</i>	New York & Pacific Co.....	New York.....	Valparaiso.
Sept. 10.....	<i>Santa Clara</i>	W. R. Grace & Co.....	New York.....	San Francisco.

NORTHBOUND.

Sept. 6.....	<i>Honolulu</i>	American-Hawaiian Co.....	San Francisco.....	New York.
Sept. 7.....	<i>Anglo-Saxon</i>	Nitrate Producer Co.....	Pisagua.....	Key West.
Sept. 7.....	<i>Lord Londsdale</i>	East Asiatic Co.....	North Pacific ports.....	St. Thomas.
Sept. 9.....	<i>Bufoed</i>	United States transport.....	San Francisco.....	Galveston.
Sept. 9.....	<i>Damara</i>	Luckenbach Co.....	San Francisco.....	New York.
Sept. 11.....	<i>Anglo-Columbian</i>	Nitrate Producer Co.....	Pisagua.....	Key West.
Sept. 12.....	<i>Fowon</i>	American-Hawaiian Co.....	San Francisco.....	New York.

MOVEMENTS OF OCEAN VESSELS.

The following is a list of sailings and scheduled arrivals of the Panama Railroad Steamship Line; of the Royal Mail Steam Packet Company; of the Hamburg-American Line, and the United Fruit Company's Line.

NEW YORK TO CRISTOBAL.

	Sails.	Arrives.
*Advance.....	P. R. R. Sept. 15.....	Sept. 22
*Panama.....	P. R. R. Sept. 22.....	Sept. 28
*Allianca.....	P. R. R. Sept. 28.....	Oct. 4
*Colon.....	P. R. R. Oct. 5.....	Oct. 11
*Advance.....	P. R. R. Oct. 10.....	Oct. 17
*Panama.....	P. R. R. Oct. 16.....	Oct. 22
*Allianca.....	P. R. R. Oct. 22.....	Oct. 28
*Colon.....	P. R. R. Oct. 29.....	Nov. 4

CRISTOBAL TO NEW YORK.

†Colon.....	P. R. R. Sept. 22.....	Sept. 28
†Advance.....	P. R. R. Sept. 28.....	Oct. 5
†Panama.....	P. R. R. Oct. 4.....	Oct. 10
†Allianca.....	P. R. R. Oct. 10.....	Oct. 16
†Colon.....	P. R. R. Oct. 17.....	Oct. 23
†Advance.....	P. R. R. Oct. 23.....	Oct. 30
†Panama.....	P. R. R. Oct. 29.....	Nov. 4
†Allianca.....	P. R. R. Nov. 4.....	Nov. 10
†Colon.....	P. R. R. Nov. 10.....	Nov. 16

NEW YORK TO COLON.

Metapaa.....	U. F. C. Sept. 9.....	Sept. 16
Oruba.....	R. M. Sept. 12.....	Sept. 20
Zacapa.....	U. F. C. Sept. 16.....	Sept. 23
*Almirante.....	U. F. C. Sept. 23.....	Sept. 30
Trent.....	R. M. Sept. 26.....	Oct. 4
*Santa Marta.....	U. F. C. Sept. 30.....	Oct. 7
*Metapan.....	U. F. C. Oct. 7.....	Oct. 14
Orotava.....	R. M. Oct. 10.....	Oct. 18
*Zacapa.....	U. F. C. Oct. 14.....	Oct. 21
Almirante.....	U. F. C. Oct. 21.....	Oct. 28
Danube.....	R. M. Oct. 24.....	Nov. 1
Santa Marta.....	U. F. C. Oct. 28.....	Nov. 4
*Metapan.....	U. F. C. Nov. 4.....	Nov. 11
Tagus.....	R. M. Nov. 7.....	Nov. 15
*Zacapa.....	U. F. C. Nov. 11.....	Nov. 18

COLON TO NEW YORK.

Santa Marta.....	U. F. C. Sept. 17.....	Sept. 24
Metapaa.....	U. F. C. Sept. 24.....	Oct. 1
Orotava.....	R. M. Sept. 29.....	Oct. 7
Zacapa.....	U. F. C. Oct. 1.....	Oct. 8
Almirante.....	U. F. C. Oct. 8.....	Oct. 15
Danube.....	R. M. Oct. 13.....	Oct. 21
Santa Marta.....	U. F. C. Oct. 15.....	Oct. 22
Metapan.....	U. F. C. Oct. 22.....	Oct. 29
Tagus.....	R. M. Oct. 27.....	Nov. 4
Zacapa.....	U. F. C. Oct. 29.....	Nov. 5
Almirante.....	U. F. C. Nov. 5.....	Nov. 12
Essequibo.....	R. M. Nov. 10.....	Nov. 18
Santa Marta.....	U. F. C. Nov. 12.....	Nov. 19
Metapan.....	U. F. C. Nov. 19.....	Nov. 26
Oruba.....	R. M. Nov. 24.....	Dec. 2

NEW ORLEANS TO COLON.

Heredia.....	U. F. C. Sept. 9.....	Sept. 16
*Atenas.....	U. F. C. Sept. 12.....	Sept. 17
Cartago.....	U. F. C. Sept. 16.....	Sept. 23
*Turrialba.....	U. F. C. Sept. 19.....	Sept. 24
Heredia.....	U. F. C. Sept. 23.....	Sept. 30
*Abangarez.....	U. F. C. Sept. 26.....	Oct. 1
Parismina.....	U. F. C. Sept. 30.....	Oct. 7
*Atenas.....	U. F. C. Oct. 3.....	Oct. 8
Cartago.....	U. F. C. Oct. 7.....	Oct. 14
*Turrialba.....	U. F. C. Oct. 10.....	Oct. 15

COLON TO NEW ORLEANS.

†Abangarez.....	U. F. C. Sept. 17.....	Sept. 22
Parismina.....	U. F. C. Sept. 17.....	Sept. 24
†Atenas.....	U. F. C. Sept. 24.....	Sept. 29
Cartago.....	U. F. C. Sept. 24.....	Oct. 1
†Turrialba.....	U. F. C. Oct. 1.....	Oct. 6
Heredia.....	U. F. C. Oct. 1.....	Oct. 8
†Abangarez.....	U. F. C. Oct. 8.....	Oct. 13
Parismina.....	U. F. C. Oct. 8.....	Oct. 15

*Will carry mail from the United States.

†Will carry mail to the United States.

‡Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.

Tide Table.

The following table shows the time of high and low tides at Panama for the week ending September 26, 1914:

DATE.	Low	High	Low	High	Low
	A.M.	A.M.	A.M.	P.M.	P.M.
Sept. 20.....	3.34	9.51	3.56	10.11	
Sept. 21.....	4.15	10.34	4.39	10.54	
Sept. 22.....	4.57	11.16	5.21	11.36	
			P.M.		
Sept. 23.....	5.39	12.01	6.04		
Sept. 24.....	12.21	6.23	12.46	6.49	
Sept. 25.....	1.09	7.08	1.36	7.39	
Sept. 26.....	2.01	7.59	2.31	8.36	

75th meridian time.

CANAL



RECORD

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No. 5.

The Canal Record

Official publication of The Panama Canal.

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Address all Communications,

THE CANAL RECORD,

Balboa, Canal Zone,

Isthmus of Panama.

No communication either for publication or requesting information will receive attention unless signed with the full name and address of the writer.

NOTES OF PROGRESS.

Canal Earnings in August Nearly \$100,000.

Canal revenues for the month of August amounted to \$91,664.55, the greater part of which sum was received after August 15, the date the Canal was officially opened to commerce. The earnings in detail were, as follows:

PORT OF CRISTOBAL.	
Tolls collected.....	\$41,910.20
Pilotage.....	2,144.00
Total.....	\$44,054.20
PORT OF BALBOA.	
Tolls collected.....	\$46,491.60
Pilotage.....	1,085.00
Launch service.....	33.75
Total.....	\$47,610.35

The first receipts from the use of the Canal were reported in May, and consisted principally of tolls collected from freight transhipped at Balboa and taken through to Cristobal on Panama railroad barges, in order to relieve the congestion at that time existing on the railroad. The records show that there was but little difference in the cost of handling by this plan than over the railroad, but the barge service accomplished the purpose in taking care of the heavy cargoes of sugar and other commodities brought to Balboa during this period. The total earnings of the Canal to September 1, from tolls, pilotage, etc., by months is, as follows:

PORT OF CRISTOBAL.	
May.....	\$3,214.92
June.....	4,518.16
July.....	4,210.06
August.....	44,054.20
Total.....	\$55,997.28
PORT OF BALBOA.	
May.....	4,141.20
June.....	5,360.80
July.....	5,020.40
August.....	47,610.35
Total.....	\$62,131.75
Grand total.....	\$118,129.03

New Quarantine House for Steerage Passengers at Colon.

Building No. 14 of Colon Hospital, formerly a ward for male negro patients, is being remodeled for use as a quarantine detention

house for steerage passengers. This is a large building, tile roofed, near the east end of the area of ward buildings and adjoining the area devoted to residences and the former nurses' quarters. The nurses' quarters are being made into a detention house for cabin passengers, and the quarantine reservation will include it and building No. 14 at its eastern and western limits, respectively. The entire reservation is to be fenced off. The old detention house beyond the radio station will be abandoned, and its site will probably be included in the Naval reservation.

In the remodeling of building No. 14, the principal part of it will be devoted to male passengers, a wing being partitioned off for women, with a further subdivision for white women. The mess will be in the wing adjoining the women's section. Standee bunks to the number of about 350 will be erected in the several sections. It is expected that the building will be ready for occupancy in the early part of October.

Floating Cranes Nearing Completion.

Fire was started under the boilers of the new floating crane *Ajax* on Monday, September 21, and tests will be made on the machinery. These will include running the spindle carriage up and down, revolving the various drums, and slewing the bell around. On September 25, the *Ajax* is to be towed to Gatun Locks and placed in the middle chamber of the east flight for the attachment of the jib, which has been erected on the east backfill; this work will require about eight days.

The work of removing the forms for the concrete of the counterweight of the *Ajax* was begun on Tuesday, September 15, and the same forms are now being erected on the *Hercules*. The counterweights weigh about 150 tons, and are made of concrete, containing about 45 tons of scrap iron. The mass as mixed weighs about 164 pounds to the cubic yard. The mass concrete placed in the locks weighed approximately two tons to the cubic yard.

United Fruit Company's Steamers Transferred to American Registry.

The United Fruit Company's steamers *Cartago* from New Orleans, and *Zacapa* from New York, arrived at Colon on Wednesday, September 23, flying the American flag for the first time. The total number of vessels in the United Fruit Company's freight and passenger services is 90, with an aggregate gross tonnage of 248,607, and of this number, 25, comprising the "Great white fleet" will be transferred to American register under the new law. The first of the United Fruit Company's ships to change its registry at New Orleans was the *Marrowijne*, one of the three steamers purchased two years, or more, ago from the Royal Dutch West India Company. The flag raising was made the occasion of a celebration by the New Orleans

business men, under the auspices of the merchant marine committee of the Association of Commerce. The first ship under the new registry, out of New York, was the *Zacapa* abovementioned. The United Fruit Company's vessels were built in Great Britain, and registered at Glasgow. Under the American flag, their home ports will be New York and New Orleans. The *Cartago*, which has the honor of being the first of the United Fruit Company's vessels in the New Orleans-Colon service to fly the American flag, was the first ship of the company's modern fleet to enter the port of Colon. This occurred in 1908.

Other companies that have so far applied for American registry include the United States Steel Products Company, operating nine vessels, and the Robert Dollar Steamship Line.

Status of Steamship Passengers Going Through the Canal.

The Superintendent of Canal Transportation has defined the status of steamship passengers going through the Canal, as covered by Article 13 of the Rules and Regulations for the operation and navigation of the Panama Canal, which reads, as follows:

Article 13. Pilotage for vessels in transit through the Canal will be free, nor will they be charged pilotage for entering or leaving a terminal port, when it is for the sole purpose of passing through the Canal, but should any such vessel while in Canal waters, discharge or receive freight or passengers, or take on board supplies, provisions, stores, or fuel, or remain for the purpose of effecting repairs, or make either terminal a port of call, she may be liable for entrance or departure pilotage, as the Canal authorities may direct.

This section, he explains, was introduced into the Rules and Regulations to cover instances where a ship uses the terminal ports to take on new passengers, or permanently lands others whose voyage is completed so far as this ship is concerned, in either of which cases, the ship will be liable for pilot dues the same as if it had taken on or discharged freight. When passengers are booked for a continuous voyage on a vessel which will pass through the Canal, and which may be detained for the convenience of the Canal authorities for making measurements, or other purposes, there can be no objection whatever to passengers landing, nor should there be any pilot charges under these conditions.

Arrival of Coast Artillerymen.

Three companies of the Coast Artillery Corps, the 21st from Fort Howard, near Baltimore, the 45th from Fort Dupont, near Wilmington, Del., and the 144th, from Fort Moultrie, near Charleston, S. C., arrived on the Isthmus on the United States transport *Kilpatrick* on Friday, September 18. The *Kilpatrick* left Charleston on September 11, and the voyage down was all that could be desired. The 21st company, which has been assigned to Fort Sherman on Toro Point, is temporarily quartered in building No. 2 on Cristobal Point. The commissioned officers

of the company are Capt. Wade H. Carpenter, who has not yet arrived, First Lieut. Raphael R. Nix, temporarily in command, and Second Lieut. Austin McC. McDonald. The 45th and 144th companies will be quartered for the next few days in the old Panama Canal type houses at Empire. They have been assigned to Fort Amador, at the Pacific entrance, and will be transferred to that point and go into permanent barracks probably next week. The barracks are expected to be completed ready to turn over on Monday, September 28. The commissioned officers of the 45th company are: Capt. Chas. E. T. Lull, who has not yet joined his company; First Lieut. Robert C. Eddy, temporarily in command, and Second Lieut. Homer A. Bagg. The commissioned officers of the 144th company are: Capt. John M. Dunn; First Lieut. Marcel S. Keene, and Second Lieut. Bert S. Dubois. The present strength of the three companies are, as follows: 21st, 100 men; 45th, 107 men; 144th, 105 men. The number of companies of Coast Artillery Corps now on the Isthmus is six; six more companies are due to arrive at some future date. The *Kilpatrick*, which brought the Tenth Infantry to the Isthmus in 1911, left Cristobal on September 19 for Vera Cruz to transport home the troops which have been on active duty there.

Tramway Improvements.

The Panama Tramways Company has been authorized to double track its line in the Canal Zone from the boundary at Chorrillo to the terminus of the present double track line at the foot of the hill near East Balboa. The additional construction was decided on partly as a measure of safety, and partly to avoid the delay passengers are sometimes subjected to in waiting at the top of the hill at East Balboa until the car from the opposite direction comes up. The danger in the single track line at this point is of a car on the present double track line getting away from the motorman while going down the hill and colliding with a car coming from the opposite direction on the single track. In addition, double tracking the line as above described will allow for a 5-minute service, instead of a 7-minute service as at present. The company has also arranged to build a shelter for the convenience of passengers near the boundary at Chorrillo. The above work will be started as soon as the material arrives from the United States.

Canal Excavation in August.

The grand total of Canal excavation to September 1, 1914, was 225,248,058 cubic yards, leaving 13,597,529 cubic yards remaining to be excavated according to the revised estimate of August 1, 1914.

The total excavation in August was 1,174,695 cubic yards, as compared with 964,994 cubic yards in July. Of this amount, dredges removed all but 144,343 cubic yards, taking out 423,558 cubic yards from the Culebra Cut section, as compared with 431,634 cubic yards for the previous month. The dry excavation amounted to 69,904 cubic yards, and was confined entirely to operations at the terminal sites. Hydraulic work in the rear of Gold Hill resulted in the removal of about 75,000 cubic yards, a considerable increase over the month of July.

The detailed figures of excavation, by

sections, and a statement of concrete placed in the locks, follow:

ATLANTIC SECTION.

LOCALITY.	"Work" excavation.	"Plant" excavation.	Total excavation.
	Cu. Yds.	Cu. Yds.	Cu. Yds.
Dry excavation—			
Locks, dam and spillway.			
Mind.	1,815		1,815
Terminal			
Total dry excavation..	1,815		1,815
Wet excavation—			
Atlantic entrance.	179,506		179,506
Locks, dam and spillway.			
Terminal coal plant.	17,995		17,995
Total	197,501		197,501
Total wet excavation.	199,316		199,316

CENTRAL SECTION.

Wet excavation—			
Culebra Cut, hydraulic.	74,439		74,439
Chagres section, dredging.	423,558		423,558
Total			
Total wet excavation	497,997		497,997

PACIFIC SECTION.

Dry excavation—			
Locks, dams and spillways.			
Terminal.	68,089		68,089
Prism.			
Total dry excavation	68,089		68,089
Wet excavation—			
Pacific entrance.	138,187		138,187
Miraflores Locks.			
Diversions.	271,106		271,106
Terminal.			
Total wet excavation.	409,293		409,293
Total wet and dry excavation	477,382		477,382

TOTAL CANAL EXCAVATION.

Dry excavation ..	69,904		69,904
Wet excavation ..	1,104,791		1,104,791
Total	1,174,695		1,174,695
Concrete placed in locks.....	233		233

Mean rainfall along Canal (nine stations), 10.04 inches.

By "Work" excavation is meant excavation actually made for one of the constituent parts of the Canal, such as prism, diversions, locks, etc.; that is, it represents material taken from the area to be occupied by

the Canal and constitutes excavation useful for the completed Canal.

By "Plant" excavation is meant excavation outside any of the constituent parts of the Canal, such as prism, diversions, locks, etc. It includes material necessary to be excavated for construction purposes only, and is chargeable against the particular plant item for which it is performed, such as prism, diversions, locks, etc.

Joint Land Commission Resumes Business.

The Joint Land Commission resumed its sessions on Friday morning September 18 after an interruption of two months caused by the death of the Hon. David Marks on July 17, and following upon the arrival on the Isthmus of the Hon. Nicholas Cornet, the second American member of the commission. The commission set aside Monday, Tuesday, and Wednesday of this week for the purpose of giving hearings to the reargument, by the attorneys representing the United States and the claimants, of certain claims which were accorded public hearings in June, but, owing to the death of Commissioner Marks, were not finally disposed of. This action was taken in order to familiarize the new commissioner with the cases upon which he, with the other members of the commission, will be called upon to render decision.

The following is a calendar of cases set for hearing by the Joint Land Commission for the week ending October 3, 1914, at its offices in house No. 114, Ancon: MONDAY, SEPTEMBER 28.

Docket No.	Claimant.	Docket No.	Claimant.
390	William Robinson	862	Nicomeres Gonzales
391	Thomas Crawford	863	Robert Haley
392	William Coney	1035	John Williams
393	Charles Snill	1091	José Orozco
394	Joseph Snill	1099	Elesia Guardia
395	James Gordon	1123	Julio Gonzalez
396	Samuel Clarke	1125	Samuel Hendr
397	Lian Braley	1127	Robert Hause
398	David Harrison	1128	James McKenzie
399	Robert Mullon	1133	Cecilio (Sesillo) Piti
400	Tomas Julia	1134	William Pitt
401	Robert Dennis	1137	Santiago Saint
402	David Lilly	1149	Alexander Morgan
856	Julian Barrio	1152	Pastor Perez
858	Joseph Lambre	1172	Nathaniel Williams
860	Manuel de Jesus Saeo	1422	Ursula Rodriguez

WEDNESDAY, SEPTEMBER 30.

390½	Clementine Mon-delle	1242	Sipion Maucay (Mon-cock)
403½	David Walker	1434	James Palmer
422	José Martin	1442	José Pinillo
843	Pedro Lopez	1555	Heriberto Villaverde
1759	Joseph Amiel		

WILLIAM TAYLOR,
Secretary.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Dunn, Dr. M. J.	3807	U. S. A.	Culebra	Supply Dept.	1914.
Slayback, Ed	8496	U. S. A.	Panama	P. R. R.	September 13.
Beckles, Ernest	98877	Barbados	Las Cascadas	Pacific Division.	September 12.
Forbes, Theodore V.		Jamaica	Panama	P. R. R.	September 9.

Insane Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of commitment.
Smith, Charles E.	63358	Jamaica	Colon	Supply Dept.	1914.
					September 5.

The estates of these deceased or insane employees of the Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

SOCIAL LIFE OF THE ZONE.

Postponement of Women's Club Reception

The annual reception of the Cristobal Woman's Club, which was to have been held in the Government clubhouse on Wednesday afternoon, September 30, has been postponed, owing to the absence of the newly elected president, Mrs. Charles A. Hearne, from the Isthmus. Mrs. Hearne is expected to arrive in Colon about October 1, and the reception will be held on the Wednesday following, October 7. Commander Dismukes will deliver an address. The program for the year has been completed and will be published as soon as it is approved by the president.

Church Notes.

The Rev. William C. Flammer, the new pastor of the Union Church of the Canal Zone, preached his first sermon on the Isthmus in the Union Church, Cristobal, on Sunday evening, September 20. He attended the session of the Sunday school and the Christian Endeavor society on the same day.

The Ladies Aid Society will give a reception to the pastor and his family at the home of the president, Mrs. S. P. Verner, Colon Beach, on Thursday afternoon, September 24.

The Reverend Mr. Flammer will preach in the recreation hall of the Government clubhouse in Balboa, on Sunday morning, September 27, at 11 o'clock.

There will be a meeting of the executive board of the Union Church of the Canal Zone in the Government clubhouse, Pedro Miguel, on Sunday afternoon, September 27. The pastor of the church will be present, and the itinerary of his work and services will be arranged.

The Isthmian Sunday School Association will hold its quarterly meeting on Sunday, October 11. The place of the convention will be announced later.

Hebrew Services, Colon.

Divine service will be conducted at our synagogue on Third street and Broadway, on the approaching Day of Atonement, as follows: Tuesday evening, September 29, at 6.30; Wednesday morning, September 30, at 8.30.

H. J. HENRIQUEZ, *Secretary.*

COLON, R. P., September 16, 1914.

PERSONAL.

The Hon. Nicholas Cornet, who has been appointed to succeed the late David Marks as one of the American members on the Joint Land Commission, arrived on the Isthmus on the *Ancon*, on Thursday, September 17, accompanied by the Hon. Levi Monroe Kagy, the other American member of the commission, who has been making a short visit to his home in the United States. Judge Cornet was born at Treves, Germany, in 1857, of American parents. He is a resident of Lawrenceburg, Ind., has practiced law there for 25 years, and was at one time attorney for the Baltimore and Ohio Railroad. He also served one term of six years as judge of the Ripley County Circuit Court. He received his appointment on the Joint Land Commission at Venice, while traveling with his family in Europe, and returned to the United States on the first vessel available.

Capt. Frank O. Whitlock, accompanied by Mrs. Whitlock and their two children, sailed

for New York on Tuesday, September 22. Captain Whitlock has been assigned to service with the Twelfth Cavalry, by special orders dated September 2, 1914, and his resignation from The Panama Canal service will be effective October 1. He was born in Cedar Rapids, Iowa, in 1879, entered the United States Military Academy in June, 1896, was appointed second lieutenant of cavalry in June, 1900, first lieutenant in February, 1901, and captain on March 3, 1911. He was on detached service at the Military Academy from August 15, 1903, until June 24, 1905, when he was transferred to the Isthmus, reporting for duty as Assistant General Quartermaster on July 12. After the arrival of Mr. Stevens, the General Quartermaster, Captain King, was relieved from duty, and Captain Whitlock applied for transfer to his former post of duty at West Point, and returned there in August, 1905. He was again assigned to Canal duty on October 1, 1908, as Assistant Subsistence Officer. He was appointed Subsistence Officer on February 25, 1914, vice Lieut.-Col. E. T. Wilson, resigned, and held this post until the consolidation of the Supply Department, when he was made Assistant Chief Quartermaster of The Panama Canal.

Mr. F. M. M. Richardson, who has been appointed Superintendent of Clubhouses to succeed Mr. A. B. Dickson, resigned, arrived on the Isthmus on September 15. He is a native of Louisville, Ky., and a graduate of the University of Tennessee. He entered the service of the Young Men's Christian Association as educational secretary of the industrial department of that association at Wilmerding, Pa., where the Westinghouse air brake factory is situated. Since 1909, he has been traveling secretary for the railroad department of the International Committee of the Y. M. C. A. His special work has been the promotion of educational activities among railroad associations, and the organization and development of educational features for various railroad companies which maintain apprentice schools for employes, among these being the St. Louis Southwestern, the Delaware, Lackawanna and Western, and the Baltimore and Ohio railway systems; and the schools for enginemen on the Cotton Belt route and the Wabash. Mr. Richardson will assume his duties as head of the system of clubhouses in the Canal Zone on September 27.

Missing Men.

Any one having knowledge of the whereabouts of Barton Murphy, formerly of Mattoon, Ill., and of Mathew Garard, both of whom are supposed to be on the Isthmus, is requested to communicate with the American Minister, Panama city.

Metal Trades Council.

The next regular meeting of the metal trades council of Panama will be held in the Balboa clubhouse on Sunday, September 27, at 1.30 p. m. There will be business of importance.

BALBOA, C. Z., September 21, 1914.

H. A. S. LEVERING, *Secretary.*

Married.

HUGHES-PENDLETON—At the residence of Mr. C. A. McIlvaine, Culebra, on August 29, Miss Florence Pendleton of New York City, to Mr. Joseph E. Hughes of Phoenixville, Pa., the Rev. Henry R. Carson officiating. Canal Zone residence, Ancon.

A PROCLAMATION.

President Fixes October 4 to Pray for Return of Peace in Europe.

Whereas great nations of the world have taken up arms against one another and war now draws millions of men into battle whom the counsel of statesmen have not been able to save from the terrible sacrifice; and

Whereas in this, as in all things, it is our privilege and duty to seek counsel and succor of Almighty God, humbling ourselves before Him, confessing our weakness and our lack of any wisdom equal to these things; and

Whereas it is the especial wish and longing of the people of the United States in prayer and counsel and all friendliness to serve the cause of peace;

Therefore, I, Woodrow Wilson, President of the United States of America, do designate Sunday, the fourth day of October next, a day of prayer and supplication, and do request all God fearing persons to repair on that day to their places of worship, there to unite their petitions to Almighty God, that, overruling the counsel of men, setting straight the things they cannot govern or alter, taking pity on the nations now in the throes of conflict, in His mercy and goodness showing a way where men can see none, He vouchsafe His children healing peace again and restore once more that concord among men and nations without which there can be neither happiness nor true friendship, nor any wholesome fruit of toil or thought in the world; praying also to this end that He forgive us our sins, our ignorance of His holy will, our wilfulness and many errors, and lead us in the paths of obedience to places of vision and to thoughts and counsels that purge and make wise.

In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington, this eighth day of September, in the year of our Lord one thousand nine hundred and fourteen, and of the independence of the United States of America the one hundred and thirty-ninth.

WOODROW WILSON.

By the President:

W. J. BRYAN,

Secretary of State.

Physical Examination of Hotel and Mess Employes.

The Health Department has completed a physical examination of all men working in the Government hotels and messes in whom the presence of communicable disease would constitute a menace to the health of patrons. In addition to bodily examination for tuberculosis, venereal and blood diseases, etc., tests of stools and urine were made to determine the presence of typhoid, paratyphoid, and dysentery. One typhoid carrier was found in the person of a waiter in a silver mess at Corozal, and he was discharged and deported. Several other employes at different messes were discharged for unclean habits, but, in general, the sanitary condition of the personnel was found to be highly satisfactory. These examinations will be repeated from time to time, and all new men employed in the hotel and mess service will be subjected to similar examination.

The new Ford automobile, recently purchased for the Health Department of Panama, has been placed in service.

TERMINAL COALING PLANTS.

Progress of Work on Permanent Storage and Handling Plants at Canal Entrances.

In the construction of the permanent Atlantic entrance coaling station, situated at the north end of Mindi Island, across the French canal from Cristobal, the area for the dry storage has been filled to its final elevation of two feet above sealevel, the concrete walls along the sides of this area have been practically completed, and work is advancing toward the north, or sea end of the plant, which will contain the subaqueous storage; and on the construction of the wharves which will enclose the storage spaces and carry the moving and stationary coal handling machinery.

It was planned at first to make the storage area 1,000 feet long, but in consequence of greater demand for storage space by coaling companies its length was increased to 1,700 feet by an extension of 700 feet to the south. The width of the storage has been increased from 250 feet to 310 feet. The total storage now provided for at this plant is 485,000 tons; the original plans were for 300,000 tons.

Forty 6-foot steel cylinder caissons have been set for the unloader wharf, but none of them have yet been sunk to rock; for the reloader wharf, 90 caissons have been set and 35 have been driven to rock and excavated. It has been found feasible to drive the cylinders to rock with a steamhammer, through from 30 to 65 feet of material, and afterward to do practically all the excavation by orange peel buckets. Both wharves will extend a distance of 1,170 feet from the initial station at the sea end of the plant, and will be connected there by an end wharf. The reloader wharf will be on the west side, toward the Canal, and the unloader wharf will be on the east side, toward Cristobal.

Pipeline suction dredge No. 83 is dredging to 28 feet below sealevel the area to be occupied by the subaqueous coal storage. The spoil is being used to back fill west wall, which area, when completed, will be used for storage of material. At this time, the material excavated is almost entirely coral rock and sand. Later, the dredge will proceed to the excavation of the berths alongside the wharves, which will be dredged to a depth of 41 feet for a distance of 1,065 feet. On the east, or Cristobal side, the channel will be 500 feet wide, including practically the width of the French canal; on the west side, along the reloader wharf, the berth will be not less than 250 feet wide.

The construction of the smaller coaling plant for the Pacific terminus is being carried out on different lines. The site of the plant is directly to the south of the entrance to dry dock No. 1. The unloader wharf will form a seawall along the south side of the entrance, and the excavation for the entrance will thus provide the slip alongside the wharf. The reloader wharf will extend from the outer end of the unloader wharf at an angle of 48° 7', toward the land end of the present Panama railroad pier at Balboa. The storage pile will lie parallel to and south of the unloader wharf. The Atlantic plant will be in effect a pier, with berthing places on both sides, the coal being stored within the pier; the Pacific plant will be in effect a continuous wharf, with an angle, the vessels berthing only along the front of the wharf, with the coal storage space in the rear.

The subaqueous storage will lie to the rear of the center of the unloader wharf, and will be covered by a dry storage, which will extend beyond it on either side. The storage will have a width of 350 feet. The subaqueous storage will be 300 feet long, with its bottom 18 feet below mean tide. The total length of storage will be 800 feet, and the bottom of the dry storage will be at 10 feet above sealevel. The total storage space will accommodate 215,000 tons, of which 50,000 tons may be stored under water.

As the site of the coaling plant adjoins that of the entrance to the dry dock, most of the excavation required has been accomplished in the dry in connection with the dry dock excavation. The storage basins have thus been completely excavated, with the exception of the southeast corner, which is now occupied by tracks of the Panama railroad, and the berth along the greater part of the unloader wharf has been excavated as a part of the entrance to the dry dock. The part of the entrance which has been excavated and the site of the dry dock are protected by a cofferdam, which will be removed by dredges when the dry dock is nearly completed. The dredges will complete the entrance basin and in so doing will dredge the slip alongside the reloader wharf.

Retaining walls have been built along the south and east sides of the storage spaces. That on the south side is of riprap, and that on the east side is of concrete.

Concrete is now being placed for the piers which will support the unloader wharf, and work is in progress on about two-thirds of them. Supports for the cantilever cranes, which will command the storage areas, have been built across the east dry area, and pier supports have been placed in the middle, or subaqueous area. Piles are being driven for supports for the south track of the crane runway across the west area; supports for the north runway over this area will be built on rock fill, which is now being dumped.

No work has been done on the reloader wharf. This will be supported on 6-foot steel cylinder caissons, sunk to rock and filled with concrete, similar to the caissons which will

support both unloader and reloader wharves of the Atlantic coaling plant.

Contracts for the operating machinery for the two plants were entered into on August 19, 1913. To date, none of the material has been delivered on the Isthmus. The machinery for the Atlantic plant will be all new. For the Pacific plant, the unloading and re-loading towers and the conveying system will be new, but a part of the handling machinery will consist of four double cantilever cranes which were used in building the Pacific locks of the Canal and will be reconstructed for this service.

More Offices Moved.

The offices of the Superintendent of Canal Transportation, and of the Chief Health Officer, and Chief Quarantine Officer, formerly in the old administration building, Ancon, were moved on Friday and Saturday, September 18 and 19, into the Administration Building at Balboa Heights. The Ancon building now contains only the offices of the Special Attorney, the legal department, and the branch pay office. The accounting department of the commissary branch of the Supply Department at Cristobal was moved to Balboa last week also.

Society of the Chagres.

To the members of the Society of the Chagres: The attention of members of the Society of the Chagres is invited to Article 16 of the Constitution reading, as follows:

"Any 10 members may nominate a fellow-member for election to any office of the society. All such nominations must be submitted to the secretary-treasurer in writing not later than October 31. As soon thereafter as possible, but in any event not later than November 15, the secretary-treasurer shall prepare and mail to each member of this society a ballot containing names of all candidates nominated for each office. At the annual meeting of the society, the vote cast by letter ballot shall be canvassed and those candidates receiving a plurality of the votes shall be declared elected."

Under the foregoing article nominations are in order for president, vice-president, secretary-treasurer, and four members of the executive committee.

JOHN K. BAXTER,
Secretary-Treasurer.

CANAL EXCAVATION TO SEPTEMBER 1, 1914.

By French companies	78,146,960
French excavation useful to present Canal	29,903,000
By Americans—	
Dry excavation	130,228,383
Dredges	95,019,675
Total	225,248,058
May 4 to December 31, 1904	243,472
January 1 to December 31, 1905	1,799,227
January 1 to December 31, 1906	4,948,497
January 1 to December 31, 1907	15,765,290
January 1 to December 31, 1908	37,116,735
January 1 to December 31, 1909	35,096,166
January 1 to December 31, 1910	31,437,677
January 1 to December 31, 1911	31,603,899
January 1 to December 31, 1912	30,269,349
January 1 to December 31, 1913	27,177,960
January 1 to August 31, 1914	9,759,736

SECTIONS.	Amount excavated.	*Remaining to be excavated.
Atlantic—	Cu. yds.	Cu. yds.
Dry excavation	8,860,792	26,185
Wet excavation	41,548,482	2,969,428
Total	50,209,274	2,995,613
Central—		
Chagres section	12,945,324	251,000
Culebra section	103,750,125	4,083,695
Total	116,695,949	4,334,695
Pacific—		
Dry excavation	11,278,147	45,097
Wet	46,864,688	6,222,124
Total	57,142,835	6,267,221
Grand total	225,248,058	13,597,529

EXECUTIVE ORDER

To Amend the "Rules and Regulations for the Operation and Navigation of the Panama Canal, Etc."

By virtue of the authority vested in me, I hereby establish the following Order for the Canal Zone:

I. Rule No. 2 of the "Rules and regulations for the operation and navigation of The Panama Canal, and approaches thereto, including all waters under its jurisdiction," dated July 9, 1914, is hereby amended so as to read, as follows:

2. Any person violating any of the provisions of the rules and regulations, established hereunder, shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine not to exceed five hundred dollars (\$500), or by imprisonment not to exceed six months, or by both such fine and imprisonment, at the discretion of the court.

II. This Order shall take effect from and after this date.

WOODROW WILSON.

THE WHITE HOUSE,

September 3, 1914.

[No. 2037.]

EXECUTIVE ORDER.

By direction of the President, it is ordered:

That Nicholas Cornet, who has been appointed a member of the Joint Commission for the appraisement and settlement of damages to property in the Canal Zone, in accordance with the provisions of Articles VI and XV of the Convention between the United States and Panama, concluded November 18, 1903, be allowed twenty-five (\$25) dollars per day for his services, including all expenses, from the time of his sailing from New York until his return thither; provided, that he shall be granted free transportation on the Panama Railroad Steamship Line from New York to the Isthmus and return, free transportation over the Panama railroad, and such other transportation as may be necessary when traveling on official business on the Isthmus; he shall also be allowed the ordinary privileges of Government employes on the Isthmus, including employes' rates at the hotels of The Panama Canal or the Panama Railroad Company on the Isthmus.

LINDLEY M. GARRISON,

Secretary of War.

WAR DEPARTMENT,

Washington, D. C.,

September 8, 1914.

Spanish War Veterans and Veterans of Foreign Service.

A joint meeting of Chagres Camp, No. 1, United Spanish War Veterans, and Post No. 40, American Veterans of Foreign Service, will be held in the Moose hall, on Central avenue, Panama, on Saturday evening, September 26, beginning at 8 o'clock.

O. J. RICE, U. S. W. V.

J. W. WILLIAMSON, A. V. F. S.

COROZAL, C. September 19, 1914.

The crews used in coaling steamshovels at Balboa have been taken off, and this work is now done at noon or at night by placing the cars of coal where the watchmen can coal the shovels.

CANAL CLUBHOUSES.

Activities of the Young Men's Christian Association.

GENERAL.

Mr. T. S. Bocz, who was formerly secretary at the Gorgona clubhouse and who has been for two years in the United States in Y.M.C.A. work, has returned, and has been appointed secretary of the Balboa clubhouse. Mr. Adams, formerly secretary of the Balboa clubhouse, has resigned, and will attend the Y.M.C.A. Training School at Springfield, Mass.

Mr. H. B. Monre has been appointed assistant secretary at the Cristobal clubhouse. He was formerly in Y.M.C.A. work at Bennington, Vt., Revelstoke, B.C., and Rochester, Minn.

A meeting of the committee on the selection of a team to represent the Canal Zone at the Panama-Pacific International Exposition in San Francisco, was held in the Corozal clubhouse on Friday, September 18. It was decided to have Mr. J. S. Williams devote his attention largely to the aquatic team, and Mr. A. Kjellander to the track team. Messrs. Woolworth and Kjellander were appointed to select the events to be run on Saturday nights, in a competition beginning on October 3. These events will be open to all employes of The Panama Canal and Panama railroad and the sons of employes. The events scheduled are, as follows: October 3, 1.0-yard dash and mile run; October 10, 800-yard run and running high jump; October 17, 220-yard dash and 16 pound shot put; October 24, 440-yard dash and pole vault; October 31, 220-yard hurdles and running broad jump; November 7, 120-yard high hurdles and hammer throw. The next practice night will be Saturday, September 26, when Mr. Kjellander and Mr. Woolworth will both be on hand to coach the men. Mr. Williams will meet the swimmers at the Corozal float at the same time.

BALBOA.

The following men participated in a checker tournament Saturday night: Messrs. Custer, Watson, McKenzie, Harris, Clawe, Wallerstat. The tournament was won by Mr. Custer, with Messrs. Watson and McKenzie following.

Balboa sent several track men to Corozal Saturday night, to try out with other men from along the line, under the direction of the physical director from Gatun.

The Balboa baseball association was organized at the clubhouses, with 21 charter members, Saturday night. Work is progressing nicely on the ball field. The first game will probably be played this week. The game scheduled with the Tenth Infantry was postponed because the grounds were not in shape.

COROZAL.

The Balboa basketball team came over to Corozal on Saturday night and defeated the Corozal second team by the score of 26 to 24. Mr. Kjellander, physical director of the Gatun Y. M. C. A., acted as referee.

The standing of the teams in the Corozal local basketball league is, as follows:

Team.	Won.	Lost.	P. C.
English.....	4	1	.800
French.....	3	1	.750
Japs.....	1	1	.500
Germans.....	1	2	.333
Russians.....	0	4	.000

Capt. in Kyte's duck pin team was defeated Friday night by the Pedro Miguel team.

High scores in bowling for the past week were, as follows: *Tenpins*—White, 213, 215; Hanna, 200; Terittier, 228; Otis, 233. *Duckpins*—Rich, 100; Gustavson, 102, 112; Otis 117.

GATUN.

Mr. A. N. Kjellander will give all of his time to the Gatun clubhouse from now on. The gymnasium nights have been changed to Tuesday and Friday. The boys' days will be Monday and Wednesday afternoons, and Saturday mornings.

A reception was tendered the secretary of the Gatun clubhouse, Mr. Frank Gardner Smith, on Friday evening, September 19, the occasion being the fifth anniversary of his arrival on the Isthmus. Complimentary addresses were made by Mr. U. C. Gayer, chairman of the executive council, and Mr. E. C. Wood. The balance of the program consisted of selections by the quartet from Company C, Tenth Infantry, a solo by Mrs. McPherson, recitations from Kipling's "Barrack room ballads," by Private Magee, Company C, Tenth Infantry; a solo in German, and an encore in English by Mrs. Weiss; and a series of rag time selections on the piano by Corporal Foster, Company C, Tenth Infantry. Refreshments were served and the program continued informally down stairs.

CRISTOBAL.

Mr. G. C. Bunker, bacteriologist, addressed the discussion club on Thursday, September 17, on "Water

purification." Mr. Bunker had prepared a side view of the rapid sand filter, such as is in use at the Mount Hope filtration plant. He also showed the method of clearing the water by means of alum; of killing disease bacteria by means of bleach (chloride of lime), and plant bacteria by means of hypochlorite of calcium. Mr. Bunker stated that the Canal Zone filtering plants are furnishing as pure water as can be had.

The "Athletics" defeated the "Senators" in the local basketball league on Tuesday, September 15, by a score of 31 to 25. On Thursday, September 17 the "Naps" defeated the "Yankees," by a score of 27 to 13.

Corozal clubhouse will send two teams to play basketball at Cristobal on Saturday, September 26. Seventy of the Cristobal-Colon Beach children, members of the gymnasium classes, were taken on an outing to Margarita Point on Friday, September 18. After viewing the fortifications under the guidance of Messrs. Fitzpatrick and Townsend, the children enjoyed a swim and finished the day by making a raid on the cocoanut trees, each youngster carrying home a good sized cocoanut.

The following men rolled high scores for the week ending September 19: *Duckpins*—Steele, 108, Henri, 107; Pinney, 104; Smith, 100. *Tenpins*—Peterson, 248; Strong, 244; Russell, 233; Burns, 205; Gibson, 200.

Rainfall, September 1 to September 19, 1914, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Ancon.....	2.37	10	3.51
Balboa.....	1.49	10	3.23
*Miraflores.....	1.10	7	3.61
Pedro Miguel.....	1.41	7	6.00
Rio Grande.....	2.11	7	5.68
<i>Central Section—</i>			
Culebra.....	2.13	7	7.05
*Camacho.....	1.80	7	5.25
Empire.....	1.66	7	5.91
Gamboa.....	2.00	7	6.54
*Juan Mina.....	1.87	10	10.62
Alhajuela.....	1.14	8	8.53
*El Vigia.....	1.48	12	11.11
Frijoles.....	.91	10	5.55
*Trinidad.....			
*Monte Lirio.....	1.40	10	9.05
<i>Atlantic Section—</i>			
Gatun.....	1.24	10	7.44
*Brazos Brook.....	2.15	7	8.88
Colon.....	1.91	7	8.26

*Standard rain gage—readings at 5 p. m., daily. Automatic rain gage at unstarred stations—values, midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, September 19, 1914. All heights are in feet above mean sealevel:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Sept. 13.....	134.30	98.65	35.28	86.31	53.97
Mon., Sept. 14.....	129.00	94.87	35.40	85.46	54.00
Tues., Sept. 15.....	133.40	98.00	35.65	85.67	53.82
Wed., Sept. 16.....	133.80	98.18	35.96	86.00	53.73
Thurs., Sept. 17.....	130.70	97.00	35.86	86.07	53.66
Fri., Sept. 18.....	128.50	94.55	35.86	86.11	53.74
Sat., Sept. 19.....	128.50	94.28	36.11	86.06	53.67
Height of low water to nearest foot.....	125.0	91.0			

Tide Table.

The following table shows the time of high and low tides at Panama for the week ending October 3, 1914:

DATE.	High	Low	High	Low	High
	A.M.	A.M.	A.M.	P.M.	P.M.
Sept. 27.....	3.01	9.00	3.36	9.49	
Sept. 28.....	4.14	10.18	4.52	11.13	
Sept. 29.....	5.34	11.49	6.07		
		P.M.			
Sept. 30.....	12.36	6.48	1.08	7.14	
Oct. 1.....	1.39	7.47	9.06	8.06	
Oct. 2.....	2.28	8.35	2.52	8.51	
Oct. 3.....	3.08	9.16	3.31	9.31	

75th meridian time.

OFFICIAL CIRCULARS.

Act of Congress—Registry of Foreign-built Vessels.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., September 5, 1914.
CIRCULAR No. 600-11:

The Act of Congress quoted below is published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

AN ACT to provide for the admission of foreign-built ships to American registry for the foreign trade, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the words "Not more than five years old at the time they apply for registry" in Section 5 of the Act entitled "An Act to provide for the opening, maintenance, protection, and operation of the Panama Canal, and the sanitation and government of the Canal Zone," are hereby repealed.

Section 2. That the President of the United States is hereby authorized whenever, in his discretion, the needs of foreign commerce may require, to suspend by order, so far and for such length of time as he may deem desirable, the provisions of law prescribing that all the watch officers of vessels of the United States registered for foreign trade shall be citizens of the United States.

Under like conditions, in like manner, and to like extent, the President of the United States is also hereby authorized to suspend the provisions of the law requiring survey, inspection, and measurement by officers of the United States of foreign-built vessels admitted to American registry under this Act.

Section 3. This Act shall take effect immediately.
Approved August 18, 1914.

Launch "Louise".

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., September 12, 1914.
CIRCULAR No. 600-12:

The Act of Congress quoted below is published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

AN ACT to present the steam launch *Louise*, now employed in the construction of the Panama Canal, to the French Government.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that, as a mark of appreciation of the sacrifices and services of the French people in the construction of the Panama Canal, the steam launch *Louise*, built in France in 1885, and employed in the construction of the Canal successively by the French Panama Canal Company and by the United States, be put in good condition and presented to the French Government.

Section 2. That the sum of \$6,000 is hereby appropriated, out of any money in the Treasury not otherwise appropriated, to pay the expense of executing this Act, to be disbursed by the Governor of the Canal Zone.

Approved August 25, 1914.

Rates for Service of Tugs and Other Floating Equipment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
CULEBRA, C. Z., August 15, 1914.

CIRCULAR No. 686:

The rates quoted below are effective this date for the following services furnished individuals, companies, and others:

1. For service of tugs in harbors and for temporary service of tugs in the Canal, lakes, and Culebra Cut, or for conveying vessels, per hour or fraction thereof. \$15.00
2. For towage direct from entrance of Canal, or from dock, or from anchorage in the harbor at either end, to entrance of Canal, or to dock, or to anchorage in the harbor at the other end, whether loaded or in ballast:
 - Per net vessel ton (as determined by Panama Canal certificate of measurement)10
 - Or per displacement ton (as determined by Panama Canal certificate of measurement)04
 - Minimum charge for each vessel150.00
3. The Canal authorities reserve the right to take small vessels through the Canal at the rates specified in Paragraph 2 at the convenience of the Canal, also, the right to take more than one vessel at one time.
4. For the small tugs *DeLesseps* and *Sanidad*, and for claps, per hour. 10.00

Crane boat, *La Volley*, per hour. 20.00
Wrecking barge, per hour. 7.50

GEO. W. GOETHALS,
Governor.

Fire Hydrants and Standpipes.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., September 8, 1914.
CIRCULAR No. 688:

1. All water hydrants and standpipes installed within the Canal Zone for the purpose of fire protection will be painted white, and no hydrants or standpipes installed for other purposes will be given this color.

2. All fire hydrants and standpipes that may be opened by hand without wrenches will be marked in addition to the above "For fire only."

3. The opening or use of fire hydrants or standpipes by unauthorized persons, except in the event of fire, is in violation of the ordinances of the Canal Zone and is a misdemeanor punishable by fine.

4. The attention of all employees of The Panama Canal and the Panama Railroad Company is particularly directed to the above; any employee found violating the above ordinance will, in addition to prosecution, be summarily discharged from the service.

GEO. W. GOETHALS,
Governor.

Credit Sales Made by Storehouses.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., September 12, 1914.
To all concerned:

1. Effective at once, the following procedure will be observed in handling invoices and bills covering credit sales made by storehouses:

(A) To branches of the United States Government on the Isthmus:

(a) Shipments and deliveries on requisitions will be invoiced on Form P. C. 924-1. Proper surcharges will be shown on all copies.

(b) Storekeepers will mail to the Auditor an advance copy of each invoice, and will forward to the requisitioning official the original and four copies.

(c) The consignee will sign and send to the Auditor the original and two copies of each invoice.

(d) The Auditor will hold all invoices until the third day of the month following that in which the invoices are dated, and will then prepare bill on Form A-15 (yellow.) The Auditor will forward the original (to which will be attached the originals of invoices) and two copies of the bill to the proper officials, who will approve and return the original to the Auditor.

(e) In case of deliveries on foremen's orders, the usual copies will be forwarded to the Auditor daily to be included in a monthly bill. The Auditor will forward the original and two copies of the bill to the proper official, who will approve and return the original to the Auditor. One copy of the bill (which is to be retained by the receiving official) will be supported by duplicate copies of foremen's orders.

(B) To other purchasers:

(a) Shipments and deliveries will be invoiced on Form P. C. 924-1.

(b) In addition to the regularly required advance copy, the storekeeper will send to the Auditor the original and two copies of each invoice.

2. One copy of each invoice covering credit sales will be stamped with the bill number and returned to the issuing storekeeper for his file.

R. E. WOOD,
Chief Quartermaster.
H. A. A. SMITH,
Auditor, Panama Canal.

Typewriters Not Required for Actual Service.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., September 14, 1914.
CIRCULAR No. 195:

Heads of departments and divisions—The storekeeper, Balboa, has on file requisitions for seven second hand typewriters, which cannot be filled, as no machines are available.

It is believed there is a considerable number of old typewriters in the various offices which can be turned in, repaired, and made serviceable.

Please canvass your offices, and ship to the storekeeper, Balboa, at once, any machines not required for actual service.

R. E. WOOD,
Chief Quartermaster.

Teachers' Meeting.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

DIVISION OF SCHOOLS,
BALBOA HEIGHTS, C. Z., September 18, 1914.
To all teachers—The first meetings of the teachers

will be held on Wednesday, September 30, in the schoolhouse for white children at Balboa. The colored teachers will meet at 9 o'clock in the morning, and the white teachers at 2 o'clock in the afternoon.

A. R. LANG,
Superintendent of Schools.

High School Entrance Examinations.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
DIVISION OF SCHOOLS,

BALBOA HEIGHTS, C. Z., September 18, 1914.
High school entrance examinations will be held at the school building for white children at Balboa on Monday, September 28, at 8.30 a. m. Eighth grade pupils who failed of promotion in June will have an opportunity at this time to take an examination in the subjects in which they failed. Those passing the examination will be permitted to enter the high school on trial.

A. R. LANG,
Superintendent of Schools.

Changes in P. R. R. Organization.

THE PANAMA CANAL,
THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
COLON, R. P. September 23, 1914.

CIRCULAR No. 448;
To all concerned—Effective October 1, 1914, the office of freight and passenger agent of the Panama railroad and Panama Railroad Steamship Line on the Isthmus is abolished. On and after that date, all agents, including the local agents at Colon and Panama, will report to and receive instructions from the Superintendent of Railroad Transportation on all matters pertaining to administrative, personnel, transportation, accidents, etc., but will be guided by instructions received from the Local Auditor regarding accounting, tariffs, rates, ticket sales, cash reports, etc. The steamship ticket agent will report direct to his office.

Approved:
GEO. W. GOETHALS,
Governor.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., September 21, 1914.
The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts, and may be secured upon request of the addressees:

Bates, W. H.	Kerrigan, Thos. A.
Bayridge Auto Supply Co.	Kirby, Cathrine
Beddow, C. R.	Knights, Charles R.
Behrman, A. H.	Lathrop, Thos. Ridgway
Birk, Lanice	Lynch, Dr. Carlos
Byron, Fred	Miller, A. F.
Clarke, C. C.	Moe, Einar
Courtney, Clarence	Parsons, Mr. (Ord. Mach.)
Desgroellers, Raoul	Rosenburg, M. L.
Donneway, Walter	Schobert, C. P.
Dustheimer, Clarence	Schott, Miss Pearl
Edmiston, J. S.	Smith, Harris C. (2)
French, Bert A.	Stumm, Charles A.
Gustavson, Frank	Thomas, Russell
Gynn, George F.	Tovatt, Geo. W.
Hunter, Fred	Wenze, Wm. (Ord. Mach.)
Jackson, Roselia E.	Westcot, Harry
	Judd, B. C.

Measurement of Vessels.

The following vessels were measured and tonnage certificates issued to them during the month of August: *Cristobal*—Private yacht *Lasala*; private yacht *California*; Peruvian gunboat *Teniente Rodriguez*.

Balboa—*Acajulla* of the Salvador Railway Company; *Pennsylvanian*, *Montanan*, *Kentuckian*, and *Nebraskan* of the American-Hawaiian Steamship Company; *Santa Catalina* of W. R. Grace and Company; private yacht *Niagara*, and the *Palena* of the Compañia Sud-Americana de Vapores.

Sale of Old French House Boat.

OFFICE OF CHIEF QUARTERMASTER,
BALBOA HEIGHTS, C. Z.

Sealed bids will be received at this office until 3 p. m., Tuesday, October 6, 1914, for house boat, rebuilt at Balboa shipways in 1907 from old French barge; steel hull, equipped for house boat purposes; length, 72 feet four inches; beam, 18 feet; depth, seven feet two and one half inches; draft, four feet; gross tonnage, 100; displacement, 125 tons. House boat has no number or name; is located at Balboa, and may be inspected by application to the Board of Local Inspectors, Ancon. Right is reserved to reject any or all bids. Bids should be addressed to the Chief Quartermaster, Balboa Heights, Canal Zone, plainly marked, "Proposal to purchase old French house boat, to be opened October 6, 1914."

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

In rush periods, all stores will remain open until 7 p. m.

Cold Storage Prices.

Retail prices of cold storage provisions for the week beginning September 24, 1914:

FRESH MEATS.		Price
Mutton—Stewing, per pound	10	
Shoulder, trimmed, per pound	16	
Leg (8 to 10 pounds), per pound	25	
Cutlets, per pound	26	
Short cut chops, per pound	30	
Shoulder, chops, per pound	18	
Lamb—Stewing, per pound	13	
Shoulder, trimmed, per pound	19	
Leg (5 to 8 pounds), per pound	30	
Chops, per pound	36	
Chops, shoulder, per pound	23	
Cutlets, per pound	36	
Veal—Stewing, per pound	13	
Shoulder, for roasting (not under 4 pounds), per pound	17	
Chops, shoulder, per pound	23	
Chops, per pound	35	
Loin, for roasting, per pound	35	
Cutlets, per pound	40	
Beef—Suet, per pound	08½	
Soup, per pound	08	
Stew, per pound	12	
Plate, per pound	14	
Corned, No. 1, per pound	20	
Corned, No. 2, per pound	17	
Chuck roast, 3 lbs., and over, special, per pound	13	
Chuck roast, 3 lbs., and over, choice, per pound	17	
Rib roast, second cut (not under 3½ pounds), special, per pound	18	
Rib roast, second cut (not under 3½ pounds), choice, per pound	24	
Rib roast, first cut (not under 3 pounds), special, per pound	22	
Rib roast, first cut (not under 3 pounds), choice, per pound	27	
Pot roast, special, per pound	23	
choice, per pound	28	
Rump roast, special, per pound	23	
choice, per pound	28	
Porterhouse roast, special, per pound	25	
choice, per pound	31	
Steak, chuck, special, per pound	15	
choice, per pound	18	
Round, bottom, per pound	15	
choice, per pound	19	
Round, top, special, per pound	17	
choice, per pound	22	
Rib, special, per pound	23	
choice, per pound	27	
Sirloin, special, per pound	23	
Sirloin, choice, per pound	28	
Sirloin, choice cut, special, per pound	26	
Sirloin, choice cut, choice, per pound	32	
Rump, special, per pound	23	
choice, per pound	28	
Porterhouse (not less than 1½ pounds), special, per pound	26	
Porterhouse (not less than 1½ pounds), choice, per pound	34	
Porterhouse, short, Delmonico, special, per pound	23	
Porterhouse, short, Delmonico, choice, per pound	28	
Tenderloin, Western, special, per pound	40	
Tenderloin, Western, choice, per pound	46	
Pork—Hams, fresh, per pound	\$26	
Shoulders, fresh, per pound	\$22	
Loin, chop, or roast, per pound	\$26	
Pigs' feet, each	08	
Pigs' head, whole	95	
Pigs' head, ½-head	48	
Sausage, home made, per pound	26	

MISCELLANEOUS.

Livers—Beef, per pound	13
Calif, each	71
Half, each	36
Steak—Hamburger, package	17
Hamburger, 20-pound containers, per pound	14
Sausage—Bologna, per pound	14
Frankfurter, per pound	13
Lieberwurst, per pound	14
Pure pork, 1-lb. cartons, per pound	*20
Sweetbread, beef, per pound	23
Eggs, fresh, per dozen	35
per ½-dozen	18
Bluefish, per pound	7
Halibut, fresh, per pound	5
Salmon, per pound	6
Yeast, per pound	31

POULTRY AND GAME.

Chickens—Fancy roasting, milk fed, per pound	25
Fancy roasting, corn fed, per pound	23

Fowls, per pound	24
Fowls, light, per pound	20
Ducks, Western, per pound	22
Capons, per pound	29
Broilers, milk fed, per pound	22
Broilers, corn fed, per pound	21
Turkeys, per pound	27
Squabs, each	42
Partridges, per pair	1.30
Grouse, per pair	1.30
Pheasants, per pair	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound	43
Genuine Westphalia, per pound	50
Sugar cured, per pound	24
Sliced, per pound	31
Half, for boiling, per lb.	26
Boiled, per pound	35
Hocks, per pound	10
Butt end, about ½ pounds to butt, per pound	12
Bacon—Breakfast, sliced, per pound	33
Whole piece, per pound	32
Ham, lunch, per pound	40
Pork, salt, family, per pound	14
Ox tongues, each	1.40
Pigs' feet, per pound	7
Tongues, per pound	21

DAIRY PRODUCTS.

Butter—Creamery, special, per pound	*42
Sheffield Farms, extra fancy, per lb.	54
Cheese—Philadelphia cream, cake	9
Roquefort, per pound	35
Young America, per pound	22
Swiss, per pound	33
Edam, each	*90
Edam, tin	29
Parmesan, per pound	38
Gouda, per pound	*33
Snappy, per cake	9
Milk (certified), bottle	**24
Per-mil-lac, bottle	**25
Ice cream, quart	\$25
½-gallon	\$50
Cream, Sheffield Farms, quart	Price.
pint	**33
½-pint	**19
	**12

VEGETABLES.

Beets, per pound	2½
Celery, per head	4½
Cabbage, per pound	2½
Carrots, per pound	2
Cucumbers, per pound	15
Lettuce, per pound	15
Onions, per pound	2½
Peppers, per pound	13
Potatoes, white, per pound	2½
sweet, tropical, per pound	2
sweet, American, per pound	4
Yams—Tropical, per pound	3
Eggplant, per pound	2½
Rhubarb, per pound	*3
Turnips, per pound	2
Tomatoes, per pound	3
Squash, per pound	2
Kale, per pound	4½

FRUITS.

Apples, per pound	*7
Cantaloupes, each	5
Grape fruit—American, each	7
Tropical, each	13½
Grapes, per pound	6
Lemons, per dozen	17
Limes, per 100	40
Oranges—American, each	2½
Jamaican, per dozen	18
Peaches, per pound	7
Plums, per pound	16
Bananas, per bunch	38
Bananas, each	0½
Apples, evaporated, per pound	16
Apricots, evaporated, per pound	23
Pears, evaporated, per pound	23
Pears, alligator, each	6

* Indicates advance from preceding list.

† Indicates reduction from preceding list.

**Indicates five cents allowed for return of bottle.

‡ Sold only from commissaries; no orders taken for delivery.

§ Sold only from cold storage and not from commissaries.

Additions to Stock.

Shoes, child's, white, nubuck, button, welt, orthopedic last, pr.	2.05
Shoes, misses', white nubuck, button, ½-heel, orthopedic last, pr.	2.35
Shirts, wool, U. S. A., olive drab, ea.	2.80
Soap, milkweed cream, cake	.19
Chocolates, Lowney's, assorted, tin	.47
Enamel, nail, Hudnut's, bot.	.43
Pickles, mixed sweet, "Pin money," jar	.21
Ties, silk, four-in-hand, assorted, ea.	.44
Ties, bat wing, fancy colors, ea.	.37
Ties, reversible, four-in-hand, fancy patterns, ea.	.44
Ties, bat, wing, Barathea, plain colors, ea.	.37
Ties, reversible, four-in-hand, plain, white, figured, ea.	.44
Chocolates, assorted, Lowney's, ½'s tin	.26
Caramels, Chocolate, Lowney's, ½'s tin	.21
Ratines, Baltusrol, novelty, plain, yd.	.33
Ratines, Baltusrol novelty, fancy, yd.	.37
Gingham, Renfrew, Devonshire, 32", assorted patterns yd.	.17

Supporters, hose, ladies', pair	.46
Biscuits, soda, N. B. Co., lb. carton	.10
Syrup, maple, Robin Hood, qt. tin	.29
Crepe, Basim Madura, 36", yd.	.19
Lime mints, Park and Tilford, tin	.09
Cream mints, Park and Tilford, tin	.09
Ketchup, Snider's, bot.	.28
Cloth, lace, 40", yd.	.16

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective September 16, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Mattresses, double, fiber, 4' 6" x 6' 4", ea.	5.25	6.60
Mattresses, single, fiber, 3' x 6' 4", ea.	3.85	4.75
Mattresses, crih, ea.	3.70	4.70
Pipes, clay, ea.	.00½	.01
Chimneys, Berlin, student lamp, ea.	.05	.07
Cinnamon, ground and powdered, tin	.05	.06
Bowls, mixing, 3½-quart, ea.	.27	.19
Hooks, hammock, doz.	.30	.44
Rice, lb.	.03	.05
Beans, red kidney, lb.	.05	.08
Asparagus, tin	.16	.20
Beans, stringless, tin	.11	.09
Peel, citron, lb.	.19	.22
Onions, pickled, keg	5.85	6.50
Grapes, tin	.14	.15
Pears, tin, gal.	.58	.65
Prunes, stewing, lb.	.11	.12
Cocoa, Van Houten's, tin	.40	.36
Walnuts, lb.	.12	.23
Thread, raw silk, spool	.03	.04
Notepaper, Highland linen, box	.32	.38
Powder, baking, cream of tartar, tin	.99	1.32
Sardines, Norwegian, "Queen Maud," tin	.07	.10
Garbanzos, lb.	.07	.08
Buckets, covered, ea.	.35	.48
Caps, bathing, ea.	.17	.22
Belts, men's cotton, elastic, with buckle and extra strip for same, ea.	.31	.35
Fasteners, dress, doz.	.05	.08
Mitts, bath, pair	.20	.26
Salmon, pink, tails, tin	.09	.11

Supplies for the Canal.

The following steamers, with supplies for The Panama Canal and Panama railroad, arrived at the ports of Colon and Cristobal during the week ending September 5:

Panama, September 3, from New York, with four boxes paint, three cases oil, 85 cases sal soda, 301 bales hay, three packages wire clamps, 107 packages switch material, 22 cases copper tubes, seven boxes brass valves, 26 boxes bronze wire cloth, 33 coils manila rope, 240 kegs boat spikes, 53 cases sheet copper, 50 bundles galvanized pipe, 350 bundles brooms, 120 bags bran, 720 rolls roofing paper, 204 barrels roofing pitch, 51 kegs galvanized spikes, 20 kegs galvanized staples, 18 packages bolts, 30 packages miscellaneous material, six pieces steel blooms, 20 pieces steel beams, four boxes dry storage batteries, two carboys sulphuric acid, for stock; one case cutters, three boxes photo material, one package flags, for Executive Secretary; one box tags, one bucket, 139 packages signal material, 50 cases electrical material, for Panama railroad; four propeller wheels, one box pumps, four pieces dredge parts, for Dredging Division; one box typewriter parts, one box tools, one package blueprint paper, 40 kegs manganese dioxide, for Mechanical Division; one box coloring, 15 crates hypochlorite of lime, one box brass valves and fittings, four cases electrical material, 14 crates pumps, two cases packing, for Division of Municipal Engineering; one package spare parts, one box electrical material, one box diving outfit, two cases asbestos lumber, for lock erection; two packages photo plates, two packages vaccine, one package antitoxin, for Health Department; one box rods, 311 packages vault material, one case glass, 12 cases iron doors and fittings, for permanent buildings; four barrels lubricating oil, for Division of Fortifications; one box apparatus, one case pipe fittings, 24 huddles pipe, 21 cases copper wire, 29,997 pieces conduit, four boxes wire solder, one box electrical material, one reel cable, 20 cases electrical material, for Electrical Division; 619 pieces rail fittings, for Division of Terminal Construction; and a miscellaneous cargo, the whole consisting of 34,478 packages, weighing approximately 564 tons.

Almirante, September 3, from New York, with 11 barrels rosin, 25 barrels pitch, 11 bundles leather belting, 70 farm wagon wheels, for stock; eight cases insulating tape, for Electrical Division; one tub copper sleeves, for lock erection.

Turrialba, September 3, from New Orleans, with 1,097 pieces (10,866 board feet), yellow pine lumber, 120 bags sucrose dairy feed, for stock; 522 pieces (24,819 board feet), yellow pine car lumber, 25 bundles wheels, 41 pieces castings, for Mechanical Division; 54 pieces rough castings, for Division of Terminal Construction.

MOVEMENTS OF OCEAN VESSELS.

(Week ending 8 a. m., September 20.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Line	From	To
Sept. 16.....	<i>Pleiades</i>	Luckenbach Steamship Co.....	New York.....	San Francisco.
Sept. 16.....	<i>Orestan</i>	G. L. Steamship Co.....	Boston.....	San Pedro.
Sept. 18.....	<i>Atlantic</i>	Emery.....	Norfolk.....	Seattle.
Sept. 19.....	<i>Montosa</i>	Porto Rican.....	New York.....	San Pedro.
Sept. 19.....	<i>Georgian</i>	American-Hawaiian Co.....		

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Date	Vessel	Line	From	To
Sept. 13.....	<i>Foxton Hall</i>	N. Y. and S. A.....	Pisagua.....	New York.
Sept. 16.....	<i>Anglo Californian</i>	Nitrate Pro. Co.....	San Francisco.....	Key West.
Sept. 16.....	<i>Santa Cecilia</i>	W. R. Grace & Co.....		New York.
Sept. 18.....	<i>Dunclupha</i>	W. R. Grace & Co.....		England.

ARRIVALS—PORTS OF COLON AND CRISTOBAL.

Date	Vessel	Line	From
Sept. 15.....	<i>Magdalena</i>	R. M. S. P.....	Southampton.
Sept. 15.....	<i>Colon</i>	P. R. R.....	New York.
Sept. 15.....	<i>Tancred</i>	Earn Line.....	Norfolk.
Sept. 16.....	<i>Carrillo</i>	U. F. C.....	New York.
Sept. 16.....	<i>Parismina</i>	U. F. C.....	New Orleans.
Sept. 17.....	<i>Santa Maria</i>	U. F. C.....	Cartagena.
Sept. 17.....	<i>Abangarez</i>	U. F. C.....	Bocas del Toro.
Sept. 17.....	<i>Atenas</i>	U. F. C.....	New Orleans.
Sept. 17.....	<i>Ancon</i>	P. R. R.....	New York.
Sept. 18.....	<i>Kilpatrick</i>	U. S. A. transport.....	Charleston.
Sept. 18.....	<i>San'a Clara</i>	W. R. Grace & Co.....	Baltimore.
Sept. 19.....	<i>Chagres</i>	Elder and Fyffes.....	Limon.
Sept. 19.....	<i>Jupiter</i>	Seeberg.....	Gulf port.
Sept. 20.....	<i>Oruba</i>	R. M. S. P.....	New York.

DEPARTURES—PORTS OF COLON AND CRISTOBAL.

Date	Vessel	Line	For
Sept. 14.....	<i>Bjorn</i>	P. R. R.....	Santiago.
Sept. 15.....	<i>Allianca</i>	R. M. S. P.....	New York.
Sept. 15.....	<i>Magdalena</i>	U. F. C.....	New York.
Sept. 17.....	<i>Santa Maria</i>	U. F. C.....	New Orleans.
Sept. 17.....	<i>Parismina</i>	U. F. C.....	Cartagena.
Sept. 17.....	<i>Carrillo</i>	U. F. C.....	New Orleans.
Sept. 17.....	<i>Abangarez</i>	U. F. C.....	Cartagena.
Sept. 19.....	<i>Chagres</i>	Elder & Fyffes.....	Bristol.
Sept. 19.....	<i>Atenas</i>	U. F. C.....	Bocas del Toro.
Sept. 19.....	<i>Kilpatrick</i>	U. S. A. transport.....	Vera Cruz.
Sept. 19.....	<i>Tancred</i>	Earn Line.....	Danquii.

ARRIVALS—PORT OF BALBOA.

Date	Vessel	Line	From
Sept. 13.....	<i>Manari</i>	P. S. N.....	Tumaco.
Sept. 14.....	<i>Colusa</i>	Grace.....	San Francisco.
Sept. 14.....	<i>Peru</i>	P. S. N.....	Callao.
Sept. 17.....	<i>San Joaquin</i>	Union Oil.....	San Luis.
Sept. 17.....	<i>San Juan</i>	P. M. S.....	San Francisco.
Sept. 17.....	<i>Capella</i>	Whaler.....	South Pacific ports
Sept. 19.....	<i>Ecuador</i>	P. S. N.....	Guayaquil.
Sept. 20.....	<i>La Habia</i>	Union Oil.....	San Luis.
Sept. 20.....	<i>Angola</i>	Angola Co.....	
Sept. 20.....	<i>S. Rathborne</i>	Burrell.....	Calita Buena.

DEPARTURES—PORT OF BALBOA.

Date	Vessel	Line	For
Sept. 11.....	<i>Packeo</i>	C. P. de V.....	Callao.
Sept. 14.....	<i>Guilpue</i>	P. S. N.....	Guayaquil.
Sept. 15.....	<i>Limon</i>	S. S. A. de V.....	Valparaiso.
Sept. 16.....	<i>Newport</i>	P. M. S.....	San Francisco.
Sept. 17.....	<i>Colusa</i>	Grace & Co.....	San Francisco.
Sept. 19.....	<i>Manari</i>	P. M. S.....	Tumaco.

EXPECTED ARRIVALS—PORTS OF COLON AND CRISTOBAL.

Date	Vessel	Line	From
Sept. 23.....	<i>Belgian</i>	Leyland.....	Liverpool.
Sept. 23.....	<i>Zacapa</i>	U. F. C.....	New York.
Sept. 23.....	<i>Cartago</i>	U. F. C.....	New Orleans.
Sept. 24.....	<i>Carrillo</i>	U. F. C.....	Cartagena.
Sept. 24.....	<i>Atenas</i>	U. F. C.....	Bocas del Toro.
Sept. 24.....	<i>Turrialba</i>	U. F. C.....	New Orleans.
Sept. 24.....	<i>Perou</i>	C. G. T.....	Bideaax.

EXPECTED DEPARTURES—PORTS OF COLON AND CRISTOBAL.

Date	Vessel	Line	For
Sept. 24.....	<i>Zacapa</i>	U. F. C.....	Cartagena.
Sept. 24.....	<i>Cartago</i>	U. F. C.....	New Orleans.
Sept. 24.....	<i>Atenas</i>	U. F. C.....	New Orleans.
Sept. 26.....	<i>Turrialba</i>	U. F. C.....	Bocas del Toro.
Sept. 28.....	<i>Advance</i>	P. R. R.....	New York.

EXPECTED ARRIVALS—PORT OF BALBOA.

Date	Vessel	Line	From
Sept. 23.....	<i>Monturo</i>	C. P. de V.....	Peruvian ports.
Sept. 23.....	<i>Celia</i>	Grace & Co.....	South Pacific.
Sept. 24.....	<i>Montanan</i>	American-Hawaiian.....	New York.
Sept. 27.....	<i>Headley</i>		
Sept. 29.....	<i>Volumnia</i>		San Francisco.
Sept. 30.....	<i>Purley</i>		Colon.

EXPECTED DEPARTURES—PORT OF BALBOA.

Date	Vessel	Line	For
Sept. 23.....	<i>Dakotan</i>	American-Hawaiian.....	Colon.
Sept. 25.....	<i>Celia</i>	Grace & Co.....	Colon.
Sept. 25.....	<i>San Juan</i>	P. M. S.....	San Francisco.
Oct. 10.....	<i>City of Para</i>	P. M. S.....	San Francisco.
Oct. 21.....	<i>Peru</i>	P. M. S.....	San Francisco.

SAILINGS OF PASSENGER VESSELS TO AND FROM CRISTOBAL AND COLON.

The following is a list of sailings and scheduled arrivals of the Panama Railroad Steamship Line; of the Royal Mail Steam Packet Company and of the United Fruit Company's Line.

NEW YORK TO CRISTOBAL.

	Sails.	Arrives.
*Panama.....	P. R. R. Sept. 22.....	Sept. 28
*Allianca.....	P. R. R. Sept. 28.....	Oct. 4
*Colon.....	P. R. R. Oct. 5.....	Oct. 11
*Advance.....	P. R. R. Oct. 10.....	Oct. 17
*Panama.....	P. R. R. Oct. 16.....	Oct. 22
*Allianca.....	P. R. R. Oct. 22.....	Oct. 28
*Colon.....	P. R. R. Oct. 29.....	Nov. 4

CRISTOBAL TO NEW YORK.

†Ancon.....	P. R. R. Sept. 26.....	Oct. 4
†Advance.....	P. R. R. Sept. 28.....	Oct. 5
†Panama.....	P. R. R. Oct. 4.....	Oct. 10
†Allianca.....	P. R. R. Oct. 10.....	Oct. 16
†Colon.....	P. R. R. Oct. 17.....	Oct. 23
†Advance.....	P. R. R. Oct. 23.....	Oct. 30
†Panama.....	P. R. R. Oct. 29.....	Nov. 4
†Allianca.....	P. R. R. Nov. 4.....	Nov. 10
†Colon.....	P. R. R. Nov. 10.....	Nov. 16

NEW YORK TO COLON.

Zacapa.....	U. F. C. Sept. 16.....	Sept. 23
*Almirante.....	U. F. C. Sept. 23.....	Sept. 30
Trent.....	R. M. Sept. 26.....	Oct. 4
*Santa Marta.....	U. F. C. Sept. 30.....	Oct. 7
*Metapan.....	U. F. C. Oct. 7.....	Oct. 14
Orotava.....	R. M. Oct. 10.....	Oct. 18
*Zacapa.....	U. F. C. Oct. 14.....	Oct. 21
Almirante.....	U. F. C. Oct. 21.....	Oct. 28
Danube.....	R. M. Oct. 24.....	Nov. 1
Santa Marta.....	U. F. C. Oct. 28.....	Nov. 4
*Metapan.....	U. F. C. Nov. 4.....	Nov. 11
Tagus.....	R. M. Nov. 7.....	Nov. 15
*Zacapa.....	U. F. C. Nov. 11.....	Nov. 18
*Almirante.....	U. F. C. Nov. 18.....	Nov. 25
Essequibo.....	R. M. Nov. 21.....	Nov. 29
*Santa Marta.....	U. F. C. Nov. 25.....	Dec. 2
*Metapan.....	U. F. C. Dec. 2.....	Dec. 9

COLON TO NEW YORK.

Metapan.....	U. F. C. Sept. 24.....	Oct. 1
Orotava.....	R. M. Sept. 29.....	Oct. 7
Zacapa.....	U. F. C. Oct. 1.....	Oct. 8
Almirante.....	U. F. C. Oct. 8.....	Oct. 15
Danube.....	R. M. Oct. 13.....	Oct. 21
Santa Marta.....	U. F. C. Oct. 15.....	Oct. 22
Metapan.....	U. F. C. Oct. 22.....	Oct. 29
Tagus.....	R. M. Oct. 27.....	Nov. 4
Zacapa.....	U. F. C. Oct. 29.....	Nov. 5
Almirante.....	U. F. C. Nov. 5.....	Nov. 12
Essequibo.....	R. M. Nov. 10.....	Nov. 18
Santa Marta.....	U. F. C. Nov. 12.....	Nov. 19
Metapan.....	U. F. C. Nov. 19.....	Nov. 26
Oruba.....	R. M. Nov. 24.....	Dec. 2
Zacapa.....	U. F. C. Nov. 26.....	Dec. 3
Almirante.....	U. F. C. Dec. 3.....	Dec. 10
Trent.....	R. M. Dec. 8.....	Dec. 16

NEW ORLEANS TO COLON.

Heredia.....	U. F. C. Sept. 9.....	Sept. 16
*Atenas.....	U. F. C. Sept. 12.....	Sept. 17
Cartago.....	U. F. C. Sept. 16.....	Sept. 23
*Turrialba.....	U. F. C. Sept. 19.....	Sept. 24
Heredia.....	U. F. C. Sept. 23.....	Sept. 30
*Abangarez.....	U. F. C. Sept. 26.....	Oct. 1
Parismina.....	U. F. C. Sept. 30.....	Oct. 7
*Atenas.....	U. F. C. Oct. 3.....	Oct. 8
Cartago.....	U. F. C. Oct. 7.....	Oct. 14
*Turrialba.....	U. F. C. Oct. 10.....	Oct. 15
Heredia.....	U. F. C. Oct. 14.....	Oct. 21
*Abangarez.....	U. F. C. Oct. 17.....	Oct. 22

COLON TO NEW ORLEANS.

†Atenas.....	U. F. C. Sept. 24.....	Sept. 29
Cartago.....	U. F. C. Sept. 24.....	Oct. 1
†Turrialba.....	U. F. C. Oct. 1.....	Oct. 6
Heredia.....	U. F. C. Oct. 1.....	Oct. 8
†Abangarez.....	U. F. C. Oct. 8.....	Oct. 13
Parismina.....	U. F. C. Oct. 8.....	Oct. 15
†Atenas.....	U. F. C. Oct. 15.....	Oct. 20
Cartago.....	U. F. C. Oct. 15.....	Oct. 22

*Will carry mail from the United States.
†Will carry mail to the United States.

Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.

Panama Railroad Company's steamers sail from Piers

9, and 11, Cristobal, at 3 p. m.

Hotel Aspinwall Launch Service.

The launch *Louise* will sail from the dredge landing at Balboa for the Hotel Aspinwall on Taboga Island at 9.25 a. m., on Monday, Thursday, and Saturday of each week. The time of sailing permits connection to be made with train No. 3, which arrives at Panama from Colon at 9.25 a. m., daily.



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employes of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

No communication either for publication or requesting information will receive attention unless signed with the full name and address of the writer.

NOTES OF PROGRESS.

Appointment of Board on Accommodations for Troops.

The Secretary of War has approved the recommendation of the Governor for the creation of a local board to decide questions relative to the location and general type of buildings to be erected under the \$700,000 appropriation for providing quarters for troops on the Isthmus. The Governor has appointed the following as members of this board: Col. W. F. Blauvelt, commanding, Tenth Infantry, Camp Otis; Lieut.-Col. Chas. F. Mason, Chief Health Officer; Maj. B. T. Clayton, Tenth Infantry; Maj. W. E. Cole, Coast Artillery Corps, and Capt. R. E. Wood, Chief Quartermaster. In connection with the general subject of quarters for troops, the board is empowered to set aside at Corozal, Margarita Island, and at the several locks, such tracts of land as it may deem suitable for the erection of barracks and other buildings.

Physical Examination for Gold Employes.

Each permanent male employe of The Panama Canal on the Isthmus on the gold roll will be given a physical examination to determine his general condition and to take steps toward remedying chronic ailments. This procedure is in line with work done by life insurance companies among their policy holders, and is comparable to general examination and overhauling given machinery, or to the practice of persons of going periodically to a dentist for examination and repair of the teeth.

Under the plan recommended by the Chief Health Officer and approved by the Governor, the examinations for Ancon and vicinity will be held at Ancon Hospital, and for Cristobal and vicinity, at Colon Hospital. The examination of employes in the more isolated settlements will be conducted by the nearest district physician. All doubtful cases will be referred to and passed on by the Ancon Hospital Examining Board.

Printed forms will be furnished, divided into

two parts, one part to contain a series of questions, with space for the answers, which are to be filled in by the employe; and the other part to contain a report of the physical examination of the employe, signed by the examining physician. These forms, when completed, will be filed and added to from year to year, so as to make the record of each gold employe's physical condition, as long as he remains in the service, complete.

Arrangements will be made with heads of departments and divisions as to the date and place of the examination, and the number and names of those employes who can be spared on a certain date and hour. The work of examining the employes will begin about November 1, and it is expected that it can be completed within 30 days thereafter.

Motorcycles for Police and Fire Division.

Three motorcycles have been ordered from the United States for the use of the police and fire division. The terminal central police stations at Ancon and Cristobal will each be provided with a machine, while the third will be reserved for the use of the police and fire inspectors. The machines assigned to the central stations will be for service in connection with the enforcement of speed regulations, patrol service, and for emergency calls. They will be substituted for three horses, which have been condemned and will not be replaced.

Floating Caisson on Its Way from San Francisco.

The floating lock entrance caisson dam left San Francisco for Balboa on September 16, at 11 a. m., according to cable advice received on September 21. It is in tow of the tug *Hercules* and it is expected that they will make about 95 miles daily. This makes them due at Balboa about October 25; the distance from San Francisco to Panama by the usual route for direct vessels is reckoned at 3,277 nautical miles, which would require of the tow approximately 34½ days of actual travel, and three or four days may be allowed for coaling and taking on other supplies.

Dumping on Naos Island Breakwater Discontinued.

Dumping of spoil on the Naos Island breakwater was discontinued on Thursday, September 10, and it is believed that this work is now finished, with the exception of slight fills here and there, which will be made later, in leveling up the top for the proposed permanent railroad track and highway. For the past four months the breakwater has been at approximately final elevation, and the work has been principally in evening the fill; during the month of August the quantity of spoil placed on the breakwater was about 1,200 cubic yards. The top of the completed breakwater is at 18 feet above mean sealevel and is 40 feet wide, thereby allowing ample space for a 14-foot

roadbed for tracks, and an 18-foot highway. Grading and ballasting will make the top of the rails and the crown of the highway at 19 feet above sealevel. Above water, the slope of the fill approximates one on one, but lower down the slope flattens out considerably.

Task Work at Cristobal Coaling Plant.

A part of the work of installing the caissons at the Cristobal coaling plant will be handled by the "Task" method. This will include bottom excavation, assembling of the spiral reinforcement, and assembling and riveting of the caissons. The excavation for the caissons will be handled by orange peel buckets as far as possible; at a lower depth, 4-man crews will continue the work, the rate of pay for which will be \$1.50 per lineal foot of excavation. For assembling the spiral reinforcement, a rate of \$0.0025 per pound has been fixed, and for assembling and riveting the caissons, which includes clamping, bolting, riveting, and calking each joint, the rate will be \$3.99 per completed joint. This latter work will require about 18 men to a crew.

Work at Oil Tank Sites.

Forces of the Division of Municipal Engineering have constructed a roadbed for the Division of Terminal Construction, around the knoll, south of the waterworks at Mount Hope, for the purpose of laying a spur track, about 1,000 feet long, from the main line of the Panama railroad to the area reserved for the Atlantic terminal fuel oil handling plant. The track will be used in connection with the transportation of material and supplies required for the building of the new pumping station, and later, the roadbed will serve for supporting the pipe lines from the handling plant to the oil docks. These pipe lines will carry the oil from tank vessels to the storage tanks of individuals and companies, as well as those of the Government, or from the storage tanks to steamers taking on oil.

The construction of the roadbed was accomplished on the "Task" plan. Two crews were employed, one reporting for duty at 5.30 a. m., and continuing work until about 1 p. m., when the second crew took its place, working up to about 7 p. m. The material, which was handled into place by Decauville equipment, was partly a sticky red clay, very difficult to work in during the recent heavy rains. Under the "Task" plan, however, the work proceeded without delay, the men getting out their daily quota, rain or shine, and earning about \$1.50, United States currency, per day, per man.

The site of the pumping station has been located in a small pocket between knolls, facing the Mount Hope-Gatun road, at the western limit of the oil tank reservation. The building will be of wood frame construction throughout, with open sides and ends,

and a corrugated iron roof; the floor will be of concrete. A small amount of excavation will be necessary in leveling off the site. The pump room will be 30 by 50 feet, and boiler room, 50 by 50 feet, in plan. The main machinery to be installed will consist of two horizontal, duplex-compound, specially constructed oil pumps, capable of maintaining pressure at 250 pounds, and two boilers equipped with oil-burning furnaces.

The foundation for the boilers and stack of the Pacific terminal handling plant have been installed, and the boilers erected by the Division of Terminal Construction. This plant will be erected near the water front on the Balboa dump, in the depression between the two high dumps, and will be connected by pipe lines, with a berth about 1,200 feet off shore. The dredging of this berth, 1,400 feet long by 75 feet wide, to a depth of 45 feet at mean tide, has been completed, and the sinking of caissons for the construction of oil cribs alongside the berth is in progress.

It is expected that both plants will be ready for service about the first of January, 1915. The two 42,000-barrel Government tanks at both terminals have been completed, with fire walls, and have been temporarily rented to the Union Oil Company until such time as the Government is ready to take over their operation. Tank No. 4, at Balboa, has been filled by the lessee. To date, 11 tank sites in the farm adjoining the proposed handling plant at the Pacific terminal have been leased to companies and individuals, and one tank has been erected by W. R. Grace and Company. On the Atlantic side, eight sites have been leased, but no tanks, other than the two Government tanks, have been erected.

Concrete Work on Dry Dock No. 1 may be Let on Contract.

Invitations for proposals on the mixing of the concrete for dry dock No. 1 at Balboa will be issued shortly by the Chief Quartermaster. The contractor will supply labor only, the materials and equipment being furnished by The Panama Canal.

Conviction Under New Opium Law.

Lam Hing, a Chinese merchant of Colon, Lee Leen Onn, a member of the Chinese crew on the United Fruit Company's steamer *Carlago*, and David Brown and Cornelius Hilaire, West Indians in the employ of Lam Hing, were tried in the District Court at Cristobal on Wednesday, September 23, for violating the opium law which recently became effective in the Canal Zone. The evidence showed that Lam Hing had sold to the Chinese sailor, two tins of the drug, amounting to about 25 pounds. The opium was being carted to the Cristobal docks, where the *Carlago* was berthed, in a sandalwood box, when a Zone policeman, whose suspicions were aroused, caused an investigation. As a result of the trial, Lam Hing and Lee Leen Onn were found guilty, and were fined \$500 and \$100, respectively. The West Indians, who claimed to have been simply obeying orders and in ignorance of the contents of the box, were permitted to go free. The opium was confiscated by the Zone Government as authorized by the law, which prohibits the exportation of smoking opium from the United States, or from any territory under its control or jurisdiction, or from countries in which the United States exercises an ex-

traterritorial jurisdiction, under heavy penalties and confiscations.

PERSONAL.

Mrs. Geo. W. Goethals returned to the Isthmus on the *Panama*, which docked at Cristobal on Monday, September 28.

Mr. A. B. Nichols, Office Engineer, under the Engineer of Maintenance, has resigned, effective October 12, and will sail for the United States on the *Panama* on October 4. He was appointed to the Canal service on May 13, 1904, arriving on the Isthmus on May 31. He was assistant engineer at Gatun until June 1, 1905, when he was promoted to resident engineer in the Culebra Division. In July, 1906, he was appointed Office Engineer at Culebra, which position he has since held. From 1899 to 1901, he was a division engineer in the employ of the Isthmian Canal Commission having in charge the surveys for the Nicaragua canal route. Mr. Nichols is the oldest employee in the Canal Service, and is president of the Society of the Incas, an organization of 1904 employees. His home city is Philadelphia.

A cable message has been received from Dr. M. E. Connor at Santiago, Cuba, announcing his resignation, effective September 22, as Health Officer at Panama. He was appointed to the Canal Service on November 29, 1904, and was assistant quarantine officer at various times until 1906, when he was appointed Health Officer at Bocas del Toro. He remained at this post until June 1, 1907, when he was made Health Officer at Colon. On April 1, 1914, he was transferred to the position of Health Officer at Panama. He was born at Amesbury, Mass., was educated in the public schools of that place, and there fitted himself for Dartmouth Medical College at Hanover, N. H. He was graduated from the latter institution, with the degree of Doctor of Medicine, with the class of 1901. Later, he enlisted as a private in the Hospital Corps of the Army for service in the Philippines, and held the post of acting assistant surgeon when he resigned therefrom.

Mr. A. B. Dickson, Superintendent of Clubs and Playgrounds, sailed on the *Ancon*,

on Saturday, September 26, on annual leave of absence, at the end of which period he resigns from the service. He is the fourth superintendent of the clubhouses operated by the Government under the auspices of the Young Men's Christian Association. He arrived on the Isthmus on April 18, 1910, as secretary of the clubhouse at Empire, serving in that capacity until August 12, 1911, when he was appointed Superintendent of Clubhouses. He continued in this post until April 1, 1914, when the scope of his work was enlarged to include the playground system, and he was made Superintendent of Clubs and Playgrounds. He was born at Binghamton, N. Y., and entered the Young Men's Christian Association work as assistant secretary at Buffalo, N. Y., in 1896. In 1898, he went to New York City, as social secretary in the Twenty-third street Y. M. C. A., and remained there until the opening of the new building at Twenty-third street and Seventh avenue, when he was appointed financial secretary, which post he held until he came to the Isthmus. He devoted two years to the study of voice culture in New York City under Oscar Saenger, and was tenor soloist in St. John's Methodist church, Brooklyn; and the Church of the Incarnation, and the Broadway Tabernacle, in New York City. He expects to spend three months in Dayton, Ohio, before resuming work.

Mr. A. Raggi, assistant engineer in the employ of The Panama Canal, who left on July 16 on leave of absence, which he expected to spend in Switzerland, returned to the Isthmus on the *Perou*, which docked on September 24. He arrived at Bordeaux, France, two days after war was declared, and was unable to continue to his destination. He was detained 11 days in Paris waiting for a train, and six days in Havre waiting for the *Perou* to sail. Like other tourists, Mr. Raggi was caught without ready funds, and was obliged to make shift the best way he could. On the return trip, which was made via Gibraltar, the Azores, and the north coast of South America, there were over 400 passengers, and both the food and water supply ran short. A sharp lookout was constantly maintained for hostile vessels.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Eriebe, Wm. D.....	44706	Martinique.....	Empire.....	Supply Dept....	1914.
Palmer, Chas. B.....	224	Jamaica.....	La Boca.....	Panama railroad.	Sept. 24.
					Sept. 15.

Insane Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of commitment.
Coppin, David.....	19,706	Barbados.....	New Gatun.....	Panama railroad.	1914.
					Sept. 25.

The estates of the deceased or insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

SOCIAL LIFE OF THE ZONE.

Cristobal Woman's Club Resumes Meetings.

The first general meeting and reception of the Cristobal Woman's Club was held in the Government clubhouse on Wednesday afternoon, September 30, at 3 o'clock. Commander D. E. Dismukes delivered an address on compulsory military service. There was a short musical program under the direction of Mrs. Nunn and Mrs. Dovell. On October 21, the second meeting for the month will be held, when the program will consist of papers, as follows: "Kaiser Wilhelm II—The Kaiser, as he is—His home life—His personal influence," reader Mrs. Verner; "The German Army," reader Mrs. Davey; "The German Navy," reader Mrs. Harrison.

Day of Prayer to be Observed in the Canal Zone.

In response to the President's proclamation fixing October 4 as a day of prayer for the return of peace in Europe, published in THE CANAL RECORD of September 23, the president of the Union Church of the Canal Zone has issued an appeal to the local Union church organizations and the Sunday school workers, asking that an observance of the day be made in accordance with the spirit of the proclamation. He also suggests that sermons be preached in the Union churches touching upon the subject of universal peace. The local Sunday schools, federated in the Isthmian Sunday School Association, have been asked by the president of the association to observe the day in the same spirit.

Throughout the Canal Zone the churches will make special supplications for peace in Europe.

Church Notes.

A class of American children took first communion at the Roman Catholic church, Balboa, on Sunday morning, September 27, the Rev. Father McDonald, parish priest, officiating. The service of the rite of confirmation followed in the afternoon at 3.30.

The new pastor of the Union Church of the Canal Zone met with the executive council of the church in the clubhouse at Pedro Miguel on Sunday afternoon, September 27. Delegates were present from the local organizations at Cristobal, Gatun, Paraiso, Pedro Miguel, Corozal, and Balboa. The questions discussed were a change in the handling of the finances in the local organizations, the arrangement of an itinerary for Mr. Flammer, and the advisability of publishing a bulletin or official paper in the combined interests of the Union church and the Isthmian Sunday School Association. On this latter question, a committee was appointed, composed of Mr. Weaver, chairman, Mr. Stokoe and Mr. Warner.

The Rev. Mr. Flammer will speak at the Gatun chapel on Sunday morning, October 4.

The governing board of the Panama Federation of Societies of Women for Christian Work will hold a meeting at the Hotel Tivoli, Ancon, on Friday afternoon, October 2, at 3 o'clock.

First Aid Class for Women.

The examinations for the first aid class for women under the Red Cross, have been held in two sections. The first of these was last Friday, and the second is to be given on Friday, October 2. These examinations are written and credits are given those passing success-

fully, the certificate issued from the national headquarters in Washington enabling the holder to render first aid in the event of accident anywhere in the world.

A second course of lectures on nursing is being planned to follow the finished work.

Assignment of Teachers.

The following assignments of teachers in the schools for white children have been made; the grades indicated are provisional:

Balboa high school—Jessie H. Daniels, principal; M. L. Cloys, science; Ninetta Mattes, Cora E. Sessions, Olga J. Frost, Spanish and French.

Cristobal grade and high school—Katherine I. Davis, principal; Wenonah W. Dillon, first grade; Edith McI. McCarthy, second grade; Helen D. Parmelee, third and fourth grades; Ezoa Smith, fifth and sixth grades; May L. Smith, seventh and eighth grades.

Ancon—Grace E. McCray, principal, first grade; Florence M. Dildine, second grade; Charlotte Carter, third and fourth grades; Mallye A. DeCamp, fifth and sixth grades; Etta Reed, seventh and eighth grades.

Balboa—Elise Cage, principal, first grade; Shellie M. Dunn, second grade; Ila T. Hall, third grade; Dove L. Prather, fourth and fifth grades; Mary F. Adams, fifth and sixth grades; Ida B. Potts, seventh and eighth grades.

Corozal—Mary M. Shea, principal, fifth and sixth grades; Anna Mosteller, first and second grades; Mary Edmonds, third and fourth grades; Edna M. Spencer, seventh and eighth grades.

Pedro Miguel—Georgia T. Munroe, principal, sixth and seventh grades; Marie Birmingham, first, second, and third grades; Anne W. Holme, fourth and fifth grades.

Paraiso—Mary E. Flenning, first to fourth grades.

Culebra—Maybelle C. James, first to eighth grades.

Las Cascadas—Virginia C. Henshaw, first to eighth grades.

Gatun—Emma M. Cobban, principal, fifth, sixth, and seventh grades; Beulah E. Schield, first and second grades; Annie E. Stone, third and fourth grades.

Line teachers—Shirley C. Dorsey, first to fourth grades; Ida O. Erickson, fifth to eighth grades.

Supervisor, industrial training—A. H. Edgerton.

The schools at Culebra and Las Cascadas will be opened with grades one to eight, and at Gatun, with grades one to seven. This provision is temporary, as in case there are not enough pupils in those villages to carry on the upper grade work they will be discontinued, and the pupils assigned to their grades in the schools in the nearest station to their homes.

Civil Service Examinations.

Examinations for the following named positions are scheduled to be held, probably on October 25, 1914 (place and date to be left blank on application): Agricultural inspector, Philippine Service; aid, Lighthouse Service; assistant observer; cadet engineer and cadet officer, Lighthouse Service; civil engineer and draftsman, nonapportioned Departmental Service; copyist ship draftsman and ship draftsman, Navy Department; mechanical draftsman, topographic draftsman, Panama Canal Service; engineer, Indian Service (show optional); junior engineer (civil), junior engineer (mechanical

or electrical), Engineer Department at Large; junior engineer (mining), Bureau of Mines; scientific assistant, Department of Agriculture; teacher, Indian Service; and trained nurse, Indian and Panama Canal Services.

Applications should be filed by October 17, 1914. ISTHMIAN CIVIL SERVICE BOARD.

Canal Zone Motorcycle Club.

The Canal Zone Motorcycle Club will hold its regular monthly meeting at Ancon lodge hall on Sunday, October 4, at 10.30 a. m. Among other things for attention are the adoption of the by-laws. All members are requested to attend, and all interested are invited to be present.

J. L. CALDWELL, *Secretary-Treasurer*.
ANCON, C. Z., September 28, 1914.

Panama Canal Marine Association.

The Panama Canal Marine Association will hold its regular meeting on Sunday, October 4, at 7.30 p. m., sharp, at Paraiso. Members are cordially invited.

F. E. NEHLS,
Recording Secretary.
BALBOA, C. Z., September 28, 1914.

Weight of Concrete in Counterweights of Cranes.

In a note in THE CANAL RECORD of last week on the floating cranes *Ajax* and *Hercules*, it was stated that the concrete for the counterweights, containing a large proportion of scrap iron, weighs about 164 pounds to the cubic yard; this should have read "164 pounds to the cubic foot."

Obituary.

The death of Alice Mae, the little daughter of Theo. M., and Ethel Mae Drake, occurred at the home of her grandparents at Chicago, Ill., on Thursday, September 10. Interment was at Mount Greenwood.

Funeral Services.

The remains of our late Brother Joseph Cavanaugh will be buried at Mount Hope cemetery on Sunday morning, October 4. A funeral car will be attached to train No. 4, leaving Panama at 7.10 a. m. Those attending can return on train No. 5, leaving Colon at 11.05 a. m. The funeral lodge will be held in the lodge room, building No. 1, Cristobal, at 7.30 a. m., and will proceed to Mount Hope to meet the funeral train. The usual Masonic burial service will be held.

FRANK L. HEALD,
W. M., Sojourners Lodge, Cristobal, C. Z.

I. B. of S. S. and D. M.

The next regular meeting of the International Brotherhood of Steamshovel and Dredgemen will be held at Ancon lodge hall, on Sunday, October 4, 1914, at 2.30 p. m.

R. G. WARREN, *Secretary-Treasurer*.
COROZAL, C. Z., September 27, 1914.

Missing Man.

Any one having knowledge of the whereabouts of Ysmael Fernandez Ollero, who was formerly employed on the Canal, but who left here for Cuba in 1910, is requested to communicate with the Office of the Governor.

A slight seismic disturbance was recorded at Ancon from 6.37 to 6.47 p. m., on Tuesday, September 22. The maximum amplitude of the movement was four millimeters, and the approximate distance of the epicenter from Ancon was 330 miles.

CANAL WORK IN AUGUST.

Monthly Report of the Governor to the Secretary of War.

BALBOA HEIGHTS, C. Z.,

September 24, 1914.

The Honorable the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of operations on the Isthmus for the month of August, 1914:

A test voyage through the Canal from Cristobal to Balboa was made on August 3 by the steamship *Cristobal* of the Panama Railroad Steamship Line, and the return trip was made the following day. A similar trip was made by the *Advance* on August 9 from Cristobal to and through Miraflores Locks, and by the *Panama* on August 11 for the same distance.

The first complete voyage through the Canal, from deep water to deep water, was made by the *Ancon* on August 15, the time consumed being approximately nine hours and 40 minutes.

On the following day, six vessels, which had been waiting at the terminals, were passed through, three from Balboa to Cristobal, and three from Cristobal to Balboa, one of the latter being a pleasure yacht. All of the vessels named above were of American register. The first war vessel to make the trip through the Canal was the *Teniente Rodriguez*, a Peruvian torpedo boat destroyer, which was passed through on August 18. The first foreign vessel to make the passage was the *Daldorch*, a cargo steamer of Glasgow.

In all, 18 vessels passed through the Canal from the Atlantic to the Pacific in August, and 23 passed from the Pacific to the Atlantic Ocean. The tolls collected amounted to \$88,401.80.

Department of Operation and Maintenance.

WORK UNDER ENGINEER OF MAINTENANCE.

Lock construction and maintenance—Three towing locomotives were received, making a total of 30 to date. These machines are being tested and put into service immediately after their receipt at the locks.

The mechanical and electrical installation of the chain fender machines for all locks is approximately 94 per cent complete. Twenty-two fender chains have been ordered, of which five complete chains at Gatun, and three at Pedro Miguel, have been installed.

Six thousand two hundred feet of cable were pulled into the ducts at Pedro Miguel, and 7,710 feet at Miraflores, making a grand total to date of 2,420,044 feet pulled into the ducts at all locks. This includes the Gatun duct line and the Pedro Miguel-Miraflores transmission line.

Forty lockages were made at Gatun, 48 at Pedro Miguel, and 48 at Miraflores. Since August 15, the date on which the Canal was opened to commerce for vessels of a limited draft, there has been a total of 20 through commercial lockages, enabling 22 vessels to make the complete passage of the Canal.

The latest advice from the inspector in the United States is to the effect that the floating caisson will not be ready to depart from San Francisco before the latter part of the present month.

Electrical Division—The net output of the power plants was, as follows:

	k. w. h
Gatun hydro-electric station.....	638,430
Miraflores steam station.....	2,253,140
Empire steam station.....	81,840
Balboa steam station.....	4,364

The output of the air compressor plants was, as follows:

Balboa—340,112,864 cubic feet free air compressed to 105 pounds.
Empire—39,683,435 cubic feet free air compressed to 105 pounds.

Maintenance and repair work throughout the Canal Zone, and construction work on the new transmission line and substations, underground conduit systems in the Ancon-Balboa and Gatun districts, new Balboa shops, and in new and reconstructed quarters, was carried on.

Municipal engineering—The work of this division in the northern and southern districts in the Canal Zone; also, in the cities of Colon and Panama, included the usual maintenance and repair work on water and sewer systems and streets, together with the operation of pumping stations and water purification plants. The construction of the new Panama water works was continued, work being carried on at Miraflores on the water purification plant and pump station No. 2, at Ancon, on pump station No. 3, and at Gamboa, on the pump station. The walls of the pump sumps were brought up to the floor level, and forms and steel set for basement floor. A total of 363½ yards of concrete was poured during the month. Surveys were completed of the Gamboa-Miraflores pipe line, and 7,411 feet of cast iron pipe for same were received and distributed.

Meteorology and hydrography—The rainfall was generally below normal, except at stations along the Atlantic coast, monthly totals ranging from 4.97 inches at Trinidad to 21.30 inches at Porto Bello. The maximum precipitation recorded in one day was 7.10 inches at Agua Clara on the 12th. The total yield of Gatun Lake watershed was 32 per cent below the 7-year normal for August, while that at Alhajuela was 30 per cent below the 25-year normal. The elevations of Gatun Lake at the beginning and at the end of the month indicate an increase in storage of 480,000,000 cubic feet.

Monthly mean air temperatures were everywhere above the station averages, while the average hourly wind movement was the highest which has been recorded for August at all stations.

A slight seismic disturbance was recorded at Ancon on August 17. The shock was of Intensity I, Rossi-Forel scale; its epicenter was approximately 115 miles distant from Ancon.

Department of Operation and Maintenance—Division of Terminal Construction.

WORK UNDER ENGINEER OF TERMINAL CONSTRUCTION—PACIFIC TERMINALS.

Dry dock—The final section and details of the wall were decided upon and studies were made of the piping and outlets, and their final locations were practically agreed upon. One shovel was engaged excavating in the floor of the dry dock site, along the north wall, and 18,979 cubic yards were excavated. The placing of concrete in the south wall was begun on August 17, and 4,105 cubic yards were placed.

Coaling plant—The design of the girders for the berm crane supports was practically completed. Four hundred and twenty-three cubic

yards of concrete were placed. Rock fill was placed in the west area of the coal pocket.

Quay walls and pier—All of the piers, which will form the foundation for the south sea wall, had been started and were well under way at the close of the month. A total of 3,156 cubic yards of concrete was placed. In Section d-e-f of the quay wall, the work consisted of pile driving, the sinking of caissons for the foundation, and the placing of concrete therein. On Section g-h-i, all of the fender piles were driven along the face of the dock, and 541 linear feet of buffer timbers were placed. In Section i-j-m-n, concrete in the curb and balustrade was completed, and the only work remaining to be done is the placing of pavement on the floor. On pier No. 1, 19 bollards were placed along the edge, and 541 linear feet of buffer timbers were bolted on. The fill was completed. Permanent track was laid, and 1,657 square yards of brick floor were placed and grouted in.

Fuel oil plant—Foundations for the boilers for the fuel oil handling plant were placed, and piling was driven as supports for the steel caissons which will be placed for the oil berths.

Ancon quarry—The output consisted of 49,575 cubic yards of crushed rock.

Naos Island breakwater—Work on the breakwater consisted of the placing of 1,280 cubic yards of rock. A complete survey was made of the breakwater and a report was made thereon. It appears that the fill has nearly reached its equilibrium.

Permanent shops—Erection was continued on 10 buildings. The installation of steel roller doors in the ends of buildings Nos. 1, 2, 4, and 12, and the laying of tile roof on the office building were completed.

Sosa Hill quarry—The quarrying of hard rock to be used in the east breakwater at the Atlantic entrance necessitated the stripping of considerable light material from the quarry, amounting to 42,943 cubic yards. Arrangements were completed for the quarrying and transportation of hard rock.

ATLANTIC TERMINALS.

Coaling plant—Plans and specifications were issued for the purchase and construction of structural steel framing for the deck structure, and details for the foundations for viaducts and track scales at the shore extension were advanced. A total of 702 cubic yards of concrete was placed in the bridge track retaining wall. Piling, with actual penetration of 10,048 linear feet, was driven, and 749 linear feet of steel cylinders were sunk.

East breakwater—Preliminary work of constructing storage tracks and trestles was advanced, and preparations were made to receive rock from Sosa Hill quarry.

Fuel oil plant—The placing of center and corner stakes for 30 tanks south and east of Mount Hope cemetery, the grading of the site, and excavation of the 30-foot cut through the saddle southwest of the site for the passing of pipe to the oil dock, were carried on.

RADIO STATIONS.

Municipal engineering work was continued at the Colon, Balboa, and Darien radio stations. At Darien, the contractor completed the erection of the first 200 feet of tower No. 1, with the exception of the joints, and proceeded with the erection of tower No. 2.

LANDSCAPE ARCHITECT.

The forces under the landscape architect completed a plan of the townsite to accompany the annual report, set stakes for the clubhouse, court house, Union church, and other

buildings at Balboa and Balboa Heights; and continued the construction of road, and water and sewer mains.

Dredging Division.

The status of dredging on August 31 was, as follows:

LOCATION.	August excavation, Cu. yds.	Remaining August 31, Cu. yds.
Miraflores Locks to Pacific.....	138,187	1,500,000
Miraflores Lake.....	.....	306,434
Culebra Cut.....	423,558	4,083,695
Gatun Lake.....	.....	.....
Gatun Locks to Atlantic.....	179,506	443,030
Total Canal prism.....	741,251	6,333,159
Balboa terminals.....	271,106	.....
Atlantic terminals.....	182,243	.....
Gravel.....	38,650	.....
Sand.....	13,975	.....
Total.....	505,974	.....
Grand total.....	1,247,225	.....

Culebra Cut—The excavation in Culebra Cut during the month was, as follows:

LOCATION.	Earth, Cu. yds.	Rock, Cu. yds.	Total, Cu. yds.
Empire slide.....	.....	.....	.....
Culebra slide, east.....	.....	39,070	39,070
Culebra slide, west.....	886	27,329	28,215
Cucaracha slide.....	76,084	280,189	356,273
Total.....	76,970	346,588	423,558

Water hyacinths—The destruction of water hyacinths in Gatun Lake was continued, 12,736 square yards of plants being poisoned, and 2,544 square yards pulled up and piled upon the bank. One large bed of young plants was found on the old Tabernilla dump. There was a noticeable breaking up of the grass or "Floating" islands.

Mechanical Division.

The character of work was substantially the same as in previous months, but the quantity was materially reduced, and a large reduction in force of artisans was effected. The foundry output was larger than for July, due to a temporary increase in the output of iron, but it is believed that this will decrease constantly from now on. The reduction of overtime work was continued until it is now almost negligible, and it is believed that in the near future the night shift in the machine shop and blacksmith shop at Balboa may be done away with.

Shop orders authorized during the month numbered 815; carried over from July, 436; completed during August, 820; carried over into September, 431. The output of the foundry was 269,447 pounds of iron, 23,905 pounds of steel, and 16,700 pounds of brass. Hosing was done on 5,456 pieces of equipment; shop repairs were made on 1,357 cars, and field repairs on 4,791. Light repairs were made on 1,305 other pieces of equipment, and heavy repairs on nine.

Division of Canal Transportation.

Forty-one ships made the passage of the Canal in August. Eleven vessels were measured and certificates were issued; four were in process of measurement at the end of the month. Thirteen vessels were examined to see if measurements conformed to The Panama Canal rules. Tolls collected amounted to \$88,401.80.

The Board of Local Inspectors inspected and certificated nine vessels. The appraisal of the floating equipment of The Panama Canal and Panama railroad was completed, and a report thereon was made. Seven licenses to chauffeurs were issued.

Ninety-three vessels arrived at Cristobal,

and 92 departed, the former being divided, as follows: American, 34; British, 42; German, four; Danish, one; Italian, one; Dutch, two; French, one; Spanish, one; Norwegian, five; Peruvian, one.

Fifty vessels arrived at Balboa, and 50 departed therefrom. The arrivals were: American, 27; British, 12; Peruvian, six; Panamanian, one; Chilean, two; Danish, two.

Supply Department.

FORCE AND QUARTERS.

The force report for the last Wednesday in August showed a total of 28,883 employees of The Panama Canal and Panama railroad, of whom 4,529 were white Americans, and 24,354 were laborers, chiefly West Indian negroes; the last number included 999 European laborers. The occupants of Government quarters numbered 7,476 white Americans, of whom 4,404 were men; 1,167 European laborers, of whom 1,052 were men; and 9,113 West Indian laborers, of whom 6,202 were men, a total of 17,756. The number of West Indians occupying Government quarters was about one-third of the total number employed. The total force was reduced approximately 1,000 men during August. The United Fruit Company has shut down most of its construction work in Central America, and many of the laborers recruited on the Isthmus for that work last fall are returning here; the result is that there is a large number of unemployed West Indians on the Isthmus, and many of them are suffering real hardship.

BUILDINGS.

The administrative offices were moved from Empire, and the timekeeping office from Culebra. All bachelors were moved out of Empire and the hotel was closed.

MATERIAL AND SUPPLIES.

The value of material received was \$774,023.28, approximately \$150,000 less than for the same month last year. Material came forward in 36 steamers, and the total weight of cargo, exclusive of lumber and piling, was 22,989 tons.

Accounting Department.

The cash balance in Canal construction appropriations on August 31 was \$20,991,776.50; fortification appropriations, \$5,220,871.33. The pay rolls for August, exclusive of the Panama railroad and fortifications, amounted to \$1,164,184.76, about \$27,000 less than for the previous month. The fortification pay roll was \$57,518.66. Payments were made by the Disbursing Clerk at Washington amounting to \$1,359,225.15; by the Paymaster on the Isthmus, \$1,622,394.14; and \$193,239.12 to the Panama railroad on account of collections for commissary books. Collections from Canal Zone and miscellaneous funds amounted to \$13,795.91, Canal Zone revenues; \$208,459.29, money order funds; \$239,880, postal savings funds, and \$8,283.28, Canal clubhouse funds.

Health Department.

No cases of yellow fever, smallpox, or plague originated on, or were brought to the Isthmus during the month. The health of employees continued very good. The number of names on the rolls for the preceding month was 44,132. Using this as a basis, the admissions to hospitals and quarters on account of illness, 1,352, give a rate of 367.62 per thousand per annum, as compared with 543.71 for August, 1913. The total of deaths from all causes was 24, twelve from disease, or 3.26

per thousand per annum, as compared with 4.31 for the corresponding month of 1913.

The admission rate to hospitals and death rate for disease for black employees were 128.06 and 2.90 per thousand, as compared with 358 and 5.26 for white employees. In August, for the first time, it was possible to separate the statistics for white Americans from those for white Europeans. On the basis of 5,178 American employees, and 1,660 European employees, the death rate for Americans was 6.95, while no Europeans died. The admission rate for Americans was 342.99, and for Europeans, 404.82. The admission rate for malaria was much higher among Europeans.

Executive Department.

Division of Civil Affairs—At the port of Cristobal, 52 vessels entered and 50 cleared, an unusually heavy business, due in part to the use of the new docks by vessels which formerly entered at Colon, and also to the opening of the Canal. At the port of Ancon, 40 vessels entered, and 40 cleared, also a marked increase over the business of previous months. There were 45 inspections of household goods packed for shipment to the United States, including in all 271 pieces of freight.

Thirteen estates were settled during the month, and on August 31, there were 53 estates in course of settlement. Cash received during the month amounted to \$3,348.70, and the total value of estates settled amounted to \$199.94.

One hundred and four licenses were issued during the month; of this number, 17 were for automobiles and motorcycles, 40 were for bicycles, and 47 for hunting and the keeping or carrying of firearms.

Postmasters remitted on account of stamp sales and postage due collections during the month, \$6,320.43. The money order business aggregated \$285,298.20, and fees on this business amounted to \$1,330.10. The postal savings deposits for the month were \$332,672, and the withdrawals \$145,829. There was a balance of postal savings funds on hand at the close of the month of \$771,881.

Police and prisons—Arrests made numbered 462, of whom 18 were females; deportations of criminal characters, four; committed to the penitentiary, six; discharged from penitentiary, seven; confined in penitentiary on August 31st, 67.

Fire protection—Eight fires occurred, with a loss of \$294 to the Government, and of \$10 to private parties.

Courts—In the District Courts, three civil, 25 criminal, and 33 probate cases were settled; seven civil, 24 criminal, and 24 probate cases were filed; 97 cases of all kinds were pending on August 31. In the Magistrates' Courts, 24 civil and 404 criminal cases were tried.

Panama Railroad.

Cargo handled at Colon and Cristobal amounted to approximately 88,000 tons, which includes 19,000 tons of cargo rehandled on account of car shortage. On account of the opening of the Canal, coal handling operations increased, and approximately 3,000 tons of coal were bunkered into ships. Five Panama railroad steamers arrived, carrying 471 first-class, and 28 steerage passengers; and seven departed carrying 761 first-class, and 173 steerage passengers.

At the Balboa agency, approximately 27,000 tons of cargo were handled from 27 ships

arriving, and the same amount for 28 ships departing.

The construction of pier No. 10 was completed, with the exception of dredging along the face of the pier, and the driving of about 50 fender piles. The work consisted of the laying of 915 square yards of brick pavement, raising the grade of the depressed tracks, and installing bumping posts. On pier No. 7, the preparation of contract drawings was continued during the month. Driving of trestle for false work was continued, and about 52 per cent of the total is in place. Wash drill soundings were started, and 24 holes were drilled. Work on the duct line was continued by the telephone and signal forces, and a total of 13.45 miles was completed on the transisthmian line proper, making the entire line about 91 per cent completed.

Respectfully submitted,

GEO. W. GOETHALS,
Governor.

Lease of Tank for Temporary Storage of Diesel Engine Oil.

A small oil tank situated on the Balboa dump has been rented to the local agency of W. R. Grace and Company, under a revocable license, for the temporary storage of about 3,000 barrels of Diesel engine oil, which will be discharged from the steamer *Cusco*, due to arrive at Balboa about October 7. This oil is to be redelivered within the next few weeks to a steamer, equipped with Diesel engines of the internal combustion type, belonging to the Johnson Line of Stockholm, Sweden, which will pass through the Canal on its way to San Francisco. The expense of installing pipe lines, etc., will be borne by the lessee. Although W. R. Grace and Company have an oil tank under erection on the Balboa reservation, it will not be ready for use for several weeks.

Additional Improvements at La Boca.

The improvement of Block A in the La Boca silver settlement, which includes the installation of water and sewer pipes, and the building of streets, curbs, and gutters, is practically completed. The work has been performed at a cost considerably below the estimate, and because of this and the further fact that the improvements can probably be made more cheaply now than later, authority has been given similarly to improve Block B, which adjoins Block A. Two blocks will thus be added to the silver townsite ready to be built on at any time it is desired.

OFFICIAL CIRCULARS.

Act of Congress—Sundry Civil Appropriation Act, 1915.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

CULEBRA, C. Z., August 14, 1914.

CIRCULAR No. 600-10:

The extracts quoted below from an Act of Congress are published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

AN ACT making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1915, and for other purposes.

1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, that the following sums be, and the same are hereby, appropriated, for the objects hereinafter expressed, for the fiscal year ending June 30, 1915, to-wit:

UNDER THE WAR DEPARTMENT.—NATIONAL CEMETERIES.

2. Disposition of remains of officers, soldiers, civilian employees, and so forth. For expenses of interment, or of preparation and transportation to their homes or to such national cemeteries as may be designated by proper authority, in the discretion of the Secretary of War, of the remains of officers, including acting assistant surgeons, and enlisted men of the Army active list; for the expenses of interment, or of preparation and transportation to their homes, of the remains of civil employees of the Army in the employ of the War Department who die abroad, inclusive of Alaska and the Canal Zone, Panama, or on Army transports, or who die while on duty in the field or at military posts within the limits of the United States; for the expenses of interment of military prisoners who die at military posts; for the expenses of removal of remains from abandoned posts to permanent military posts or national cemeteries, including the remains of Federal soldiers, sailors, or marines, interred in fields or abandoned private and city cemeteries; and in any case where the expenses of burial or shipment of the remains of officers or enlisted men of the Army who die on the active list are borne by individuals, where such expenses would have been lawful claims against the Government, reimbursement to such individuals may be made of the amount allowed by the Government for such services, to be paid out of the funds appropriated by this Act, but no reimbursement shall be made under this Act of such expenses incurred prior to July 1, 1910, \$57,500.

UNDER THE DEPARTMENT OF COMMERCE.—COAST AND GEODETIC SURVEY.

3. *Field expenses.* For surveys and necessary resurveys of the Atlantic and Gulf coasts of the United States, including the coasts of outlying islands under the jurisdiction of the United States; provided, that not more than \$25,000 of this amount shall be expended on the coasts of said outlying islands, and the Atlantic entrance to the Panama Canal, \$65,000.

PANAMA-PACIFIC INTERNATIONAL EXPOSITION.

4. *Building to install the Government exhibit at the Panama-Pacific International Exposition.* For the construction of a suitable building in that part of the reservation of the United States known as the Presidio of San

Francisco, State of California, in which the Government Exhibit Board, created by the sundry civil appropriation Act approved June 23, 1913, shall install, display, and safeguard the exhibit of the Government of the United States at the Panama-Pacific International Exposition, \$500,000; provided, that the said building shall be so located and planned and shall be of such a permanent character as will make it available and useful for military purposes of the United States after the close of the said exposition, and shall be on such general plan and design and in such location as shall be approved by the Secretary of War; provided further, that the said building shall be erected under the authority of the Secretary of War, by contract or otherwise, as he may direct; provided further, that not exceeding \$50,000, or so much thereof as may be necessary, may be expended from the appropriation made herein, on the approval and authority of the Secretary of War, for entertaining the officers and representatives of foreign governments who may attend and participate in the Panama-Pacific International Exposition in consequence of the invitation of the President of the United States, extended in pursuance of the authority of Congress.

5. The provisions contained in the Act entitled "An Act making appropriations for the sundry civil expenses of the Government for the fiscal year ending June 30, 1914," which provides for the participation of the United States in the Panama-Pacific International Exposition, be amended, as follows: Under the head of "To provide for the participation of the United States in the Panama-Pacific International Exposition," the paragraph on Page 81, which reads, as follows: "The President of the United States is authorized to detail three civilian officers or employees from the executive departments as members of a commission which is hereby constituted as the National Exposition Commission; one of said commissioners, who shall be the chairman of said commission, shall be detailed from the Department of State. Vacancies in said commission shall be filled in the same manner as original appointments. Each commissioner shall receive, in addition to his original compensation, his actual necessary traveling expenses and an allowance of \$10 per day in lieu of subsistence. Said commissioners may appoint a secretary at \$2,500 per annum, and the sum of \$15,000, or so much thereof as may be necessary, may be expended for clerical, office, and other necessary and actual expenses of said commission," and insert in lieu thereof the following: "The President of the United States is authorized to detail two civilian officers or employees from the executive departments, also one to be appointed from civil life, as members of the commission which is hereby constituted as the National Exposition Commission; one of said commissioners, who shall be the chairman of said commission, shall be detailed from the Department of State, the commissioner appointed from civil life to receive a salary at the rate of \$5,000 per annum until the exposition closes. Vacancies in said commission shall be filled in the same manner as original appointments. Each commissioner detailed as aforesaid shall receive, in addition to his original compensation, necessary traveling expenses and an allowance of \$10 per day in lieu of subsistence while on duty in San Francisco. Said commissioners may appoint a secretary at \$2,500 per annum, and the sum of \$15,000, or so much thereof as may be necessary, may be expended for clerk hire and actual expenses of said commission."

6. *Copyright and patent branch office, Panama-Pacific International Exposition.* To defray all the expenses connected with the establishment, equipment, and maintenance (including necessary printing) of the branch office at San Francisco, California, provided for in Section 2 of the Act approved September 18,

CLASSIFIED EXPENDITURES—THE PANAMA CANAL.

A statement of classified expenditures of The Panama Canal to June 30, 1914, follows:

PERIODS.	Department of Civil Administration.	Department of Law.	Department of Sanitation.	Department of Construction and Engineering.	General Items.	Fortifications.	Total
Total to June 30, 1909.....	3,427,090.29		9,673,539.28	69,622,561.42	78,022,606.10		160,745,797.09
Total—Fiscal year, 1910.....	769,351.37		1,803,040.95	26,300,167.05	2,863,088.83		31,675,648.20
Total—Fiscal year, 1911.....	755,079.44		1,717,792.62	27,477,776.19	3,097,959.72		33,048,607.97
Total—Fiscal year, 1912.....	820,398.57	24,729.16	1,620,391.12	28,897,738.10	2,819,926.53	1,212,881.66	35,396,065.14
Total—Fiscal year, 1913.....	681,389.06	20,253.11	1,435,400.96	33,017,852.99	1,063,322.52	1,901,475.86	38,119,694.50
July, 1913.....	61,472.81	1,597.91	121,487.47	2,138,540.39	237,534.13	131,333.71	2,691,966.42
August, 1913.....	57,950.95	1,469.10	112,862.29	2,299,554.75	244,860.32	150,364.19	2,867,001.60
September, 1913.....	63,469.40	1,835.57	106,731.16	2,276,467.78	242,779.94	149,735.89	2,841,019.74
October, 1913.....	66,063.85	1,502.47	107,280.12	2,154,953.40	413,883.08	147,589.32	2,891,272.24
November, 1913.....	58,728.48	1,387.60	85,696.96	1,774,974.81	160,575.73	113,307.35	2,194,670.93
December, 1913.....	63,433.93	1,781.65	91,197.00	1,787,820.21	136,525.07	174,216.04	2,254,973.90
January, 1914.....	69,525.61	1,835.50	86,263.15	2,188,791.94	155,386.12	163,495.83	2,670,298.15
February, 1914.....	68,084.57	1,229.37	89,936.86	1,937,064.36	170,676.88	173,784.79	2,441,776.83
March, 1914.....	70,083.76	1,488.29	54,735.28	2,212,862.73	318,230.02	162,791.71	2,820,209.79
April, 1914.....	72,562.60		101,841.17	2,030,705.66	220,211.74	1,714,528.66	4,139,849.83
May, 1914.....	65,553.24		91,383.57	2,340,858.71	163,030.52	216,379.74	2,877,295.78
June, 1914.....	52,997.45		*29,042.97	2,836,380.85	43,666.13	376,204.98	3,280,296.44
Grand total.....	7,163,235.38	60,109.73	17,270,494.90	211,295,071.34	90,374,263.38	6,793,089.73	332,956,264.55

*Denotes credit.

1913, (Public, Numbered Fourteen), \$50,000, of which sum \$15,000, or so much thereof as may be necessary, shall be expended under the direction of the Secretary of the Interior, and \$15,000, or so much thereof as may be necessary, shall be expended under the direction of the Librarian of Congress, each of whom is authorized to pay to the Public Printer the cost of any portion of such printing and binding required for the said branch office which may be ordered by him from the Government Printing Office; to designate from among the employees of the Patent Office and Copyright Office, respectively, such employees as may be actually necessary for the service of the respective divisions of the said branch office, one of the employees so designated from each of said bureaus to act as his disbursing officer; and to select and employ from time to time at San Francisco such additional persons as the exigencies of the work there may require. All persons from the Patent Office and Copyright Office thus designated for service at San Francisco shall receive no compensation other than their regular salaries, but while absent from Washington, District of Columbia, and engaged upon the business of the aforesaid branch office, shall be allowed their actual and necessary traveling expenses, together with a per diem allowance in lieu of the cost of subsistence, to be fixed by the Secretary of the Interior or Librarian of Congress designating such persons, not to exceed \$3 per day.

7. The Government Exhibit Board, for which provision was made in the sundry civil Act approved June 23, 1913, shall, after consultation by correspondence or otherwise with the heads of the executive departments and the Regents of the Smithsonian Institution, the Isthmian Canal Commission, the Interstate Commerce Commission, the Civil Service Commission, the Commissioners of the District of Columbia, the American National Red Cross, the Commission of Fine Arts, the Librarian of Congress, the Public Printer, the Governor of Porto Rico, the Governor of Alaska, the Governor of Hawaii, and the United States Geographic Board, determine the nature, character, and extent of the exhibits of the United States Government to be made at the Panama-Pacific International Exposition, to be held at San Francisco, California, in 1915, and shall be charged with the selection, purchase, preparation, safekeeping, exhibition, and return of such articles and materials as said board may decide shall be exhibited; and the said board is empowered to select, purchase, and exhibit articles or materials representing the activities of any department, office, commission, or organization named in this paragraph.

THE PANAMA CANAL.

8. To continue the construction of the Panama Canal, to be expended under the direction of the President, in accordance with an Act entitled "An Act to provide for the construction of a canal connecting the waters of the Atlantic and Pacific Oceans," approved June 28, 1912, and Acts amendatory thereof or supplementary thereto.

9. *First.* For salaries of officers and employees of The Panama Canal, including assistant purchasing and shipping agents, and all other employees in the United States, \$150,000.

10. *Second.* For incidental expenses, including rents, cable and telegraph service, supplies, stationery and printing, and actual necessary traveling expenses in the United States (including rent of offices in the District of Columbia not exceeding \$7,500, textbooks and books of reference, \$1,000, and additional compensation to the Auditor for the War Department for extra services in auditing accounts for The Panama Canal, \$1,000), \$62,000.

11. *Third.* For pay of the Governor of The Panama Canal and officers and employees on the Isthmus, other than skilled and unskilled labor, including civil engineers, superintendents, instrumentmen, transitmen, levelmen, rodmen, draftsmen, timekeepers, mechanical and electrical engineers, quartermasters, clerks, accountants, stenographers, storekeepers, messengers, office boys, foremen and subforemen, wagon masters, watchmen, and stewards, including those temporarily detailed for duty away from the Isthmus, in the departments of Construction and Engineering, Quartermaster's, Subsistence, Disbursements, and Examination of Accounts, and for those employed in connection with the preservation of plans, drawings, and other records, \$2,414,000.

12. *Fourth.* For skilled and unskilled labor on the Isthmus, including engineers, conductors, firemen, brakemen, electricians, teamsters, cranemen, machinists, blacksmiths, and other artisans, and their helpers; janitors, sailors, cooks, waiters, and dairy-men, for the departments of Construction and Engineering, Quartermaster's, Subsistence, Disbursements, and Examination of Accounts, \$7,000,000.

13. *Fifth.* For the purchase and delivery of material, supplies, and equipment, including cost of inspecting material and of paying traveling expenses incident thereto, whether on the Isthmus or else-

where; purchase, maintenance and repair of motor cars, firefighting apparatus, towing locomotives, and other motor propelled vehicles, and such other expenses not in the United States as the Governor deems necessary to best promote the construction of the Panama Canal, and such expenses as are incurred in assembling, sorting, storing, repairing, and selling materials, supplies, and equipment heretofore or hereafter purchased or acquired for the construction of the Panama Canal, which are unserviceable or no longer needed, including the amount necessary to continue the construction of the two colliers provided for under the Act approved June 23, 1913, subject to the limit of cost therein fixed, and including the payment of damages caused to the owners of private lands, or private property of any kind, by reason of the grants contained in the Treaty between the United States and the Republic of Panama proclaimed February 26, 1904, or by reason of the operations of the United States, its agents, or employees, or by reason of the construction, maintenance, operation, sanitation, and protection of the said Canal or of the works of sanitation and protection therein provided for, whether compromised by agreement between the claimant and the Chairman of the Commission or allowed by a joint commission, and the payment for land and land under water as authorized in Section 3 of The Panama Canal Act, for the departments of Construction and Engineering, Quartermaster's, Subsistence, Disbursements, and Examination of Accounts, and including also payment to the Wheeling Mold and Foundry Company of Wheeling, West Virginia, of the sum of \$9,076.21, to carry into effect an equitable settlement with that company which could not be made by reason of the ruling of the Comptroller of the Treasury, this sum having been deducted as liquidated damages on the various contracts and being in excess of the actual damages to the Commission, \$9,000,000.

14. *Sixth.* For miscellaneous expenditures, cable and telegraph service, stationery and printing, local railway transportation, special trains, including pay train service; transportation of currency to the Isthmus, recruiting and transporting laborers, transporting employees from the United States, repatriating laborers and employees, actual necessary traveling expenses while on the Isthmus on official business; expenses incident to conducting hearings and examining estimates for appropriations on the Isthmus, and a 10 per cent incidental and contingent expenses not otherwise provided for, for the departments of Construction and Engineering, Quartermaster's, Subsistence, Disbursements, and Examination of Accounts, \$725,000.

15. *Seventh.* For pay of officers and employees of the department of Civil Administration, including foremen, subforemen, skilled and unskilled labor watchmen, messengers and storekeepers, of the departments of Civil Administration and Law, including those necessarily and temporarily detailed for duty away from the Isthmus, and for expenses of the official representation of Congress attending the formal opening of the Canal, \$500,000.

16. *Eighth.* For the operation, maintenance, and extension of water works, sewers, and pavements in the cities of Panama and Colon, during the fiscal year 1915, the necessary portion of such sums as shall be paid as water rentals or directly by the Government of Panama for such expenses.

17. *Ninth.* For material, supplies, equipment, construction and repairs of buildings, and contingent expenses of the departments of Civil Administration and Law, including not exceeding \$500 for law books, \$12,000.

18. *Tenth.* For pay of the officers and employees other than skilled and unskilled labor, including hospital dispensers, internes, nurses, attendants, messengers, office boys, foremen, and subforemen, watchmen, and stewards, of the Department of Sanitation on the Isthmus, including those temporarily detailed for duty away from the Isthmus, \$300,000.

19. *Eleventh.* For skilled and unskilled labor of every grade and kind, for the Department of Sanitation on the Isthmus, \$120,000.

20. *Twelfth.* For material, supplies, equipment, construction and repairs of buildings, medical aid and support of the insane and of indigent persons permanently disabled, while in line of duty and in the employ of The Panama Canal, from earning a livelihood, and contingent expenses of the Department of Sanitation on the Isthmus, including not exceeding \$75,000 for removal of quarantine station from Culebra Island to the vicinity of Balboa, and for converting the hospital at Colon into a quarantine station, and for new equipment for both, \$375,000.

21. The foregoing sums, so far as necessary, shall be available for the operation of the Canal, for the permanent organization authorized to be established under The Panama Canal Act, for dry docks, repair shops, yards, docks, wharves, warehouses, storehouses, and other necessary facilities and appurtenances, including the collection of tolls, for the purpose of pro-

viding coal and other materials, labor, repairs, and supplies, for office buildings, quarters, and other necessary buildings, for the payment of claims arising out of injuries or deaths of employees; and for the consolidation and preservation of the files of papers and other records which have accumulated or may accumulate during the construction of the Canal and needed or useful or having a permanent value or historical interest.

22. In all, \$20,718,000, the same to be immediately available and to continue available until expended; provided, that all expenditures from the appropriations heretofore, herein, and hereafter made for the construction of the Panama Canal, including any portion of such appropriations which may be used for the construction of dry docks, repair shops, yards, docks, wharves, warehouses, storehouses, and other necessary facilities and appurtenances; for the purpose of providing coal and other materials, labor, repairs, and supplies; for the construction of office buildings and quarters, and other necessary buildings, exclusive of fortifications and colliers, and exclusive of the amount used for operating and maintaining the Canal; and for the permanent organization after the Canal is opened for use and operation, may be paid from or reimbursed to the Treasury of the United States out of the proceeds of the sale of bonds authorized in Section 8 of the said Act approved June 28, 1902, and Section 39 of the Tariff Act approved August 5, 1909.

23. Except in cases of emergency, or conditions arising subsequent to and unforeseen at the time of submitting the annual estimates to Congress; and except for those employed in connection with the construction of permanent quarters, offices and other necessary buildings, dry docks, repair shops, yards, docks, wharves, warehouses, storehouses, and other necessary facilities and appurtenances, for the purpose of providing coal and other materials, labor, repairs, and supplies; and except for the permanent operating organization under which the compensation of the various positions is limited by Section 4 of The Panama Canal Act, there shall not be employed at any time during the fiscal year 1915 under any of the foregoing appropriations for The Panama Canal, any greater number of persons than are specified in the notes submitted respectively in connection with the estimates for each of said appropriations in the annual Book of Estimates for said year, nor shall there be paid to any of such persons during that fiscal year any greater rate of compensation than was authorized to be paid to persons occupying the same or like positions on the first day of July, 1913; and all employments made or compensation increased because of emergencies or conditions so arising shall be specifically set forth, with the reasons therefor, by the Governor in his report for the fiscal year 1915.

24. In cases of emergencies arising subsequent to and unforeseen at the time of submitting the annual estimates to Congress, 10 per centum of the foregoing amounts shall be available interchangeably for expenditure on objects named, but not more than 10 per centum shall be added to any one item of the appropriation.

FORTIFICATIONS, PANAMA CANAL.

25. For the following for fortifications and armament thereof for the Panama Canal, to be immediately available and to continue available until expended, namely:

26. *Electric light and power plants:* For the purchase and installation of electric light and power plants for the seacoast fortifications on the Canal Zone, \$33,550.

27. *For buildings and material.*

(a) *Toro Point*—One concrete storehouse, \$5,000; 10 buildings, at \$900 each, \$9,000.

(b) *Miraflores or Gatun*—One storehouse, \$5,000;

(c) *Obstacles*—Two thousand five hundred coils of barbed wire, at \$3 each, \$7,500; 2,500 pounds of staples, at \$0.03, \$75.

(d) *Telephone line*—Twenty-two miles, at \$1,400 per mile, \$30,800. In all \$57,375.

28. *For maintenance of clearings and trails:*

Clearings, 4,370 acres, \$21,000; trails, 70 miles; \$900. In all, \$21,900.

29. For the purchase, manufacture, and test of ammunition for seacoast and land defense cannon, including the necessary experiments in connection therewith, and the machinery necessary for its manufacture at the arsenals, \$233,000; provided, that the Chief of Ordnance, United States Army, is authorized to enter into contracts or otherwise incur obligations for the purposes abovementioned not to exceed \$500,000, in addition to the appropriation herein made.

30. For the alteration, maintenance, and installation of the seacoast artillery, including the purchase and manufacture of machinery, tools, and materials necessary for the work, and expenses of civilian mechanics, and extra-duty pay of enlisted men engaged thereon, \$26,000.

31. For alteration, maintenance, and repair of submarine mine material, \$2,700.

32. *Fire control:* For the construction of fire control

stations and the purchase and installation of accessories therefor, \$50,000.

33. For construction on the Panama Canal Zone of barracks, quarters, storehouses, and other buildings necessary for accommodating the mobile army and Coast Artillery troops to be stationed there, including water, sewer, and lighting systems, roads, walks, and so forth; and for repairing and remodeling existing buildings to render them suitable for sheltering troops, \$700,000.

34. In all, specifically for fortifications and armament thereof for the Panama Canal, \$1,124,475.

35. Section 2. That all funds collected by the Government of the Canal Zone from rentals of public lands and buildings in the Canal Zone and the cities of Panama and Colon, and from the Zone postal service, and from court fees and fines, and collected or raised by taxation in whatever form under the laws of the Government of the Canal Zone, are hereby appropriated until and including June 30, 1915, as follows: The revenues derived from the postal service to the maintenance of that service; the remaining revenues, including any balances unexpended in prior years, after setting aside a miscellaneous and contingent fund of not exceeding \$10,000, to the maintenance of the public school system in the Zone; to the construction and maintenance of public improvements within the Zone; to the maintenance of the administrative districts, and for the expenses of the subdivisions of the Canal Zone after they are established under Section 7 of The Panama Canal Act; to the maintenance of Canal Zone charity patients in the hospitals of The Panama Canal, and to the maintenance of administrative district prisoners; provided, that, if the revenues of the Canal Zone Government are not sufficient for the purposes herein specified, the necessary part of the amounts appropriated for the departments of Civil Administration and Law, under Items 7 and 9, may be used therefor. A detailed and classified statement of all receipts and expenditures, without the duplication of items, under this paragraph, shall be submitted to Congress after the close of the fiscal year 1915.

36. Section 3. That during the fiscal year 1915, all moneys received by the Governor of The Panama Canal from any services rendered or materials and supplies furnished to employees of the United States or of the Panama Railroad Company, to the Panama Railroad Company, to the Canal Zone Government, to the Panama Government, and to other departments of the United States Government, from hotel and hospital supplies and services; from rentals, wharfage, and so forth; from labor, materials, and supplies and other services furnished to vessels and to those unable to obtain similar labor, materials, supplies, and services elsewhere; from the sale of scrap and other byproducts of manufacturing and shop operations; from the sale of obsolete and unserviceable material, supplies, and equipment purchased or acquired for the operation, maintenance, protection, sanitation, and government of the Canal and Canal Zone; and from exchanges of typewriting, adding, and other machines, shall be credited to the appropriation from which payments for the materials, supplies, labor, or other services were originally made. Moneys heretofore or hereafter received from the sale of material, supplies, and equipment purchased or acquired for the construction of the Panama Canal, after deducting all expenses of assembling, sorting, storing, repairing, and selling such material, supplies, and equipment, which deductions shall be credited to the appropriations from which such expenses are paid, and the moneys received as a reimbursement for the expenditures incurred in constructing water works, sewers, and pavements in the cities of Panama and Colon, including interest on such expenditures, excluding payments on account of the expenses for maintenance of such water works, sewers, and pavements incurred under agreement with the Panama Government, and otherwise herein disposed of, shall be covered into the Treasury as miscellaneous receipts. After the Canal is opened for use and operation, the net profits accruing during the fiscal year 1915 from the operations herein authorized shall be covered into the Treasury of the United States, as provided for the profits accruing from the business authorized in Section 6 of The Panama Canal Act.

37. Section 4. That the consolidation of the functions of receiving, disbursing, and accounting for the funds of the Canal Zone Government and the Panama railroad operations on the Isthmus with the functions of receiving, disbursing, and accounting for the funds appropriated for The Panama Canal shall be and is hereby authorized in so far as may be practicable; provided, that separate accounts shall be kept of the transactions under each fund.

38. Section 5. That the collecting officers of The Panama Canal shall render their accounts in such detail, and shall transmit with their accounts to the accounting officers of the Treasury charged with the settlement thereof, all such papers, records, and copies relating to their transactions as collectors as shall be

prescribed in regulations approved by the President, and, in his judgment, not incompatible with the methods of accounting prescribed in the so-called Dockery Act approved July 31, 1894.

39. Section 6. That for the fiscal year 1916, and annually thereafter, the estimates of appropriations for The Panama Canal shall be submitted in detail, showing the amounts required for personal services, and the amounts required for material, including all supplies, under the heads of construction, maintenance, operation, sanitation, and civil government, and following each there shall be submitted notes giving in parallel columns information which will show the number, by grade or classes, of officers, employees, and skilled and unskilled laborers proposed to be paid under each of said appropriations for the ensuing fiscal year and those paid at the close of the fiscal year next preceding the period when said estimates are prepared and submitted, also, in connection with each item for material and miscellaneous purposes other than salaries or pay for personal services, the amounts actually expended or obligated, quantities purchased, and prices paid for material or supplies during the entire fiscal year next preceding the preparation and submission of said estimates.

40. There shall also be submitted in connection with the foregoing information, statements of actual unit cost of all construction work done, and of estimated unit cost of work proposed to be done for the fiscal years included in the notes so required to be submitted with the annual estimates.

41. Section 7. That the appropriations herein made for The Panama Canal, other than those for fortifications, or balances thereof, may be available, during the last half of the fiscal year 1915, for expenditure for the purposes indicated by the several titles enumerated in the foregoing section, namely, construction, maintenance, operation, sanitation, and civil government, and be accounted for at the end of that year in such detail or classification, respectively, thereunder, as may be determined by the Governor of The Panama Canal, or hereafter required by Congress, and such balances may, on or after January 1, 1915, constitute one fund for expenditure under said respective titles.

42. Section 8. That until the close of the fiscal year 1915, when any material, supplies, and equipment heretofore or hereafter purchased or acquired for the construction of the Panama Canal, is no longer needed, or is no longer serviceable, it may be sold in such manner as the President may direct, and without advertising in such classes of cases as may be authorized by him.

43. Section 9. Appropriations herein for printing and binding shall not be used for any annual report or the accompanying documents unless the head of each executive department, or other branch of the public service, or the Commissioners of the District of Columbia making such a report, shall furnish copy to the Public Printer in the following manner: Copies of the documents accompanying such annual reports on or before the 15th day of October of each year, copies of the annual reports on or before the 1st day of November of each year, and complete revised proofs of the accompanying documents and the annual reports on the 10th and 20th days of November of each year, respectively. The provisions of this section shall not apply to the annual reports of the Smithsonian Institution.

44. Section 10. That Section 6 of the sundry civil appropriation Act approved August 24, 1912, is amended to read, as follows:

Section 6. That there shall be submitted hereafter, in the annual Book of Estimates, following every estimate for a general or lump sum appropriation, except public building or other public works constructed under contract, a statement showing in parallel columns:

First, the number of persons, if any, intended to be employed, and the rates of compensation of each, and the amounts contemplated to be expended for each of any other objects or classes of expenditures specified or contemplated in the estimate, including a statement of estimated unit cost of any construction work proposed to be done; and

Second, the number of persons, if any, employed, and the rate of compensation paid each, and the amounts expended for each other object or class of expenditure, and the actual unit cost of any construction work done, out of the appropriation corresponding to the estimate so submitted, during the complete fiscal year next preceding the period for which the estimate is submitted.

Other notes shall not be submitted following any estimate embraced in the annual Book of Estimates other than such as shall suggest changes in form or order of arrangement of estimates and appropriations and reasons for such changes.

45. Section 11. That no part of any money appropriated by this Act shall be used during the fiscal year 1915 for the purchase of any typewriting machine at a price in excess of the lowest price paid by the Government of the United States for the same make and substantially the same model of machine during

the period of the fiscal years 1913 and 1914; such price shall include the value of any typewriting machine or machines given in exchange, but shall not apply to special prices granted on typewriting machines used in schools of the District of Columbia or of the Indian Service.

46. Section 12. That it shall not be lawful hereafter to pay to any person, employed in the service of the United States under any general or lump sum appropriation, any sum additional to the regular compensation received for or attached to any employment held prior to an appointment or designation as acting for or instead of an occupant of any other office or employment. This provision shall not be construed as prohibiting regular and permanent appointments by promotion from lower to higher grades of employments.

47. Section 13. That the heads of executive departments and other Government establishments are authorized to prescribe per diem rates of allowance not exceeding \$4 in lieu of subsistence to persons engaged in field work or traveling on official business outside of the District of Columbia and away from their designated posts of duty, when not otherwise fixed by law. For the fiscal year 1916, and annually thereafter, estimates of appropriations from which per diem allowances are to be paid shall specifically state the rates of such allowances.

48. Section 14. That all sums appropriated by this Act for salaries of officers and employees of the Government shall be in full for such salaries for the fiscal year 1915, and all laws or parts of laws to the extent they are in conflict with the provisions of this Act are repealed.

Approved August 1, 1914.

Passes to Military Reservations.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., September 21, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

Attention is invited to the fact that passes to military reservations for employees in the performance of their duties, should be requested in writing by the head of the employee's department or division.

GEO. W. GOETHALS,

Governor.

Notice to Mariners—Range Lights, Gatun Lake.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., September 8, 1914.

CIRCULAR No. 643-6:

Owing to the absence of night traffic in the Gatun Lake section, all of the gas lighted ranges from Gatun Locks to Gamboa will be extinguished on or about September 12, 1914, until further orders. This does not apply to the electric range at Gatun Locks for northbound vessels, to the electric range for southbound vessels, to the sections from Atlantic and Pacific ends to Gatun and Miraflores Locks, respectively, nor to any of the gas buoys or beacons.

GEO. W. GOETHALS,

Governor.

Accountable Officials.

THE PANAMA CANAL,

ACCOUNTING DEPARTMENT,

BALBOA HEIGHTS, C. Z., September 21, 1914.

CIRCULAR No. 71:

Effective at once, Maj. Wm. R. Grove is designated an accountable official of The Panama Canal and the Panama railroad, vice Capt. F. O. Whitlock.

Approved:

GEO. W. GOETHALS, Auditor, Panama Canal.

Governor.

THE PANAMA CANAL,

ACCOUNTING DEPARTMENT,

BALBOA HEIGHTS, C. Z., September 21, 1914.

CIRCULAR No. 72:

Effective at once, Mr. Benj. L. Jacobson, Depot Commissary, is designated an accountable official of the Panama railroad.

Approved:

GEO. W. GOETHALS, Auditor, Panama Canal.

Governor.

Increased Pay for Substituting Prohibited.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

CULEBRA, C. Z., August 28, 1914.

CIRCULAR No. 603-4:

1. The Sundry Civil Appropriation Act, approved August 1, 1914, contains the following clause:

Section 12. That it shall not be lawful hereafter to pay to any person, employed in the service of the United States under any general or lump sum appropriation, any sum additional to the regular

compensation received for or attached to any employment held prior to an appointment or designation as acting for or instead of an occupant of any other office or employment. This provision shall not be construed as prohibiting regular and permanent appointments by promotion from lower to higher grades of employment.

2. Section 16-e of Circular 603, issued April 1, 1914, is rendered null by this provision.

GEO. W. GOETHALS,
Governor.

Information Desired Concerning Transits and Levels.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 23, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS:

It is requested that statement be furnished to the surveying officer with as little delay as practicable, showing the following information with reference to transits and levels:

Number on hand (kind and make).
Present condition of instruments on hand.
Number actually required for present use.
Surplus instruments on hand, if any.
Will additional instruments be required at a later date, and if so, when and what class?
When is it expected that instruments now in use can be released?

GEO. W. GOETHALS,
Governor, The Panama Canal,
President, Panama Railroad Company.

Transportation For Employees Whose Services are Terminated.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 26, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS:

Hereafter, when notifying an employee that his services are to be terminated, he should be instructed to make application immediately for steamship transportation, if he intends to leave the Isthmus, indicating the boat and date upon which he desires to sail. Upon receipt of this information, transportation request will be issued immediately and reservation arranged by this office. If the employee fails to purchase his ticket within four days from the date transportation request is issued, reservation will be canceled. Transportation requests must be delivered to employee promptly, and the fact that they must purchase tickets within four days, in order to hold the reservation, should be impressed upon them.

The above refers only to employees whose services are to be terminated.

GEO. W. GOETHALS,
Governor, The Panama Canal,
President, Panama Railroad Company.

Care of Official Records.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 24, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS:

There seems to be some misunderstanding regarding the care and manner of keeping official records after they have served their current use. In several instances lately, records have been shifted from one place of storage to another, until they have become disarranged, so that they were practically inaccessible or had lost their identity.

Such laxity is inexcusable. If records have no permanent or historical value, they should be recommended for destruction on the form prescribed therefor, but under no circumstances should they be transferred from one division to another, nor placed in storage away from the office to which they belong, without authority from this office.

This is also applicable to records in the Administration Building, which in some instances heretofore, have been indiscriminately placed in the basement for storage, without first arranging with the Record Bureau to receive them, in order that proper storage space should be allotted.

GEO. W. GOETHALS,
Governor.

Accidents and Errors in Work for Other Divisions.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 25, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS:

Objections have been raised by some departments and divisions to being charged for accidents and errors which have occurred while work was being done for them by another department or division. Faulty castings made by the Mechanical Division, and other errors, are billed back to that division and taken up by them in their overhead accounts, which are eventually prorated to the work done. However, the construction divisions have no similar method of disposing of ex-

penses in connection with accidents, etc., which may occur while they are performing work for other divisions. As it is assumed that the same care is exercised by a division in doing work for another as it would exercise in work of its own, I desire that expenditures in connection with work of this character be charged to the work being performed.

GEO. W. GOETHALS,
Governor.

Services of Stenographers After Hours.

THE PANAMA CANAL,
OFFICE OF EXECUTIVE SECRETARY,
BALBOA HEIGHTS, C. Z., September 24, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS IN THE ADMINISTRATION BUILDING:

Officials in the building requiring the services of stenographers after regular office hours, or at night, are requested to notify the clerk in charge of the Correspondence Bureau prior to 5 p. m., when such services are required.

Requests for services of this character should be limited to emergency work and not be made habitually.

Stenographers will be assigned to this duty in the order in which their names appear upon a special roster, arranged alphabetically, which will be kept for this purpose. Any stenographer who has worked three or more hours of overtime after 5 p. m. since his name was last reached on the roster will not again be called. Report overtime worked to Mr. Luedtke.

Approved:
GEO. W. GOETHALS,
Governor.

Messenger Service in Administration Building.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 29, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS:

Two messengers are today being located at each of the six annunciator stations in the building, and will be available for general messenger service from now on. In assigning messengers to the various stations an effort has been made to place at each station one who are most familiar with the work of the departments and divisions to be served by the station.

A messenger force to collect and distribute papers will be established in a few days, or as soon as arrangements have been completed for the new mailing division which will serve the entire building, full details of which will be furnished at a later date.

By direction of the Governor.

C. A. McILVAINE,
Executive Secretary.

Superintendent Clubhouses and Playgrounds.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, September 26, 1914.
To all concerned—Effective September 26, Mr. F. M. M. Richardson is appointed Superintendent of Clubs and Playgrounds, vice Mr. A. B. Dickson, resigned.

C. A. McILVAINE,
Executive Secretary.

Stationery Storeroom.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 22, 1914.
CIRCULAR No. 198:

To heads of departments and divisions—A stationery storeroom is being installed in the basement of the new Administration Building, Balboa Heights, in which will be carried a general line of stationery supplies, as well as all special forms in use by the various departments.

It is expected that all stationery forms, pencils, inks, blueprint paper, etc., as well as small items of nonexpendable property, will be procured from this storeroom. All stationery supplies, or material of the character abovementioned, which is in excess of your September requirements, and which is now in your possession, should be turned into this storeroom at once for reissue.

In ordering supplies, use shall be made of foremen's order books, expendable and nonexpendable property being ordered on their respective forms. There is now a considerable stock of stationery on hand, which has already been expended, and for the balance of the month no foreman's order will be required for this material, but for new stock received during the current month, you will be required to execute a foreman's order. With a view to reduce the number of orders to a minimum, and yet conform to the purpose for which the storeroom was established, you are requested to anticipate your requirements for a period of 10 days,

or two weeks, but in any event to confine your orders to original units or packages in so far as is consistent with economy and efficiency. In the case of special forms, used exclusively by one department or division, they will be requisitioned by the storekeeper and carried in stock by him, but upon receipt of the material, foreman's order for the entire amount may be drawn by the department or division for which the forms were ordered, but only such quantity will be withdrawn for use as will answer a 30-day period at most, the remainder to be kept in the storehouse and obtained as requirements demand. This class of supplies will be withdrawn on memoranda receipts, and not on foreman's orders. General stock items will be ordered by the storekeeper on such quantities as deemed necessary and issued to all departments and divisions.

Heads of departments and divisions will designate such person or persons as they desire to sign foreman's orders for stationery, and who may be called upon to submit a complete list of the material, forms, supplies, etc., used by this particular division, as well as an approximate estimate of the consumption of same for a three months' period. Departments using draft material should anticipate their requirements at as early date as possible, as much of this material must be ordered from the United States.

R. E. WOOD,
Chief Quartermaster.

Postal Savings System Abolished.

BALBOA HEIGHTS, C. Z., September 24, 1914.
CIRCULAR No. 251:

To all postmasters—You are advised that the Executive Order of September 8, 1911, establishing the postal savings system in the Canal Zone has been repealed by a second Executive Order signed by the President September 5, 1914, to be effective from and after October 1, 1914.

Therefore, from and after the abovementioned date, Canal Zone postmasters will receive no more deposits in the postal savings bank. All accounts opened in accordance with the order of September 8, 1911, and remaining open on October 1, 1914, shall continue as prescribed in said order and by the regulations adopted by the board of trustees, until they are finally closed by the withdrawal of all deposits.

Effective October 1, 1914, all postmasters will discontinue sending to this office the daily postal savings statement. The regular weekly statement showing postal savings certificates paid, will be made to the Auditor until all accounts are closed. Withdrawals from the postal savings deposits may be met by the transfer of funds from the money order accounts in the regular manner, or upon request this office will have funds furnished by the Collector.

At the close of business September 30, 1914, postmasters will return by registered mail to the Collector of The Panama Canal at Balboa Heights, all unused postal savings certificates remaining on hand accompanied by a list showing number of each series and total value. Copies of this list will also be sent to the Auditor and to the Director of Posts.

JOHN K. BAXTER,
Director of Posts.

Deposit Money Orders.

THE PANAMA CANAL,
OFFICE OF DIRECTOR OF POSTS,
BALBOA HEIGHTS, C. Z., September 24, 1914.
CIRCULAR No. 252:

To all postmasters—In accordance with an Executive Order signed by the President, September 5, 1914, for the accommodation of persons desiring to deposit their savings in the post-offices of the Canal Zone, money orders may be issued in the Canal Zone payable to the purchaser at the office of issue, for which no fee will be charged.

This order was made effective from and after October 1, 1914.

DEPOSITORY OFFICES.

Section I.

1. All money order post-offices in the Canal Zone are designated as postal savings depository offices.

DEPOSITORS.

Section II.

1. Deposits may be made by any person of the age of 10 years, or over, in his or her own name, and by a married woman in her own name and free from any control or interference by her husband.

2. Deposits must be made by depositor in person; deposits will not be received in the name of any corporation, association, society, firm, or partnership, or in the name of two or more persons jointly.

3. Except when otherwise authorized by the Director of Posts, deposits will be accepted only from a person who is a resident of the Canal Zone, or who is an employee of The Panama Canal or the Panama Railroad Company.

DEPOSITS.

Section III.

1. Postal savings deposits will be evidenced by non-

transferable and nonnegotiable money orders to be issued without the payment of a fee in even denominations of \$5 and multiples thereof, payable only at the office of issue.

2. All applications for deposit money orders, the original orders and their corresponding advices, will be stamped across the face by the issuing clerk with the special rubber stamp "Postal savings, nontransferable." This should be done before the issue of the money order. Employees will be required to place their metal check numbers on all applications for deposit money orders.

3. The advices of deposit money orders will be placed in a special file until they are paid, when they will be stamped with the date of payment and transferred to the regular file of "Paid" money order advices.

4. Postmasters must issue the smallest possible number of money orders on account of a single deposit.

5. A single deposit money order cannot be issued for more than \$100.

6. Deposit money orders are valid until paid.

7. Whenever necessary, postmasters will require a depositor to place on the back of the corresponding advice of a deposit money order, his signature, metal check number, age, nationality, or other data for proper identification.

WITHDRAWAL OF DEPOSITS.

Section IV.

1. Deposit money orders will be paid out of the daily money order receipts at post-offices. The rules governing the payment of ordinary money orders, not in conflict with these regulations, will also apply to the payment of deposit money orders.

2. The amount of reserve which postmasters are authorized to keep on hand shall be fixed by the Director of Posts, with the approval of the Executive Secretary, and any person desiring to withdraw large sums should notify the postmaster of the depository office at least three days in advance.

3. When a postmaster is unable to meet the payment of money orders presented at his office, he will make application to the Director of Posts for the amount necessary, and the funds will be forwarded to him by the Collector of The Panama Canal.

4. Payment of deposit money orders may be made by a Collector's check, when an employee is going on leave or has resigned, on request to the Director of Posts from the post-office where the deposit was made. A Collector's check will not be issued for funds that have been on deposit less than 30 days. A depositor is also entitled to apply for and receive one Collector's check for not less than \$100, not oftener than once in three months.

5. In case of the death of a depositor, money orders to his favor will be paid to the duly authorized executor or administrator at his estate upon authority of the Director of Posts.

ACCOUNTS.

Section V.

1. Postmasters will carry as a separate memorandum in their money order cash books the amount of deposit money orders issued each day, and also report same in the first column of their daily money order statement (Form 6019-a) to the Director of Posts. The total amount of deposit money orders issued for each semimonthly period will also be reported as a separate item on the recapitulation sheet of the regular money order statement to the Auditor. This item will be placed under "International issues," which should be changed to read "Deposit issues."

2. The money order account will not be changed in any way by reporting the amount of deposit money orders as a separate item, as this is intended to be only a record of the amount of deposit money orders issued. Both deposit and regularly issued money orders will be included in the total amount of money orders issued in both the daily cash book and the semimonthly statement to the Auditor.

3. When listing deposit money orders on the semimonthly statement to the Auditor, postmasters will mark in the first space of the column for fees the letter D to indicate the issue of a deposit order.

4. Postmasters will list paid deposit money orders on a separate sheet of their semimonthly statements to the Auditor. The total amount of deposit money orders paid for each semimonthly period will be placed on the recapitulation sheet of the regular money order statement to the Auditor under "International paid," which should be changed to read "Deposit paid." This will not change the total amount of money orders paid for the period, which should include both deposit and regular money orders.

When transacting deposit money order business, postmasters will be governed by all rules and regulations of the money order system now in force that do

not conflict with the instructions of this circular and are applicable to local conditions.

JOHN K. BAXTER,
Director of Posts.

Panama Railroad Correspondence.

THE PANAMA CANAL,
THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
COLON, R. P., September 24, 1914.

CIRCULAR No. 450:

To all concerned—Referring to my circular No. 448, September 23, advising that October 1, 1914, the freight and passenger department will be abolished.

On and after that date all loss and damage and overcharge claims, and correspondence pertaining thereto, will be addressed to the Local Auditor.

All correspondence pertaining to personal injury claims should be addressed to the Superintendent.

C. H. MOTSETT,
Superintendent.

Sightseeing Trips of the "Louise" through Culebra Cut Discontinued.

THE PANAMA CANAL,
THE PANAMA RAILROAD COMPANY,
COLON, R. P., September 23, 1914.

CIRCULAR No. 449:

All concerned—On and after September 27, the sightseeing and pleasure trips made by the motor boat Louise through Culebra Cut will be discontinued. Agents will see that all literature advertising this service in their possession, or posted at stations, is destroyed.

C. H. MOTSETT,
Superintendent.

Examination by Board of Local Inspectors.

BOARD OF LOCAL INSPECTORS,
BALBOA HEIGHTS, September 28, 1914.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 308, on Wednesday, October 7, 1914, beginning promptly at 2 p. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability to properly operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m. at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m. at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m.; and at Balboa, at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

By direction of the chairman of the board.

W. H. HYDE,
Clerk, Board of Local Inspectors.

New Pay Car Schedule.

THE PANAMA CANAL,
OFFICE OF THE PAYMASTER,
BALBOA HEIGHTS, C. Z., September 29, 1914.

The Panama Canal pay car will travel on the 9th, 10th and 11th of October, and on the same days thereafter, until further notice, using the following approximate schedule:

9TH.

From Colon to Margarita fortifications, Coco Solo breakwater, scrap yard, Mount Hope depot, dry dock shops and new coaling station.

10TH.

From Panama—Naos Island, 7 to 7.30. Breakwater dumps, 7.35 to 7.50. Balboa yard office, 7.55 to 8.10. Permanent buildings (north of Balboa commissary), 8.10 to 8.45. Balboa shops (beginning at machine shop), 9 to 10.30. Gangs from Big Tree to Panama, 10.35 to 11.05. Panama yards for lunch. Dry dock, east side, 12.50 to 1.10. Foundry, 1.12 to 1.30. New pier, 1.45 to 2. Balboa material and lumber yard, 2 to 2.20. Corozal, 2.30 to 3. Miraflores Locks, 3.20 to 4.20. Return to Panama.

11TH.

From Panama—Pedro Miguel, 6.40 to 7.05. Paraiso

shops, 7.12 to 7.50. Culebra, 8 to 8.20. Empire, 8.23 to 8.40. Las Casca's, 8.43 to 8.48. Gamboa bridge, 10 to 10.15. Radio station, 10.25 to 11.40. Gatun, 11.20 to 1. Miraflores Hill, 2.30 to 3. Miraflores transformer house, 3.20 to 3.40. Return to Panama.

The pay office at the new building is prepared to pay all time vouchers and gold and silver tickets of employees working in and around the new building, but will not be prepared to make heavy silver payments until the new vaults are ready to store silver, about the middle of October. Employees, especially silver men, not located at the new building should wait for the pay car, or go to the Ancon office until the middle of October.

JOHN H. McLEAN,
Paymaster.

Proposals for Construction of Railroad Station at Balboa Heights.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER,

Sealed proposals will be received at the office of the Chief Quartermaster, Panama Canal, Balboa Heights, C. Z., for the erection, by contract, of the new Panama railroad station at Balboa Heights. Bids will be received until 3 p. m., October 17, 1914, when they will be opened in the office of the Chief Quartermaster.

The buildings are to be constructed of concrete blocks and stucco, with reinforced concrete foundations and umbrella shed. The Panama Canal will furnish all material on cars at the site of the work, and the contractor will be required to furnish all labor. Plans and specifications may be obtained at the office of the Chief Quartermaster, Balboa Heights. A deposit of \$15 will be required to insure their return.

Each bidder must accompany his proposal with a certified check, cash, or money order for 10 per cent of the amount bid, as a guarantee of his acceptance of the contract.

Bids should be marked "Proposal for Panama railroad station."

The Panama Canal reserves the right to reject any or all bids.
R. E. WOOD,
Chief Quartermaster.

Sale of Old French House Boat.

OFFICE OF CHIEF QUARTERMASTER,
BALBOA HEIGHTS, C. Z.

Sealed bids will be received at this office until 3 p. m., Tuesday, October 6, 1914, for house boat, rebuilt at Balboa shipways in 1907 from old French barge; steel hull, equipped for house boat purposes; length, 52 feet four inches; beam, 18 feet; depth, seven feet two and one half inches; draft, four feet; gross tonnage, 100; displacement, 125.6 tons. House boat has no number or name; is located at Balboa, and may be inspected by application to the Board of Local Inspectors, Ancon. Right is reserved to reject any or all bids. Bids should be addressed to the Chief Quartermaster, Balboa Heights, Canal Zone, plainly marked, "Proposal to purchase old French house boat, to be opened October 6, 1914."

Misdirected Letters.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Atney Johnie	McDonald, D. S.
Baldinger, Baron von	McLoud, O. O. (paper)
Bartlett, W. J.	Morrison, Henry
Brooks, J. C.	Moustafar, Al
Copeland, Lewis	Murphy, Mrs. T. E.
Cull, Geo.	Nurse, Clemmot
Dupont, Julius	Parry, F. M.
Elmore, C. M.	Patterson, J. E. (book)
Fenner, G. W.	Pender, W. J.
Hart, Charles F.	Poland, George
Hellicksen, L. A. (paper)	Ransbottom, E. C. (paper)
Hitt, M.	Roderick, Bertie
Herrick, Jack	Ruggles, Mrs. Frank C.
Heslin, Mrs. T. H.	Shea, Philip L.
Johnson, Harry	Smith, Jas. D.
Jones, Joseph	Smith, Richard B.
Kinnimouth, A. B.	Spahr, Frederick
Krout, S. E. (paper)	Stewart, Oscar
Kyle, Thomas	Sudson, Mrs. (paper)
LeJeune, J. D.	Wilcox, John R.
Levy, Felix (2)	Wilkins, G.
Lynch, Carlos C. (paper)	Wourts, Mrs. Lizzie

Married.

DUVAL-MYERS—At Ancon, on Thursday, September 3, Miss Ola Myers of Olney, Ill., to Mr. William F. Duval of Clayton, Md., Judge William H. Jackson officiating.

AANSTOOS-ROBINSON—At Springdale, Conn., on September 10, Miss Helen Gertrude Robinson of Springdale, Conn., to Mr. Theodore Arnold Aanstoos of New Rochelle, N. Y. Canal Zone residence, Cristobal.

CANAL CLUBHOUSES.

Activities of the Young Men's Christian Association.

BALBOA.

A team of checker players from Cristobal will come to Balboa on Saturday evening, October 3, to play the Balboa checker players.

The Balboa basketball team will play the Ancon basketball team on the open air court, Wednesday evening, September 30, at 5.30.

There will be a farewell reception to Mr. George Adams, the former secretary of the Balboa Y. M. C. A., on Saturday night, October 3, beginning at 8 p. m. There will be an entertainment and refreshments. Everybody is invited to attend and admission will be free to all.

COROZAL.

The following high scores were made on the bowling alleys during the past week: *Tenpins*—See-ey, 312; White, 205, 204. *Duckpins*—Kite, 107; Walker, 102; Ryan, 100.

Physical Director Woodworth has been appointed to take Secretary Dwelle's place while the latter is on vacation.

Considerable activity is seen at Corozal in athletics and aquatic practice; most of the men are training hard for the events at the Panama-Pacific exposition at San Francisco in 1915. Physical activities have also taken on renewed interest.

A list of new library books to be ordered is now complete.

The standing of the basketball league to September 23, 1914, was, as follows:

Team.	Won.	Lost.	P. C.
French.....	4	1	.800
English.....	4	2	.666
Germans.....	2	2	.500
Japs.....	1	2	.333
Russians.....	0	4	.000

PEDRO MIGUEL.

The bowling scores for the past week were, as follows: *Tenpins*—Oetli, 219; Farrar, 202.

Duckpins—Batholomew, 120; Holloway, 105, 102; Piper, 105, 103; Davis, 101, Whitson, 101; Bartlett 108, 106; Anderson, 102; Abramson, 103; MacDonald, 10, 109, 101.

Two duckpin games were played with Corozal during the past week. The results were, as follows:

First game—Corozal, 443, 441, 426; Pedro Miguel, 409, 448, 410. Second game—Corozal, 425, 456, 466; Pedro Miguel, 416, 444, 445.

Under the leadership of Mr. Westman, a wrestling class is being started. The first class was held on Tuesday evening, September 29. All members of the clubhouse are privileged to join; there is no cost connected with it.

GATUN.

The open air concert given by the Tenth Infantry band on Thursday evening, September 20, was attended by a large number of the civilians and soldiers of Gatun. An impromptu entertainment was held in the lobby of the clubhouse afterward. Corporal Foster, the rag-time pianist, played several selections; Privates Daniels and Conley sang vocal solos; Messrs. Smith and VanDyke gave an imitation of a violin duet, and Private Dougherty gave a buck and wing dance.

The winners at the "Cream puff bowling tournament" on Friday evening, September 25 were: Mr. W. Housel and Mrs. M. Conley, for first prize; Mr. E. Walsh and Mrs. M. Conley, second, and Mrs. A. Kjellander and Mrs. M. Conley, third. Among others who participated were Messrs. E. T. Gilbert, F. G. Smith, M. Conley, C. Dustheimer, E. Housel, F. Chambers, H. McPherson; and among the lady bowlers were Mrs. De la Latorre, Mrs. W. Tricker, Mrs. E. Howard, Mrs. W. Housel, Mrs. J. Walsh, Mrs. E. Gilbert, and Miss Kuller. Corporal Foster entertained at the piano during the evening.

On Saturday evening, September 26, an informal song service was held for the soldiers. The quartet, Messrs. Conley, Daniels, Foster, and Baker sang several numbers. This was followed by several wrestling matches between the following contestants; Privates Apeheff, Eschler, Thompson, Valliancourt, Joblonka and Gonda.

Mrs. W. Crook of Culebra sang two solos at the song service on Sunday evening, September 27. Mr. F. M. Ray gave a piano solo. The special music for next Sunday will be cello solos.

CRISTOBAL.

Mr. Fletcher Stevens, custodian of Brazos Brook reservoir, addressed the discussion club on Friday, September 25, on "Canal Zone agriculture." Mr. Stevens stated that truck gardening should be a paying venture in this section of the Isthmus, as he has found no difficulty in growing lettuce, beans, peas, beets, squash, and other vegetables. In regard to sugar cane, pineapples, bananas, and other tropical fruits,

Mr. Stevens was even more sanguine, his experience along with that of others present, having been that tropical fruits can be grown to great advantage in the Canal Zone and adjacent country.

A class in English for Germans has been started. Ten men are enrolled, with Mr. J. W. Weaver, as instructor.

Two basketball games were played with Corozal on Saturday, September 26. Corozal took the first game, 42 to 28; the second game was won by Cristobal, 49 to 14. The Balboa Y. M. C. A. has challenged Cristobal to a match at basketball, to be played at Cristobal on Saturday, October 3.

The "Bachelors" defeated the "Henpecked" in three games of tenpins on Saturday, September 26. Scores follow:

Bachelors.	Henpecked.
Henri.....	179 207 224
Russell.....	161 163 168
Strong.....	167 200 113
Gibson.....	211 150 188
Peterson.....	130 136 170
Buser.....	145 128 178
Bevington.....	137 140 153
Collins.....	131 176 140
Pinney.....	173 159 150
Burns.....	117 121 153

848 856 863

703 724 774

The following men rolled high scores on the bowling alleys for the week ending September 26:

Tenpins—Collins, 246; Henri, 224; Russell, 229; Pinney, 201; Peterson, 214. *Duckpins*—Henri, 110, Gibson, 108; Sloan, 101; Russell, 101.

COMMISSARY DEPARTMENT.

Transfer of Accountability at Commissaries and Line Hotels.

THE PANAMA CANAL,
SUPPLY DEPARTMENT.

BALBOA HEIGHTS, C. Z., September 23, 1914.

CIRCULAR No. 34-2:

To all district quartermasters, commissary storekeepers, and hotel stewards of line hotels—The accountability for the property at line hotels and retail commissaries will be transferred to the district quartermasters in whose district the hotel and commissary are located. Chief stewards and commissary storekeepers will prepare their requisitions, as heretofore, but instead of mailing them to the Chief Quartermaster, they will send them to the district quartermaster, who will forward them to the proper place where they are to be filled. The depot quartermaster and storekeepers will render invoices for hotel and commissary equipment against the district quartermaster concerned.

For the information of the Auditor and the cost-keeping accountant, all invoices must show to which hotel or commissary the delivery was made, in order that at these invoices will not be confused with deliveries to the quartermaster branch.

This procedure will become effective October 1, 1914.

R. E. Wood,

Chief Quartermaster.

Additions to Stock.

Soap, Life Buoy, cake.....	\$0.04
Hats, women's outing, ea.....	.46
Polish, white cleaning, Alb., tin.....	.05
Dishes, pudding, ea.....	.06

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective September 26, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Apricots, tin.....	.15	.16
Tongue, lunch, tin.....	.32	.35
Peaches, gal.....	.53	.47
Ties, wash, four-in-hand, ea.....	.20	.13
Towels, Turkish bath, ea.....	.85	.74
Canvas, No. 4, 54", yard.....	.75	.67
Cabinet Extra, ea.....	.11	.10
Gentlemen, ea.....	.11	.10
Lamps, Tungsten, frosted, 40-watt, 115-volt, ea.....	.27	.32
Pans, muffin, 8-cup, ea.....	.10	.23

*FRESH MEATS.

Wholesale price list—Effective September 24 until further notice.

Beef hinds, No. 1, lb.....	\$0.19
Beef carcasses, No. 1, lb.....	.17
Beef hinds, No. 2 (hinds only), lb.....	.17
Beef hinds, No. 2 (Equal number of hinds and fores), lb.....	.16
Beef fores, No. 2 (Equal number of hinds and fores), lb.....	.13
Lamb carcasses, lb.....	.19
Mutton carcasses, lb.....	.15
Veal carcasses, lb.....	.19
Pig carcasses, lb.....	.17
Pork, loin chops or roast, lb.....	.24

*Prices of all articles on this list sold to commercial steamship lines and foreign naval vessels will be increased by 20 per cent. Ice will be sold to commercial steamship lines and foreign naval vessels at 33 cents

per 100 pounds delivered on dock at Colon or Cristobal and at 39 cents per 100 pounds delivered on dock at Balboa.

Regular established steamship lines with agencies on the Isthmus will be allowed a discount of nine per cent on all purchases.

Cold Storage Prices.

The following changes have been made in the retail prices of cold storage provisions for the week beginning October 1, 1914:

Frankfurter sausage, increased to 15 cents per pound.

Roquefort cheese, increased to 45 cents per pound.

Swiss cheese, reduced to 27 cents per pound.

Celery, reduced to 4 cents per pound.

Cucumbers, reduced to 3 cents per pound.

Rhubarb, reduced to 2 1/2 cents per pound.

Apples, reduced to 6 cents per pound.

Lemons, reduced to 13 cents per dozen.

Peaches, reduced to 6 cents per pound.

Plums, reduced to 5 cents per pound.

Tropical sweet potatoes, kale, and grapes are out of stock. Yeast, at 2 cents per cake, has been added to stock.

Rainfall, September 1 to September 26, 1914, Inclusive.

STATIONS.	Maximum in one day.	Date	Total for period
Pacific Section—	<i>Ins.</i>		<i>Ins.</i>
Ancon.....	2.37	10	8.36
Balboa.....	1.52	10	6.49
*Miraflores.....	1.10	7	5.45
Pedro Miguel.....	1.41	7	7.22
Rio Grande.....	2.11	7	6.74
Central Section—			
Culebra.....	2.13	7	8.68
*Camacho.....	1.80	7	7.02
Empire.....	1.66	7	7.38
Gamboa.....	2.00	7	8.53
*Juan Mina.....	1.87	10	12.47
Alhajuela.....	1.28	23	11.13
*El Vigia.....	1.90	25	14.46
Frijoles.....	.95	23	8.54
*Trinidad.....			
*Monte Lirio.....	1.40	10	12.49
Atlantic Section—			
Gatun.....	1.24	10	9.56
*Brazos Brook.....	2.15	7	11.04
Colon.....	3.29	26	13.42

*Standard rain gage—readings at 5 p. m., daily. Automatic rain gage at unstarred stations—values, midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, September 26, 1914. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Sept. 20.....	127.50	93.60	86.06	86.06	53.68
Mon., Sept. 21.....	127.70	93.67	86.05	86.05	53.65
Tues., Sept. 22.....	128.25	94.07	86.10	86.11	53.49
Wed., Sept. 23.....	133.15	97.65	86.06	86.02	53.46
Thurs., Sept. 24.....	137.00	100.25	86.15	86.14	53.85
Fri., Sept. 25.....	132.00	98.18	86.02	86.03	54.01
Sat., Sept. 26.....	131.05	96.18	86.12	86.15	54.10
Height of low water to nearest foot....	125.0	91.0			

Tide Table.

The following table shows the time of high and low tides at Panama for the week ending October 10, 1914:

DATE.	Low	High	Low	High	Low
	A.M.	A.M.	A.M.	P.M.	P.M.
Oct. 4.....	3.41	9.52	4.05	10.06	
Oct. 5.....	4.14	10.26	4.36	10.40	
Oct. 6.....	4.44	11.01	5.05	11.14	
Oct. 7.....	5.13	11.34	5.34	11.44	
		P.M.			
Oct. 8.....		5.42	12.06	6.03	
Oct. 9.....	12.17	6.11	12.41	6.34	
Oct. 10.....	12.51	6.43	1.19	7.11	

75th meridian time.

MOVEMENTS OF OCEAN VESSELS.

(Week ending 8 a. m., September 27.)

Service Around South America.

The steamship *Potosi* of the Pacific Steam Navigation Company passed through the Canal on September 25, on its way from Liverpool to the west coast of South America. It discharged cargo for a day at Balboa, and is now lying in Panama Bay, making preparations for sailing. Its itinerary will be down the west coast, through the Strait of Magellan, up the Atlantic coast of South America, and across to Liverpool. This is a route over which the Pacific Steam Navigation Company contemplated a fortnightly service, using large passenger vessels of the class of the *Orcoma*, but the use of many of its larger vessels by the British Government as transports in war has caused the indefinite suspension of the plan. The *Potosi*, which is primarily a cargo vessel, with accommodations for 12 saloon passengers, will follow the route without definite schedule.

Boston-Pacific Line.

The steamship *Atlantic*, which passed through the Canal on September 18, on its way from Boston to East San Pedro, is to be in regular service in what will be known as the "Boston-Pacific Line." On its outward voyage, this vessel carried a miscellaneous cargo of manufactured articles, including steel, shoes, and machinery; on its return, it will carry lumber, fruit, wine, etc. The *Pacific*, another new vessel for service in this line, has recently completed its trials and is due to sail from Boston about October 1.

Sailing of Vessels in Regular Service With the Isthmus.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every six days, direct; between Colon and New York by the United Fruit Company and the Royal Mail Company, sailings via Kingston weekly and fortnightly, respectively; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

NEW YORK TO CRISTOBAL.

	Soils.	Arrives.
*Allianca.....	P. R. R. Sept. 28....	Oct. 4
*Colon.....	P. R. R. Oct. 5....	Oct. 11
*Advance.....	P. R. R. Oct. 10....	Oct. 17
*Panama.....	P. R. R. Oct. 16....	Oct. 22
*Allianca.....	P. R. R. Oct. 22....	Oct. 28
*Colon.....	P. R. R. Oct. 29....	Nov. 4
CRISTOBAL TO NEW YORK.		
†Panama.....	P. R. R. Oct. 4....	Oct. 10
†Allianca.....	P. R. R. Oct. 10....	Oct. 16
†Colon.....	P. R. R. Oct. 17....	Oct. 23
†Advance.....	P. R. R. Oct. 23....	Oct. 30
†Panama.....	P. R. R. Oct. 29....	Nov. 4
†Allianca.....	P. R. R. Nov. 4....	Nov. 10
†Colon.....	P. R. R. Nov. 10....	Nov. 16

NEW YORK TO COLON.

*Almirante.....	U. F. C. Sept. 23....	Sept. 30
Treot.....	R. M. Sept. 26....	Oct. 4
*Santa Marta.....	U. F. C. Sept. 30....	Oct. 7
*Metapan.....	U. F. C. Oct. 7....	Oct. 14
Orotava.....	R. M. Oct. 10....	Oct. 18
*Zacapa.....	U. F. C. Oct. 14....	Oct. 21

COLON TO NEW YORK.

Zacapa.....	U. F. C. Oct. 1....	Oct. 8
Almirante.....	U. F. C. Oct. 8....	Oct. 15
Danube.....	R. M. Oct. 13....	Oct. 21
Santa Marta.....	U. F. C. Oct. 15....	Oct. 22
Metapan.....	U. F. C. Oct. 22....	Oct. 29

NEW ORLEANS TO COLON.

Heredia.....	U. F. C. Sept. 23....	Sept. 30
*Abangarez.....	U. F. C. Sept. 26....	Oct. 1
Parismina.....	U. F. C. Sept. 30....	Oct. 7
*Atenas.....	U. F. C. Oct. 3....	Oct. 8
Cartago.....	U. F. C. Oct. 7....	Oct. 14

COLON TO NEW ORLEANS.

†Turrialba.....	U. F. C. Oct. 1....	Oct. 6
Heredia.....	U. F. C. Oct. 1....	Oct. 8
†Abangarez.....	U. F. C. Oct. 8....	Oct. 13
Parismina.....	U. F. C. Oct. 8....	Oct. 15

*Will carry mail from the United States.
†Will carry mail to the United States.
‡Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Line	From	For
Sept. 24.....	Montanon.....	American Hawaiian Co.....	New York.....	San Francisco.
Sept. 24.....	J. B. Kessler.....	A. S. L. Co.....	Port Arthur.....	Tien Tsin.
Sept. 22.....	Farley.....	H. M. & Co.....	Philadelphia.....	San Francisco.
Sept. 25.....	Potosi.....	P. S. N. Co.....	Liverpool.....	San Francisco.
Sept. 25.....	José de Larrinaga.....	M. L. S. S. Co.....	New York.....	San Francisco.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Sept. 21.....	Lyra.....	Luckenbach.....	San Francisco.....	New York.
Sept. 22.....	Angola.....	Angola Co.....	Chile.....	Key West.
Sept. 23.....	Candidate.....	Lampert & Holt.....	San Francisco.....	Liverpool.
Sept. 23.....	Dakotan.....	American Hawaiian Co.....	Honolulu.....	New York.
Sept. 25.....	Capella.....	Capella Whal. Co.....	Magdalena Bay.....	Norway.
Sept. 25.....	Morelos.....	Capella Whal. Co.....	Magdalena Bay.....	Norway.
Sept. 25.....	Hidalgo.....	Capella Whal. Co.....	Magdalena Bay.....	Norway.
Sept. 25.....	Juarez.....	Capella Whal. Co.....	Magdalena Bay.....	Norway.
Sept. 25.....	Coito.....	Kyle Transp. Co.....	San Francisco.....	Norfolk.

*ARRIVALS—PORTS OF COLON AND CRISTOBAL.

Date	Vessel	Line	From
Sept. 23.....	Advance.....	P. R. R.....	New York.
Sept. 23.....	Alm.....	Seeberg.....	New Orleans.
Sept. 24.....	Perou.....	Cie. Gen. Trans.....	Bordeaux.
Sept. 25.....	Skogstad.....	E. L.....	Norfolk.

*DEPARTURES—PORTS OF COLON AND CRISTOBAL.

Date	Vessel	Line	For
Sept. 22.....	Oruba.....	Royal Mail.....	Southampton.
Sept. 22.....	Colon.....	P. R. R.....	New York.
Sept. 25.....	Candidate.....	Harrison.....	Liverpool.
Sept. 26.....	Perou.....	Cie. Gen. Trans.....	Bordeaux.
Sept. 26.....	Ancon.....	P. R. R.....	New York.

*Other than vessels passing through the Canal, and not including United Fruit Company's vessels, of which there were five arrivals and five departures during the week.

†ARRIVALS—PORT OF BALBOA.

Date	Vessel	Line	From
Sept. 22.....	St. Quentin.....	Rankin, Gilmour & Co.....	Taltal.
Sept. 23.....	Nevoian.....	American-Hawaiian.....	San Francisco.
Sept. 24.....	Huasco.....	South American S. S. Co.....	Valparaiso.
Sept. 24.....	Mantoro.....	Peruvian S. S. Co.....	Peruvian ports.
Sept. 24.....	Celio.....	Grace & Co.....	South Pacific.
Sept. 26.....	Strathgyle.....		Peruvian ports.
Sept. 25.....	Copenhagen.....		Peruvian ports.

†DEPARTURES—PORT OF BALBOA.

Date	Vessel	Line	For
Sept. 21.....	San Joaquin.....	Union Oil Co.....	Port San Luis.
Sept. 21.....	Peru.....	P. S. N.....	Callao.
Sept. 21.....	La Habra.....	Union Oil Co.....	Port San Luis.
Sept. 26.....	San Juan.....	Pacific Mail.....	San Francisco.

†Other than vessels passing through the Canal.

EXPECTED ARRIVALS—PORT OF BALBOA.

Date	Vessel	Line	From
Sept. 30.....	Purley.....	Union Oil.....	Colon.
Sept. 30.....	Oberon.....	P. M. S.....	San Luis.
Oct. 1.....	City of Para.....	P. M. S.....	San Francisco.
Oct. 1.....	Oasis.....	W. R. G.....	New York.
Oct. 3.....	Frimley.....		
Oct. 5.....	Isthmian.....	American-Hawaiian Co.....	Seattle.
Oct. 10.....	Aztec.....	P. M. S.....	San Francisco.
Oct. 12.....	Peru.....	P. M. S.....	San Francisco.
Oct. 15.....	Mino Brea.....		South Pacific ports.
Oct. 15.....	Bankfield.....		
Oct. 15.....	Harpa-hian.....		Puget Sound.
Oct. 15.....	Croigna.....		Colon.
Oct. 15.....	Meches.....	S. G.....	Colon.
Oct. 15.....	Frankmont.....	A. W. & Co.....	
Oct. 15.....	Winchester.....		
Oct. 15.....	Molderskin.....		Peruvian ports.

EXPECTED DEPARTURES—PORT OF BALBOA.

Date	Vessel	Line	For
Oct. 10.....	City of Para.....	P. M. S.....	San Francisco.
Oct. 21.....	Peru.....	P. M. S.....	San Francisco.
Oct. 21.....	Mina Brea.....		London.

EXPECTED ARRIVALS—PORTS OF COLON AND CRISTOBAL.

Date	Vessel	Line	From
Oct. 4.....	Allianca.....	P. R. R.....	New York.
Oct. 4.....	Magdalena.....	R. M.....	New York.

EXPECTED DEPARTURES—PORTS OF COLON AND CRISTOBAL.

Date	Vessel	Line	For
Oct. 1.....	Almirante.....	U. F. C.....	Cartagena.
Oct. 1.....	Steamer.....	U. F. C.....	New Orleans.
Oct. 1.....	Zacapa.....	U. F. C.....	New York.
Oct. 1.....	Turrialba.....	U. F. C.....	New Orleans.
Oct. 3.....	Abangarez.....	U. F. C.....	Bocas del Toro.
Oct. 4.....	Ponama.....	P. R. R.....	New York.
Oct. 5.....	Bologna.....	La Veloce.....	Genoa.
Oct. 6.....	Magdalena.....	R. M.....	Southampton.
Oct. 10.....	Allianca.....	P. R. R.....	New York.

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, OCTOBER 7, 1914.

No. 7.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

No communication either for publication or requesting information will receive attention unless signed with the full name and address of the writer.

NOTES OF PROGRESS.

Canal Record Index.

The index to Volume VII of THE CANAL RECORD, in form suitable for binding, will be ready for distribution shortly. It will be sent free, on application, to such persons, institutions, libraries, etc., as desire to preserve their copies of THE CANAL RECORD in book form. Application should be made to Mr. John K. Baxter, Chief, Division of Civil Affairs, Balboa Heights, C. Z.

Artillery Companies Transferred to Fort Amador.

The 45th and the 144th companies of the Coast Artillery Corps, which had been in temporary quarters at Empire since their arrival on the Isthmus on September 18, moved on October 5 to an encampment at Fort Amador, near the land end of Naos Island breakwater. They have been combined in one command with the 81st company, which is quartered at Fort Grant.

The 21st company, which also arrived on the Isthmus on September 18, is still in temporary quarters in building No. 2, Cristobal. The companies at Toro Point are the 44th and the 119th.

Commissary Supply Trains to be Eliminated.

The extra train for carrying supplies to the line commissaries from Cristobal, and that for returning the empty cars to Cristobal for reloading, are to be abolished when the new schedule of the Panama railroad, No. 20, goes into effect. Instead, solid cars will be handled daily to the principal main line villages in the regular tonnage freight, No. 101, leaving Colon at 2 a. m., and arriving at Panama at 4.15; and twice a week to the villages on the Las Cascadas branch.

Perishable supplies, bread, and laundry for the villages on the branch line will be loaded in peddle cars daily, sent out on train No. 101, dropped off at the dump north of Miraflores tunnel, and picked up by the passenger train leaving Panama at 5 a. m., for Las Cascadas. This train, on its return trip to Panama, will drop these cars at the tunnel dump, and they will be picked up by the regular freight train,

No. 102, which will also take back to Colon the solid cars dropped at the principal main line towns by No. 101.

Perishable supplies for the minor points on the main line, including Mount Hope, Mendi, Lirio, Frijoles, Darien, Gamboa, Gamboa stockade, New Culebra, and Miraflores Locks, and extra deliveries for the principal towns, will be handled in a peddle car attached to the regular passenger train leaving Colon at 7.10 a. m., and dropped off like express matter at each stop for which there is a consignment.

Rooms at New Gatun and Empire.

Figures gathered by the police division show that on August 31, there were at New Gatun, out of a total of 206 houses 1,310 rooms with tenants, and 783 without. At Empire on the same date, there were, out of a total of 287 houses, 483 rooms with tenants, and 1,722 without. These figures do not include Panama Canal quarters.

Panamantan Customs Officers May Inspect Consignments to Colon at Cristobal Docks.

A provisional arrangement has been entered into between the Government of the Canal Zone and the Republic of Panama by which officers of the customs service of Panama are allowed to go on the wharves at Cristobal for the purpose of checking and examining cargo, consigned to Colon on which the duty has been paid. This has been effected especially for the benefit of consignees in Colon of perishable merchandise. The former arrangement was that all such goods unloaded on the wharves in Cristobal should be transferred to the freight house of the Panama railroad at Colon, and checked and claimed there. This was at all times a cause of delay, and the objection to the procedure has increased recently, for the reason that vessels from New Orleans have been required to moor at the new ratproof wharves, all of which are in Cristobal. In instances of unusual urgency, the collector of the port of Colon had been issuing permits for the release of consignments without examination, but this was disadvantageous to the Republic of Panama since it allowed no check of the cargo by its officers to determine whether the shipments released corresponded with the invoices on the basis of which duty was paid and permits for release were issued.

The new arrangement simply allows the same inspection on the wharves as was formerly made at the freight house. The authority of the Panamanian inspectors on the wharves extends only to cargo for delivery in Colon; it has nothing to do with transit cargo, cargo consigned to The Panama Canal or the Panama Railroad Company, or to cargo in transit for the city of Panama. The latter is examined on arrival at Panama, as heretofore. The Government of the Canal Zone retains complete administrative control of the docks.

TRAFFIC THROUGH THE CANAL

Has Exceeded Anticipations Notwithstanding International Conditions—Summary.

In view of the general check on business over the world in consequence of the European war, and the interference by war vessels with the shipping of belligerent nations, the traffic through the Canal, in the first month and a half of its commercial service, has exceeded anticipations. From August 15 to October 1st, 81 vessels had passed through the Canal, and as traffic has been unusually heavy during the past week, the total number of transits to date is approximately 100.

During the month of August, 12 vessels passed through from the Atlantic to the Pacific, and 12 from the Pacific to the Atlantic, a total of 24. Twenty of these were American vessels, two were British, one was Danish, and one a Peruvian naval vessel. The first British vessel was the *Daldorch*, which passed from the Pacific to the Atlantic on August 22. The Danish vessel, the *Transvaal*, went from the Pacific to the Atlantic on August 31. The Peruvian gunboat *Teniente Rodriguez*, which went from the Atlantic to the Pacific on August 18, was the first foreign vessel to use the Canal.

In September, the British vessels took first place, numbering 27. The number of American vessels in that month was 25. The first Dutch vessel to use the Canal, the *J. B. Aug. Kessler*, passed from the Atlantic to the Pacific on September 24, and on the following day occurred the first use of the Canal by a Norwegian vessel, when the *Capella I*, *Hidalgo*, *Juarez*, and *Morelos*, comprising a whaling fleet, went to the Atlantic from the Pacific. Counting these as separate vessels, the total number of Atlantic, or northbound vessels, was 30, and of Pacific, or southbound, 27. No ships of other nationalities than the above-mentioned went through the Canal during the month, and to date it has not been used by vessels of other nations than those specifically named above.

To October 1, the total net Canal tonnage carried from the Atlantic to the Pacific through the Canal, including that handled in 58 barges, prior to the formal opening of the Canal, was 144,343 tons; the aggregate net Canal tonnage transported from the Pacific to the Atlantic, including 57 barges, was 153,312 tons, making a grand total of 297,655 tons. The total tolls collected, including pilotage on vessels stopping at the terminal ports, amounted to \$369,706.29.

Whaling Fleet Passes Through the Canal.

The steamships *Capella I*, *Hidalgo*, *Juarez*, and *Morelos*, which sailed for Sandfjord, Norway, from Colon, on September 28, after passing through the Canal, comprise a whaling fleet which had been operating in Magdalena Bay, Mexico. The *Capella I* is the principal vessel, about 350 feet in length, equipped with apparatus for dissecting and flensing the

whales, and rendering the blubber; the three other vessels, each 100 feet in length, are the whalers proper, which capture the whales and tow them alongside the *Capella I*. The smaller vessels are capable of a speed of about 12 knots, which enables them to overtake and capture a whale ordinarily within an hour or so of sighting it. The three whalers averaged about four captures a day, together, but one of them made a record of six "Humpbacks" in one day. The kind of whales taken in Magdalena Bay included "Humpbacks," California "Grays," and "Sulphurbottoms."

The fleet had about eight months of hunting, which resulted in the production of about 20,000 barrels of oil (3,400 tons), valued at \$300,000. The *Capella I* carries a crew of 40 men, and the whalers nine each. By using the Canal, in place of traveling around South America on the home voyage, the master of the fleet estimated that he would save between \$25,000 and \$30,000 in actual expenses of travel, after paying tolls amounting to \$4,012. The fleet will arrive home about four months earlier than by the longer route. It is expected that it will return to the Canal for another season of whaling in Magdalena Bay about November, 1915.

Mail for Vessels Using the Canal.

Mail or cablegrams for officers or crews of vessels which will call at the Canal terminal ports or pass through the Canal should be addressed to Cristobal or Balboa, Canal Zone, with the name of the vessel written plainly. If practicable, the probable date of arrival should be given.

In case of vessels of regular lines, with offices or known representatives on the Isthmus, mail should be addressed in care of such office or representative.

Where there are no such representatives of the vessel on the Isthmus, to the knowledge of the sender, mail may be addressed "Care of captain of the port" (Cristobal or Balboa), but registered mail will be held at post-office, as the captains of the port may not assume responsibility for its delivery.

The use of the offices of the port captains for the transmission of communications is not solicited, but when it will be of service, it will be readily accorded. The arrangement has been made for the convenience of shipping people, and is in line with the principle that the offices of the port captains are clearing houses for communications with vessels.

Keeping Tab on the Progress of Vessels through the Canal.

A wall board, 12 feet long by three feet high, bearing a map of the Canal and its approaches, painted on the wood on a scale of 1:12,000, has been mounted in the port captain's office at each end of the Canal, and push pins, standing for ships, will be used to give a visual representation of the status of traffic at any time.

Upon the departure of a vessel from either terminal to go through the Canal, the time of its departure is telephoned immediately to the port captain's office at the other terminal, and its arrival at and departure from each of the locks, as well as Culebra Cut, is reported at the time to both port captains, by telephone or radio. The times of these arrivals and departures are recorded on blanks prepared for the purpose, which are the same as those for pilots' reports, and at the same time the push pin standing for any vessel reported

is moved to a corresponding location on the wall board.

From the reports, and from knowledge of the usual rates of progress through the several sections of the Canal, the men in the port captains' offices can tell with a considerable degree of accuracy where a vessel should be at any moment, barring accident. The speed of vessels through the open channels is nearly uniform, as practically all of them can make the maximum speed allowable, except in about 10 miles of Gatun Lake, where a speed of 15 knots is permitted. Some of the vessels cannot attain this, but those that can do not usually go faster than 12 knots. The maximum speeds allowable for vessels in transit through the Canal are, as follows:

Steamers entering or leaving a port, or in the entrance channels, or in Culebra Cut, or in Miraflores Lake, six knots; in Gatun Lake, in the 1,000-foot channels, 15 knots; in the 800-foot channels, 12 knots; and in the 500-foot channels, 10 knots.

"Foxton Hall" Burned at Sea.

The steamship *Foxton Hall*, the first foreign built vessel to transfer to American registry at one of the Canal ports, which was done at Cristobal on September 17, after the vessel had passed through the Canal on its way from Chile to New York with a cargo of nitrate, has been reported burned off Watling's Island. The vessel was 368 feet long by 49½ feet in the beam, was registered as of 4,032 gross tons, and was built in 1902.

Passengers from Havana Not Detained at Local Quarantine.

The Chief Quarantine Officer announces that, until further notice, steamship passengers embarking at Havana, Cuba, will not be detained at Colon or Cristobal if all on board the vessel are well at the time of arrival. Passengers in transit for Colon or Cristobal may go on shore at Havana without liability of detention on reaching the Isthmus. This exemption does not affect the existing quarantine against other Cuban ports.

The "Falk" Brings Cargo from the "Wasgenwald."

The Norwegian steamer *Falk*, which arrived at Colon on Friday, October 2, from St. Thomas, Danish West Indies, had on board a quantity of cargo transferred to it from the Hamburg-American line steamer *Wasgenwald*, which has been anchored in St. Thomas harbor since the early part of August. Included in the cargo were eleven blooded cattle from Denmark, consigned to Ecuador, insured at approximately \$1,000 each. Up to the time of their arrival at Colon, they had been at sea about 70 days.

Cruiser "Denver" at Balboa.

The U. S. S. *Denver*, a third class cruiser in general service in the Pacific Ocean, arrived at Balboa on October 2, from Corinto. The vessel is to remain in port about a week for the purpose of taking on coal and other supplies, and giving the personnel shore liberty.

Operation of Pontoon Bridge.

The following regulations will govern the operation of the pontoon bridge over the Canal at Paraiso between the hours of 8 a. m., and 4 p. m., each day: Canal traffic will have the right-of-way and the bridge must be kept open; it will only be closed for scheduled trains, when the movement of such trains will not interfere with passing vessels. The oper-

ator at the bridge will be required to keep himself informed of the movements of vessels, either through the captain of the port at Balboa, or the lockmaster at Pedro Miguel, but the opening and closing of the bridge will be subject to the orders of the Captain of the port at Balboa in all cases.

Steamship Brokers.

The United Fruit Company announces, through its general agent on the Isthmus, that, in addition to the handling of its steamers at Cristobal, it has arranged to enter into a general steamship brokerage business. It will act as agents and stevedores for all steamers desiring to break bulk at Colon, Cristobal, or Balboa; also, purchase supplies, including coal or oil for fuel; pay Canal tolls, and attend to all other details necessary for the passage of steamers through the Canal. Further information may be obtained from the office of the United Fruit Company, Cristobal, C. Z.

PERSONAL.

Mr. James C. Courts, clerk of the House Committee on Appropriations, arrived on the *Panama* on Monday, September 28, and returned to New York by the same vessel, which sailed from Cristobal on Sunday, October 4. He was accompanied by his daughter.

New Railroad Timetable.

A new timetable, No. 20, will go into effect on the Panama railroad at 12.01 a. m., on Sunday, October 11. The principal changes in the operation of the main line passenger trains are in the arriving and leaving time. No. 3 will leave Colon at 7.15 a. m., daily, instead of 7 o'clock, and No. 4 will leave Panama at 7.10 a. m., instead of 7.35. No. 7 will leave Colon at 5.05 p. m., instead of 4.25, and No. 8 will leave Panama at 5.05, instead of 5.30. There is no change in the arriving and leaving time of Nos. 5 and 6. The Sunday night train out of Colon at 9.35, and the Sunday night train out of Panama, at 11.15, have been discontinued.

On the Las Cascadas-Panama branch line the number of shuttle trains on week days between the two terminals has been reduced from five to three, and changes in the arriving and departing time have been made. The first train from Panama for Las Cascadas leaves at 5 a. m., instead of 6, the next two leave at 7.10 and 11 o'clock, respectively, but go only to Pedro Miguel. The next train for Las Cascadas leaves at 12.10 p. m., and the last train of the day on week days leaves at 6.15; there is a train for Pedro Miguel at 5.05 p. m. On Sunday, there are three additional trains on this line, two for Las Cascadas, and one as far as Pedro Miguel.

All trains in the Colon-Gatun shuttle service will be discontinued with one exception, namely, the train leaving Colon at 5.50 a. m., which returning, leaves Gatun at 6.25.

Contract for Oil Pumps and Auxiliary Equipment.

A contract has been entered into with the National Transit Company of Oil City, Pa., for supplying four oil pumps, 14 by 20 by 12 by 18 inches, two for use at the Cristobal oil handling plant, and two for the Balboa plant, at the price of \$3,503 each. In addition, the firm is to supply four sets of auxiliary spare parts for these pumps at a total price of \$1,208.

SOCIAL LIFE OF THE ZONE.

Convention of the Panama Federation of Women for Christian Work.

The convention of the Panama Federation of Women for Christian Work will be held at the Methodist church, Panama, on Saturday, October 24, the Woman's Foreign Missionary Society of the church entertaining. It has been decided to have a short business meeting in the morning, beginning at 10 o'clock, and a program in the afternoon. This program, which will be held in the church, will consist of addresses, music, exercises by the Camp Fire girls of Cristobal and the San Blas Camp at Corozal, congregational singing, and instrumental selections. The pastor of the Union Church of the Canal Zone has been asked to take part in the program. At the meeting of the executive board, held at the Hotel Tivoli on Friday afternoon, October 2, there were present representatives from Colon, Cristobal, Empire, Ancon, Balboa, and Panama.

St. Luke's Altar Guild.

The annual corporate communion of the members of St. Luke's Altar Guild, Ancon, will be held on Sunday, October 18, St. Luke's Day, instead of on All Saint's Day, October 31, as formerly. The annual meeting, with election of officers, will be held on the Tuesday following, October 20, at the home of Mrs. Darling, hospital grounds. These events will mark the beginning of the eighth year of the existence of the guild.

Register of Employees Visiting San Francisco.

Following the suggestion of the Society of the Chagres that a register of former employees of the Isthmian Canal Commission and The Panama Canal, and of the Panama Railroad Company on the Isthmus, be kept at the Panama-Pacific exposition in connection with the Canal exhibit, the Governor has directed the Washington office to arrange for the manufacture of a register with space for approximately 5,000 entries. Visiting employees will register chronologically, as at a hotel, and the pages will be ruled with spaces for the employee's name, period of residence on the Isthmus, department or division in which employed, Isthmian residence, period of stay in San Francisco, his San Francisco address, and remarks or messages to friends.

Masons Apply for a Building Site in Ancon.

The following Masonic lodges have asked for a site in Ancon for the erection of a Masonic Hall: Canal Zone Lodge, A. F. and A. M.; Canal Zone Chapter, No. 1, Royal Arch Masons; Canal Zone Council, No. 1, R. and S. M., and the Canal Zone Commandery, No. 1. The site requested is the vacant area, known in French times as Ancon section; later, the site of of the American corral in Ancon. It is proposed to build a 2-story frame structure, approximately 40 by 110 feet, with the lower story fitted for an assembly or social hall, library, and offices, and the upper story for lodge purposes. The above lodges will bear the expenses of the building jointly in case construction is authorized.

Lighting Improvement at Hotel Tivoli.

A new lighting system has been installed at the entrance to the Hotel Tivoli. At the outer edge of the approach and driveway, two 24-foot standards have been placed, each

bearing two lanterns, and on the building six similar lanterns, called "English Inn" lights, have been affixed. The lighting is designed to illuminate the driveway and circle.

Camp Otis Notes.

The first number of *The Pioneer*, a small weekly paper, published at Camp Otis in the interests of the officers and enlisted men of the Tenth and Fifth Infantry and the Coast Artillery Corps, has been issued. The paper contains editorials, contributed articles on various current topics of post life, notices of amusements and athletic events and church services, notes of the hospital corps and letters from the men. The Reverend M. C. Doran, chaplain of the Tenth Infantry, is the editor. The paper appears each Sunday.

A Young Men's Hebrew Association has been formed for the Jewish men of the Tenth Infantry. Meetings of the association are held every Saturday evening in the Camp Otis chapel at 7.30 o'clock.

The new recreation hall at Camp Otis is soon to be opened for indoor athletics. The lower story of the building will be a roller skating rink and it is proposed to form a hockey team of the best skaters. Teams for basketball and volleyball will also be organized as soon as the equipment arrives from New York. Chaplain Doran is in charge of the amusement features of the camp.

Columbus Day.

Panama Council, Knights of Columbus, will celebrate Columbus Day this year on Sunday, October 11, beginning with a mass *pro pace* at St. Mary's church, Balboa, at which the council will attend Holy Communion and listen to an appropriate eulogium on the order's patron. This will be followed by a Communion breakfast at the Balboa hotel. The Ancon lodge hall will be the scene of a first degree at 2 o'clock in the afternoon. Visiting Knights of Columbus are invited to be present.

Cristobal Council will partake of the blessed sacrament at the Church of the Immaculate Conception in Colon, where services will be held on Sunday, at 7 a. m. A banquet will be given in honor of Columbus at the Hotel Washington, Sunday evening, at 8.30 o'clock.

The program for the Columbus Day celebration, to be held on October 11, 1914 is, as follows: At 9 a. m., mass in Balboa chapel, with Holy Communion; 10.30 a. m., breakfast; 1 p. m., exemplification of the first degree in Ancon Lodge Hall.

Visiting knights are cordially invited to attend. THOS. H. CHARNLEY, G. K.

BALBOA, C. Z., September 28, 1914.

Cristobal Council announces that Columbus Day will be celebrated on Sunday, October 11, by attending Holy Communion at the Church of the Immaculate Conception, Colon, at 7 o'clock mass, upon the arrival of the Gatun shuttle train. A banquet will be held at the Hotel Washington in the evening, at 8.30.

A. P. E. DOYLE, *Grand Knight*.

CRISTOBAL, C. Z., October 5, 1914.

Election of officers of Cristobal Council, Knights of Columbus, for the year ending

September 30, 1915, will be held at the next meeting, Tuesday, October 13, at 8 p. m., in the lodge hall, building No. 1, Cristobal.

WM. H. MARSH, *Recorder*.

CRISTOBAL, C. Z., October 3, 1914.

The next regular meeting of Nombre de Dios Assembly, Knights of Columbus, will be held on Sunday, October 11, at 2.30 p. m., at lodge hall, building No. 1, Cristobal. The annual election of officers will be held at this meeting. THEO. A. AANSTOOS,

Faithful Navigator.

CRISTOBAL, C. Z., October 7, 1914.

Obituary.

Paul E. Roche, an American, employed as a foreman in the Supply Department, residing at Ancon, died at Ancon Hospital at 11 p. m., on Wednesday, September 30, from organic heart trouble. He was 49 years of age, was born in New York City, and had been on the Isthmus since October 2, 1906. He is survived by his wife, Mrs. Marguerite J. Roche, and two daughters, one of whom is Mrs. Gertrude V. Buehler, residing in Panama, and the other, Miss Pauline W. Roche.

Cristobal Dance Club.

The regular dance of the Cristobal Dance Club will be held on Saturday evening, October 10, at the Canal clubhouse. Dancing starts promptly at 8.15.

W. H. MARSH, *Secretary*.

CRISTOBAL, C. Z., October 5, 1914.

Missing Boy.

Any one having knowledge of the whereabouts of Dudley Gray, age 14, formerly a student at the Calumet high school in Chicago, Ill., and who disappeared from that city on February 6, 1914, is requested to communicate with the United States Consul General in Panama. The boy is fond of outdoor sports and farm life, and had made a special study of wireless telegraphy.

Missing Man.

Any one having information as to the whereabouts of Elias W. Caswell, who is supposed to be on the Isthmus, is requested to communicate with Mr. Wilbur W. Sherman, 165 Campbell street, New Bedford, Mass.

Meeting of the O. P. I. A.

The regular monthly meeting of Panama Local, No. 1, auxiliary of the O. P. I. A. of the United States and Canada, will be held at the Hotel Normandie, Panama, on Sunday, October 11, at 2.30 p. m. PHILIP SHEA,

Corresponding Secretary.

CRISTOBAL, C. Z., October 4, 1914.

Copies of the Official Handbook Available.

A surplus supply of the Official Handbook of The Panama Canal is available for distribution, and copies may be obtained free on application, in person or by mail, to the Executive Office, Balboa Heights, Canal Zone.

The Kingdom of Italy has established a Legation in Panama, with Mr. Carlos Raguzzi as *chargé d'affaires*.

Married.

BECHLEM-NEILSON—At the Cristobal Union Church, on Wednesday, September 23, Miss Dora Neilson of The Dalles, Oregon, to Mr. Albert W. Bechlem, the Rev. William Flammer officiating. Canal Zone residence, Gatun.

EXECUTIVE ORDER

To Amend the Executive Order of March 20, 1914, Relating to Compensation to be Paid to Injured Employees of The Panama Canal and Panama Railroad Company.

By virtue of the authority vested in me, I hereby establish the following Order for the Canal Zone:

Section 1. Paragraph E of Section 12, of the Executive Order of March 20, 1914, relating to injury compensation to be paid to employees of The Panama Canal, and the Panama Railroad Company, is hereby amended to read, as follows:

(E) If the deceased employee leaves a parent, either partially or wholly dependent on him for support, or a brother, sister, grandparent of grandchild, wholly dependent on him for support, there may be paid to such relation monthly such portion or portions of the monthly pay of the employee as may be determined by the Governor of The Panama Canal, provided that the total compensation to all beneficiaries under this and Paragraphs A, B, C, and D of this section shall not exceed 50 per cent of the monthly pay of the deceased employee; and provided, that in order to make payment to the relatives under this paragraph, the Governor of The Panama Canal may, if necessary, reduce the proportion payable to widow or children under Paragraphs A, B, C, and D of this section; and provided further, that payment for the benefit of a relative under this paragraph shall cease if he dies, marries, or, in the opinion of the Governor, becomes capable of selfsupport, but in no case shall payment continue more than eight years.

This amendment shall be effective from the date the Order of March 20, 1914 became effective, viz., April 1, 1914.

WOODROW WILSON.

THE WHITE HOUSE,
September 19, 1914.
[No. 2052.]

EXECUTIVE ORDER.

To Amend the Canal Zone Law Against Gambling.

By virtue of the authority vested in me, I hereby establish the following Order for the Canal Zone:

1. Section 1 of Act No. 4, entitled "An Act to prohibit gambling in the Canal Zone, Isthmus of Panama, and to provide for the punishment of violations thereof, and for other purposes," enacted by the Isthmian Canal Commission on August 22, 1904, is hereby amended to read, as follows:

Section 1. Every person, within the limits of the Canal Zone, who shall play at any game whatever for any sum of money or other property of value, or shall bet any money or property upon any gaming table, bank, or device, or who shall bet upon any game played at or by means of any such gaming table or gambling device, shall, upon conviction, be fined in any sum not exceeding one hundred dollars (\$100), or by imprisonment in jail not exceeding thirty (30) days, or shall suffer both such fine and imprisonment in the court's discretion.

2. This Order shall take effect 30 days

from and after its publication in THE CANAL RECORD.

WOODROW WILSON.

THE WHITE HOUSE,
September 19, 1914.
[No. 2051.]

Sanitary Census of Colon.

The enumeration of the inhabitants in the city of Colon, recently made by sanitary inspectors, under the direction of the Cristobal-Colon Health Officer, has been completed, and shows a count of 27,831 divided, as follows:

EMPLOYEES AND NONEMPLOYEES.	
Canal employees.....	5,395
Nonemployees.....	22,436
Total.....	27,831
RACES.	
Whites.....	1,728
Panamanians.....	3,841
Yellow.....	583
Blacks.....	21,679
Total.....	27,831
SEXES.	
Male.....	15,348
Female.....	12,483
Total.....	27,831

In view of the fact that the enumerators made but one visit, and that a number of people were found temporarily absent from their rooms, the figures given above have been increased by 1,500. The estimate of 29,331, therefore, has been adopted as the official basis for the compilation of future health statistics for that city. The estimate in use by the Health Department since June, 1912, was 20,232.

The first sanitary census of Colon was taken in August, 1904, and at that time the city had but 7,214 inhabitants. The last count, therefore, shows a gain in population in 10 years of over 400 per cent. In 1911, a census was taken by the Panama Government, which showed the population to have been 17,748 divided, as follows:

	Male.	Female.
Whites.....	1,548	1,108
Mestizoes.....	1,905	2,485
Negroes.....	5,529	4,452
Mongolians.....	533	92
Indian.....	100	1
Totals.....	9,610	8,138

Progress on United Fruit Company's New Building.

The United Fruit Company's new office building, situated on the Cristobal water front adjoining the fire station, is completed, with

the exception of some interior painting and additional installations on the first floor; it is expected that the offices will be ready for occupancy shortly.

The building is of reinforced concrete throughout, 89 feet six inches in length by 66 feet six inches in width, inclusive of the 11-foot veranda. The lower floor will be devoted entirely to the offices of the company; the upper floor to quarters for the resident manager. The interior trimmings, counters, and other office furnishings are done in solid mahogany, imported from Honduras. The counters are so arranged as to entirely enclose the offices from the space allotted for the use of the general public; they will be surmounted by a bronze grill, provided with suitable openings for the transaction of business. The various departments, auditing, freight, and passenger, will be railed in, and in one corner of the building there is a separate room fully enclosed, for the private office of the manager. A record room, modern fireproof vault, toilets, and ceiling electroliters are among the other facilities provided. The floor is of red tile, and in it, near the main entrance has been worked a representation of the company's house flag. A private branch exchange switchboard, equipped for serving 12 telephone instruments, will be installed near the gate for the admission of visitors to the inner offices, and in this location, the switchboard attendant can not only answer calls, but give out information to the public as well. The gate will be fitted with a button device, so that it can be opened or closed by any one in any of the offices.

The present office of the company, which is in a 2-story frame building, near the Panama railroad general offices, will be rented; the upper floor will be fitted up with entirely new furniture and used as quarters for the company's unmarried employees.

The Columbia Smelting and Refining Works of New York City has entered into contract with The Panama Canal for the purchase of 40,500 pounds of old brass condenser tubes at the price of \$0.0951 per pound, and of 42,500 pounds of sheet copper at the price of \$0.1106 per pound.

Mr. C. N. Chau has been appointed vice-consul of the Republic of China to the Republic of Panama.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Cobham, Charles.....	21416	Barbados.....	Cucaracha.....	Dredging Div...	1914. September 27.
Fowler, Alexander.....		Jamaica.....	Paraíso.....	Panama R. R....	September 23.
Roche, Paul E.....	3953	U. S. A.....	Ancon.....	Supply Dept....	September 30.
Swanson, Edward (alias C. Swanson).....	31453	Jamaica.....	Gatun.....	Electrical Div...	September 25.
Taylor, Charles.....	51519	Jamaica.....	Colon.....	Terminal Con....	October 1.
Williams, David.....	54276	Jamaica.....	Toro Point.....	Fortifications...	September 28.
Jennings, David.....	52748	Jamaica.....	Panama.....	Fortifications...	September 23.

The estates of these deceased employees of the Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

FACILITIES FOR SHIPPING.

Ample Provisions for Supplying and Repairing Vessels—Prices.

The Canal is to be equipped with complete facilities for supplying vessels with coal, fuel oil, miscellaneous stores, and general supplies, such as are taken on at any of the great ports of the world; and for dry docking and repairing vessels of the largest size now afloat. The facilities for this service are not all completed at this time, but the accommodations for shipping, other than in dry docking vessels, are ample for the traffic, and all the facilities are being pushed toward completion. Following is a summary of present accommodations. A compendium of charges is given at the end of the article.

FUEL.

Coal may be taken on at either the Atlantic or the Pacific terminal, but it costs \$1 a ton more at Balboa than at Cristobal, on account of the cost of transportation across the Isthmus. The coal comes from the fields of Virginia and West Virginia and is shipped to the Atlantic seaboard. It is handled to vessels at the Atlantic end of the Canal by a cantilever crane, commanding a coal wharf, or in lighters, and at the Pacific end lighters are the present means. Between 600 and 750 tons can be taken on in the working day of nine hours at either terminal, with the present facilities.

Fuel oil is supplied at the Pacific terminus by the Union Oil Company. The berth alongside its crib carries 30 feet of water at mean tide. Oil is delivered from tanks, aggregating 150,000 barrels capacity, at the rate of from 1,300 to 1,600 barrels per hour. The Panama Canal is constructing extensive fuel oil handling plants at both terminals. A number of tanks belonging to individuals and companies will be connected with the plants, as well as two 42,000-barrel tanks belonging to the Government, at each terminal. Upon the completion of its plants, in January, 1915, The Panama Canal will assume entire control of handling oil.

Water is sold at the rate of 25 cents per 1,000 gallons, delivered at the dock, but the minimum charge is \$3. Ships passing through the Canal may take up fresh water from the lakes without hindrance. Not all of this water, however, is entirely clean or suitable for industrial uses. All water sold at the docks is drawn from the regular water supply systems and has been purified.

GENERAL SUPPLIES.

As The Panama Canal and the Panama Railroad Company are together operating a large number of vessels, of a variety of classes, from tugs to oceangoing passenger and freight vessels, supplies for practically any kind of vessel are kept on hand on the Isthmus. Such supplies are for sale to all ships using the Canal, or calling at the terminal ports. The storehouses at Cristobal and Balboa have in stock all standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies.

Foodstuffs and the general variety of merchandise handled by the commissary department of The Panama Canal may be purchased for ships. The fact that the Supply Department is supplying regularly most of the food and wearing apparel of approximately 50,000 people is a warrant that its operations are on a scale which can easily include the needs of ships now coming to the Canal.

Prices are generally lower than the retail prices in the United States, or possibly about 10 per cent higher than the wholesale prices there, and compare favorably with prices in any port of the world.

A large stock of fresh meats, vegetables, fruits, canned groceries, bakery products, etc., is always on hand, and advance arrangements can be made for supplies of any article obtainable in the markets of the world.

Ice may be purchased in any reasonable quantity.

Laundry is handled quickly. No advance notice is required, and ship's laundry can be returned on the same day it is received. A vessel entering the Canal can forward its laundry by rail to the plant at Cristobal, or the one at Ancon, and receive it back by the time it is ready to clear from the other end of the Canal. Passengers' laundry can be handled with corresponding dispatch, but it is preferred to have at least two days for the work.

REPAIRS.

Except for the limitations imposed at present by the absence of a large dry dock, and of lathes for turning the largest crank shafts and longest line shafts of modern vessels, the Canal shops can do practically any repair work which a vessel might bring. Sufficient materials, including heavy billets and all sizes of plates and angles, are kept on hand to meet every probable need. The foundry can make steel castings up to five tons in weight, and iron castings up to 10 tons, as well as brass castings of any ordinary size.

The shops at Balboa are equipped with a 540-ton hydraulic forging press, an open side extension planer with capacity to plane 132 inches wide, 96 inches high, and 24 feet long, lathes large enough for ordinary line shaft work, and the usual accessories of fully equipped machine, boiler, and shipfitters' shops. The shops alongside the dry dock at Mount Hope can do small machine work of moderate size, and practically any plate work likely to be required. By submitting to the delay necessary to transport parts to Balboa, all the facilities of the Balboa shops are also available for work at Mount Hope. The Mount Hope dry dock can take ships drawing 13½ feet of water and 300 feet long; the permanent dry dock now under construction at Balboa will take any vessel that can pass through the Canal.

The Balboa shops contain a plant for the generation of oxygen and acetylene, and both they and the shops at Mount Hope are equipped with tools for all kinds of cutting and welding. Compressed air, steam, water, oil, and electric current are available at the repair wharves in the maximum quantity required. Locomotive and wrecking cranes are available at the wharf side for lifting, and a derrick barge with a lifting capacity of 40 tons may be brought into service if necessary. Two floating derricks of 250-tons capacity each are being erected now, and are to be ready for service in December, 1914.

Contracts for doing repair work at a stated cost cannot be made by The Panama Canal, though estimates of probable cost can be furnished from the shops. Charges are made on the basis of actual cost of repairs, plus a percentage to cover overhead expenses, prescribed by The Panama Canal.

PERSONAL ACCOMMODATIONS.

The Hotel Washington at Colon and the

Hotel Tivoli at Ancon, adjoining Balboa, and the Hotel Aspinwall, on Taboga Island, are owned and operated by the Government for the accommodation of the traveling public. Reservations can be made in the same way as at privately owned hotels.

Ancon Hospital is equipped with 800 beds. It treats about 35,000 cases a year, in which approximately 7,000 surgical operations are performed. Its staff of physicians and surgeons includes men of marked experience and ability, and several experts in tropical medicine. The treatment of cases from neighboring countries and from ships is a part of its regular work.

Direct cable connections extend from the Isthmus to New York and to the west coasts of Mexico, Central, and South America. The radio stations at Colon and Balboa handle commercial business.

METHOD OF APPLICATION.

Steamship captains, or agents, desiring the services of The Panama Canal in the way of supplies, repairs, etc., will receive prompt response on communicating with the captain of the port at Balboa or Cristobal. Ships may communicate their wants by radio, in advance of arrival. The Canal organization, having made ample preparations for serving vessels, is desirous of giving prompt and satisfactory service on a businesslike basis, without unnecessary delay or red tape.

The captain of the port will furnish information in regard to placing orders, and should be notified of all orders placed, so that he may be able to keep track of them in relation to clearing ship, etc. If orders are placed direct, application should be made to the following:

Coal—Receiving and forwarding agent, Panama railroad, Cristobal, or Balboa.

Fuel oil—Union Oil Company, Balboa. (Temporarily.)

Ships' supplies—Depot quartermaster, Cristobal, or quartermaster's storekeeper, Balboa.

Foodstuffs, general merchandise, ice, laundry, etc.—Depot commissary, Cristobal, or commissary storekeeper, Balboa.

Repairs—Superintendent of Mechanical Division, Balboa.

Water and miscellaneous supplies, and information—Captain of the port, Cristobal, or Balboa.

Electric repairs such as wiring, lights, dynamos, etc.—Electrical Engineer, Balboa Heights.

Bills for all supplies will be submitted through the offices of the deputy collectors at the ports for collection, or cash may be sent with orders. Bills for supplies furnished ships of regularly established lines will be submitted to the local agents, if desired.

PRICES OF SUPPLIES.

The following is a partial list of the charges prevailing at present for various services, but they are subject to change from time to time:

Coal—At Cristobal, from lighters, trimmed in bunkers, per ton, \$5.40; from cars alongside wharf, handled by ships' gear, per ton, \$5.15; use of steam hoist and crane, per hour, \$1. At Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil—Regular sales, \$1.30 per barrel.

Water—Delivered at dock, 25 cents per 1,000 gallons; minimum charge, \$3.

General supplies, foodstuffs, etc.—Prices are usually less than retail prices in the United States. Wholesale lists may be obtained from the offices of the port captains.

Ice—At Cristobal, 30 cents per 100 pounds; at Balboa, 35 cents per 100 pounds.

Laundry—The following representative prices will give a fair idea of charges: *For passengers*—Drawers or undershirts, 10 cents each; socks, five cents per pair; collars, three cents each. *For ships*—Waiters' coats, 10 cents each; blankets, 10 cents each; trousers, and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each. **CHARGES FOR SERVICES.**

Barges and lighters—With towing machine, 400 tons or over, \$2.25 per hour; without towing machine, 400 tons or over, 90 cents per hour; under 400 tons, 30 cents per hour.

The charge for barges or lighters will depend upon the kind and class of service rendered, time in use, and charges in connection with handling freight and cargo.

Wharfage—All steam or motor vessels, per day or fraction thereof, per foot of length, measured over all, 15 cents. Sailing vessels, 100 feet in length, or less, per foot, five cents; over 100, but less than 200 feet, per foot, 10 cents; over 200 feet, per foot, 15 cents.

Dry docking at Mount Hope—For vessel docked alone, \$75 for the first day, and \$25 for each subsequent day. For a vessel docked with another vessel, \$50 for the first day, and \$18 for each subsequent day.

Launches—Larger launches, for the first hour, \$7.50, and \$5 for each succeeding hour; smaller launches, \$5 for the first hour, and \$2.50 for each succeeding hour.

Diver's service—For the first four hours, or fraction thereof, from time of arrival at point of diving, \$60; for each subsequent hour, \$10.

Freight—Rates for handling freight depend upon the kind and class of services required. Freight is handled at the terminal ports either by the Panama railroad or the agents of vessels.

Tugs—For harbor work, shifting berths, work around piers or locks, and short tows, \$15 per hour. For towing through the Canal, four cents per displacement ton, or 10 cents per net Panama Canal ton; minimum charge for towing through the Canal, \$150.

Pilotage—Charges are based upon the maximum draft; rate per foot, or fraction of foot exceeding six inches, \$1. In case pilot is taken on outside of the Atlantic breakwaters, an extra charge of \$10 is imposed. There is no charge for pilotage when a vessel goes direct through the Canal, without stopping at either terminal port to take on or discharge cargo or passengers. Through passengers will be allowed to land without affecting the status of the vessel in this respect.

Tolls—On merchant vessels carrying passengers or cargo, per net ton (each 100 cubic feet) of actual earning capacity, \$1.20.

On vessels in ballast, without passengers or cargo, 40 per cent less than the rate for vessels with passengers or cargo, *i. e.*, per ton, 72 cents.

On Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton, \$1.50.

On Army and Navy transports, colliers, hospital ships, and supply ships, the vessel to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton, \$1.20.

Additional charges are made for deck loads, depending on the space occupied; per net vessel ton, \$1.20.

For passengers, no specific charge is made,

but passenger space is included in the net tonnage upon which tolls are charged.

Control of Radio Communication in Republic of Panama Vested in the United States.

By decree No. 130 of August 29, 1914, signed by the President of Panama, the control of all radiotelegraphic communication within the Republic of Panama is vested in the United States, as follows:

1. That by the terms of the Bunau-Varilla-Hay Treaty, the Republic of Panama is obliged to assist the United States by all necessary and suitable measures for the conservation, protection, and defense of the inter-oceanic canal constructed across the Isthmus.

2. That the said Government considers it indispensable to assume, from now on, per-

manent and complete control of the wireless stations, fixed and movable, in all the territory and territorial waters of the Republic of Panama.

3. That it is to the interest and for the safety of the Republic of Panama that wireless communication be controlled and regulated by the nation, which, by a solemn pact, has guaranteed its independence, therefore,

4. It is decreed that from this date the radiotelegraphic stations, fixed and movable, and everything relating to wireless communication in the territory and territorial waters of Panama shall be under the complete and permanent control of the United States of America, and to attain that end said Government will take such measures as it deems necessary.

LABOR FORCE AND QUARTERS IN AUGUST.

The force report of August 26 shows the actual working force of The Panama Canal on that date to have been 24,762; of the Panama railroad, 4,059, and of contractors, 62, a total effective working force of 28,883. This is an decrease of 3,554, as compared with the statement of July 22. The gold force on the Canal work, composed almost exclusively of white Americans, was 4,529, divided, as follows: The Panama Canal, 4,009; Panama railroad, 512; contractors, eight, a decrease in the total gold force, as compared with the preceding month, of 183. Detailed figures of the total force employed on the Isthmus, by departments and divisions, are given below:

DEPARTMENT OR DIVISION.	SILVER EMPLOYES*													Total silver	Total gold	Grand total
	Artisans.						European labor.		Laborers.							
	Monthly.	Special.	22 cents.	18 cents.	15 cents.	12 cents.	Special.	16 cents.	13 cents.	10 cents.	7 cents.	5 cents.				
Operation and Main- tenance; office & locks	61	7	38	194	251	122		1	109	127		7	917	218	1135	
Terminal Construct'n	687	32	35	227	637	171		456	496	685	11	40	3,477	240	3,717	
Erection																
Electrical	62	14	24	51	157	113		1	49	154			625	266	891	
Municipal Eng.	257		80	254	403	261		51	68	459	2	22	1,857	101	1,958	
Dredging	1,723		5	11	49	4	2	19	192		1		2,006	288	2,294	
Mechanical	177	21	64	126	611	837		10	49	202	5	13	2,115	1,077	3,192	
Canal Transporta'on	90												90	33	123	
Fortifications	113		51	121	297	90	14	6	309	95		7	1,103	92	1,195	
General Construct'n	33		12	5	7	1	3	128	103	60		4	356	10	374	
Total	3,203	74	309	969	2,412	1,599	19	672	1,375	1,782	18	94	12,546	2,333	14,879	
Supply: main office	5												5	47	52	
Commissary	664		2	1	9	9	212	2		113	11		1,023	176	1,199	
Subsistence	598	1	1	1	1	2							604	34	638	
Quartermaster	949	313	213	475	914	297		239	935	1,247	2	28	5,612	705	6,317	
Accounting	13												13	140	153	
Health	408		3	2	7				14	317		47	793	199	997	
Executive	152												152	375	527	
Panama railroad	484	115	66	179	236	403		86	603	1,331	7	37	3,547	512	4,059	
Contractors	1								1	52			54	8	62	
Grand total	6,477	503	594	1,617	3,579	2,310	231	999	2,928	4,842	38	206	24,354	4,529	28,883	
Month previous	6,745	332	710	1,862	4,467	2,944	1,278	1,349	3,062	4,718	50	206	27,725	4,712	32,437	
Changes	-268	+171	-116	-245	-888	-634	-1,047	-350	-134	+124	-12	-2	-3,371	-183	-3,551	

*The wages are stated in United States currency.

QUARTERS.

A report of Canal and Panama railroad quarters occupied on August 31, follows:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Children	Men	Women	Children	Men	Women	Children
Ancon	783	342	303	...	...	...	644	44	5
Balboa	691	52	41	348	13	21	1,585	155	558
Corozal	819	210	274	170	...	...	636	46	53
Cristobal	961	346	302	144	...	...	1,370	172	341
Culebra	356	233	237	14	13	25	531	319	423
Gumbao	22	4	4	...	...	...	114	32	36
Gatun	309	164	188	214	5	16	407	41	52
Paraiso	276	70	81	106	5	17	336	112	167
Pedro Miguel	181	101	117	56	...	...	281	4	8
Toro Point	3	...	...	...	...	...	298	...	...
Total	4,404	1,522	1,550	1,052	36	79	6,202	1,228	1,683

(1) Includes eight American negroes, and two Panamanians on the gold roll. (2) Includes Sabanas police station, Taboga Island, Naos Island, Culebra Island, and Palo Seco. (3) Includes Miraflores. (4) Includes one Asiatic. (5) Includes 50 Panamanians. (6) Includes Empire, Las Cascadas, and Bas Obispo. (7) Includes eight American negroes. (8) Includes Colon Beach and Colon Hospital. (9) Includes 26 East Indians. (10) American citizens, and 82 Panamanians. Gold force of contractors (included above), 27 bachelors.

SCHOOL ATTENDANCE.

Enrollment in Schools for White Children Larger Than Anticipated.

The Canal Zone schools were opened on Thursday, October 1, with an unexpectedly large enrollment in the schools for white children on the first day. There are nine grade schools for white children, two less than last year; and two high schools, one each at Balboa and Cristobal. The schools at Empire and Porto Bello were closed permanently last year. It had been expected that the reduction of force and the movement of the population toward the Pacific end of the Canal would greatly reduce the number of pupils in the schools along the line, but this was not the case. At Culebra, as an illustration, where provision had been made for a very small school, the enrollment on the opening day was 78, and on Monday, October 5, it had increased to 84. Last year the enrollment on the opening day was 30. The same was the case at Ancon, where 57 children were enrolled in the third and fourth grades, and at Cristobal, where 61 in the third and fourth grades were present on the opening day. The result of this increased enrollment over that which had been expected, was that five additional rooms were opened on the first day and relief teachers had to be engaged temporarily.

The largest school for white children is at Cristobal, which opened with 190 pupils. Following is the enrollment on the opening day, by schools: Balboa, 100; Ancon, 153; Corozal, 133; Pedro Miguel, 52; Paraiso, 34; Culebra, 78; Las Cascadas, 19; Gatun, 107; Cristobal, 190; total, 866. High school—Balboa, 65; Cristobal, 20; total, 85, making a grand total of 951 in the schools for white children.

There are 36 teachers in the force of the schools for white children, not including the supervisor of industrial teaching.

The enrollment for the first day in the schools for colored children was 475. This low figure does not indicate the normal size of the schools, however, as the colored children seldom enroll on the opening day of school if it falls near the end of the week. At Ancon school, for example, the enrollment on October 1 was 63, while on Monday, October 5, there were 112 children present; at LaBoca, the increase was 70, at Paraiso, 20, and at Cristobal, the first day's enrollment was increased by 77 pupils on Monday. There are six schools operated for colored children, with a staff of 20 teachers. The colored enrollment by schools for the opening day, follows: La Boca, 129; Ancon, 63; Paraiso, 32; Gatun, 32; Mount Hope, 15; Cristobal, 204; total, 475. On Monday, October 5, the enrollment at these schools was 731, an increase of nearly 50 per cent.

Sand Unloading Operations Retrained to Balboa.

Effective September 3, the sand unloading operations, which have been carried on for several months past at the south end of Miraflores Locks, were retransferred to Balboa. The completion of dredging work at the east end of slip No. 1, immediately in front of Quay Wall g-h-i, allows the sand service to be removed to that point, and about 350 feet of the water front of the quay wall, measured from the head of slip No. 1 has been reserved for it. A temporary track has been laid on top of the quay wall, for a distance of about 400

feet, which will be used as a loading track for steel dump cars. It will be necessary to employ a light locomotive in placing the cars in position, as the concrete girders and beams in the floor, except along the permanent track, are not designed to bear up railway equipment. The loading of the cars from barges will be accomplished by locomotive cranes operating clamshell buckets.

Messrs. C. L. Parker, John H. Smith, C. C. McColley, and John F. Warner have

been appointed a committee to inspect the wooden office furniture in the new Administration Building, with a view of ultimately replacing it with metallic equipment.

Woman's Auxiliary, U. S. W. V.

The Woman's Auxiliary to the United Spanish War Veterans met at the home of Mrs. E. von Muenchow, Ancon, on Wednesday afternoon, September 23. The next meeting is scheduled to take place at Empire lodge hall on Wednesday, October 14.

PANAMA RAILROAD COMPANY.

(PASSENGER TRAIN TIME TABLE NO. 20—IN EFFECT OCTOBER 11, 1914.)
COLON-PANAMA MAIN LINE AND SHUTTLE SERVICES.

SOUTHWARD.

STATIONS.	Miles from Colon	Daily except Sunday	DAILY.							Sundays only	Sundays only	Sundays only
			21	31	3	5	33	7	35			
Leave.		A. M.	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	A. M.	P. M.	
Third Street		5.50										
Fifth Street		5.51										
Colon		5.53			7.15	11.05		5.05		11.38		
Commissary		5.55										
Shops		5.57						5.10				
Mount Hope	1.57	5.01			7.20	11.10		5.15		11.40		
Mindi	4.40	5.07										
New Gatun	5.94	5.10			7.28	11.18		5.23		11.48		
Gatun	6.79	6.13			7.36	11.20		5.25		11.50		
Monte Lirio	14.48				7.45	11.35		5.40		A. M.		
Frijoles	20.92				7.56	11.46		5.51		12.06		
Darien	25.27				8.04	11.54		5.59		12.17		
Gamboa	30.26				8.14	12.04		6.10		12.35		
New Culebra	35.19				8.30	12.15		6.20		12.46		
Las Cascadas	47.93		7.00				1.05		7.15		1.40	11.40
Empire	45.64		7.05				1.10		7.20		1.45	11.45
Culebra	44.65		7.10				1.15		7.25		1.50	11.50
Paraiso	40.95		7.25				1.30		7.40		2.05	12.05
Pedro Miguel	40.24		7.28	8.44	12.29	1.33	6.34	7.43	12.58	2.08	12.08	
Miraflores Locks	42.35		7.34	8.50	12.35	1.39	6.40	7.49	1.04	2.14	12.14	
Corozal	44.24		7.39	8.54	12.39	1.44	6.44	7.54	1.09	2.19	12.19	
Balboa Heights	46.25		7.45	9.00	12.45	1.50	6.50	8.00	1.15	2.25	12.25	
Panama	47.61		7.50	9.05	12.50	1.55	6.55	8.05	1.20	2.30	12.30	
		A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	A. M.	
		21	31	3	5	33	7	35	9	53	55	

NORTHWARD.

STATIONS.	Miles from Colon	Mixed Daily	Daily except Sunday	DAILY.					SUNDAY ONLY.		
		30	22	4	6	32	8	34	10	52	54
Leave.		A. M.	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	A. M.	P. M.
Panama	47.61	5.00	.....	7.10	11.00	12.10	5.05	6.15	11.30	12.40	10.40
Balboa Heights	46.25	5.05	.....	7.15	11.05	12.15	5.10	6.20	11.35	12.45	10.45
Corozal	44.24	5.11	.....	7.21	11.12	12.21	5.16	6.26	11.41	12.51	10.51
Miraflores Locks	42.35	5.16	.....	7.26	11.16	12.26	5.21	6.31	11.46	12.56	10.56
Pedro Miguel	40.24	5.26	.....	7.33	11.23	12.33	5.28	6.38	11.53	13.03	11.03
Paraiso	40.95	5.29	.....			12.36		6.41		13.06	11.06
Culebra	44.63	5.03	.....			12.49		6.55		13.19	11.19
Empire	45.64	5.28	.....			12.53		7.00		13.24	11.24
Las Cascadas	47.93	6.35	.....			12.58		7.05		13.29	11.29
									A. M.		
New Culebra	35.19		.....	7.45	11.35		5.40		12.06		
Gambon	30.26		.....	7.55	11.45		5.50		12.16		
Darien	25.27		.....	8.06	11.56		6.01		12.27		
					P. M.						
Frijoles	20.92		.....	8.14	12.04		6.09		12.34		
Monte Lirio	14.48		.....	8.25	12.15		6.20		12.45		
Gatun	6.79	6.25	.....	8.40	12.30		6.35		13.00		
New Gatun	5.94	6.28	.....	8.42	12.32		6.37		13.02		
Mindi	4.40	6.31	.....							
Mount Hope	1.57	6.37	.....	8.56	12.40		6.45		13.10		
Shops		6.41	.....							
Commissary		6.43	.....							
Colon		6.45	.....	8.55	12.45		6.50		13.15		
Fifth Street			.....							
Third Street			.....							
		A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	P. M.
		30	22	4	6	32	8	34	10	52	54

s Stop. f Flag stop.

Southward main line passengers for branch using Nos. 5, 7, and 9, change cars at Pedro Miguel, connecting with Nos. 32, 34, and 52. No. 3 does not make any connection for Las Cascadas branch. Northward main line trains do not make any connections for Las Cascadas branch.

OFFICIAL CIRCULARS.

Supplement No. 1 to List of Nonexpendable Property Published with Circular No. 656-1.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,
EMPIRE, C. Z., August 19, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The following changes and additions to the list of nonexpendable property are published for the information of all concerned:

CHANGES.

- Page 1. Atomizers, plain; eliminate
Page 3. Beakers, glass; eliminate
Page 7. Catheters; eliminate
Page 15. Funnels; add "Except glass"
Page 15. Furnaces, blast, plumbers; add E
Page 16. Glasses, medicine; eliminate
Page 16. Gloves, rubber; add "Except for surgical and postmortem work"
Page 16. Goggles; add "Except medical for issue to patients"
Page 16. Irrigators; add "Except medical and surgical for issue to patients"
Page 26. Pipettes, glass; eliminate
Page 28. Punches; add "Except blacksmith's"
Page 35. Tops, glass, for operating room and ward tables; eliminate

ADDITIONS.

- E Apparatus, restraint, medical and surgical
Applicators, medical and surgical
Aspirators, medical and surgical
Bags, air, Politzer's
E Bags, obstetrical, with contents
Basins
Basins, solution, except glass
Baths, arm, medical and surgical
E Binnacles
Bougies, metal, medical and surgical
Boxes, fracture, medical and surgical
Buckets, dressing
Calibrators, medical and surgical
Carriers, metal, medical and surgical
E Cases, emergency, with contents
E Cases, ear, nose, and throat, with contents
E Cases, eye, with contents
E Cases, drinking cup
E Cases, general operating, with contents
E Cases, genito-urinary, with contents
E Cases, pocket, with contents
E Cases, tooth extracting, with contents
Cauteries, thermo cauteries
Chairs, comode, receptacles for
Chambers; counting, medical and surgical
Chambers, moist, glass
Chisels, medical and surgical
Clamps, medical and surgical
Coats, operating, surgeon's
E Covers, boot
Cups, feeding
Cups, sputum
Curettes, medical and surgical
Depressors, metal, medical and surgical
Dialyzers
Dilators, metal, medical and surgical
Directors, metal, medical and surgical
Dishes, ligature
Dresses
Drills, bone, medical and surgical
Dusters, powder, medical and surgical
Dusters, counter
Elevators, metal, medical and surgical
Endoscopes, medical and surgical
Extractors, cork
Files, manicure, medical and surgical
Glasses, test, conical, glass
Gorgetts, medical and surgical
Gouges, medical and surgical
Gowns, operating, surgeon's
Haemocytometers
Haemoglobinometers
Holders, caustic, medical and surgical
Holders, cover, glass, medical and surgical
Holders, sponge, medical and surgical
Hooks, metal
Inhalers, for anaesthesia
E Instruments, exploring
Jars, bell
Jars, cover
Jars, dressing, glass, medical and surgical
E Lamps, 5-day
Lancets, gum
Laryngoscopes, medical and surgical
Litrotrites, medical and surgical
E Machines, suppository, medical and surgical
E Machines, tablet and pill
Mills, drug
Mirrors, medical and surgical
Moulds, suppository, medical and surgical
Needles, aneurysm, medical and surgical
Needles, eye, foreign body, medical and surgical
Nightgowns
Objectives, microscopic
Ophthalmometers
Ophthalmoscopes
Otosopes
Pads, operating, rubber
Pelymeters, medical and surgical
E Perimeters, optical
Perforators, medical and surgical
Periosteotomes, medical and surgical
Pleximeters, medical and surgical
Proctoscopes, medical and surgical
E Pulmotors
E Racks, bedpan and urinal
E Rests, back, bed
Retinoscopes, medical and surgical
Retractors, medical and surgical
Rongeurs, medical and surgical
Searchers, stone, medical and surgical
Separators, medical and surgical
Sheets, rubber, draw
Sigmoidoscopes, medical and surgical
Slippers, ward, leather
Sounds, metal, medical and surgical
Spectroscopes
Sphygmomanometers, medical and surgical
Spuds, medical and surgical
Staffs, lithotomy, medical and surgical
Stages, mechanical, microscopic
E Stands, immersion or solution, medical and surgical
E Stands, irrigator, medical and surgical
Stoves, alcohol
E Stretchers, wheeled, for ward use
Suits, bathing
Syringes, antitoxin, medical and surgical
Syringes, hard rubber, medical and surgical
Tenaculums, medical and surgical
Tiles, pill, delf
Tiles, pill, hard rubber
Tonsilotomes, medical and surgical
Tractors, medical and surgical
Tripods, for alcohol lamps
Urethrotomes, medical and surgical
Urinals, metal, for ward use
Urinometers, medical and surgical

Approved:

GEORGE W. GOETHALS,

Governor.

SUPPLEMENT NO. 2 TO LIST OF NONEXPENDABLE PROPERTY, PUBLISHED WITH CIRCULAR NO. 656-1.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,

BALBOA HEIGHTS, C. Z., September 30, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The following changes and additions to the list of nonexpendable property are published for the information of all concerned:

CHANGES.

- Page 5. E Boxes, filing; add "Except paper and paste or cardboard."
Page 5. Boxes, tool; add "Portable."
Page 6. Canteens, covers for; eliminate.
Page 7. E Cases, file; add "Except paper and paste, or cardboard."
Page 7. E Cases, letter; add "Except paper and paste, or cardboard."
Page 8. Hooks, metal; add "Medical and surgical."
Page 10. Counters, revolution; add E.
Page 11. Cutters, emery wheel; eliminate.
Page 12. Dies, steel; change to "Dies, stamping."
Page 13. Dynamometers; add E.
Page 25. Outfits, belt repairing; add E.
Page 35. Testles, painters; change to "Trestles, painters."
Page 36. Trocars and canula; change to "Trocars and canula."

ADDITIONS.

- Broilers, culinary.
Brushes, counter duster.
(shown in supplement No. 1 as "Dusters, counter.")
E Dynamometers.
E Equipment, sand blast.
E Hammers, piledriver.
Shoes (wearing apparel).
E Tables, operating.
MEMORANDA FOR ACCOUNTABLE OFFICIALS.
When designation of property is changed from nonexpendable to expendable, accountable officials will list items on regular invoice (form P. C. 924-1), showing reference to circular changing designation. The accountable official will sign invoice, and will show the account number against which charge is to be made. The original and one signed copy will be forwarded to the Auditor.
When the classification of an item is changed from "Tools" to "Equipment," or reverse, accountable

officials will prepare invoices relieving one account and charging the other. Signed original and one copy of such invoices will be sent to the Auditor, as in the case of transfer between officials.

Items of property heretofore considered nonexpendable and carried on the return of property for the period ending March 31, 1914, and which were not included in the list of nonexpendable property or supplements thereto, will be listed and submitted to the Auditor for a ruling under the provisions of Paragraph 1 of Circular 656-1.

Approved:

GEORGE W. GOETHALS,

Governor.

H. A. A. SMITH,
Auditor, Panama Canal.

Changes In Supply Department—Building Division Created.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., September 30, 1914.
CIRCULAR NO. 660-20:

1. Effective October 1, 1914, the construction and repair of buildings for The Panama Canal and the Panama Railroad company, exclusive of minor repairs costing less than \$50, and building construction for account of the Army, will be handled by a building division, in charge of a constructing quartermaster, reporting direct to the Governor. District repair work costing less than \$50 will be handled by the force of the Supply Department.

2. Maj. W. R. Grove, U. S. A., is hereby appointed Chief Quartermaster in charge of the Supply Department, relieving Capt. R. E. Wood, U. S. A., who is hereby appointed Constructing Quartermaster.

GEORGE W. GOETHALS,
Governor.

Employment of Term "Laborer" Defined.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., September 24, 1914.
CIRCULAR NO. 603-5:

Section 12 of the Executive Order of February 2, 1914, (Panama Canal Circular 601-4), as quoted in Section 13 of Circular 603 is interpreted so as to include within the grade "Laborer" all alien hourly employees receiving 40 cents or less per hour. Overtime to such laborers is payable only after 10 hours' service in each day.

GEORGE W. GOETHALS,
Governor.

Division and Field Accounting for Property.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

CIRCULAR NO. 656-4 (Amending Circular No. 656-2):

1. Section 10 of Circular No. 656-2, Line 3, is amended by striking out the word "Auditor", and substituting the word "Paymaster."

2. As amended, this section will read, as follows:
"10. Property releases—All gold employees leaving the service or entering on leave will be required to secure releases from property and quarters, which, for Panama Canal employees, must be presented to the Paymaster of The Panama Canal, or to the branch of his office at Cristobal or Ancon, before final payment will be made."

GEORGE W. GOETHALS,
Governor, The Panama Canal,
President, the Panama Railroad Company.

Notice to Mariners—Dumping Grounds near Pacific Entrance of Canal.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., September 17, 1914.
CIRCULAR NO. 643-7:

1. Material dredged from the Canal is being dumped immediately to the southward and westward of the Pacific entrance of the Canal, and vessels are warned that there is less water there than is shown on the charts. In order to be perfectly safe vessels should keep to the northward and eastward of the extension of the axis of the Canal, and to the eastward of a line running north and south through San José Rock and Taboguilla Island.

2. The dumping ground will be marked by a line of black nun buoys, placed about 1-mile to seaward of it and spaced 1/2-mile apart. They will be unnumbered, and established, as follows:

(a) The first one on a line joining the outer gas buoy, No. 1, at the seaward end of the dredged channel, with Taboguilla Island, distant from the former 1/2-mile. The second on the same line distant one mile from the gas buoy. The azimuth of this line is 173° 30' true (S. 6° 30' E.)

(b) The remainder of the buoys will be on a line passing through the second buoy, with Commission Rock and Melones Island in range. The azimuth of this line is about 235° true (S. 55° W.)

3. These buoys will be moved from time to time as

occasion may demand without further notice. During dredging operations they may be lighted at night with small oil lanterns showing white lights, but these are not to be depended upon by vessels, as they are only intended for the use of the towboats engaged in dredging operations.

GEO. W. GOETHALS,
Governor.

Office Engineer in Charge of Drafting Force.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., September 21, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The Office Engineer will be in charge of the entire drafting force centralized in the drafting room, with the exception of that pertaining to the Fortification Division. General drafting work to be executed will be apportioned by him to the proper member of the force. Designing engineers or officials in charge of construction or maintenance work may be assigned certain draftsmen for their particular work, and will then be authorized to give instructions to such draftsmen directly; the general oversight and discipline of such assigned draftsmen will, however, remain with the Office Engineer.

GEO. W. GOETHALS,
Governor.

Measuring Sand, Gravel, and Stone.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., October 1, 1914.

CIRCULAR No. 637-3 (Superseding 637, 637-1, and 637-2) Effective October 1, 1914, the following quantities will be standard for measuring carloads of sand, gravel, and crushed stone:

	Cu. Yds.
Standard or large coal cars.....	25
Rodger ballast cars.....	20
P. C. wooden and steel flats, without side-boards.....	10
P. C. wooden and steel flats, with side-boards.....	15
Oliver dump cars and Western dump cars (small).....	15
Oliver dumpcars and Western dump cars (large).....	23

All circulars in conflict herewith are hereby revoked.

GEO. W. GOETHALS,
Governor.

Post-office at Frijoles Discontinued.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., September 28, 1914.

CIRCULAR No. 253:

To all postmasters—You are advised that the post-office at Frijoles will be discontinued at the close of business September 30, 1914. Therefore, no registered matter should be accepted for dispatch to that office after that date. All ordinary mail addressed to Frijoles will be delivered by the railway mail messengers to the police officer at that station, who will hold it for delivery at the police station.

JOHN K. BAXTER,
Director of Posts.

Proposals for Construction of Railroad Station at Balboa Heights.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER,

Sealed proposals will be received at the office of the Chief Quartermaster, Panama Canal, Balboa Heights, C. Z., for the erection, by contract, of the new Panama railroad station at Balboa Heights. Bids will be received until 3 p. m., October 17, 1914, when they will be opened in the office of the Chief Quartermaster.

The buildings are to be constructed of concrete blocks and stucco, with reinforced concrete foundations and umbrella shed. The Panama Canal will furnish all material on cars at the site of the work, and the contractor will be required to furnish all labor. Plans and specifications may be obtained at the office of the Chief Quartermaster, Balboa Heights. A deposit of \$15 will be required to insure their return. Each bidder must accompany his proposal with a certified check, cash, or money order for 10 per cent of the amount bid, as a guarantee of his acceptance of the contract.

Bids should be marked "Proposa for Panama railroad station."

The Panama Canal reserves the right to reject any or all bids.

R. E. WOOD,
Chief Quartermaster.

Married.

CARSON-HESS—At Vernon, Ind., on September 9, Miss Edna D. Hess, to Mr. George Barr Carson, the Rev. Daniel C. Simpson officiating. Canal Zone residence, Balboa Heights.

JOINT LAND COMMISSION.

Rule of Dismissal No. 135, September 19, 1914.

In the matter of sundry claims—With reference to the claims for improvements of the persons hereinafter named, the evidence before the commission is that they have made settlements with the United States for their houses and other improvements. The names of such persons, their docket numbers, the tax numbers (where stated) of the houses included in the settlements, and their location, follow:

Name.	Docket No.	Tax No.	Locality.
Acosta, Anastacio.....	1675	C-55	Near Empire
Aguilar, Lazaro.....	1427		Near Rio Naran-gito
Aldeano, Brigidio.....	1724		Near Miraflores
Alvarez, Eduardo.....	768	1927	Near Empire
Anderson, Richard.....	501	1571	Near Empire
Ayarza, Gregorio.....	980	922	Torno Sabalo
do.....	1071		Torno Sabalo
Balderamo, Serafino.....	1004	C-5	Near Empire
Baza, Lorena.....	1720	22	Paraiso
Blanquises, Candela-ria.....	1002		Near Empire
Bolivar, Francisco.....	1003	C-9	Near Empire
Brown, Manuel.....	332	C-2008	Near Miraflores
Busto, Juan.....	320	C-2032	Cardenas, near Corozal

Caceres, Bernardino.....	329	C-2019	Near Miraflores
Caceres, Higino.....	318	C-2021	Near Miraflores
Campo, José Aguedo.....	328	C-2018	Near Corozal
Campos, Roman.....	330	C-2000	Mirazal
Canu, Nicola.....	304	C-2024	Cardenas, near Corozal

Carlos, Serafin.....	310	P-75	Cardenas, near Corozal
Castillo, Manuel.....	314	C-2027	Cardenas

Cateral, Daniel (Cot-trell, Daniel).....	337	C-2015	Near Corozal
Cerezo, Luisa, et al.....	149		Near Bohio

Chaves, Ana C. (Ana-Christina Chave-vez).....	335	128	Card-nas, Margarita
Chave, Senon.....	1301		
Cortes, Nicolas (Cor-tez, Nicolas).....	313	C-2023	Near Corozal
De la Cruz, Juan.....	1700		Near Chorrera road

De Leon, Petra (de-ceased).....	1380		Monte Lirio
Dixon, Wm.....	317	P-68	Cardenas
Estrada, Julian.....	541		Juan Mina
Faquarson, Alexander.....	324	P-87	Cardenas
Garcia, Carmelo.....	334	C-2030	Cardenas

Garcia, José Isabel.....	761	1055	
do.....	762	1056	Cocoli
Gonzalez, Manuel.....	1037	1565	Near Empire
do.....	874	8	Near Empire
Gonzalez, Martiniano Grandeson, Guillermina Y. (Grandizon, Guilermína Y.).....	1718	1671	Las Cascadas

Herrera, Bonifacia H. de.....	1677	1667	Las Cascadas
do.....	1768	1768	Las Cascadas
Hernandez, Encarna-ción (Incarnación).....	1311		Margarita

Holness, Pedro (Pe-ter).....	1010	1802	Near Empire
Isprua, José Rosario.....	1722	C-51	Mandingo
Johnson, Richard.....	953	1569	Near Empire
Lee, Hop.....	956		Near Empire
Lindsay, Edward.....	957	962	Cerro Gordo
Lopez, Antonio.....	311	127	Cardenas

Lucena, Octavio (Lu-ceno, Octavio).....	323	C-2035	Cardenas
do.....		C-2036	
Magallon, Catalino.....	488	1599-A	Mandingo
Melendez, Pedro.....	315	C-2034	Cardenas
Miller, Tomas.....	316	M-1102	Cardenas

Montenegro, Isabel (Montanegro, Isa-bell).....	207	231	Near Gorgona
Muñoz, Doroteo.....	322	P-77	Cardenas
do.....		P-77-A	Cardenas
Murphy, Chas.....	312	C-2037	Cardenas
Murphy, Robert.....	306	P-67	Cardenas

Nix, Edward (Nix, Eduardo W.).....	333	C-2017	Cardenas
Ospina, Alcides.....	1725	1844	Near Empire
do.....		1845	Near Empire

Pascal, James Muf-fitt.....	1816	159	Near Miraflores
Pelarez, José (Pela-z).....	756	1917	Empire
do.....		1934	

Portillo, Eustaquio, Poxtillo, Eustaquio.....	543		Juan Mina
Portillo, Eustaquio.....	766		Juan Mina
Poxtillo, Eustaquio.....	767		Juan Mina
Poxtillo, Eustaquio.....	765		Juan Mina

Prado, Cajetani (Pra-do, Cayetano).....	1326	290	Crucés
do.....		296	Crucés
do.....		297	Crucés
do.....		306	Crucés

Reales, Ricardo.....	999	3	Near Empire
Rodenas, Auselio (Ro-denas, Aurelio).....	865	1926	Near Empire
do.....		2051	Near Empire

Rodriguez, Francisco.....	1000	6	Near Empire
do.....		7	Near Empire

Rodriguez, Manuel Castro.....	758	1920	Empire
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Castro.....	758	1925	Empire
do.....		2053	Empire

Rodriguez, Quintin (Rodriguez, Quen-tin).....	303	C-2003	Cardenas
Salinas, Magdalena (Salina, Magdalena).....	309	P-73	Near Miraflores
do.....		P-173	Near Miraflores

Santana, Bernardina (Santana, Bernar-do).....	1001	C-12	Near Empire
Santana, Diogenes.....	1008	C-11	Near Empire
Santana, Juan.....	1009	C-13	Near Empire

Sarmiento, Aurelia Ana (Aureliana).....	1671	384	Near Matachin
Sosa, Nazaria (Sossa, Aoasaria).....	308	P-72	Cardenas
do.....		133	Cardenas
do.....		153	Cardenas
do.....		157	Near Miraflores

Thomas, John.....	1602		
Thompson, Ovidio (Thompson, Obe-diah).....	298	C-2013	Cardenas
do.....		2013-A	Cardenas

Trebo, Felix (Tribó, Felix).....	1640		Near Miraflores
Turner, Wm.....	1477	1541	Near Empire
do.....	944		Near Empire
Urrutia, Manuel.....	158	152	Near Sierpo

Vargas, Maria de la Paz.....	1716	1645	Las Cascadas
do.....		1638	Las Cascadas
Vasquez, Modesto.....	331	C-2001	Near Corozal

Welsh, Albert (Walsh, Albert).....	307	C-2005	Mirazal
Wiedmann, Albert.....	300	130	Corozal
do.....		C-2045	Corozal

In view of the agreements before noted, these claims call for no further action by this commission, and they are accordingly dismissed.

(Signed) FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule 136.

In the matter of an award to Saturnina Borsallo, Carmen Posada, Elvira Posada, for property in the town of Gorgona, docket No. 497 (1250-A) September 19, 1914—Rule in re award No. 41 of September 20, 1913:

This award included an item of \$1,200 United States currency, for a house in Gorgona, the property of Saturnina Barsallo, Carmen Posada, and Elvira Posada, docket No. 497. It was stated that the house referred to bore the tax number 704. The proper designation of the house of this claimant is tax number 708, and the original award is hereby amended so to read.

(Signed) FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule No. 137, September 19, 1914, Docket No. 1379.

In the matter of the claim of D. W. Ogilvie, for property located at Juan Grande—Two claims have been filed by the claimant D. W. Ogilvie for slightly different properties, but the previous award made to Ogilvie showed only one of the two docket numbers, although the award in reality covered both properties. In order that the records of the commission may be complete and show all docket numbers which have been acted upon, the commission rules, as follows:

That the award previously announced and herein-below shown be amended to show, in addition to the docket number already shown, the docket number listed below:

Name of Claimant.	Award No.	Date.	Dock No. already shown.	Dock No. to be shown.
Ogilvie, D. W. (David W.).....	2	6-24-13	36	1,379

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Tide Table.

The following table shows the time of high and low tides at Panama for the week ending October 17, 1914:

DATE.	High	Low	High	Low	High
	A.M.	A.M.	A.M.	P.M.	P.M.
Oct. 11.....	1.32	7.22	2.03	7.57	
Oct. 12.....	2.24	8.12	3.01	8.59	
Oct. 13.....	3.31	9.20	4.09	10.15	
Oct. 14.....	4.49	10.44	5.22	11.32	
Oct. 15.....	5.59	12.03	6.27		
Oct. 16.....	12.38	6.59	1.06	7.22	
Oct. 17.....	1.31	7.50	1.59	8.12	

75th meridian time.

Hotel Aspinwall Lunch Service.

The launch Louise will sail from the dredge landing at Balboa for the Hotel Aspinwall on Taboga Island at 9.25 a. m., on Monday, Thursday, and Saturday of each week. The time of sailing permits connection to be made with train No. 3, which arrives at Panama from Colon at 8.45 a. m., daily.

Rib roast, second cut (not under 3½ pounds), special, per pound.....	18	½-gallon.....	\$50
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24	Cream, Sheffield Farms, quart.....	**33
Rib roast, first cut (not under 3 pounds), special, per pound.....	22	" pint.....	**19
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27	" ½-pint.....	**12
Pot roast, special, per pound.....	28	VEGETABLES.	
choice, per pound.....	23	Beets, per pound.....	2½
Rump roast, special, per pound.....	28	Cel-ry, per head.....	4
choice, per pound.....	23	Cabbage, per pound.....	2½
Porterhouse roast, special, per pound.....	25	Carrots, per pound.....	3
choice, per pound.....	31	Cucumbers, per pound.....	2
Steak, chuck, special, per pound.....	15	Lettuce, per pound.....	15
choice, per pound.....	18	Onions, per pound.....	2½
Round, bottom, per pound.....	15	Peppers, per pound.....	3
choice, per pound.....	19	Potatoes, white, per pound.....	2½
Round, top, special, per pound.....	17	sweet, American, per pound.....	4
choice, per pound.....	22	Vams—Tropical, per pound.....	3
Rib, special, per pound.....	23	Eggplant, per pound.....	2½
choice, per pound.....	27	Rhubarb per pound.....	2½
Sirloin, special, per pound.....	23	Turnips, per pound.....	2
Sirloin, choice, per pound.....	28	Tomatoes, per pound.....	3
Sirloin, choice cut, special, per pound.....	26	Squash, per pound.....	2
Sirloin, choice cut, choice, per pound.....	32	FRUITS.	
Rump, special, per pound.....	23	Apples, per pound.....	6
choice, per pound.....	28	Cantaloupes, each.....	5
Porterhouse (not less than 1½ pounds), special, per pound.....	26	Grape fruit—American, each.....	7
Porterhouse (not less than 1½ pounds), choice, per pound.....	34	Tropical, e'ch.....	3½
Porterhouse, short, Delmonico, special, per pound.....	23	Lemons, per dozen.....	13
Porterhouse, short, Delmonico, choice, per pound.....	28	Limes, per 100.....	40
Tenderloin, Western, special, per pound.....	40	Oranges—American, each.....	2½
Tenderloin, Western, choice, per pound.....	46	Jamaican, per dozen.....	18
Bone, soup, per pound.....	2½	Peaches, per pound.....	6
Pork—Hams, fresh, per pound.....	\$26	Bananas, per bunch.....	38
Shoulders, fresh, per pound.....	\$22	Bananas, each.....	0½
Loin, chop, or roast, per pound.....	26	Apples, evaporated per pound.....	16
Pigs' feet, each.....	08	Apricots, evaporated per pound.....	23
Pigs' head, whole.....	95	Pears evaporated, per pound.....	23
Pigs' head, ¼-head.....	48	Pears, alligator, each.....	6
Sausage, home made, per pound.....	26		
MISCELLANEOUS.		* Indicates advance from preceding list.	
Livers—Beef, per pound.....	13	† Indicates reduction from preceding list.	
Calf, each.....	165	**Indicates five cents allowed for return of bottle.	
Half, each.....	133	‡ Sold only from commissaries; no orders taken for delivery.	
Steak,—Hamburger, package.....	17	§ So d only from cold storage and not from commissaries.	
Hamburger, 20-pound containers, per pound.....	14	Additions to Stock.	
Sausage—Bologna, per pound.....	14	Cherkins, sour, bot.....	\$0.24
Frankfurter, per pound.....	15	Nail bleach, Ongoline, jar.....	.32
Lieberwurst, per pound.....	14	Hooks, picture, brass, doz.....	.03
Pure pork, 1-lb. cartons, per pound.....	20	Tea, Temple Garden, ½s. pkg.....	.09
Sweetbread, beef, per pound.....	23	Tea, Temple Garden, ¾s. pkg.....	.17
Eggs, fresh, per dozen.....	35	Tea, Temple Garden, 1s. pkg.....	.32
per ½-dozen.....	18	Onions, pickled, Williams, keg.....	5.60
Bluefish, per pound.....	7	Vermicelli, Zeregas, lb., pkg.....	.09
Halibut, fresh, per pound.....	5	Macaroni, Zeregas, lb., pkg.....	.08
Salmoo, per pound.....	6	Buttons, cuff links, pair.....	.64
Veast, per pound.....	31	Towels, T. B., 24" by 45".....	.34
Yeast, per cake.....	2	Caps, men's, shepherd check, ea.....	.43
POULTRY AND GAME.		Lawn, colored, yard.....	.13
Chickens—Fancy roasting, milk fed, per pound.....	25	Pajamas, boy's, suit.....	.66
Fancy roasting, corn fed, per pound.....	23	Ties, bat wing, solid colors, ea.....	.36
Fowls, per pound.....	24	Biscuits, Gentulla, N. B. Co., tin.....	.92
Fowls, light, per pound.....	20	Biscuits, cream wafers, N. B. Co., tin.....	.60
Ducks, Western, per pound.....	22	Soap, castile, almond scented, cake.....	.11
Capons, per pound.....	29	Saws, hand, Jennings, 28" ea.....	1.40
Broilers, milk ted, per pound.....	22	Jap-a-lac, qt. can.....	.43
Broilers, corn fed, per pound.....	21	Jap-a-lac, ½-pt. can.....	.11
Turkeys, per pound.....	27	Postum, instant, 4-oz. tin.....	.25
Squabs, each.....	42	Postum, instant, 8 oz. tin.....	.41
Partridges, per pair.....	1.30		
Grouse, per pair.....	1.30	Price Changes.	
Pheasants, per pair.....	1.30	The following changes in prices of articles in stock at the commissary stores became effective September 30, 1914:	
CURED AND PICKLED MEATS.			
Ham—Real York and Cumberland, per pound.....	43	ARTICLE.	PRICE CHANGE.
Genuine Westphalia, per pound.....	50		Old. New.
Sugar cured, per pound.....	24	Brassieres, ea.....	\$0.50 \$0.43
Sliced, per pound.....	31	Crepe, Yeddo, yd.....	.13 .14
Half, for boiling, per lb.....	26	Coolers, water, 8-gal., ea.....	2.85 3.05
Bolled, per pound.....	35	Nutmegs, whole, lb.....	.21 .24
Hocks, per pound.....	10	Thyme, powdered, tin.....	.04 .05
Butt end, a out 1½ pounds to butt, per pound.....	12	Hooks, hat and coat, doz.....	.05 .06
Bacon—Breakfast, sliced, per pound.....	33	Soap, hotel, special, cake.....	.03 .02
Whole piece, per pound.....	32	Ties, Surah, plain, assorted, ea.....	.25 .22
Ham, lunch, per pound.....	40	Ties, Scotch, plaid, silk, Windsor, ea.....	.22 .24
Pork, salt, family, per pound.....	14	Leaves, bay, ½s tin.....	.10 .21
Ox tongues, each.....	1.40	Sugar, granulated, sack.....	.42 .40
Pigs' feet, per pound.....	7	Sugar, powdered, tin.....	.24 .23
Tongues, per pound.....	21	Chow chow, keg.....	4.25 4.45
DAIRY PRODUCTS.		Kettles, Berlin, 10-quart, ea.....	.66 .78
Butter—Creamery, special, per pound.....	42	Padlocks, Yale, No. 830, 1½" ea.....	.95 .83
Sheffield Farms, extra fancy, per lb.....	54	Cambrie, Bradford, Lordered, 36", yd.....	.10 .09
Cheese—Philadelphia cream, cake.....	9	Walnuts, Cresca, small, jar.....	.23 .27
Roquefort, per pound.....	45	CHANGES EFFECTIVE OCTOBER 5, 1914.	
Young America, per pound.....	22	Milk, condensed, Nestle's, tin.....	\$0.10 \$0.12
Swiss, per pound.....	27	Oil, olive, Italian, 5-gal. tin.....	6.55 7.10
Edam, each.....	90	Peas, dried, green, lb.....	.03½ .05
Edam, tin.....	29	Pearline, 1s. pkg.....	.11 .09
Parmesan, per pound.....	38	Garlic, lb.....	.07 .09
Gouda, per pound.....	33	Pimenton, 5s, tin.....	1.15 1.23
Snappy, per cake.....	9	Cases, suit, leather, 24", ea.....	5.05 4.65
Milk (certified), bottl.e.....	**24	Cases, suit, hber, 24", ea.....	1.20 1.00
Milk, Sheffield Farms, per quart.....	**15	Trunks, 36", No. 207, ea.....	6.50 6.90
Fer-mil-lac, bottle.....	**25	Trunks, 36", No. 97, ea.....	6.26 6.60
Ice cream, quart.....	\$25	Hose, silk, men's, pair.....	.45 .43
		Shoes, misses, dong, Blu, pair.....	2.50 2.65
		Shoes, Dong., Blu., pair.....	1.90 2.00
		Shoes, Dong., Blu., pair.....	2.21 2.35
		Oxford, Blu., white buckskin, pair....	4.95 5.25
		Strainers, extension, ea.....	.15 .11
		Roasters and bakers, ea.....	.25 .34
		Filters, Gate City, ea.....	4.00 4.55

CANAL CLUBHOUSES.

Activities of the Young Men's Christian Association.

BALBOA.

A farewell reception was given at the clubhouse on Saturday evening, October 3, in honor of the secretary, George R. Adams. The following program was given: Selection, Corozal mandolin club; recitation, Mr. Butler; violin solo, Dr. Hill, accompanied by Mrs. Randolph; demonstration of physical culture, Jack Hawkey; vocal solo, Mr. Case, accompanist, Miss Otis; recitation, "A son of the tropics" Mr. Foster; selection Corozal mandolin club; piano solo, Mrs. Randolph. Mr. Van Fleet, on behalf of the community, expressed the appreciation of Mr. Adams' work. Refreshments of home made cakes and lemonade were served.

The checker tournament, which was postponed on account of the reception, will be held on Saturday evening, October 10. All clubhouses are requested to send players.

COROZAL.

Considerable interest is being shown in wrestling, 10 men having signed up for instruction under Mr. Westman.

Corozal took two out of three games in duckpins from Pedro Miguel on Friday night, by the following score:

Corozal.				Pedro Miguel.			
Moore.....	93	84	104	Davis.....	99	82	84
Gill.....	76	70	100	Piper.....	79	..	..
Ryan.....	100	80	86	Halloway.....	..	87	84
White.....	99	75	96	Whiston.....	85	89	91
Ruggles.....	94	99	100	McDonald.....	92	82	76
				DeCorra.....	80	108	89

Totals.... 462 408 486 435 448 424

High scores for the week were, as follows: *Tenpins*—Moore, 208; Parks, 200, 206; Terittier, 201, 225; Davis, 214. *Duckpins*—White, 103; Mundberg, 110; Gustavson, 113; Gill, 100; Seebt, 102, 101; Moore, 104; Gill, 100; Ryan, 100; Ruggles, 100.

The vocal solos of Mrs. A. P. Boyd were a special feature of the moving picture show on Thursday night.

The standing in the basketball league is, as follows:

Team.	Won.	Lost.	P. C.
French.....	4	1	.800
English.....	4	2	.666
Germans.....	2	2	.500
Japs.....	1	3	.250
Russians.....	1	4	.200

PEDRO MIGUEL.

The local pool tournament, which ended in a tie between Mr. Edwards and Mr. Eggleston, was played off on Monday evening, September 28, resulting in favor of Mr. Edwards, by the close score of 50 to 49 points.

The local high duckpin scores for the past week were made by the following men: Anderson, 106; Whiston, 110; Davis, 109, 103; Hodges, 108; DeCorra, 104; Abramson, 110; Holloway, 105, 102, 101.

Eighty new books were recently ordered from the United States. The list includes a number of books requested by the members, and a number of others that will make a valuable addition to the local library.

The wrestling class under Mr. Westman is attracting a number of men who enjoy the exercise this pastime entails.

Members interested in a gymnasium class are invited to join the class now forming, to meet twice weekly.

GATUN.

A reception was held on Saturday evening, October 3, in honor of Mr. F. M. M. Richardson, superintendent of clubhouses and playgrounds. Mrs. Richardson, and the Reverend William Flammer, minister of the Canal Zone Union Church. The program follows:

Overture, Prochaska' orchestra; song, "All hail the power of Jesus' name"; invocation, Rev. Stephen Witt, soprano solo, Mrs. William Crook; "Gatun's welcome," Mr. W. C. Gayer, chairman Gatun Executive council; piano solo, Mrs. E. T. Gilbert; "The soldier's welcome," Corporal Baker; song, "Onward, Christian soldiers," "The Union Church of Gatun," Mr. J. N. Twitchell, president Gatun Union Church; bass solo, Mr. H. Cantor; "Other Y. M. C. A.'s," Mr. C. R. Russell, secretary at Pedro Miguel; cornet solo, Mr. John Sweika; "Defense," Mr. Richardson and Mr. Flammer; song, "America;" reception to guests; refreshments and music. The committee of arrangements consisted of Messrs. W. C. Gayer, chairman; Thomas Richardson, J. T. Smith, E. T. Gilbert, A. N. Kjellander.

The Gatun clubhouses observed the proclamation of the President of the United States calling for prayers for the return of peace in Europe by having special prayers at the song service on Sunday evening, October 4. Musicien Sweika played two cornet solos.

A boys' bowling tournament is being formed. Any boy member may join. The fee is 50 cents. Mr. Kjellander has charge.

A "Smoker" will be given within a few days. The

affair will be in the nature of a farewell to the soldiers now at Gatun.

CRISTOBAL.

The monthly single folks tournament held on September 28 resulted, as follows:

Miss Cotton and Mr. Parker, 505; Miss Butler and Mr. Smith, 491; Miss Cox and Mr. Morgan, 456; Miss Bevington and Mr. Drew, 441; Miss Campbell and Mr. Russell, 427; Miss Cori and Mr. Bevington, 422; Miss Ragsdale and Mr. Prager, 419; Miss McKenzie and Mr. Patrick, 407; Miss Krabbe and Mr. Buser, 401; Miss McKenzie and Mr. Purchase, 398.

Mr. Henri Rodeghiero rolled the high score in duckpins, and Mr. P. C. Petersen rolled the high score in tenpins during September. Each received a box of cigars as a prize.

The two local pool tournaments for the month resulted in Mr. Alfred Hansli winning the first place, and Mr. Stanley Ashton, second, in French pool; Mr. Stanley Ashton, first place, and Mr. Ed. Roberts, second prize, in straight pool. Suitable medals will be given the winners. For running the highest number of balls during the tournament, Mr. Ed. Roberts was awarded a box of cigars.

The "Athletics" defeated the "Yankees" in the local basketball league on Thursday, October 1, by the score of 36 to six.

The Balboa basketball team plays at Cristobal on Saturday, October 17.

A checker team will play at Balboa on Saturday October 10.

Upon request, a minstrel show will be given. Music has been ordered and practice on the songs will begin the latter part of the month. All men interested are invited to enroll in the chorus.

Supplies for the Canal.

The following steamers, with supplies for The Panama Canal and Panama Railroad Company, arrived at the ports of Colon, Balboa, and Cristobal during the week ending September 19:

Colusa, September 14, from Portland, Or., with 27,188 pieces (517,885 board feet), Douglas fir lumber, 376 bundles (8,088 board feet), Douglas fir flooring, 118 pieces (8,180 board feet) Oxford cedar lumber, 3,731 pieces (71,314 board feet), redwood lumber, 2,661 sacks oats, for stock.

Santa Cecilia, September 14, from Portland, Or., with 876 pieces (6,156 board feet) Douglas fir ceiling, 1,960 pieces (16,492 board feet) Douglas fir flooring, 9,574 pieces (365,643 board feet) Douglas fir lumber, 1,695 pieces, 141 bundles (53,274 board feet) redwood lumber, for stock.

Colon, September 15, from New York, with three cases brushes, eight barrels brick, eight barrels glue, five boxes leather belting, three cases brass rods, five cases iron valves, 23 cases paper, one box molding, one case wire, one bundle steel bars, one box locks, one package punches, one package twist drills, 15 anchors, 10 kegs litharge, 141 packages track material, 25 barrels pitch, 104 kegs bolts and nuts, 26 cases lye, 80 kegs galvanized nails, 11 cases paper cups, 120 rolls wire cloth, nine boxes headlights, one keg nut locks, eight pairs wagon shafts, one box saws, one box discs and nuts, one package air brake parts, for stock; one case woodenware, for Executive Secretary; one case machine parts for Division of and Transportation; 30 cases electrical material, one reel wire rope, three cases glass shades, one package glass pens, for Electrical Division; 10 boxes electrical material, 10 bundles antirail creepers, 94 packages signal material, 26 packages electrical material, for Panama railroad; four boxes electrical material, 25 pieces steel angles, four packages parts, three boxes lamps, for lock erection; eight reels wire rope, for Dredging Division; one box motor, for Auditor; one roll wire, for depot commissary; one box torches, one box tools 12 packages steel shutters, one box repair parts, one package springs, 123 packages air compressor machinery, for Mechanical Division; one box gas engine parts, 252 packages iron pipe fittings, one case car parts, for Division of Terminal Construction; 48 packages cable tank cars, 18 boxes tin plate, 44 cases electrical material, for Division of Fortifications; 10 packages pumps and fittings, for Division of Municipal Engineering; one box artificial leg, five boxes miscellaneous medical supplies, for Health Department; one package so-ke sets, for permanent buildings; and a miscellaneous cargo, the whole consisting of 1,376 packages, weighing approximately 315 tons.

Carrillo, September 16, from New York, with 10 cases copper bars, four boxes turnbuckles, for stock; seven cases copper rods, for lock erection, one case pulley blocks for Division of Municipal Engineering.

Panama, September 15, from New Orleans, with 1,070 cases kerosene oil, for stock; five boxes plate glass and molding for permanent buildings; 50 pieces steel castings, for Dredging Division; 503 pieces (12,516 board feet) white oak lumber, for Mechanical Division.

Atenas, September 17, from New Orleans, with

two boxes hatchets and hammers, 2,800 cases kerosene oil, for stock.

Ancon, September 17, from New York, with 517 crates roofing tile, for permanent buildings; two boxes engine parts for Division of Canal Transportation; 35 crates roofing tile, one piece cast iron pipe, 57 pieces structural steel, 10 barrels sulphate of copper, for Division of Municipal Engineering; 1,262 packages signal material, 38 packages railroad scales, 17 packages structural steel for Panama railroad; six pieces chain fenders five towing locomotives, three boxes diving apparatus, three boxes electric motors, four cases electrical material, for lock erection; 60 cases paper five boxes wicking, 1,205 bales hay, one package pulley blocks, one case carbon paper five bars steel, one box car jacks, seven boxes screws, 20 cases paint, one case rubber packing, one case locks, two cases waiters' coats; 130,160 bags cement, for stock; five cases school supplies, one package stationery, for Executive Secretary; one box mining machinery 31 pieces beams and angles, four pieces steel billets, nine channels, for stock; four boxes track material, 574 packages structural steel, 54 bundles steel plates, for Division of Terminal Construction; 25 pieces steel angles, 22 cases electrical material, for Division of Fortifications; 21 packages electrical material, for Electrical Division; 65 boxes air compressor machinery, for Mechanical Division; and a miscellaneous cargo, the whole consisting of 134,250 packages, weighing approximately 7,527 tons.

Santa Clara, September 18, from Baltimore, with 825 boxes 495 bundles, 582 pieces, 115 boxes, and two bundles structural steel, for Division of Terminal Construction; 400 bundles and 103 boxes structural steel for Panama railroad.

Jupiter, September 19, from Gulfport, Miss., with 160 barrels kerosene, 171 pieces (27,346 board feet), white oak lumber, 1,573 pieces (10,050 board feet), yellow pine flooring; 27 pieces (80 feet), yellow pine untreated piling, 2,839 pieces yellow pine cross-ties, for stock; 135 pieces (85 feet), yellow pine piling untreated, 6,838 barrels paving brick, for Division of Terminal Construction; 976 pieces (79,127 board feet), yellow pine car lumber, for Mechanical Division; 651 bundles framed doors, windows, etc., for permanent buildings.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., October 5, 1914.

The following insufficiently addressed letters, originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Brewer, T. B.	Lyman, Van Allen
Brown, Mrs. Elsie M.	Mara, Thomas (paper)
Brown, Mrs. W. H. (paper)	Miles, John
Brown, Mrs. F. W.	Park, Arthur
Bullen, Samuel A.	Phisterer, Mrs. Fred'k.
Butler, Mrs. Wm.	Powell, J. N.
Christensen, Mrs. Aage	Powell, William
Clark, O. Llewellyn	Purcell, Joseph
Dipner, Frank J.	Reese, Harry
Edmunds, R. C.	Richardson, F. M. M.
Edwards, Mrs. C. W.	Ridenour, Cecil
Feiner, Harry I.	Roach, Edward
Finnigan, Julia	Robinson, Van
Fishbough, Calvin	Rodgers, Mrs. Iris
Flynn, C. J.	Rosenthal, Ignatius P.
Goldman, Syman	Russell, William (pamphlet)
Grubbs, Mrs. W. H.	Shatt, Frank
Hambarsley, Miss Wildar	Shine, T. B.
Hebner, Chas.	Smith, Jas. D.
Henkle, William	Smith, F. G.
Hull, J. B.	Tucker, Geo. H.
Hull, Mrs. Sarah (pkg.)	Walizer, Robert
Husen, Abe	Wiedmann, F.
Jackson, O. F.	Winans, Roger S.
Levi, Felise	Wolff, Charles

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, October 4, 1914. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gatun Lake.	Miraflores Lake.	
Sun., Sept. 27.....	129.15	95.05	86.05	86.02	54 10
Mon., Sept. 28.....	133.00	97.52	86.12	86.01	54 07
Tues., Sept. 29.....	129.90	96.18	86.09	86.04	54 10
Wed., Sept. 30.....	131.60	96.57	86.20	86.18	54 31
Thurs., Oct. 1.....	130.50	96.50	86.18	86.15	54 02
Fri., Oct. 2.....	131.00	96.05	86.15	86.20	54 00
Sat., Oct. 3.....	129.40	95.58	85.91	86.00	54 21
Height of low water to nearest foot.....	125.0	91.0			

MOVEMENTS OF OCEAN VESSELS.

(Week ending 8 a. m., October 4.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	Far	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Sept. 27...	Lewis Luckenbach...	American...	Luckenbach Steamship Co....	New York...	San Francisco...	Gen'l mdse...	4,000	4,599	3,492
Sept. 27...	Volga...	British...	Gow, Harrison & Co....	Norfolk...	Tacoma...	Ballast...		4,801	3,539
Sept. 27...	Vimeria...	American...	Gow, Harrison & Co....	Norfolk...	San Francisco...	Coal...	8,340	6,463	4,754
Sept. 28...	Santa Catalina...	American...	W. R. Grace & Co....	New York...	San Pedro...	Gen'l mdse...	6,000	6,748	4,475
Sept. 28...	Vienna...	British...	Gow, Harrison & Co....	Norfolk...	Valparaiso...	Coal...	6,010	4,547	3,334
Sept. 29...	Nebraskan...	American...	American-Hawaiian S.S. Co....	New York...	San Francisco...	Gen'l mdse...	4,800	4,687	3,457
Sept. 29...	Craigina...	British...	Biggart, Fulton & Roy...	Philadelphia...	Itosaki, Japan...	Oil in cases...	5,370	4,483	3,552
Sept. 30...	South Pacific...	British...	Pacific Shipping, Ltd....	Newport News...	Portland, Or....	Ballast...		4,466	3,302
Sept. 30...	Shirley...	British...	Mitre S.S. Co....	New York...	Yokohama...	General...	7,500	6,263	4,456
Oct. 1...	Danax...	British...	Anglo-Saxon Petroleum Co....	Port Arthur...	Tien Tsia...	Oil in bulk...	4,345	3,756	2,756
Oct. 1...	Nerhes...	American...	Sudden & Christianson...	Baltimore...	San Diego...	Coal...	6,000	5,557	4,113
Oct. 2...	Cassia...	British...	Anglo-Saxon Petroleum Co....	New Orleans...	Sydney...	Oil in bulk...	6,501	5,127	3,641
Oct. 2...	Bankdale...	British...	Bank S.S. Co....	Norfolk...	Guaymas, Mex...	Coal...	5,943	4,813	3,657
Oct. 2...	Venturade Larrinaga...	British...	Larrinaga & Co....	New York...	Portland, Or....	Ballast...		5,920	4,550
Oct. 3...	L. K. Thurlow...	American...	Sudden & Christianson...	Norfolk...	Seattle...	Coal...	4,252	3,441	2,444
Oct. 3...	Kentuckian...	American...	American-Hawaiian S. S. Co....	New York...	San Pedro...	General...	6,342	6,878	4,831
Oct. 3...	Gowanburn...	British...	Macley & McIntyre...	Baltimore...	San Francisco...	Ballast...		4,811	3,587

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Sept. 26...	Strathlorne...	British...	Strathlorne S.S. Co....	Taitai...	Wilmington, N. C....	Nitrates...	8,400	6,337	4,736
Sept. 27...	St. Quentin...	British...	Lain Line...	Peruvian ports...	Key West...				
Sept. 27...	Strathgyle...	American...	American-Hawaiian S.S. Co....	San Francisco...	New York...				
Sept. 28...	Nebraskan...	American...	Luckenbach S.S. Co....	San Pedro...	New York...	Gen'l cargo...	4,000	3,224	2,198
Sept. 28...	Isabella...	British...	Mitre S.S. Co....	San Francisco...	Teneriffe...	Barley...	8,230	6,346	4,573
Sept. 29...	Hadley...	British...	W. R. Grace & Co....	South Pacific...	New York...				
Sept. 29...	Celia...	British...	W. R. Grace & Co....	Peruvian ports...	Baltimore...				
Sept. 30...	Copenhagen...	American...	Sudden & Christianson...	San Francisco...	New York...				
Sept. 30...	Volumia...	American...	Sudden & Christianson...	San Francisco...	New York...	Barley, lumber...			
Oct. 1...	John A. Hooper...	American...	Sudden & Christianson...	San Francisco...	New York...				
Oct. 2...	Melderskin...	British...	Wessel, Duval & Co....	Antofagasta...	St....	Nitrates...			

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date	Vessels	Line	From	Date	Vessels	Line	Far
Sept. 27...	Oraiva...	Royal Mail...	Southampton.	Sept. 27...	Santa Clara...	E. & Co....	Havana.
Sept. 28...	Meridian...	Horsley Line, Ltd....	Martinique.	Sept. 28...	Jupiter...	Seeberg...	Belize.
Sept. 29...	Tordenskjold...	Emery Line...	Norfolk	Sept. 29...	Alm...	Seeberg...	Puerto Colombia.
Sept. 29...	Habil...	United Fruit Co....	Puerto Barrios.	Sept. 30...	Skagstad...	Emery Line...	Daiquiri, Cuba.
Oct. 2...	Belgian...	Leyland...	Liverpool.				
Oct. 2...	Bologna...	La Veloce...	Genoa.				
Oct. 2...	Thelma...	Andrews & Co....	Brunswick, Ga.				
Oct. 2...	Falk...	Falk Company...	St. Thomas, D.W.I.				
*EXPECTED ARRIVALS.				*EXPECTED DEPARTURES.			
Oct. 6...	Haiti...	Cie. Gen. Transatlantique...	Bordeaux.	Oct. 4...	Bologna...	La Veloce...	Genoa.
Oct. 9...	Manuel Calvo...	Com. Trasatlantica...	Barcelona.	Oct. 6...	Magdalena...	Royal Mail...	Southampton.
Oct. 11...	Danube...	Royal Mail...	Southampton.	Oct. 11...	Haiti...	Cie. Gen. Transatlantique...	Bordeaux.
Oct. 16...	Lyra...	Luckenbach S.S. Co....	New York.	Oct. 12...	Manuel Calvo...	C. T. de B....	Barcelona
Oct. 17...	Santa Cecilia...	W. R. Grace & Co....	New York.				
...	Frankmont...	W. & Co....					
...	Falls City...	Bradford S. S. Co....					
...	Malakka...	E. A. S. Co....	Copenhagen.				
...	S. Monarch...	Mitre S.S. Co....					
...	E. Monarch...	Mitre S.S. Co....					
Oct. 27...	Santa Cruz...	W. R. Grace & Co....	New York.				

*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular connection with the United States.

PORT OF BALBOA.

*ARRIVALS.				*DEPARTURES.			
Date	Vessels	Line	From	Date	Vessels	Line	Far
Sept. 27...	Manavi...	P. S. N. Co....	Buenaventura.	Sept. 28...	Huasco...	C. S. A. de V....	Valparaiso.
Oct. 1...	Oberon...	Union Oil Co....	Port San Luis.	Sept. 28...	Maniara...	Peruvian S. S. Co....	Peruvian ports.
Oct. 1...	Denver...	U. S. cruiser...	San Francisco.				
Oct. 2...	City of Para...	Pacific Mail...	Corinto.				
*EXPECTED ARRIVALS.				*EXPECTED DEPARTURES.			
Oct. 4...	Guatemala...	P. S. N. Co....	Guayaquil.	Oct. 10...	City of Para...	Pacific Mail...	San Francisco.
Oct. 5...	Cuzco...	Grace & Co....	San Francisco.	...	Ecuador...	P. S. N. Co....	Guayaquil.
Oct. 5...	Quilque...	P. S. N. Co....	Valparaiso.	...	Potosi...	P. S. N. Co....	South coast.
Oct. 7...	Palena...	C. S. A. de V....	Valparaiso.	Oct. 10...	Guatemala...	P. S. N. Co....	Guayaquil.
Oct. 7...	Pachitea...	Peruvian S.S. Co....	Callao.	Oct. 11...	Quilque...	P. S. N. Co....	Valparaiso.
Oct. 10...	Aztec...	Pacific Mail...	San Francisco.	Oct. 12...	Palena...	C. S. A. de V....	Valparaiso.
Oct. 12...	Peru...	Pacific Mail...	San Francisco.	Oct. 12...	Pachitea...	Peruvian S. S. Co....	Callao.
Oct. 15...	Mina Brea...	Pacific Mail...	South Pacific.	Oct. 12...	Manavi...	P. S. N. Co....	Buenaventura.
Oct. 21...	City of Sydney...	Pacific Mail...	San Francisco.	Oct. 20...	Aztec...	Pacific Mail...	San Francisco.
Oct. 21...				Oct. 21...	Peru...	Pacific Mail...	San Francisco.

*Other than vessels passing through the Canal.

Sailings of Vessels in Regular Service With the Isthmus.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every six days, direct; between Colon and New York by the United Fruit Company and the Royal Mail Company, sailings via Kingston weekly and fortnightly, respectively; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

NEW YORK TO CRISTOBAL.			
	Soils.	Arrives.	
*Colon...	P. R. R. Oct. 5...	Oct. 11	
*Advance...	P. R. R. Oct. 10...	Oct. 17	
*Panama...	P. R. R. Oct. 16...	Oct. 22	

*Allianca...	P. R. R. Oct. 22...	Oct. 28	
*Colon...	P. R. R. Oct. 29...	Nov. 4	
CRISTOBAL TO NEW YORK.			
†Allianca...	P. R. R. Oct. 10...	Oct. 16	
†Colon...	P. R. R. Oct. 17...	Oct. 23	
†Advance...	P. R. R. Oct. 23...	Oct. 30	
†Panama...	P. R. R. Oct. 29...	Nov. 4	
†Allianca...	P. R. R. Nov. 4...	Nov. 10	
†Colon...	P. R. R. Nov. 10...	Nov. 16	
NEW YORK TO COLON.			
*Santa Marta...	U. F. C. Sept. 30...	Oct. 7	
*Metapan...	U. F. C. Oct. 7...	Oct. 14	
Orotava...	R. M. Oct. 10...	Oct. 18	
*Zacapa...	U. F. C. Oct. 14...	Oct. 21	
COLON TO NEW YORK.			
Almirante...	U. F. C. Oct. 8...	Oct. 15	

Danube...	R. M. Oct. 13...	Oct. 21	
Santa Marta...	U. F. C. Oct. 15...	Oct. 22	
Metapan...	U. F. C. Oct. 22...	Oct. 29	

NEW ORLEANS TO COLON.

Parismina...	U. F. C. Sept. 30...	Oct. 7	
*Atenas...	U. F. C. Oct. 3...	Oct. 8	
Cartago...	U. F. C. Oct. 7...	Oct. 14	

COLON TO NEW ORLEANS.

†Abangarez...	U. F. C. Oct. 8...	Oct. 13	
Parismina...	U. F. C. Oct. 8...	Oct. 15	

*Will carry mail from the United States.
†Will carry mail to the United States.
‡Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, OCTOBER 14, 1914.

No. 8.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

No communication either for publication or requesting information will receive attention unless signed with the full name and address of the writer.

NOTES OF PROGRESS.

Progress on Canal Colliers.

A progress report on the new Canal colliers, the *Achilles* and *Ulysses*, now building at the yards of the Maryland Steel Company at Sparrow's Point, Md., shows that on August 31, work on both vessels was well ahead of contract time. The estimated degree of completion of the *Achilles*, under the hull specifications, including equipment and installation of ordnance, was 37.6 per cent, of which 28 per cent was represented by work, and 9.6 per cent by material. The elapsed time in building to August 31 was 4.6 months, and on that date the collier was estimated to be 1.2 months ahead of schedule. The estimated degree of completion of the *Ulysses*, under the hull specifications, which are similar to those of the *Achilles*, was 42.2 per cent, of which 35.8 per cent was represented by work, and 6.4 per cent by material. The elapsed time in building to August 31 was 4.6 months, showing work on this vessel to be 1.8 months ahead of schedule.

United States Navy Collier "Jupiter" Passes Through the Canal.

The collier *Jupiter*, which arrived at Balboa on Thursday, October 8, on its way from the north Pacific Ocean to Philadelphia, where it will restock with coal, is the largest vessel to have passed through the Canal to date. It is 520 feet long, 65 feet in the beam, and has a mean draft of 27 feet eight inches. When loaded with its normal supply of coal, its displacement is 19,360 tons.

The *Jupiter* is the only large vessel in the world driven by electricity. The electricity is developed by a turbogenerator, driven by steam, for which coal is the fuel, and transmitted to large motors connected to the twin shafts. The ship's officers say that the propelling system is satisfactory, and effects an economy of about 35 per cent in comparison with the usual systems. The *Jupiter* makes a speed of 14 knots, and its sister ship, the *Cyclops*, which is driven by marine engines, makes a speed of 14.61 knots.

The ship's passage through the Canal was begun in the morning of Saturday, October 10,

and on that day it was taken as far as the anchorage basin near the upper entrance to Gatun Locks, where it lay for about 48 hours for the effect of the fresh water on its barnacles. Its transit of the Canal was completed on Monday, October 12, and it cleared for Philadelphia on Monday evening at 7 o'clock. Its passage from Balboa as far as Gatun Locks was made in less than six hours, the shortest time yet required for this part of the transit, and demonstrated the smoothness of operation that has been developed in handling vessels through the Canal.

The colliers *Achilles* and *Ulysses*, now building for The Panama Canal, will be slightly smaller than the *Jupiter*. They will be approximately 500 feet long and 62 feet in the beam, with about the same depth and draft as the *Jupiter*.

Work of Admeasurers of Vessels.

With the increasing traffic through the Canal, the admeasurers of vessels at the two terminal ports have been kept busy. The majority of the vessels coming to the Canal for transit have been provided with certificates previous to arrival, but these have to be checked, and, in many instances, corrected before the vessel can enter the Canal. The time required for this is from an hour to about one day, but it is frequently longer, according to the degree of accuracy of the original measurement and the nature of the vessel. When a vessel comes without a certificate, the time required for its measurement approximates a day. After the verification of a ship's certificate, the only measurement required for future passage is that of deck load, if the vessel is carrying any.

Of the 30 vessels going through the Canal from Atlantic to Pacific during the month of September, four, including a motor boat, were given original measurement for Canal certificates at Cristobal. The remainder came provided with certificates; of these, 19 were checked and found correct, and seven were remeasured, their certificates being altered to conform with the rules of The Panama Canal. The schooner *Anthony D. Nichols* was measured at the port of Cristobal, but did not pass through the Canal. Of the 31 vessels going from Pacific to Atlantic during September, 16 were given original certificates at Balboa, and 15, provided with certificates, had them checked, and, in most cases, altered slightly. The steamship *Limari*, engaged in traffic on the west coast, was measured and certificated, but did not use the Canal. In addition to the foregoing, two launches and four deck loads were measured at Balboa for Canal tonnage.

In the cases of vessels with erroneously prepared certificates, the fault seems to lie principally in lack of care in interpreting the rules for measurement, or in following the certificate for the Suez Canal, the rules for which vary in some instances from the Panama rules.

WEATHER PROBABILITIES.

Probable Conditions on Isthmus During October and November.

Based on the records taken at Colon and Ancon for the past seven years, by the Division of Meteorology and Hydrography of The Panama Canal, the following weather conditions may be expected to prevail at the Canal entrances during the months of October and November.

OCTOBER.

Winds—Light variable winds will prevail at the Atlantic entrance to the Canal, south-east predominating. The average velocity should be about seven miles per hour, although the wind occasionally during rain squalls of short duration, may reach a maximum velocity of from 30 to 36 miles an hour.

Over the interior and at the Pacific entrance light northwest winds will prevail with a considerable percentage of variable wind. The maximum velocities here, too, during occasional rain squalls may exceed 30 miles an hour. These squalls are invariably of too short duration to produce a heavy sea.

Rain—The average October rainfall at the Atlantic entrance of the Canal is 14.40 inches, and on the Pacific side, 10.80 inches. Twenty-five days with rain may be expected on the Atlantic side, and about 20 on the Pacific. The average number of days with heavy rain (one inch or more) has been six on the Atlantic side, and two at the Pacific entrance.

Throughout the length of the Canal, the greater part of the rainfall occurs during the daytime; the heaviest precipitation is usually recorded between the hours of 1 p. m. and 3 p. m. At this season of the year, the percentage of daytime rainfall is higher over the interior and on the Pacific side than at the Atlantic entrance.

Fogs—Practically no fogs may be expected at either Canal entrance. Night and early morning fogs will be numerous over the interior. The average number of nights during the month with light or dense fog over Culebra Cut, at the continental divide, has been 25. As practically all fogs lift or dissipate before 8.30 a. m., they will not constitute a hindrance to the navigation of the Canal under present operating conditions.

Temperature—The average air temperatures in the shade will be approximately 80° Fahrenheit on both sides. The extreme maximum temperature may not be expected to rise above 92° Fahrenheit, or the minimum to fall below 70° Fahrenheit. The mean daily range is 10° Fahrenheit on the Atlantic side, and 14° Fahrenheit on the Pacific.

Barometric pressure—Barometric readings are quite uniform from day to day. The average sealevel pressure will be approximately 29.85 inches. Fluctuations in air pressure are so slight that local barometric readings are of practically no value in forecasting weather conditions. The maximum

reading during the month may not be expected to exceed 29.95 inches, nor the minimum to fall below 29.70 inches.

Storms—The territory traversed by the Panama Canal is remarkably free from severe storms of wide extent, although local rain and thunder storms are of common occurrence. This is the season of the West Indian hurricane and rough weather may be expected to the northward of the Atlantic entrance. These storms never extend as far south as the Isthmus, but a rough sea and heavy swell, accompanied by brisk northerly winds, are occasionally experienced outside the breakwater, following the passage of a hurricane across the Caribbean Sea to the northward.

Smooth seas and quiet weather usually prevail at the Pacific entrance to the Canal during the month of October.

Tides—Tidal fluctuations need not be considered in navigating the Atlantic entrance to the Canal, as the average tidal range is only about 0.9 feet, and the extreme range less than two feet.

The average tidal range at the Pacific entrance is about 13 feet, while the maximum range may reach 20 feet.

Panama tide predictions for the remainder of the month are presented in the following table:

DATE.	Time and height of high and low water.			
Wed., Oct. 14.....	4:49	10:44	17:22	23:32
Thurs., Oct. 15.....	4 8	11 2	3 9	12 0
Fri., Oct. 16.....	5:59	12:03	18:27	24:00
Sat., Oct. 17.....	4 0	11 9	3 0	12 0
Sun., Oct. 18.....	0:38	6:59	13:06	19:22
Mon., Oct. 19.....	12 9	2 7	13 0	2 0
Tues., Oct. 20.....	1:31	7:50	13:59	20:12
Wed., Oct. 21.....	14 1	1 4	14 3	0 9
Thurs., Oct. 22.....	2:20	8:38	14:47	20:59
Fri., Oct. 23.....	15 3	0 0	15 4	-0 1
Sat., Oct. 24.....	3:04	9:23	15:32	21:44
Sun., Oct. 25.....	16 4	-1 0	16 3	-0 6
Mon., Oct. 26.....	3:48	10:08	16:15	22:29
Tues., Oct. 27.....	17 0	-1 7	16 7	-0 8
Wed., Oct. 28.....	4:31	10:52	16:59	23:14
Thurs., Oct. 29.....	17 2	-1 8	16 7	-0 6
Fri., Oct. 30.....	5:15	11:37	17:45	24:00
Sat., Oct. 31.....	16 9	-1 5	16 3	18:33
Sun., Nov. 1.....	0:00	6:01	12:25	19:24
Mon., Nov. 2.....	0 0	16 2	-0 7	15 4
Tues., Nov. 3.....	0:49	6:48	13:15	20:23
Wed., Nov. 4.....	1 0	15 1	0 4	14 4
Thurs., Nov. 5.....	1:45	7:42	14:12	21:33
Fri., Nov. 6.....	2 1	13 8	1 6	13 3
Sat., Nov. 7.....	2:46	8:46	15:17	22:54
Sun., Nov. 8.....	3 1	12 6	2 6	12 4
Mon., Nov. 9.....	3:57	10:05	16:28	23:54
Tues., Nov. 10.....	3 8	11 8	3 3	12 1
Wed., Nov. 11.....	5:12	11:34	17:40	24:00
Thurs., Nov. 12.....	4 0	11 7	3 5	12 4
Fri., Nov. 13.....	0:08	6:23	12:47	18:43
Sat., Nov. 14.....	12 4	3 7	12 1	3 3
Sun., Nov. 15.....	1:06	7:21	13:44	19:38
Mon., Nov. 16.....	12 9	3 1	12 6	2 9
Tues., Nov. 17.....	1:56	8:08	14:29	20:24
Wed., Nov. 18.....	13 3	2 4	13 1	2 5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning; for instance: 15:47 is 3:47 p. m.

NOVEMBER.

Wind—Light variable winds will continue throughout the month at the Atlantic entrance to the Canal, southeast predominating. The average velocity should be about nine miles per hour, although maximum velocities of from 30 to 40 miles per hour are possible during occasional rain squalls of short duration.

At the Pacific entrance and over the inter-

ior, light northwest winds will prevail, with a considerable percentage of variable wind during the daytime. Maximum velocities here may reach 30 miles an hour during short rain squalls.

Rain—The average November rainfall at the Atlantic entrance of the Canal is 21.70 inches, and on the Pacific side, 10.50 inches. Twenty-seven days with rain may be expected on the Atlantic side, and about 23 on the Pacific. The average number of days with heavy rain (one inch or more) has been 10 on the Atlantic side, and three at the Pacific entrance. Over the interior and at the Pacific entrance, the greater part of the rainfall (about 70 per cent) occurs during the daytime, while along the Atlantic coast nearly half of the rain falls at night.

Fogs—Practically no fogs may be expected at either Canal entrance. The average number of nights during the month with light or dense fog in the Culebra Cut section of the Canal, near the continental divide, has been 14. As practically all of these fogs lift or dissipate before 8.30 a. m., they will not affect the navigation of the Canal during the daytime.

Temperature—The average air temperature in the shade will probably be slightly below 80° Fahrenheit on both sides. The extreme maximum temperature may not be expected to rise above 94° Fahrenheit, or the minimum to fall below 68° Fahrenheit. The mean daily range is approximately eight degrees Fahrenheit on the Atlantic side, and 14° Fahrenheit on the Pacific.

Barometric pressure—The average sealevel pressure will continue close to 29.85 inches. Fluctuations in air pressure on the Isthmus are so small that local barometric readings are of practically no value in forecasting weather conditions. The maximum reading the month may not be expected to exceed 29.98 inches, or the minimum to fall below 29.68 inches.

Storms—The so-called "Northers" may possibly extend as far south as the Atlantic entrance of the Canal during the month of November. These storms are characterized by steady brisk northerly winds ranging in velocity up to 30 or more miles per hour, and are usually accompanied by a heavy swell. The winds alone are of insufficient force materially to affect navigation at the Atlantic entrance, but the accompanying swell and heavy sea outside the breakwater may at times prove somewhat troublesome.

Smooth seas and quiet weather may be expected to prevail throughout the month at the Pacific entrance to the Canal.

Tides—Tidal fluctuations need not be considered in navigating the Atlantic entrance of the Canal, as the average tidal range is less than one foot, and the extreme range about two feet.

At the Pacific entrance, the average tidal range is about 13 feet, while the maximum range may reach 20 feet. Panama tide predictions for November are given below:

NOVEMBER.

DATE.	Time and height of high and low water.			
Sun., Nov. 1.....	2:36	8:48	15:07	21:02
Mon., Nov. 2.....	13 8	1 8	13 4	2 2
Tues., Nov. 3.....	3:10	9:24	15:39	21:37
Wed., Nov. 4.....	14 1	1 4	13 6	2 1
Thurs., Nov. 5.....	3:42	9:58	16:09	22:11
Fri., Nov. 6.....	14 3	1 1	13 7	2 1
Sat., Nov. 7.....	4:12	10:31	16:38	22:44
Sun., Nov. 8.....	14 3	1 1	13 7	2 3

DATE.	Time and height of high and low water.			
Thurs., Nov. 5.....	4:41	11:05	17:07	23:1
Fri., Nov. 6.....	14 2	1 2	13 7	2 5
Sat., Nov. 7.....	5:13	11:39	17:38	23:51
Sun., Nov. 8.....	13 9	1 4	13 6	2 8
Mon., Nov. 9.....	5:45	12:15	18:13	24:27
Tues., Nov. 10.....	13 6	1 8	13 4	2 6
Wed., Nov. 11.....	0:32	6:21	12:56	18:54
Thurs., Nov. 12.....	3 2	13 2	2 4	13 2
Fri., Nov. 13.....	1:14	7:04	13:40	19:41
Sat., Nov. 14.....	3 6	12 7	2 9	12 8
Sun., Nov. 15.....	2:07	7:54	14:34	20:39
Mon., Nov. 16.....	4 0	12 2	3 4	12 5
Tues., Nov. 17.....	3:09	8:58	15:37	21:45
Wed., Nov. 18.....	4 1	11 8	3 6	12 4
Thurs., Nov. 19.....	4:18	10:11	16:44	22:54
Fri., Nov. 20.....	3 9	11 8	3 5	12 6
Sat., Nov. 21.....	5:24	11:26	17:50	23:57
Sun., Nov. 22.....	3 3	12 2	3 6	13 3
Mon., Nov. 23.....	6:25	12:33	18:49	24:57
Tues., Nov. 24.....	2 4	13 0	2 2	13 0
Wed., Nov. 25.....	0:56	7:20	13:30	19:42
Thurs., Nov. 26.....	14 2	1 3	14 0	1 4
Fri., Nov. 27.....	1:48	8:10	14:22	20:32
Sat., Nov. 28.....	15 2	0 1	15 0	0 6
Sun., Nov. 29.....	2:38	9:00	15:10	21:22
Mon., Nov. 30.....	16 0	-0 8	15 7	0 0
Tues., Nov. 31.....	3:25	9:47	15:58	22:09
Wed., Nov. 1.....	16 6	-1 4	16 2	-0 2
Thurs., Nov. 2.....	4:11	10:34	16:44	22:56
Fri., Nov. 3.....	16 7	-1 6	16 3	-0 1
Sat., Nov. 4.....	4:57	11:20	17:31	23:45
Sun., Nov. 5.....	16 5	-1 3	16 0	0 4
Mon., Nov. 6.....	5:45	12:10	18:19	24:39
Tues., Nov. 7.....	15 8	-0 7	15 4	0 1
Wed., Nov. 8.....	0:35	6:34	13:00	19:11
Thurs., Nov. 9.....	1 1	14 9	0 3	14 6
Fri., Nov. 10.....	1:29	7:28	13:55	20:06
Sat., Nov. 11.....	1 9	13 9	1 4	13 8
Sun., Nov. 12.....	2:27	8:28	14:53	21:08
Mon., Nov. 13.....	2 7	12 8	2 4	13 0
Tues., Nov. 14.....	3:32	9:38	15:56	22:16
Wed., Nov. 15.....	3 4	12 0	3 2	12 5
Thurs., Nov. 16.....	4:39	10:55	17:01	23:23
Fri., Nov. 17.....	3 7	11 6	3 7	12 3
Sat., Nov. 18.....	5:45	12:09	18:04	24:29
Sun., Nov. 19.....	3 8	11 6	3 9	12 4
Mon., Nov. 20.....	0:25	6:44	13:10	19:00
Tues., Nov. 21.....	12 4	3 5	11 8	3 8
Wed., Nov. 22.....	1:16	7:34	13:59	19:48
Thurs., Nov. 23.....	12 6	3 1	12 1	3 6
Fri., Nov. 24.....	2:00	8:15	14:39	20:30
Sat., Nov. 25.....	13 0	2 6	12 4	3 4

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11.00 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning; for instance: 15:47 is 3:47 p. m.

Coal in Cargo Space.

A vessel coming to the Canal for transit "In ballast" had coal stored in a part of the cargo space, and was accordingly charged the rate of \$1.20 a ton, instead of the ballast rate of 72 cents. The ruling that cargo space must not be occupied if a vessel is to be rated "In ballast" is clear, and The Panama Canal will insist upon strict compliance.

Even in the case of a vessel of foreign registry, in transit from one United States port to another under a customs declaration of being in ballast, and prohibited by law from carrying cargo between such ports, it is pointed out that this does not affect the actual condition in regard to the space designated by the Panama rules as *earning capacity*, which alone forms the fundamental basis upon which tolls are charged.

Collapse of Section of Trestle Bridge Over French Canal.

A section, about 50 feet long, of the temporary trestle bridge over the French canal at Mount Hope, used for the passage of work and labor trains from the mainland to the site of the new coaling station on Telfer's Island, collapsed suddenly on Monday after-

noon, October 12, carrying a 75-ton crane and its engineer to the bottom of the canal, a depth of about 22 feet. The engineer extricated himself from the machine with some difficulty, but finally reached shore safely. A heavy piledriver passed over the trestle a few minutes before the accident, and at that time there was no intimation of trouble. The trestle was being used only until the new iron bridge, now under construction at the same point, is completed.

Moving of Panama Railroad Offices

The Panama railroad offices at Colon are being moved to the new Administration Building at Balboa Heights, and it is expected that by Thursday of this week the transfer will have been effected. Arrangements have been made by the chief of the Record Bureau to take over the railroad records in the offices of the superintendent and superintendent of railroad transportation, in line with the general plan of consolidation, and the miscellaneous clerical and correspondence work will be assigned to the Correspondence Bureau of the Executive Office. The timekeeping force will be accommodated in the general timekeeping office, and as soon as practicable the same system of timekeeping will be used for the railroad as for The Panama Canal.

The rooms assigned for the railroad's use in the Administration Building are, with one exception, situated on the third floor of the west wing, as follows: Superintendent, No. 336; superintendent of railroad transportation, No. 337; roadmaster, and superintendent of bridges and buildings, No. 333; chief dispatcher's office, No. 340; property clerk, No. 314; telephone and signals, No. 329; correspondence clerks, No. 205.

Effective November 1, 1914, the forces in the offices of the superintendent, superintendent of railroad transportation, roadmaster, superintendent of bridges and buildings, and the telephone and signal department will be transferred to the Executive Office of The Panama Canal, and the railroad billed for services rendered.

The offices vacated by the railroad in Colon will be occupied temporarily by the captain of the port and by the Cristobal-Colon quarantine service.

Agricultural Opportunities.

Canal employes interested in agricultural opportunities in the State of Oregon may procure copies of publications issued by the Oregon State Immigration Commission upon application to the Office of the Executive Secretary, Balboa Heights.

Remeasuring and Renumbering Lighters, Barges, and Small Craft.

A plan has been approved for the remeasuring and renumbering; also, reclassification of all the scows, lighters, barges and small boats in the service of the The Panama Canal and the Panama railroad. This will involve an inspection of all this class of craft and preparation of a report showing the reclassification, new measurements, old numbers now on craft, and new numbers assigned and applied when the inspection and remeasurement is made. The Board of Local Inspectors will designate a representative from the Division of Canal Transportation to supervise the work; each division using floating equipment will be called upon to furnish the necessary labor and material.

The new numbers applied to scows, lighters, barges, etc., will be 12 inches high, painted in

white on each side of craft, as well as on the inside of bulkheads, the exact location in each instance to be determined by the representative of the Board of Local Inspectors, it being the intention to have numbers appear in as nearly uniform places on the boats and as conspicuously as possible. Pangas, cayucas, and other small rowing or paddling craft will be numbered consecutively from one upward, without regard to class, using 2-inch letters and figures, painted on both sides of the bow; in addition, the numbers will be branded into the wood both inside and outside of each boat.

Future equipment, when placed in service, will be assigned numbers by the Board of Local Inspectors, acting in conjunction with the Surveying Officer.

PERSONAL.

Mr. T. H. Rossbottom, assistant to the vice-president, and secretary of the Panama Railroad Company, with headquarters in New York City, accompanied by his daughter, arrived on the *Colon*, which docked at Cristobal on Sunday, October 11.

Mr. F. R. Blunt, superintendent of transportation, sailed for New York on the *Turrialba*, on Thursday, October 7, on 15 days' special leave of absence.

Granite for Dry Dock No. 1.

A contract has been entered into with the Stone Mountain Granite Corporation of Stone Mountain, Ga., to supply the granite required for the entrance to dry dock No. 1 at the Balboa terminals. The stone is to bear heavy and sustained pressures imposed by the miter gates and floating caisson, and will be subject to the action of sea water. Award has been made for approximately 11,496 feet of dressed, and 752 cubic feet of rough granite. All sill stone for the miter gates is to be delivered on the Isthmus on or before November 24, 1914, and the remainder of the order on or before December 19, 1914.

Changes in Cristobal Commissary.

Some alterations, designed in the main to give more counter and shelf room, have been made in the interior of the Cristobal commissary. The department for tobacco, cigars, candy, etc., formerly occupied a space to the right of the entrance to the gold section, in an

enclosure that formed the dividing line between the gold and silver sides. This enclosure has been removed and the counters and shelving in both front and rear through the building have been made continuous. The candy and tobacco department will be in about the same general location as before, but the goods will be displayed on new shelves built against the wall of the building, and customers will be served over a new counter rounded at the ends. Two gates, spaced about eight feet apart, have been placed in the main aisle, which forms the barrier between the gold and silver sides. The purpose of two gates is to provide additional space when the silver side is overcrowded, by opening one of the gates, and *vice versa*. About 40 feet of additional counter and shelf space both in front and the rear of the commissary, have been gained in the rearrangement. In addition, the aisles for the salesmen have been narrowed, while the customers' aisle has been enlarged in width; the manager's raised office has also been widened and now affords a much better view of the sales departments. The packing of shipments for line customers, etc., heretofore done in a department outside the main building, known as XG, has been abolished, and packing operations will be carried on inside, in a special space set apart for the purpose.

Knights of Columbus.

The regular monthly meeting of Nombre de Dios Assembly, Knights of Columbus, was postponed from Sunday, October 11 to Sunday, October 25, at 2.30 p. m., at lodge hall, building No. 1, Cristobal. The annual election of officers will take place at this meeting.

THEO. A. AANSTOOS,
Faithful Navigator.

Panama Canal Marine Association.

The Panama Canal Marine Association will hold its regular meeting on Sunday, October 18, at 7.30 p. m., in its hall at Paraiso.

F. E. NEHLS,
Recording Secretary.

BALBOA, C. Z., October 12, 1914.

Labor train service out of Culebra will be discontinued on October 19.

The post-office at Bas Obispo will be moved to Corozal and reerected on a site in the rear of the railroad station.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Campbell, Chas.	50549	Jamaica.	Cristobal.	Panama railroad.	Oct. 8, 1914.
Douglas, Chas.	22046	St. Kitts.	Colon.	Dredging Div.	Sept. 26, 1914.
Grant, Alexander.	2624	U. S. A.	Paraiso.	Paraiso shops.	Sept. 3, 1914.
Lloyd, George.	51584	Fortune Island.	Cristobal.	Panama railroad.	(about) Oct. 5, 1914.
Lynch, Reynold.	218907	Barbados.	Corozal.	Supply Dept.	Oct. 2, 1914.
Maloney, Herman.	47457	Barbados.	Enterprise.	Drill runner Sos. Hill.	Oct. 5, 1914.
Sobesty, Daimen.	20338	Martinique.	Colon.	Health Dept.	Oct. 1, 1914.
Thomas, Solomon.	9990	Jamaica.	Panama.	Panama railroad.	Oct. 2, 1914.
Williams, Robert.	53870	Jamaica.	Mount Hope.	Fortifications.	Oct. 4, 1914.

The estates of these deceased employes of the Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

SOCIAL LIFE OF THE ZONE.

Christmas Gifts for Children in War Zone.

A New York paper has begun a movement to have the children of the United States send Christmas presents to the children in the war zone of Europe, including Japan, who have been made fatherless by the war. The proposition has met with an immediate response and throughout the country children are organizing for the project. The idea is to designate in each city and town one or more receiving depots where the gifts of the children will be sent. These receiving depots will, in their turn, forward the gifts to one central depot in New York City, whence they will be forwarded by ship, called the "Children's ship" in time to reach Europe before December 25. Arrangements will have been made for depositing and forwarding depots in the port towns where the steamer will call. The President and officials of the United States Government are interested, though not officially connected with the movement, and aid has been promised to insure the safe delivery of the freight on the children's ship.

An invitation has been extended to the children in the Canal Zone to join this movement. Through their clubs, camp fire girls, and boy scouts, their school classes and the Sunday schools, the American children are asked to form organizations for the purpose of collecting gifts. These gifts should be preferably small articles such as may be easily transported. The Governor of the Panama Canal has promised free transportation into the United States for the children's gifts. Parcels should be sent to the district quartermaster in any Canal village, marked "Christmas gifts for Europe," where they will be received and packed for shipment. While toys and books will be acceptable, emphasis is being laid on the necessity for useful articles, as the presents are intended primarily for distribution among the children of the poorer classes on whom the loss of the father and breadwinner falls most heavily.

La Boca Clubhouse.

A clubhouse for colored men, under the direction of the Young Men's Christian Association, will be opened in La Boca about October 15. The building to be used is the old Porto Bello clubhouse, which has been reconstructed for the purpose. Thomas B. Neely, a colored Y. M. C. A. man, has been engaged as secretary of the building and the club. He arrived on the Isthmus on Sunday, October 4. He is a graduate of Tuskegee Institute; also, of Howard University, an institution for colored people founded by Gen. O. O. Howard, at Washington, D. C. After his graduation he entered the Y. M. C. A. work and has served in various positions in the department for colored men. He was general secretary of the association in this department at Columbus, Ga., when he resigned to accept the appointment in the Canal Zone.

Medical Examination of Schoolchildren.

The annual medical examination of all the children attending the Canal Zone schools, excepting the high school, has been authorized to take place during the school week beginning on Monday, October 26. A form containing simple questions concerning the physical condition, tendencies, and habits of each child, will be sent to all parents and

guardians of children in the schools, which will serve as a guide to the examining physician. This form, filled out and signed by the parent or guardian, will be handed to the examining physician when he comes to the school. Special cards are issued for children found to have defective teeth, containing the result of the examination and advice to the parent or guardian to have the child taken to a dentist. With this card is a detachable coupon which the dentist consulted will fill out stating the nature of the work done, and then forward to the Division of Schools. In case the child is not treated by the examining dentist, the reason why is stated on the coupon. The same system is used in the cases of children found to be defective in the matter of eyes, ears, or nose. Advice here given is that the child be taken to the surgeon in charge of the eye and ear clinic, either at the Ancon or Colon Hospitals. A detachable coupon similar to that issued with the dentist's report is furnished with this card. By this system an accurate card health record of the schools can be kept from year to year.

Reading on Trains.

A circular has been issued to the pupils traveling on the trains instructing them to avoid reading as much as possible while traveling. If reading or study are found to be necessary, the pupils are cautioned to minimize it. A protection to the strain of the eyes, if reading is necessary, will be found in slipping a card or piece of paper under each successive line. The further caution is given to the pupils never to read on the evening train on the approach of dusk, or when the lamps are lighted. The circular is in line with the effort to maintain the highest possible physical efficiency in the pupils of the Canal Zone schools.

Canal Medals.

The medals and service bars earned by Canal and Panama railroad employes for the period 1911 to 1913 were received on September 29, and are being distributed. The list of medals earned is smaller than in any previous period, with the exception of 1904 to 1906. The number of first and second service bars is also considerably less than for the preceding period, while the number of third service bars increased. A statement of the number of medals and service bars issued for each period from 1904 to 1913, inclusive, follows:

PERIOD.	No. medals	First bar	Second bar	Third bar
1904-1906.....	232	.....	.....	.....
1905-1907.....	885	.....	.....	.....
1906-1908.....	1,147	146	.....	.....
1907-1909.....	1,384	536	.....	.....
1908-1910.....	943	704	92	.....
1909-1911.....	959	830	362	.....
1910-1912.....	939	615	498	72
1911-1913.....	294	384	376	194
Total.....	6,783	3,215	1,328	266

Medal and bar service ceases to be earned after December 31, 1914.

Meteorological observations at Ancon were discontinued at 12, midnight, on September 30, on and after which date, the reports at Balboa Heights were made the official station reports.

Mr. F. M. M. Richardson, superintendent of clubs and playgrounds, has been appointed secretary of the Canal Zone chapter of the American National Red Cross.

JOINT LAND COMMISSION.

Awards.

Award No. 58, docket numbers as shown, October 5, 1914. In the matter of sundry claims—An award is hereby made against the United States in favor of the persons hereinafter named, in the sum of \$645, United States currency.

This award shall be paid to the respective claimants hereinafter named, in the amounts hereinafter specified, on or before the 5th day of November, 1914, and if payment, or tender of payment, of any item of this award is not made on or before that date, such items shall thereafter bear interest at the rate of six per centum per annum, until paid:

Acosta, Gabino, docket No. 240, for all rights, claims, and other interests in growing crops, fruit trees, house without tax number, and any other buildings and any other improvements which the said Acosta may possess or may have possessed on the lands of Agua Salud, near Buena Vista, the sum of \$200, United States currency.

Acosta, Lucio, docket No. 247, for all rights, claims, and other interests in growing crops, fruit trees, house without tax number, and any other buildings and any other improvements which the said Acosta may possess or may have possessed on the lands of Agua Salud, near Buena Vista, the sum of \$200, United States currency.

Becas, (Bacus) Filomena, docket No. 253, for all rights, claims, and other interests in growing crops, fruit trees, house without tax number, and any other buildings, and any other improvements which the said Becas (Bacus) may possess or may have possessed on the lands of Palenquillo, near old Frijoles, the sum of \$125, United States currency.

Castillo, (Contillo), Louisa, docket No. 238, for all rights, claims, and other interests in growing crops, fruit trees, house without tax number, and any other buildings and any other improvements which the said Castillo (Contillo), may possess or may have possessed on the lands claimed by Samuel Miller, near Buena Vista, the sum of \$120, United States currency.

Total, \$645, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Award No. 59, docket No. 28, October 5, 1914—In the matter of the claim of Maria Cespedes, for property near Aguas Caldas and Gatuncillo Rivers—An award is hereby made against the United States, in favor of Maria Cespedes, in the sum of \$1,000, United States currency, for all rights, title, claims, and other interests in lands, growing crops, fruit trees, houses without tax numbers, and any other improvements which the said Maria Cespedes may possess or may have possessed on the lands below the 100-foot contour line, described in the claim as being "Three (3) leagues in circumference, starting from a point at the confluence of Aguas Caldas and Gatuncillo Rivers."

This award shall be paid to the claimant herein named, in the amount herein specified, on or before the 5th day of November, 1914, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum (6%) per annum until paid.

The claim in so far as it refers to gold and silver mines known as "Emanuel," "Ensenada," and "Dolores," is hereby dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rules of Dismissal.

Rule of dismissal No. 138, October 3, 1914. In the matter of sundry claims—With reference to the claims for improvements of the persons hereinafter named, the evidence before the commission is, that they have made settlements with the United States for their houses and other improvements. The names of such persons, their docket numbers, the tax numbers (where stated) of the houses included in the settlements, and their locations, follow:

Name.	Docket No.	Tax No.	Locality.
Cabeza, Gabriela.....	1702	897	Nombre de Dios
Carbajal, Andres (Carajal).....	1190		Nombre de Dios
Galvan, Bruno.....	1198	C-911-P	Nombre de Dios
Galvan, Clemente.....	1241	893	Nombre de Dios
Marquez, José (Marques).....	1690	C-909-P	Nombre de Dios
Morales, Felipe.....	1202	C-907-P	Nombre de Dios
Nino, Celestino.....	1688	C-899-P	Agua Dulce
Pacheco, Ceferino (Seferino).....	1689	877	Nombre de Dios
Palomino, Roque.....	1706	898	Nombre de Dios
Perez, Blas C.....	1707	890	Nombre de Dios
Reed, Louis (Reid).....	1200		Nombre de Dios
Salazar, Pedro.....	1193		Nombre de Dios
Thiagaridi, Cecilio (Thieralo, Cicello).....	1709	C-901-P	Nombre de Dios

Villalobos, Vicente... 1188 Nombre de Dios
Wood, Cyril... 1194 859 Nombre de Dios

In view of the agreements before noted, these claims call for no further action by this commission, and they are accordingly dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of dismissal No. 139, docket numbers as shown, October 3, 1914. In the matter of sundry claims—The following claims for improvements, said to have been located on the Buena Vista lands, are hereby dismissed for the reason that the evidence submitted to the commission does not justify an award being made:

Claimant.	Docket No.	Location.
Canady, James (Kennedy, Robert)	239	Buena Vista
Marina, Juana Josefa	251	Buena Vista

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of dismissal No. 140, docket No. 27-1, October 5, 1914. In the matter of the claim of Hortensio de Leon, et al—Hortensio de Leon, Braulio Quesada, Crescencia Quesada, Octaviano Barrios, Tibursio Carmona, and Victoria de los Rios de Jimenez, claim to be the owners of about five hundred (500) hectares of land known as "Aguardentito" and located near Cruces, Canal Zone, which lands are declared by the United States to have been necessary for the construction, maintenance, operation, protection, and sanitation of the Panama Canal.

The document which they rely upon as evidence of title is a series of sworn statements made before the Circuit Court of Gorgona in the month of December, 1895, by several persons who at the request of José Quesada, Juan Pio Jimenez, Rimigio Barrios, Tibursio Carmona, and Ventura de Leon testified that José Quesada had been occupying with houses, clearing, and cultivations, public lands known as "Aguardentito" for more than 13 years; Juan Pio Jimenez for more than 17 years; Rimigio Barrios for seven years, and Tibursio Carmona and Ventura de Leon for over five years, each of them, but said document is not sufficient title of ownership, according to the Colombian laws in force in the territory of the Canal Zone prior to the American occupation in 1904.

The ownership to lands of "Aguardentito" already occupied by José Quesada, Juan Pio Jimenez, Rimigio Barrios, Tibursio Carmona, and Ventura de Leon for 17, 13, seven, and five years, respectively, up to 1895, as it is shown in the declaration of witnesses submitted to the commission, could not have been acquired by extraordinary prescription, because, in accordance with Article 2532 of the Civil Code, "The lapse of time necessary to acquire by this kind of prescription (extraordinary) is 30 years against any person, and is not suspended in favor of those enumerated in Article 2530," and the time they have been on said lands hardly covers the period of years required for the acquiring of them by extraordinary prescription.

Furthermore, Law 48 of August 28, 1882, amendatory of Cultivators' Law of 1874, said:

"11. Public lands (tierras baldías) shall be considered property of public use and the ownership thereof shall not prescribe against the nation, in any case, in conformity with the provisions of Article 2519 of the Civil Code."

From the above facts, the commission has reached the conclusion that Hortensio de Leon, Braulio Quesada, Crescencia Quesada, Octaviano Barrios, Tibursio Carmona, and Victoria de los Rios de Jimenez are not the owners of the lands of "Aguardentito," and their joint claim is hereby dismissed without prejudice to any claim they, or either of them, may have for improvements on said premises.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Supplies for the Canal.

The following steamers, with supplies for The Panama Canal and Panama railroad, arrived at the ports of Colon and Cristobal during the week ending September 26. In addition there is included the material from cargoes of the steamer *Santa Clara*, which was not reported before:

Santa Clara, September 18, from Baltimore, with 3,168,485 pounds structural steel, 1,577,900 pounds structural steel, for Division of Terminal Construction, and 2,108,714 pounds structural steel, for Panama railroad.

Advance, September 23, from New York, with seven cases electrical machinery, one reel cable, 1,200 pieces clay conduit, two boxes copper rail bonds, one box glassware, two cases patterns, for lock erection; two cases electrical machinery, 30 packages copper wire and fittings, eight boxes loading coils, 13 reels cable, two boxes adding machine for Panama railroad; one box bronze wearing rings, for Dredging Division; two cases electrical material, two cases electrical machinery, 101 bundles conduit and fittings, 177 bundles iron pipe,

20,004 pieces clay conduit, two reels cable, two boxes spare parts, for Electrical Division; three crates structural steel, 27 crates hypochlorite of lime, one box pump parts, five cases glass and woodwork, five crates steel troughs, 27 crates water meters, 13 barrels sulphate of copper, for Division of Municipal Engineering; 13 barrels structural steel, nine cases steel castings, three bundles rubber belt, one box repair parts, for Division of Terminal Construction; two cases pneumatic tool parts, one case brake shoe heads, four cases sewing machines, one box leather bands, one box bandsaws, one box threadtight, one package books, one package pulley blocks, one box blueprint paper, for Mechanical Division; 14 cases addressograph machine, one case typewriter, for Accounting Division; eight packages medical supplies, one box artificial limb, one package books, for Health Department; one package badges, for Division of Canal Transportation; three crates iron lamp posts, for Division of Fortifications; one case woodwork, one case handrail, nine cases sheet copper, two barrels liquid paint, 25 rolls wire concrete reinforcement, for permanent buildings; 25 packages stationery material, seven kegs forgings, three cases bolts and nuts, 16 cases solder, 40 cases lampblack, 60 cases paint, one box injectors, nine packages hardware, two boxes flags, one crate bottle carriers, two boxes pitchers, two cases marine motors, 25 kegs mule shoes, two bundles wagon springs, two boxes fange parts, one keg emery, two kegs bicarbonate of soda, three cases waiters' coats, 166 crates shelving, two boxes tools, for stock; and a miscellaneous cargo, the whole consisting of 22,188 packages, weighing approximately 334 tons.

Cartago, September 23, from New Orleans, with 204 bales rice straw, for stock.

Zacapa, September 23, from New York, with 46 packages electrical material, for Panama railroad; four reels wire rope, for Dredging Division; two cases sandpaper, 12 barrels paint in oil, three boxes iron pipe-fittings, 122 boxes window glass, 11 barrels rosin, 18 cases paint in oil, three boxes varnish, for stock.

Alm, September 24, from Mobile, with 250 pieces iron water pipe, for Division of Municipal Engineering; 2,351 pieces (64,506 board feet) yellow pine lumber, for stock.

Turrialba, September 24, from New Orleans, with one keg iron castings, for Mechanical Division; six steel castings, for Dredging Division; two boxes chisels, three boxes industrial truck, for stock.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, October 10, 1914. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Allajuela.	Gatun.	Gatun Lake.	Miraflores Lake.
Sun., Oct. 4.....	128.00	94.08	85.96	85.98	54.19
Mon., Oct. 5.....	130.15	95.55	85.98	86.00	54.07
Tues., Oct. 6.....	129.70	95.20	86.12	86.12	54.00
Wed., Oct. 7.....	140.90	103.10	86.18	86.16	54.19
Thurs., Oct. 8.....	135.80	101.65	86.15	86.05	54.23
Fri., Oct. 9.....	129.85	95.12	86.05	86.05	54.20
Sat., Oct. 10.....	128.60	94.50	86.08	86.04	53.98
Height of low water to nearest foot....	125.0	91.0			

Proposals for Construction of Railroad Station at Balboa Heights.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER,

Sealed proposals will be received at the office of the Chief Quartermaster, Panama Canal, Balboa Heights, C. Z., for the erection, by contract, of the new Panama railroad station at Balboa Heights. Bids will be received until 3 p. m., October 17, 1914, when they will be opened in the office of the Chief Quartermaster.

The buildings are to be constructed of concrete blocks and stucco, with reinforced concrete foundations and umbrella shed. The Panama Canal will furnish all material on cars at the site of the work, and the contractor will be required to furnish all labor. Plans and specifications may be obtained at the office of the Chief Quartermaster, Balboa Heights. A deposit of \$15 will be required to insure their return.

Each bidder must accompany his proposal with a certified check, cash, or money order for 10 per cent of the amount bid, as a guarantee of his acceptance of the contract.

Bids should be marked "Proposal for Panama railroad station."

The Panama Canal reserves the right to reject any or all bids.

W. R. GROVE,
Chief Quartermaster

CANAL CLUBHOUSES.

Activities of the Young Men's Christian Association.

BALBOA.

The Balboa basketball team will go to Cristobal Saturday night, October 17, to play the Cristobal team.

The Cristobal checker club has promised a team to represent it at the local checker tournament on Saturday night, October 17, at the Balboa clubhouse.

Captain Weber, an intertranscontinental traveler, who is out on a 36,000-mile walk from New York to Buenos Aires and return, will deliver a lecture at the clubhouse Saturday night at 8 o'clock. Admission is free to all.

The boys of Balboa between the ages of 13 and 16 years met in the Y. M. C. A. on Saturday morning, October 10, at 10 a. m., and organized a boys' club, known as the "Balboa bugs." This club is open to all boys between the above ages. T. S. Booz was elected "Big bug," Steve Engelke, "Pinch bug," and James Roberts, "Scratch bug." The first degree of the order will be conferred upon all boys present next Saturday morning at 10 o'clock. All boys who can keep a secret are invited to be present.

COROZAL.

The following high scores were recorded for the past week:

Duckpins—Ruggles, 108; Kite, 106; Ryan, 102, 100; White, 101; Walker, 101.

Tenpins—White, 221, 201; Kite, 200.

Mr. Weston met a large and enthusiastic wrestling class on Saturday night. This class meets once a week. Every one is welcome. There is no instruction charge.

Practice for the track and field events for the San Francisco exposition was held on Saturday evening.

The list of new library books to be sent to the United States, while complete, is being held up, awaiting the return of library books now out and overdue.

GATUN.

The special musical numbers for the Sunday evening song service were two violin solos by Mr. Wright, accompanied by Mrs. D. W. Dennis.

Gatun entertained the Corozal duckpin team on Saturday evening, October 10, Gatun taking two out of three match games.

Messrs. Wright and Sales supplied piano and drum music for last week's motion pictures. They will play again Saturday evening this week.

The boys of the Pedro Miguel Y. M. C. A. were the guests of the boys of Gatun on Saturday, October 10. The results of the three contests were:

Indoor baseball—Gatun 14; Pedro Miguel 13.

Basketball—Gatun 9; Pedro Miguel, 6.

Duckpins—Gatun, 241; Pedro Miguel, 207.

CRISTOBAL.

Mr. Milton A. Smith took first prize in the monthly ragtime bowling tournament on Wednesday, October 7. The games bowled were cocked-hat, duckpins, and tenpins. Score, 239; Pinney, second, 219; and Cotton, third, 203.

Capt. H. Weber, a veteran of the Boer war, who has traveled much in South America on foot, gave an account of his travels, showing many pictures and curios on Thursday, October 8.

A meeting of the boys' department was held on October 13 to select teams for a series of aquatic contests. All the boys of Colon Beach and Cristobal between the ages of 10 and 16 years are invited to enter.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., October 12, 1914.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Acrons, Miss E. (cat.)	Kramer, Fred.
Beckwith, Mrs. A. R. (cat.)	Leon, Enrique (paper)
Davis, Lillian C.	MacMillan, S. L. (paper)
Dibben, Wm. H. (paper)	Reese, Hy F. (papers)
Eskridge, Mrs. C. S.	Settle, Mrs. D. (cat.)
Flynn, Aileen B. (paper.)	Shartt, Frank
Gray, Stella V. Hyde	Slatz, J. C.
Hahn, C. F.	Smith, Mrs. John M.
Hamilton, John T.	Tarmen, Ruth
Harner, Lawrence	Tobin, Wm.
Heltemes, W. M.	Van Note, Harold
Higgins, F. M. (paper)	Walls, George
Hoffman, Geo.	Wenzencroft, Frank E.
Horton, S. B. (2)	Wiedemann, Charles
Haltman, Robert	Whitfield, George E.

FOUND—A small leather purse. Owner may recover same upon application to the office of THE CANAL RECORD, Balboa Heights, identifying property.

OFFICIAL CIRCULARS.

Charges for Deck Hands Furnished Vessels in Transit.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., October 5, 1914.

CIRCULAR No. 691:

1. In case The Panama Canal furnishes additional hands for vessels in transit through the Canal, for the purpose of assisting in handling lines, etc., the charge against the vessel shall be at the rate of \$2 per man for complete trip through the Canal. When such extra men are furnished by the Canal, the charges shall be collected in advance by the Collector after the bill has been submitted by the captain of the port.

2. The above should not be construed to mean that agents or masters will be prohibited from employing such men as they may require for this service.

GEO. W. GOETHALS,
Governor.

Danger from Spillway Discharges.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., October 9, 1914.

To all concerned—To regulate properly the levels of Gatun and Miraflores Lakes, it is necessary at times to operate the gates of the spillways at any hour of the day or night. It is not practicable to give special warning or notice on each occasion of such operation.

All persons are hereby cautioned that the channels and rivers below the spillways are liable to sudden freshets due to the operation of the regulating gates, and that such freshets may endanger life or property lying within the reach of the waters.

GEO. W. GOETHALS,
Governor.

Building Division.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., October 9, 1914.

CIRCULAR No. 660-21:

The Building Division created by Circular 660-20, is a part of the organization of the Department of Operation and Maintenance, effective October 1, 1914, to conform to the general plan of carrying all construction divisions in that department. All employees reporting to the Constructing Quartermaster will be carried on the rolls of the Department of Operation and Maintenance, Building Division.

GEO. W. GOETHALS,
Governor.

Tug Service Through Culebra Cut.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., October 5, 1914.

CIRCULAR No. 686-2 (Amending Circular No. 686):

Hereafter, during construction work in Culebra Cut, and until normal conditions obtain, no charge will be made for tug service to the vessels using the Cut, unless the size of the vessel be such that a tug would be required to insure safety, provided the Canal were completed to its designated size.

GEO. W. GOETHALS,
Governor.

Consolidation of Offices.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., October 12, 1914.

To all concerned:

1. The office of the local auditor of the Panama Railroad Company will be moved to Balboa Heights and consolidated with the office of the Auditor of the Panama Canal on October 15, 1914.

2. The Auditor of the Panama Canal will assume the duties of local auditor of the Panama Railroad Company at the beginning of business October 15, 1914. Any mail matter for the local auditor should be addressed accordingly to Balboa Heights.

3. Effective at the beginning of business October 16, 1914, the duties of local treasurer pertaining to the disbursement of funds by the railroad company will be assumed by Mr. John H. McLean, Paymaster, and the duties of the local treasurer pertaining to making collections will be assumed by Mr. T. L. Clear, Collector, Panama Canal.

4. The local treasurer at Colon and the cashier at Panama will close their accounts as such at the close of business October 15, and transfer all cash to Mr. John H. McLean, Paymaster. Mr. Wardlaw's accounts will be closed as soon as possible thereafter, whereupon, as deputy collector, he will assume the duties now performed by the cashier in the Panama station.

5. On and after October 16, all payments of the Panama Railroad Company at Colon will be made by the Paymaster through his representative at that point, Mr. E. A. Keeling, and all collections will be made by

the Collector through his representative, Mr. E. P. Sine, deputy collector at Cristobal.

6. Station agents and other collecting agents of the Panama Railroad Company from Colon south to and including Gamboa will make their remittances to the deputy collector at Cristobal. All remittances of station agents and other collecting agents of the railroad company south of Gamboa will be made to the deputy collector in the Panama station.

7. The accounts of Mr. Wardlaw and his cashier will be closed out under the supervision of the present local auditor of the Panama Railroad Company and the Auditor, Panama Canal.

Approved: H. A. A. SMITH,
Auditor, Panama Canal.

GEO. W. GOETHALS,
Governor, Panama Canal.
President, Panama Railroad Company.

Steamshovel Cranemen Wanted.

THE PANAMA CANAL,
OFFICE OF EXECUTIVE SECRETARY,

BALBOA HEIGHTS, C. Z., October 10, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The United Fruit Company requires the services of two steamshovel cranemen at Port Limon. They will pay \$110 a month for experienced men, and \$60 a month to begin with for men without experience. Application should be made to the office of the United Fruit Company in Cristobal.

C. A. MCLVAINE,
Executive Secretary.

Inventory of Nonexpendable Property in Administration Building.

THE PANAMA CANAL,
OFFICE OF EXECUTIVE SECRETARY,

BALBOA HEIGHTS, C. Z., October 10, 1914.

Heads of Departments and Divisions in the Administration Building—At an early date it is the intention to take a complete inventory of the nonexpendable property in the new Administration Building at Balboa Heights.

In order to eliminate as much unnecessary work as possible in connection with this inventory, it is desired that heads of departments and divisions, at the earliest practicable date, send to the property clerk, in the basement of the building, any material of this nature, which may be unserviceable or no longer needed.

Any material of this nature now in the basement, or to be sent to the basement, should be labeled to show the division to be credited, and whether "Unserviceable," or "No longer desired."

Material not needed in one division may be of some service in another, and arrangements may be made with the property clerk for transfer.

All material of this class, which has been stored in corridors, should be at once removed to the basement, or to the offices and rooms for which intended.

Instructions will be issued within a few days covering preparations for the general inventory.

C. A. MCLVAINE,
Executive Secretary.

Examinations by Board of Local Inspectors.

THE PANAMA CANAL,
BOARD OF LOCAL INSPECTORS,

BALBOA HEIGHTS, October 9, 1914.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 308, on Wednesday, October 21, 1914, beginning promptly at 2 p. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m. at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m.; and at Balboa, at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

By direction of the chairman of the board.
F. M. NIXON,
Clerk, Board of Local Inspectors.

COMMISSARY DEPARTMENT.

Milk and Cream.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER,
BALBOA HEIGHTS, C. Z., October 8, 1914.

To district quartermasters and commissary storekeepers: A report of the chemist relative to quality of fermillac and sweet milk is quoted below:

"1. A sample of fermillac, ex steamer *Santa Maria*, September 10, 1914, sample of sweet milk, and fermillac, ex steamer *Advance*, September 22, 1914, and a sample of sweet milk, ex steamer *Panama*, September 28, 1914, have been inspected, representing the last two shipments and the stock on hand.

2. The fermillac was found to be in good condition in both instances. A slight separation is noticeable, as a general rule, in all fermillac bottles, but the contents readily mix in an even consistency.

3. The sample of sweet milk, ex steamer *Advance*, had an odor coming from the inside of the neck of the bottle and the top of the cream layer, but after cleaning the inside of the neck of the bottle with a soft cloth no odor was perceptible, and when the milk and cream were mixed by pouring from the bottle it was found to be sweet and in good condition.

4. The sample of sweet milk ex steamer *Panama*, was free from odor, was sweet and in good condition.

5. Oftentimes there is considerable odor from the top of the cream layer and inside of the neck of the bottles, and the older the milk the more pronounced is this odor, but by carefully cleaning the neck of the bottle after opening, and removing a very small amount of the cream from the top before mixing, the odor disappears."

Please call the above report to the attention of commissary patrons and request them to handle milk on opening as indicated in Paragraph 5.

W. R. GROVE,
Chief Quartermaster.

Ginger Snaps.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., October 12, 1914.

District quartermasters and commissary storekeepers—Ginger snaps will hereafter be baked twice a week. Orders for delivery on Tuesday mornings must reach the depot commissary not later than the preceding Saturday; orders for delivery on Friday morning must reach the depot commissary not later than the preceding Wednesday.

W. R. GROVE,
Chief Quartermaster.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

In rush periods, all stores will remain open until 7 p. m.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective October 15:

	FRESH MEATS.	Price.
Mutton—	Stewing, per pound.....	10
	Shoulder, trimmed, per pound.....	16
	Leg (8 to 10 pounds), per pound.....	25
	Cutlets, per pound.....	26
	Short cut chops, per pound.....	30
	Shoulder, chops, per pound.....	18
Lamb—	Stewing, per pound.....	13
	Shoulder, trimmed, per pound.....	19
	Leg (5 to 8 pounds), per pound.....	30
	Chops, per pound.....	36
	Chops, shoulder, per pound.....	23
	Cutlets, per pound.....	36
Veal—	Stewing, per pound.....	13
	Shoulder, for roasting (not under 4 pounds), per pound.....	17
	Chops, shoulder, per pound.....	23
	Chops, per pound.....	35
	Loin, for roasting, per pound.....	35
	Cutlets, per pound.....	40
Beef—	Suet, per pound.....	03½
	Soup, per pound.....	08
	Soup bones, per pound.....	02½
	Stew, per pound.....	12
	Plate, per pound.....	14
	Corned, No. 1, per pound.....	20
	Corned, No. 2, per pound.....	17
	Chuck roast, 3 lbs., and over, special, per pound.....	13
	Chuck roast, 3 lbs., and over, choice, per pound.....	17
	Rib roast, second cut (not under 3½ pounds), special, per pound.....	18
	Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
	Rib roast, first cut (not under 3 pounds), special, per pound.....	22
	Rib roast, first cut (not under 3 pounds), choice, per pound.....	27
	Pot roast, special, per pound.....	23
	choice, per pound.....	28

	Price.
Rump roast, special, per pound.....	23
choice, per pound.....	28
Porterhouse roast, special, per pound.....	25
choice, per pound.....	31
Steak, chuck, special, per pound.....	15
choice, per pound.....	18
Round, bottom, per pound.....	19
choice, per pound.....	17
Round, top, special, per pound.....	22
choice, per pound.....	23
Rib, special, per pound.....	27
choice, per pound.....	23
Sirloin, special, per pound.....	23
Sirloin, choice, per pound.....	28
Sirloin, choice cut, special, per pound.....	26
Sirloin, choice cut, choice, per pound.....	32
Rump, special, per pound.....	23
choice, per pound.....	28
Porterhouse (not less than 1½ pounds), special, per pound.....	26
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse, short, Delmonico, special, per pound.....	23
Porterhouse, short, Delmonico, choice, per pound.....	28
Tenderloin, Western, special, per pound.....	40
Tenderloin, Western, choice, per pound.....	46
Pork—Hams, fresh, per pound.....	\$26
Shoulders, fresh, per pound.....	\$22
Loins, chop, or roast, per pound.....	26
Pigs' feet, each.....	08
Pigs' head, whole.....	95
Pigs' head, ½-head.....	48
Sausage, home made, per pound.....	26

MISCELLANEOUS.

Livers—Beef, per pound.....	13
Calif, each.....	65
Half, each.....	33
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	14
Frankfurter, per pound.....	15
Lieberwurst, per pound.....	14
Pork, per pound.....	18
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	35
per ½-dozen.....	18
Bluefish, per pound.....	7
Halibut, fresh, per pound.....	5
Salmon per pound.....	6
Yeast, per pound.....	31
Yeast, per cake.....	2

POULTRY AND GAME.

Chickens—Fancy roasting, milk fed, per pound.....	25
Fancy roasting, corn fed, per pound.....	23
Fowls, per pound.....	24
Fowls, light, per pound.....	*21
Ducks, Western, per pound.....	22
Capons, per pound.....	29
Broilers, milk fed, per pound.....	*24
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	27
Squabs, each.....	42
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, per pound.....	24
Sliced, per pound.....	31
Half, for boiling, per lb.....	26
Boiled, per pound.....	35
Hocks, per pound.....	10
Butt end, about 1½ pounds to butt, per pound.....	12
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.40
Pigs' feet, per pound.....	7
Tongues, per pound.....	21

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	42
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	45
Young America, per pound.....	22
Swiss, per pound.....	27
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	33
Snappy, per cake.....	* 9
Milk (certified), bottl.e.....	*24
Milk, Sheffield Farms, per quart.....	*15
Fer-mil-lac, bottle.....	25
Ice cream, quart.....	25
½-gallon.....	50
Cream, Sheffield Farms, quart.....	*33
pint.....	*19
½-pint.....	*12

VEGETABLES.

Cauliflower, per pound.....	*6
Beets, per pound.....	2½
Celery, per head.....	4
Cabbage, per pound.....	2½
Carrots, per pound.....	2
Cucumbers, per pound.....	3

	Price.
Lettuce, per pound.....	10
Onions, per pound.....	2½
Peppers, per pound.....	3
Potatoes, white, per pound.....	2½
sweet. American, per pound.....	12½
Yams—Tropical, per pound.....	3
Eggplant, per pound.....	*3½
Rhubarb per pound.....	*3½
Turnips, per pound.....	2
Tomatoes per pound.....	3
Squash, pr pound.....	2

FRUITS.

Apples, per pound.....	13½
Grapes, per pound.....	8
Grape fruit—American, each.....	*8
Tropical, each.....	3½
Lemons, per dozen.....	13
Limes, per 100.....	40
Oranges—American, each.....	2½
Jamaican, per dozen.....	18
Peaches, per pound.....	*8
Bananas, per bunch.....	38
Bananas, each.....	½
Apples, evaporated per pound.....	16
Apricots, evaporated per pound.....	23½
Pears evaporated, per pound.....	23
Pears alligator, each.....	6

* Indicates advance from preceding list.

† Indicates reduction from preceding list.

** Indicates five cents allowed for return of bottle.

† Sold only from commissaries; no orders taken for delivery.

‡ Sold only from cold storage and not from commissaries.

Additions to Stock.

Jam, strawberry, tin.....	\$0.11
Pipes, briar, ea.....	12
Pipes, briar, ea.....	16
Pipes, briar, ea.....	21
Ink wells, glass, single, ea.....	06
Ink wells, glass, double, ea.....	18
Desk pads, ea.....	76
Blotters, hand, doz.....	02
Eradicator, ink, set.....	19
Erasers, rubber, ruby, ea.....	04
Erasers, ink and pencil, ea.....	03
Penholders, ea.....	03
Pads, scratch, 3" by 5", ea.....	01
Pads, ruled, 8" by 10", ea.....	04
Pencils, Kohinor, H. B., ea.....	09
Pencils, No. 2, ea.....	01½
Pencils, Dixon's, ea.....	02½
Eyeshades, ea.....	15
Tacks, thumb, doz.....	06
Clips, Gem, box.....	03
Wax, sealing, stick.....	09
Blotters, large, desk, ea.....	03
Marshmallows, chocolate, Powell's, ¼-lb. pkg.....	07
Hose, boys', extra heavy, pair.....	22
Tea, Ceylon U. S., lb.....	\$0.35
Tea, Young Hyson, tin.....	10
Salmon, red, bellies, lb.....	16
Charcoal, lb.....	00½

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective October 8, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Sweets, Pascall's, jar.....	\$0.29	\$0.30
Flour, lb.....	.03	.03½

WEATHER CONDITIONS, CANAL ZONE, SEPTEMBER, 1914.

Rainfall during the month was generally above normal, being heavier over the upper Chagres River basin and along the Atlantic coast. September rainfall was above the station averages at 12 stations and deficient at six stations. The monthly totals ranged from 6.38 inches at Miraflores to 28.92 inches at Indio, on the upper Chagres. The maximum precipitation recorded in one day was 3.39 inches at Trinidad on the 10th.

Monthly mean air temperatures and relative humidity were approximately normal, while there was a slight deficiency in atmospheric pressure. The average daytime cloudiness was the highest which has been recorded for September, at both stations.

No fogs were observed during the month at either coast station, while the average number of nights with fog at the interior station was 11. Of the fogs observed, 49 per cent were dissipated by 6.30 a. m., 88 per cent by 7.30 a. m. and 93 per cent by 8.30 a. m.

Elevation of Gatun Lake (feet above mean sea level): Mean for month 85.57; maximum, 86.17 on 30th; minimum, 84.82 on 8th. Evaporation from lake surface 4.074 inches.

The following table summarizes the weather conditions for the month.

STATION.	Pressure (reduced to mean of 24 hours).	Temperature.				Mean relative humidity.	Precipitation.			Wind.			
		Mean.	Maximum.	Date.	Minimum.	Date.	Total inches.	Station average.	Days of .01 inch or more.	Total movement (miles).	Prevailing direction.	Max. velocity in (miles).	Direction.
Colon.....	29.833	79.4	88	Sep. 21	72	Sep. 26	14.80	12.52	27	6,274	W.	27	W.
Ancon.....	29.820	80.3	94	Sep. 14	70	Sep. 27	9.60	7.80	17	4,393	N.W.	22	N.E.

Elevations of Gatun Lake, (feet above mean sea level)—Mean for the month 84.93 feet; maximum, 85.06 feet on the 17th; minimum, 84.78 feet on the 4th. Evaporation from lake surface 4.684 inches.

Tea, Omphale, pkg.....	.36	.39
Tea, Omphale, pkg.....	.18	.20
Vinegar, malt, C. & B., bot.....	.18	.17
Mushrooms, Mombadon, tin.....	.13	.19
Puffs, powder, No. 8864, ea.....	.16	.22
Brushes, nail, ea.....	.19	.22
Buttons, pearl, doz.....	.09	.10
Buttons, pearl, doz.....	.10	.11
Buttons, pearl, doz.....	.12	.13
Buttons, pearl, doz.....	.14	.16
Buttons, pearl, doz.....	.17	.18
Buttons, pearl, doz.....	.19	.22
Buttons, pearl, doz.....	.29	.32
Pimientos, Morrones, tin.....	.07	.09

Rainfall from October 1 to 10, 1914, Inclusive.

STATIONS.	Maximum one day.	Date.	Total for period
<i>Pacific Section—</i>			
Balboa Heights.....	<i>Ins.</i> .83	1	<i>Ins.</i> 2.08
Balboa.....	.89	1	2.41
*Miraflores.....	.90	7	1.68
Pedro Miguel.....	.94	7	2.02
Rio Grande.....	1.14	2	2.31
<i>Central Section—</i>			
Culebra.....	1.62	1	3.53
*Camacho.....	1.75	2	3.58
Empire.....	1.53	1	3.67
Gamboa.....	1.21	7	2.96
*Juan Mina.....	2.75	2	6.89
Alhajuela.....	2.12	7	5.99
*El Vieja.....	3.35	7	10.06
Frijoles.....	1.84	1	6.97
*Monte Lirio.....	.....	.....	7.81
<i>Atlantic Section—</i>			
Gatun.....	1.29	7	4.99
*Brazos Brook.....	2.32	2	6.05
Colon.....	1.60	7	6.40

*Standard rain gage—readings at 5 p. m. daily.
Automatic rain gage at unstarred stations—values midnight to midnight.

September Rainfall for Three Years.

STATIONS.	1912	1913	1914	Station Av.	Years of record	Rainy days, '14
<i>Pacific Section—</i>						
Ancon.....	8.30	11.43	9.60	7.80	18	17
Balboa.....	10.01	9.01	7.72	6.98	16	18
Miraflores.....	14.45	8.92	6.38	10.08	6	22
Pedro Miguel.....	10.76	8.32	7.97	8.69	7	23
Rio Grande.....	15.10	8.95	8.76	10.72	10	23
<i>Central Section—</i>						
Culebra.....	14.12	10.55	11.12	11.20	24	25
Camacho.....	14.14	6.75	9.17	10.41	9	19
Empire.....	13.78	9.14	9.65	8.51	11	27
Gamboa.....	12.75	9.48	11.50	10.50	32	27
*Juan Mina.....	14.27	8.22	17.10	12.04	4	28
Alhajuela.....	9.12	8.82	16.98	11.78	16	28
El Vieja.....	10.10	7.50	18.06	12.78	7	24
Frijoles.....	11.93	11.61	10.55	11.36	3	29
Trinidad.....	11.36	11.30	15.03	12.48	7	19
Monte Lirio.....	9.39	14.12	15.38	12.86	7	23
<i>Atlantic Section—</i>						
Gatun.....	7.84	9.95	10.95	9.86	10	27
Brazos Brook.....	9.11	11.96	13.28	11.80	9	27
Colon.....	12.23	9.90	14.80	12.52	44	27

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon October 11.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.									
Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Oct. 6.....	Cowrie.....	British.....	Anglo-Saxon Petroleum Co.....	Port Arthur, Tex.....	Tien Tsin.....	Oil in bulk.....	5,943	5,316	3,983
Oct. 6.....	Damara.....	American.....	Luckenbach S.S. Co.....	New York.....	San Francisco.....	General mdse.....	4,900	5,838	4,506
Oct. 7.....	Bellucia.....	British.....	Bellucia S.S. Co.....	Philadelphia.....	Higo, Japan.....	Case oil.....	6,000	4,861	3,687
Oct. 8.....	Crosshill.....	British.....	Macbeth & Co.....	Swansea.....	Tacoma.....	Ballast.....	.....	5,590	3,984
Oct. 8.....	Alaskan.....	American.....	American-Hawaiian S.S. Co.....	New York.....	Los Angeles.....	General cargo.....	4,000	8,746	6,388
Oct. 10.....	St. Winifred.....	British.....	Rankin, Gilmour & Co.....	Philadelphia.....	Shimonoseki, Jap.....	Oil.....	6,200	5,081	3,684
Oct. 11.....	Charcas.....	British.....	W. R. Grace & Co.....	New York.....	South America.....	General cargo.....	7,006	5,951	4,271

THROUGH THE CANAL—PACIFIC TO ATLANTIC.									
Oct. 4.....	Falls City.....	British.....	Bradford S. S. Co.....	Mejillones, Chile.....	Key West.....	Nitrates.....	7,897	5,302	3,781
Oct. 6.....	Inverberie.....	British.....	Inverkip S.S. Co.....	San Francisco.....	London.....	General cargo.....	6,500	4,792	3,673
Oct. 6.....	Frankmount.....	British.....	Palace Shipping Co.....	Tacoma.....	Southampton.....	Wheat.....	7,500	5,847	4,087
Oct. 6.....	Camino.....	American.....	W. R. Grace & Co.....	San Francisco.....	New York.....	General cargo.....	4,000	3,325	2,170
Oct. 7.....	Isthmian.....	American.....	American-Hawaiian S. S. Co.....	San Pedro.....	New York.....	General cargo.....	5,500	5,677	4,068
Oct. 8.....	Carolyn.....	American.....	Luckenbach S.S. Co.....	San Francisco.....	New York.....	General cargo.....	2,662	3,392	2,517
Oct. 9.....	Mexican.....	American.....	American-Hawaiian S.S. Co.....	San Francisco.....	Philadelphia.....	General cargo.....	8,500	8,317	6,482
Oct. 9.....	Santa Cruz.....	American.....	W. R. Grace & Co.....	San Francisco.....	New York.....	General cargo.....	6,000	5,436	4,065
Oct. 9.....	Primley.....	British.....	Houlden, Middleton & Co.....	San Francisco.....	Antwerp.....	Barley.....	7,098	5,270	3,868
Oct. 10.....	Jupiter.....	American.....	United States Navy.....	Pacific Ocean.....	Philadelphia.....	Coal and oil.....	.....	.....	.....
Oct. 11.....	Saxon Monarch.....	British.....	Monarch S. S. Co., Ltd.....	Portland, Oregon.....	Colon (for orders).....	Wheat.....	.....	.....	4,922

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date	Vessels	Line	From	Date	Vessels	Line	For
Oct. 4.....	Falk.....	Robert Wilcox.....	New York.	Oct. 3.....	Habil.....	United Fruit Co.....	Honduras.
Oct. 5.....	Wegadesk.....	Earn Line.....	Norfolk.	Oct. 3.....	Tordenskjold.....	Earn Line.....	Daiquiri.
Oct. 7.....	Haiti.....	Cie. Gen. Transatlantique.....	Bordeaux.	Oct. 6.....	Belgian.....	Leyland Line.....	Galveston.
Oct. 8.....	Ellis.....	United Fruit Co.....	New Orleans.	Oct. 6.....	Magdalena.....	Royal Mail.....	Southampton.
Oct. 8.....	Masoria.....	McLean-McIntyre, Ltd.....	Norfolk.	Oct. 6.....	Bologna.....	La Veloce.....	Genoa.
Oct. 8.....	Zeta.....	Robert Wilcox.....	Gulfport.	Oct. 7.....	Falk.....	Atlas Line.....	St. Thomas.
Oct. 10.....	DeSabra.....	Bank Line.....	Rio Janeiro.	Oct. 8.....	Falk.....	Robert Wilcox.....	New York.
				Oct. 9.....	Haiti.....	Cie. Gen. Transatlantique.....	Bordeaux.
				Oct. 10.....	Thelma.....	Andrews & Co.....	Brunswick, Ga.

EXPECTED ARRIVALS.

Oct. 12.....	Honolulu.....	American-Hawaiian Co.....	New York.
Oct. 15.....	Kanuta.....	Pacific Steam Nav. Co.....	Liverpool.
Oct. 15.....	Penrith Castle.....	Lancashire Shipping Co.....	Galveston.
Oct. 16.....	Lyra.....	Luckenbach S.S. Co.....	New York.
Oct. 17.....	Santa Cecilia.....	W. R. Grace & Co.....	New York.
	English Monarch.....	Monarch S.S. Co.....	.....
	Malakka.....	East Asiatic S.S. Co.....	Copenhagen.
	Lord Antrim.....	Irish Shipowners' Co.....	.....
	Fornebo.....	Houlden, Middleton & Co.....	United States.
	Queen Eugenia.....	Dunlop S.S. Co.....	London.

*EXPECTED DEPARTURES.

Oct. 12.....	Manuel Cacho.....	Compañia Trasatlantica.....	Barcelona.
Oct. 20.....	Orolava.....	Royal Mail.....	Southampton.
	Centurion.....	Leyland Line.....	.....
	Wegadesk.....	Earn Line.....	.....
	Meridian.....	Horsley Line.....	.....
	D. Olga.....	Seeberg S.S. Co.....	St. Thomas.
	Crathens.....	Seeberg S.S. Co.....	.....
Oct. 24.....	Bayano.....	Elder & Fyffes.....	Bristol.
	Valatia.....	Galveston S.S. Co.....	.....

*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular connection with the United States.

PORT OF BALBOA.

*ARRIVALS.				*DEPARTURES.			
Date	Vessels	Line	From	Date	Vessels	Line	For
Oct. 6.....	Cuzco.....	W. R. Grace & Co.....	San Francisco.	Oct. 3.....	Oberon.....	Union-Oil Co.....	Port San Luis.
Oct. 7.....	Pachica.....	Peruvian S. S. Co.....	Callao.	Oct. 10.....	Cuzco.....	W. R. Grace & Co.....	Valparaiso.
Oct. 7.....	Palena.....	South American S. S. Co.....	Valparaiso.	Oct. 10.....	Dewey.....	United States cruiser.....	Nicaragua.
Oct. 9.....	Saxon Monarch.....	Monarch Line.....	Portland, Or.	Oct. 10.....	Ecuador.....	Pacific Steam Nav. Co.....	Guayaquil.
Oct. 10.....	Aztec.....	Pacific Mail S. S. Co.....	San Francisco.	Oct. 10.....	City of Para.....	Pacific Mail S.S. Co.....	San Francisco.
				Oct. 11.....	Palena.....	South American S.S. Co.....	Valparaiso.

*EXPECTED ARRIVALS.

Oct. 12.....	Peru.....	Pacific Mail.....	San Francisco.
Oct. 13.....	Pennsylvanian.....	American-Hawaiian Co.....	San Francisco.
Oct. 15.....	Mina Brea.....	London and Pacific Petr. Co.....	South Pacific.
Oct. 17.....	Washingtonian.....	American-Hawaiian Co.....	San Francisco.
Oct. 15.....	Crown of Seville.....	Direct Line.....	San Francisco.
Oct. 21.....	City of Sydney.....	Pacific Mail.....	San Francisco.
Oct. 20.....	Oregonian.....	American-Hawaiian Co.....	Seattle.
	Spithead.....	Clyde Shipping Co.....	San Francisco.
	Winchester.....	Galbraith, Pembroke & Co.....	.....
	Harparkian.....	.....	Puget Sound.

*EXPECTED DEPARTURES.

Oct. 12.....	City of Para.....	Pacific Mail.....	San Francisco.
Oct. 12.....	Pachica.....	Peruvian S.S. Co.....	Callao.
Oct. 12.....	Manari.....	Pacific Steam Nav. Co.....	Buenaventura.

*Other than vessels passing through the Canal.

Sailings of Vessels in Regular Service With the Isthmus.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every six days, direct; between Colon and New York by the United Fruit Company and the Royal Mail Company, sailings via Kingston weekly and fortnightly, respectively; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

NEW YORK TO CRISTOBAL.			
	Soils.	Arrives.	
*Advance.....	P. R. R. Oct. 10.....	Oct. 17	
*Panama.....	P. R. R. Oct. 16.....	Oct. 22	
*Allianca.....	P. R. R. Oct. 22.....	Oct. 28	
*Colon.....	P. R. R. Oct. 29.....	Nov. 4	
CRISTOBAL TO NEW YORK.			
†Colon.....	P. R. R. Oct. 17.....	Oct. 23	
†Advance.....	P. R. R. Oct. 23.....	Oct. 30	
†Panama.....	P. R. R. Oct. 29.....	Nov. 4	
†Allianca.....	P. R. R. Nov. 4.....	Nov. 10	

†Colon.....P. R. R. Nov. 10.....Nov. 16

NEW YORK TO COLON.

Orotava.....	R. M. Oct. 10.....	Oct. 18	
Metapan.....	U. F. C. Oct. 14.....	Oct. 21	
Zacapa.....	U. F. C. Oct. 21.....	Oct. 28	
Danube.....	R. M. Oct. 24.....	Nov. 1	
Almirante.....	U. F. C. Oct. 28.....	Nov. 4	

COLON TO NEW YORK.

Almirante.....	U. F. C. Oct. 15.....	Oct. 22	
Santa Marta.....	U. F. C. Oct. 22.....	Oct. 29	
Tagus.....	R. M. Oct. 27.....	Nov. 4	
Metapan.....	U. F. C. Oct. 29.....	Nov. 5	
Zacapa.....	U. F. C. Nov. 5.....	Nov. 12	
Essequibo.....	R. M. Nov. 10.....	Nov. 18	

NEW ORLEANS TO COLON.

*Turrialha.....	U. F. C. Oct. 10.....	Oct. 15	
Heredia.....	U. F. C. Oct. 14.....	Oct. 21	
*Abangarez.....	U. F. C. Oct. 17.....	Oct. 22	
Parismina.....	U. F. C. Oct. 21.....	Oct. 28	

COLON TO NEW ORLEANS.

†Atenas.....	U. F. C. Oct. 15.....	Oct. 20	
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Cartago.....U. F. C. Oct. 15.....Oct. 22
 †Turrialba.....U. F. C. Oct. 22.....Oct. 27
 Heredia.....U. F. C. Oct. 22.....Oct. 29
 *Will carry mail from the United States.
 †Will carry mail to the United States.
 †Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.

Married.

TUCKER-HALL—At Boston, Mass., on Wednesday, September 2, by the Rev. L. H. Austin of Roslindale, D. Esther, daughter of Mrs. A. A. Hall of Boston, to Frederick D. Tucker of Balboa, C. Z.

WATTS-VARELA—On Saturday evening, October 10, at the home of Ricardo Bermudez, Governor of Colon, Miss Sylvia Varela of Colon, to Dr. H. C. Watts of San Francisco, the Rev. Father Volk officiating. Isthmian residence, Colon Hospital reservation.

COTTON-GLAWSON—On October 8, at the Union chapel, Cristobal, Miss Ida May, Glawson of Marshall, Tex., to Mr. Ernest C. Cotton of Revere, Mass., the Rev. Wm. Flammer officiating. Canal Zone residence, Cristobal.

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, OCTOBER 21, 1914.

No. 9.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,
Isthmus of Panama.

No communication either for publication or requesting information will receive attention unless signed with the full name and address of the writer.

NOTES OF PROGRESS.

Oil Cargoes.

Some shipping companies are under the impression that, in order to pass a vessel loaded with crude oil, or similar products, through the Canal, it is necessary to first obtain permission, by cable, in advance. This is not the case. In general, there is no objection to such vessels using the Canal, unless some unusual condition of vessel or cargo obtains, which might endanger the Canal, or interfere with its navigation, and permission for their passage will be granted on arrival at the Isthmus. Section 4 of the Executive Order, providing "Rules and regulations for the operation and navigation of The Panama Canal and approaches thereto, including all waters under its jurisdiction," was introduced, so that the Canal authorities might have discretionary power in individual cases in passing judgment on the condition of the vessel, and the nature and location of its cargo, where such cargo consists of explosives or highly inflammable materials, etc. There has been no case to date where vessels carrying oil cargoes have been refused the transit, nor is there a likelihood of such refusal, if the ordinary precautions have been observed.

Removal of Offices Into P. R. R. Building.

The Panama railroad building at Colon, which was vacated on Wednesday, October 14, by most of the railroad force, is being occupied by other divisions of the Canal work. The office of the captain of the port, formerly in the wooden annex to the railroad freight house, was transferred to this building on Saturday, October 17, and will be located on the second floor. There will be a private office for the captain of the port, a general office for the clerical force, and suitable space for the pilots, and the admeasurers. The branch offices of the Paymaster and Collector were moved to the building last week, the pay-clerk occupying the office vacated by the former local treasurer, and the Deputy Collector, the former office of the local freight and passenger agent. Other offices in this building will be,

as follows: Quarantine (not yet moved in), office of the designing engineer for the new Cristobal pier, office of the receiving and forwarding agent of the railroad, branch hydrographic office, fortifications, and Panama railroad storehouse for electrical supplies.

Construction of Army Post.

The new Army post on Balboa dumps will be constructed by the Building Division of the Supply Department. As at present planned, there will be four barracks and one headquarters building of simple design, built of concrete. In addition, there will be a residence for the commanding officer, and two 4-family and three 2-family quarters for officers, to be constructed in accordance with the Canal types for permanent buildings. Plans of the quarters for the noncommissioned officers have not yet been decided on.

Stoppage of Night Work at Balboa Shops.

All night work in the boiler shop of the Mechanical Division at Balboa was stopped at 1 a. m., Sunday, October 18, and the force transferred to the day shift. This was the last shop at the plant working a night shift. Hereafter, there will be no more night work at Balboa shops, except in cases of emergency in connection with which overtime has been requested.

Transfer of Stock at Mount Hope Depot.

The work of transferring the active stock from the Mount Hope depot to the permanent storehouse at Balboa has been begun. Only material in usable condition is included in this class, and to determine this, an inspection is made of all items before they are shipped. Material that can be shipped direct to the work, such as water and sewer pipe, and railroad and track equipment, will be retained at Mount Hope. The oil stock, also, will remain where it is for the present, as no provision for taking care of this class of stores at Balboa has yet been made. In future, all new stock material received from the United States will be shipped direct to the Balboa store.

Two Clapets Retired from Service.

Clapets No. 2 and No. 12 have been condemned by the Dredging Division's inspector of marine equipment, on account of defective hulls, and retired from service. These self-propelling barges were a part of the equipment of the second French canal company reclaimed and repaired by forces of the Isthmian Canal Commission, and had been in service since 1906, in the Pacific entrance channel and, for the past six months, in Culebra Cut. No. 2 had been used recently for transporting subsistence and other supplies to the dredging fleet in the Cut, and No. 12 had been used to carry the crews back and forth with the change of shifts.

CANAL CLOSED BY SLIDE.

Movement of 725,000 Cubic Yards in Cut.—Channel Reopened by Dredges.

A large slide on the east bank of Culebra Cut, directly north of Gold Hill, moving between 5 p. m., Wednesday, October 14, and 9 a. m., Thursday, October 15, carried about 725,000 cubic yards of earth and rock into the Canal prism, and blocked the channel for 1,000 feet to the passage of vessels larger than tow-boats, causing the suspension of traffic. This occurred two months, to the day, after the official opening of the Canal to commercial traffic.

The big dredges were working at Cucaracha slide, south of Gold Hill, at the time the slide started, and with commendable foresight on the part of Messrs. Comber and Macfarlane steps were taken to move them northward; but for this action the results secured could not have been accomplished, as the condition of the channel was such that loaded barges could not be passed through the slide. The dredges were worked under triple shift. The 15-yard dipper dredges *Gambua* and *Paraiso*, and the 5-yard dipper dredge *Mindi*, began excavation at the north side of the slide during the night of October 14-15, while the mass was still in motion. The dipper dredge *Cardenas* was added to the fleet on October 15, and during the 16th an extension of discharge pipe was laid from a point opposite Cucaracha slide, which allowed the pipeline suction dredge No. 86 to take part in the work.

The channel was cleared sufficiently by noon of Tuesday, October 20, to allow the passage during the afternoon of seven vessels, which had been delayed at the south end of the Canal. The vessels had been taken to Pedro Miguel Lock and moored alongside the approach piers and within the lock. The actual passage of the seven through the Cut occupied about four hours; they followed each other at intervals of about half an hour, propelled by their own power, but passing the slide under the control of a tug fore and aft, to hold them to the course. Thirteen vessels were awaiting passage from the Atlantic entrance; nine of them were transferred to the anchorage basin in Gatun Lake, south of Gatun Locks, on October 20, and are being handled through the Cut today.

The slide which blocked the Canal is 2,100 feet long, extending from station No. 1775 to station No. 1796, and broke back about 1,000 feet from the center line of the channel. It occurred in a part of the bank, formerly involved in the east Culebra slide, and is designated as the "New Culebra" slide. The old slide appeared to be dead, and the channel opposite it had been cleared to almost full width and depth. At the present time, no further movement is indicated, but practically all of the 725,000 cubic yards involved in the movement of October 14-15 will have to be dredged from the prism, which may cause further motion. The material is

masses of rock and earth, in about equal proportions.

Following the preliminary survey made on the morning of October 15, after the slide had come to rest, it was estimated that, unless further movements occurred, the channel could be opened in one week. A still later estimate set October 22 as the first day on which vessels could pass the slide. The performance of the dredging forces in clearing the channel in two days less time than was believed to be necessary indicates the fitness of the equipment and the loyal persistence of the personnel.

The Governor was greatly pleased with the results accomplished.

The excavation accomplished by the dredges at the base of the slide, in periods ending at 8 a. m. of each day named, was:

DREDGE.	15th	16th	17th	18th	19th	20th	Total.
Gamboa.....	3,935	5,160	6,175	6,910	7,800	5,775	35,755
Paraiso.....	4,150	6,900	7,625	7,600	6,720	4,975	37,970
Mindi.....	1,845	1,000	2,403	2,709	1,640	2,137	11,734
Cardenas.....		3,027	3,251	2,031	3,210	2,052	13,571
No. 86.....			3,825	5,850	6,250	4,050	20,575
Total.....	9,930	16,087	23,279	25,100	25,620	19,589	119,605

The maximum day's output was 25,620 cubic yards, in the period ending at 8 a. m., October 19, or Sunday, when the dredge and towboat crews appeared for duty, without orders or instructions. The following is a list of the gold employes of the Dredging Division who assisted in securing the results noted:

Name.	Rating.
Edward Davis.....	Supervisor of Dredging
John J. D. Wiehen.....	General Foreman
Robert P. Morgan.....	Supervising Engineer
George Lytle.....	Supervising Engineer

DREDGE "PARAISO."	
James W. Landers.....	Master
Lauritz Pettoletti.....	Chief Engineer
Tony La Sera.....	Operator
C. H. Hoffman.....	Operator
C. E. Petersen.....	Craneman
V. M. Claybourn.....	Craneman
M. Allacier.....	Assistant Engineer
A. Barton.....	Assistant Engineer
Frank Morton.....	Assistant Engineer

DREDGE "GAMBOA."	
D. W. Hurey.....	Master
Robert Tweedie.....	Chief Engineer
J. T. McGrath.....	Operator
A. A. Slater.....	Operator
W. A. Tedford.....	Craneman
J. J. Murray.....	Craneman
H. Morrison.....	Craneman
O. A. Helmerichs.....	Assistant Engineer
F. J. Kruse.....	Assistant Engineer

DREDGE "MINOL."	
F. L. Heald.....	Master
H. F. Cartier.....	Operator
H. Sanborn.....	Craneman
A. B. Moore.....	Craneman
G. Suarez.....	Engineer
J. D. Trower.....	Engineer
J. C. Will.....	Engineer

DREDGE "CAROENAS."	
E. G. Turner.....	Master
J. M. Bol.....	Craneman
F. E. Fletcher.....	Craneman
T. J. Doran.....	Craneman
W. A. Raymond.....	Engineer
T. Frayne.....	Engineer

DREDGE "NO. 86."	
H. Ohlhausen.....	Master
J. Moore.....	Chief Engineer
F. G. Chapman.....	Mate
C. Cook.....	Mate
H. Everson.....	Operator
F. A. Quigg.....	Operator
McDuffy Mitchell.....	Operator
J. R. Eastburn.....	Engineer
F. P. Wentworth.....	Engineer

BARGE OPERATION.	
E. H. Stube.....	Foreman
MOTORBOAT "SEARCH."	
H. B. Majilton.....	Coxswain Engineer
CRANE BOAT "LA VALLEY."	
William Carter.....	Master
G. H. Evans.....	Chief Engineer
John Manuel.....	Assistant Engineer

TUG "COCOLI."	
J. F. Cason.....	Master
W. H. Stone.....	Chief Engineer

S. O. Koch.....	Mate
F. E. Nehls.....	Mate
J. W. Bass.....	Engineer
H. Klumpp.....	Engineer
TUG "CHAMEL."	

A. Pfisterer.....	Master
P. S. Smith.....	Chief Engineer
H. P. Fransen.....	Mate
B. Gille.....	Assistant Engineer

TUG "MIRAFLORES."	
H. A. V. VonPflugk.....	Master
Leslie B. Colgin.....	Chief Engineer
D. Ross.....	Mate
J. H. Trower.....	Assistant Engineer
S. E. Foster.....	Assistant Engineer

TUG "RELIANCE."	
A. Terwilliger.....	Master
J. L. Aznoe.....	Chief Engineer
W. A. VanSiclen.....	Mate
M. B. Glockie.....	Mate
A. Ampuero.....	Assistant Engineer
J. P. Surry.....	Assistant Engineer

TUG "EMPIRE."	
A. T. Luther.....	Master

P. J. Sundberg.....	Chief Engineer
R. Frost.....	Mate
C. Melene.....	Mate
H. Arens.....	Assistant Engineer
R. E. A. Thiele.....	Assistant Engineer

TUG "GATUN."	
P. Evans.....	Master
V. Anderson.....	Chief Engineer
A. Jackson.....	Mate
G. C. Dow.....	Mate
T. Welter.....	Assistant Engineer
R. Wright.....	Assistant Engineer

TUG "LA BOCA."	
K. Wikingstad.....	Master
F. D. Jones.....	Chief Engineer
O. Vineyard.....	Mate
W. Miller.....	Mate
A. Thomas.....	Assistant Engineer
R. Beachboard.....	Assistant Engineer

TUG "BOHIO."	
J. Martin.....	Master
C. M. Ferguson.....	Chief Engineer
E. W. Allen.....	Mate
W. U. Louis.....	Assistant Engineer

TUG "SANIDAO."	
M. T. Svenson.....	Master
J. Johnson.....	Chief Engineer
J. F. Mountain.....	Mate
F. W. Gardiner.....	Mate
A. M. Kalzer.....	Assistant Engineer
W. P. Jennings.....	Assistant Engineer

SURVEYS.	
C. L. Vandeburgh.....	Junior Engineer
R. W. Berdeau.....	Transitman
A. N. Margeson.....	Transitman
W. E. Boyd.....	Levelman
F. L. Thomas.....	Foreman
J. S. Hagner.....	Rodman
D. W. Norton.....	Rodman
L. B. Monroe.....	Rodman
G. Holder.....	Rodman
F. Cheney.....	Rodman
J. A. Elanton.....	Rodman
R. D. Short.....	Rodman

Spanish War Veterans.

Chagres Camp, No. 1, United Spanish War Veterans, will meet in the Las Cascadas lodge hall on Sunday, October 25, at 2 p. m.

L. B. WILLIS, *Adjutant.*

BALBOA, C. Z., October 20, 1914.

Local Relief Measures for War Sufferers in Belgium.

A committee of women of the Canal Zone has been formed, with a representative in each town, for the purpose of soliciting clothing and articles of wearing apparel for men, women, and children of Belgium who have been rendered destitute by the European war and whose need at this time is urgent.

An unoccupied ward in Ancon Hospital has been placed at the disposal of this service by the superintendent as a depot for the receiving, assorting, and packing of articles donated.

Arrangements are being made for the free

handling of the donated relief supplies by the Panama railroad in the Canal Zone, and by the Royal Mail Steam Packet Line to Europe.

It is expected to forward the first consignment on the next Royal Mail steamer sailing on November 3.

Change of Offices of Joint Land Commission.

On and after this date the offices and public session room of the joint commission, appointed in accordance with Articles VI and XV of the Treaty between the United States of America and the Republic of Panama, ratified February 26, 1904, will be located in the National Palace, in the city of Panama.

All persons having claims before the joint commission are hereby informed that the commission is in session daily, and is endeavoring to hear and adjudicate all claims before it as quickly as possible.

By direction of the joint commission.

WILLIAM TAYLOR, *Secretary.*

PANAMA, R. P., October 15, 1914.

Joint Land Commission Calendar.

The following is a calendar of claims set for hearing by the Joint Land Commission, for the week ending October 24, at its offices in the National Palace, Panama:

WEDNESDAY, OCTOBER 21.

Docket No. 487, Eugenio Theophile; No. 423, José Martin; No. 1087, Ernesto Hernandez.

THURSDAY, OCTOBER 22.

Docket No. 1497, Francisco Diaz; No. 1601, Ramon Ruiz; No. 1613, Manuel Sacramento Moran.

FRIDAY, OCTOBER 23.

Docket No. 424, Alexander Schwart; No. 1443, Manuel Estevan Mendieta; No. 435, Andres de Orta.

WILLIAM TAYLOR, *Secretary.*

Probable Case of Suicide.

The body of Alexander Grant, an employee of the Mechanical Division at Paraiso, was found in the brush near that village in the morning of October 9. The deceased had disappeared about five weeks before, and a coroner's jury rendered a verdict that he came to his death on or about September 3, by a gunshot wound in the head, probably selfinflicted during a period of mental aberration. He was born in Karkudy, Scotland, but was a naturalized American citizen, and had been on the Isthmus five years. He was 32 years of age, single, and is survived by his father, James Grant, living at 1018 Segal street, Camden, N. J.

The dispensary department of the admitting office and dispensary at the entrance to Ancon Hospital is being enlarged by the addition of three rooms. The changes will enlarge the consulting room for white patients, and provide separate dressing and toilet rooms for white and colored patients.

Due to the removal of most of the Panama railroad employes to Balboa Heights, the restaurant, formerly conducted in the old Washington Hotel building, was closed on October 15.

The office of the Southern District, Division of Municipal Engineering, located at Ancon, was moved on Thursday, October 15, into a new building erected on the fill back of the Government hotel. The building which contained the former offices, situated near the Ancon pumping station, has been torn down.

The sailing of the steamer *Ancon* has been set for Saturday, October 24, at 3 p. m.

SHORE DIKES ON LIMON BAY.

Experimental Barriers Demonstrate Value of Permanent Ones.

To check erosion of the beach on the south shore of Limon Bay, west of the Canal prism, the construction of three temporary dikes was authorized in 1913. The work was started in August of that year, and was completed within the following month. Dike No. 1 is 650 feet long, and is situated 800 feet west of and parallel to the Canal axis. Dike No. 2 is 450 feet long, and is 1,300 feet west of the Canal. Dike No. 3 is 250 feet in length, and 1,800 feet west of the Canal. These dikes are located about 50 feet inland from the water's edge, extending to the highest point on the beach, and were constructed of a single row of 3-inch sheet piling held in place by a row of ordinary piles, spaced on 13-foot centers, and two stringers. Old 8 by 16-foot trestle material was used for the stringers; one was placed four feet above, and the other at mean sealevel.

A survey was made in September, 1913, shortly after the work of driving the sheet piling from the shore end of the dikes was started, and another was made about six weeks later. These surveys covered the period of driving the sheet piling, and showed that the shore line had been built out about 15 feet during this time. On December 6, 1913, a third survey was made which showed a filling out from the shore line of from 35 to 50 feet from the date of the original survey, and a shoaling of nearby waters of about five-tenths of a foot.

The dikes have diverted the currents enough to show what might be expected from more permanent structures. The 6-foot contour line turns to the north opposite the dikes, and near here indications point to the building up of a bar parallel to the west bank of the Canal. Since the dredges cut through the shore line at Mile Post 4, plus 2,400 feet, in 1908, the beach has receded 1,400 feet on the west bank, and 400 feet on the east bank of the Canal center line. In addition to this, the survey made by the Atlantic Division in 1912, compared with that of the coast and geological survey of 1905, shows a scouring between the beach and the 12-foot contour line of 4,868,000 cubic yards.

The fills in the sea entrance to the Canal in Limon Bay, Mile Posts 4 to 5, during the dry seasons for the past five years, together with the amounts of material excavated during the same period, are summarized below. In view of the large amount of excavation going on over this reach during the years 1909-1913, the fills are somewhat complicated with the regular dredging operations.

In 1909-10, the fill was estimated at 879,385 cubic yards. The excavation during the same period over this reach was 1,094,511 cubic yards; the dredges, therefore, are credited with only 215,126 cubic yards of original excavation for the six months period.

In 1910-11, the fill was placed at 607,622 cubic yards, and the total excavation at 210,817 cubic yards, which showed that the dredges did not keep up with the fill by 396,805 cubic yards. During the norther of December 3-4, 1910, a total of 98,400 cubic yards of silt were deposited in the channel between Mile Posts 4 and 5.

In 1911-12, the fill was estimated at 762,978 cubic yards, and the excavation was 648,143

cubic yards; the dredges during this period fell short 114,835 cubic yards.

The figures for the fill in 1912-13 probably show less than actually occurred, as the pipeline and seagoing suction dredges were at work continuously during the period, and no doubt removed considerable fill material between surveys. The fill was estimated at 187,446 cubic yards, while the excavation amounted to 372,462 cubic yards.

The fill for 1913-14 was 23.3 per cent less than that during 1912-13, and was the least of any previous year, notwithstanding the fact that the weather was as bad, if not worse, than the season before. The amount of fill was placed at 143,683 cubic yards, while the excavation by dredges aggregated only 45,356 cubic yards.

Although the construction of the west breakwater has had some effect on the currents, and consequently has retarded filling to some extent, it has been shown by the temporary barriers that small rock dikes built up above the water line will not only protect the shore from erosion, but that they will deflect the current in the Canal in a longitudinal, instead of a transverse, direction, thereby inducing a tendency to a scouring action, rather than a fill, in the channel.

An estimate for the construction of the permanent dikes has been prepared by the Resident Engineer of the Dredging Division, and work on them has been authorized. They will have a top width of three feet at elevation plus two feet, and their side slopes will be one on one. The lengths of the dikes, and the approximate amount of fill required for each is, as follows:

	Length Feet.	Fill Cu. yds.
Dike No. 1.....	820	2,800
Dike No. 2.....	460	1,500
Dike No. 3.....	275	750
Total.....	1,555	5,050

Rock from Sosa Hill quarry will be used, and it is estimated that it can be dumped into place at a cost of about \$3.50 per cubic yard. It will be transported on cars to Mindi, and there unloaded into barges and hauled to the vicinity of the dikes, where it will be reloaded into Decauville cars and taken to destination. This plan has been decided on in view of the fact that the water is too shoal and generally too rough at this point to use a derrick barge to advantage.

Red Cross Ball on November 2.

A ball will be held at the Hotel Tivoli, on the night of Monday, November 2, under the auspices of the Canal Zone chapter of the Red Cross. Dancing will begin about 9 o'clock, and last until shortly after 12.

Tickets will be sold for \$5 each to men. There will be no charge for ladies. A ticket will entitle the holder and one lady to round trip transportation from any point on the Panama railroad to Balboa Heights on all trains that night, beginning with train No. 7, leaving Colon at 5.05 p. m. The charge of \$5 will include also membership dues in the Canal Zone chapter for the year ending October 31, 1915. An election of officers for the ensuing year will be held during the evening at the Administration Building; new members, as well as old, will be entitled to vote.

The officers of the Red Cross point out that this society is the one large, undenominational, active charitable organization on the Isth-

mus, and is deserving of the support of all. During the year past it has made large disbursements in local charity, and further activities are anticipated, for which additional funds are requisite. In addition to its work on the Isthmus, the society has under advisement the sending of funds to Europe, in response to the great demands caused by the war.

Y. M. C. A. Announcements.

The regular moving picture entertainment at the Corozal clubhouse will be held on Friday evening, October 23.

The Gatun senior gymnasium class will meet on Tuesday and Friday nights.

A pool tournament is to be started shortly at the Pedro Miguel clubhouse, and members interested are requested to enroll.

Two committees are working up the program of an entertainment to be held at the Pedro Miguel clubhouse on the occasion of Hallowe'en. There will be a social time for the children on Friday evening, October 30, from 5 to 8 o'clock, and one for the members of their families on Saturday evening, October 31.

An old-fashioned Hallowe'en entertainment will be held at the Cristobal clubhouse on the evening of October 31. There will be all of the old time Hallowe'en games, together with Jack-o'-Lanterns, etc.

Position Open for Steamshovel Engineer who can Operate Brown Coal Hoist.

The Panama railroad requires the services of a steamshovel engineer who can operate the Brown coal hoist at Cristobal, and, when not so engaged, act as steamshovel engineer or craneman at the coal pile. Preference will be given to applicants who have had experience both as steamshovel and Brown hoist operators, and, in the second place, to steamshovel men who can be trained to operate the Brown hoist, and are willing to perform the duties of craneman when required.

Knights of Columbus.

On account of the celebration of Columbus Day, the regular meeting of Nombre de Dios Assembly was adjourned to Sunday, October 25, at which time the election of officers for the incoming year will be held. Brothers will meet at the lodge hall, Building No. 1, Cristobal at 2 p. m.

THEO. A. AANSTOOS,
Faithful Navigator.

CRISTOBAL, C. Z., October 20, 1914.

The hacienda of Dr. Francisco Prima, located in the Canal Zone, two or three miles east of Colon, between the Escondido and Majagual Rivers, has been purchased by the Government. The property, in addition to building improvements, contains a large number of cacao, rubber, coffee, and fruit trees.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., October 19, 1914.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Alback, Fabricio de	Mott, C. H.
†Clark, Waldo E.	Murphy, Alexander
Casal, Jacinto	O'Neal, Mrs. J. C.
*Fahey, M. J.	†Patterson, John A.
Fluty, Lee	Pfodenhauer, Charles
Foster, Elfreda	Pase, D. D. D.
†Garmerly, Mrs. E. J.	Quimby, Peter T.
Healey, Martin	Reiman, Ewart
†Hood, Duncan M.	Sharr, Frank
†Kreitz, W. Ernest	Spence, E. O.
Lyons, Thomas	Telletin, Felesphore
McCain, F. H.	*Zemmer, Emmitt
* Paper. † Pamphlet.	† Catalogue. All others

are letters.

OFFICIAL CIRCULARS.

Office Engineer.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., October 13, 1914.

CIRCULAR No. 661-11:

Effective October 13, 1914, Mr. Clayton J. Embree, is appointed Office Engineer, vice Mr. A. B. Nichols, resigned.

GEO. W. GOETHALS,
Governor.

Instructions to Office Timekeepers, Field Timekeepers, and Foremen, P. R. R.

THE PANAMA CANAL,

ACCOUNTING DEPARTMENT.

BALBOA HEIGHTS, C. Z., October 20, 1914.

Effective November 1, 1914, all timekeeping for the Panama railroad will be handled under the system now in use by The Panama Canal, and the office timekeepers of the Panama railroad will be transferred to the timekeeping bureau of The Panama Canal.

FOUR-DAY PERIOD TIME BOOKS.

The following books are to be used:

First period, 1-4, 9-12, etc.:

Form A-72, a 60-line book;

Form A-74, a 120-line book;

Form A-76, a 3-shift book.

Second period, 5-8, 13-16, etc.:

Form A-73, a 60-line book;

Form A-75, a 120-line book;

Form A-77, a 3-shift book.

The books for gold and silver gangs are the same. The word "Gold" or "Silver" must be written or stamped on all books for gold and silver gangs, respectively.

Timebooks must be kept on the job during each 4-day period and then sent immediately to the timekeeping office.

Entries of time should be made in accordance with the instructions printed in the back of each book.

Field timekeepers and foremen will make no entries in the space under "Pay number."

The name of each employee and his rate of pay will be written on the first line of the double space, the occupation and unit of work below, and the metal check number in the proper column opposite occupation. (Disregard paragraph No. 1 of instructions in back of the timebook.)

When new employees are to be added, the foreman should enter the name, metal check number, occupation and rate of pay in the timebook then on the job, retaining a record of the line and pay numbers, so that the entries of the same names in the other period timebook will correspond with the first.

The 3-shift books are to be used only when expressly authorized by the chief timekeeper.

The labor distribution pages in the back of the timebooks will not be used until further instructions are issued.

The words "Panama Canal" on the front cover of all timebooks should be crossed out and the words "Panama railroad" inserted.

METAL CHECKS.

The present series of metal checks held by employees of the Panama railroad will continue to be used, and new checks may be ordered from the Auditor, Panama Canal, from time to time as needed.

Employees will retain their metal checks until their services are terminated, at which time their time vouchers will be stamped "Take up metal check" in the time office. Metal check will be taken up by the Paymaster.

COUPON BOOKS.

Coupon books will be issued for pay roll deduction from the 7th of the month to the 26th, inclusive. Books may be ordered at any time between the 1st and 24th, requests therefor being entered in the space provided in the timebooks for the purpose.

When the field timekeeper or foreman is entering the time of his men he will ascertain the number of coupon books desired. Opposite employee's name he will show \$2.50, \$5, \$10, etc., (as the case may be) in the first column of page headed "Requests for coupon books," for the first order of books, and in the second column for the second order of the month, etc. The \$2.50 coupon books will be issued to "Silver" employees only, and not more than two of these books to any employee during the month.

Field timekeepers or foremen should not place requests in the timebook for more coupon books than have been earned at the time request is made, taking into account any meal tickets that have been issued to the employee. If not enough time has been earned to cover the entire request the issuing clerk will issue as many books as the time earned will cover and cancel the balance of the request. In cases where this is done the foreman should place request for balance of order in the next period timebook. (Disregard paragraph No. 16 of instructions in the back of timebook.)

Requests for coupon books for employees carried on

time slips should be made on form PC. 145-3 (Request for coupon books.)

The delivery of coupon books will be made, as follows: Orders placed between the 1st and the 4th will be issued on or before the 7th.

Orders placed between the 5th and 8th will be issued on or before the 11th.

Orders placed between the 9th and 12th will be issued on or before the 15th.

Orders placed between the 13th and 16th will be issued on or before the 19th.

Orders placed between the 17th and 20th will be issued on or before the 23d.

Orders placed between the 21st and 24th will be issued on or before the 26th.

When these dates fall on Sundays or holidays, issues will be made on the day following.

All coupon books will be issued in the office of the chief timekeeper and forwarded by registered mail to the field timekeeper or foreman for delivery, who will immediately return to the chief timekeeper his receipt for the books on the duplicate copy of forwarding slip, and will promptly retain all No. 2 coupons after all books are delivered. If for any reason a book cannot be delivered it should be returned after a reasonable length of time for cancellation, and in no case should the No. 2 coupons or undelivered books be held later than noon of the 27th of the month.

The No. 2 coupons must not be torn from books until time of actual delivery, and the name of the person actually making delivery must appear on these coupons as witness.

It is not necessary that the person making delivery of coupon books be bonded.

MEAL TICKETS.

Meal ticket stocks should be handled by bonded employees of the Panama railroad and issued to employees direct, or to foremen and field timekeepers on receipt.

The timebooks should show all tickets issued and report should be rendered not later than the morning of the last day of the month on form A-52 (Daily report of meal tickets issued) covering all deductions for tickets to be made on the pay roll.

The bonded employees of the railroad will be required to render a meal ticket stock report (Form A-118) to the Auditor at the end of each month, accounting for all meal tickets on hand at the end of the previous month, received on requisition during the month or from other sources, together with all tickets issued during the month and all tickets on hand at the end of the month. Requisitions (Form A-43) for meal tickets should be made on the Auditor, after being approved by the head of the department.

TIME VOUCHERS.

Time vouchers issued under the Panama Canal system are somewhat similar to the service vouchers now issued by the Panama railroad. All time vouchers are issued in the office of the chief timekeeper upon requests issued by the heads of divisions, field timekeepers, or foremen. These requests must show in each case the time earned by the employee in the last 4-day period time book that has not been received in the time office. For example, a request is issued for an employee who has worked from the 1st to the 7th of the month whose time has been reported by timebook for the first four days (1st to 4th) should read "Time for period 5th to 7th, 24 hours" if an hourly man, or "Time for period 5th to 7th, three days" if a monthly man and if he has worked this full period of time. But in the case of a monthly man who has not worked the full time for the current period the absent dates must be shown on the time voucher request. The person making the request will be held responsible for the time shown thereon.

The above is necessary for the reason that the time rolls in the office would show time only up to the end of the period preceding that in which the request is made. (In the above case 1st to 4th.)

If the request is made to cover time that has already been turned in to the time office by timebooks only, no time should be shown on the request.

All time voucher requests for silver employees must show the amount to be deducted on account of meal tickets issued to the employee during the current month, but not coupon deductions.

All the time voucher requests must show where the employee desires to be paid, whether at Balboa Heights or Colon pay office. The time voucher will be forwarded to the pay clerk at the proper place for payment.

All gold employees, prior to receiving from the Paymaster of The Panama Canal time vouchers issued either at termination of service, or when going on leave, must deliver to the Paymaster the following:

(a) Twenty-four trip tickets with unused coupons, only on termination of service.

(b) Release from quarters. In case an employee does not occupy Panama Canal quarters, the release must so state.

(c) Property release. All gold employees leaving the

service or entering on leave will be required to secure releases from property.

(d) Metal check. Metal checks will be taken up from employees upon payment of time vouchers issued on account of termination of service. Should an employee fail to surrender his metal check, 50 cents will be deducted.

It will be the duty of the party issuing the time voucher request to advise employees of the above.

IDENTIFICATION CERTIFICATES.

Identification certificates (Form X-143) will be issued only to employees who have lost their metal check and are to receive payment prior to the time that a new check can be issued.

The Paymaster will pay all employees, whether by time voucher or pay receipt, upon metal check identification only, except in the case of a lost check, when payment will be made upon identification by certificate.

CHANGE METAL CHECK NUMBER STAMPS.

These rubber stamps are for use in changing metal check numbers on pay receipts where the employee holds a different number from the one shown on rolls and pay receipt.

They are registered and issued by the Auditor to responsible employees for their personal use only, and the employee to whom they are issued will be held responsible for any changes made where this stamp is used. It is, therefore, very important that proper care be taken to see that no one else has access to it, and that full information is furnished in each case before a check number is changed, particularly as to whether the holder of metal check is actually the same man who earned the money called for by the pay receipt. The foreman or field timekeeper for the gang should vouch for this fact in writing and the person responsible for the stamp should keep a record of each case for future reference.

These stamps will have to be ordered, with approval of head of department, from the Auditor, who will deliver same direct.

DELIVERY OF PAY RECEIPTS.

Pay receipts for the month of October will be delivered and paid in exactly the same manner as in the past, delivery and payment to be made from the Panama railroad pay car on the schedule now in effect.

Pay receipts for the month of November will be forwarded by the Paymaster or the chief timekeeper to the heads of departments or divisions, field clerks, field timekeepers, or foremen, as the case may be, to be delivered by them to the employees, witnessing signatures when delivery is made. Then all that is necessary for the employee to do is to present his pay receipt and metal check on the pay car or at the Paymaster's office, Balboa Heights or Colon, to receive payment.

AUTHORITY TO WITNESS SIGNATURES ON PAY RECEIPTS.

It is not necessary that an employee be bonded to witness signatures on pay receipts, but it is necessary that all employees witnessing such signatures have their own signature registered with the Paymaster. This is done by having the head of the department or division make such request on the Paymaster, forwarding with the request four sample signatures, one on each 3 by 5-inch plain cards. The signatures to appear in the exact center of each card, that is, equally distant from top to bottom and end to end.

DISTRIBUTION OF LABOR.

This work will not be handled in the time books after October 31, but will be handled under the direction of the Auditor by whatever system he may designate, about which you will be instructed at a later date.

A supply of the following forms sufficient for the month of November will be delivered by the chief timekeeper. Future needs of these forms must be anticipated and requisition placed on the Depot Quartermaster, Mount Hope, for such stock of the blanks as you may desire:

Time books—

Form A-72, 1st period, 60 lines.

Form A-74, 2d period, 60 lines.

Form A-74, 1st period, 120 lines.

Form A-75, 2d period, 120 lines.

Form A-76, 1st period, 3-shift, (120 lines.)

Form A-77, 2d period, 3-shift, (120 lines.)

Form P.C.-145-3. Request for coupon books. (To be used only in connection with time slips. Printed in pads of 100.)

Form A-25. Daily report of meal tickets issued. (Printed single sheets.)

Form P.C.-438. Gold time voucher request. (Printed in books of 50.)

Form P.C.-442. Silver time voucher request. (Printed in books of 100.)

Form A-118. Stock report of meal tickets. (Printed single sheets.)

Form A-48. Requisition for meal tickets. (Printed single sheets.)

Form X-143. Identification certificate. (Printed in books of 50.)

This is sent to you in advance for your information.

The Panama Canal system of timekeeping will be explained to you in person by a representative from the chief timekeeper's office prior to the end of October, and he will at that time explain any point in these instructions that may not be clear to you. He will also supply you with the forms herein referred to

Approved: **E. W. PALMER,**
Chief Timekeeper.
C. A. McILVAINE,
Executive Secretary.

Executive Order.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 25, 1914.
CIRCULAR No. 601-28:

POSTAL SAVINGS SYSTEM.

The Executive Order quoted below is published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

To Repeal the Executive Order of September 8, 1911, Establishing the Postal Savings System in the Canal Zone.

By virtue of the authority vested in me, I hereby establish the following Order for the Canal Zone:

Section 1. The Executive Order of September 8, 1911, establishing the postal savings system in the Canal Zone, is hereby repealed, *Provided*, that accounts, opened in accordance with that Order, and the regulations established thereunder, shall continue as prescribed in said Order and regulations until they are finally closed by the withdrawal of the deposits.

Section 2. For the accommodation of persons desiring to deposit their savings in the post-offices of the Canal Zone, money orders may be issued in the Canal Zone payable to the purchaser at the office of issue, for which no fee shall be charged.

Section 3. This Order shall take effect from and after October 1, 1914.

WOODROW WILSON,

THE WHITE HOUSE,
September 5, 1914.

Executive Order.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 14, 1914.
CIRCULAR No. 601-31:

PAYMENT OF TOLLS AND BILLS FOR SERVICES TO UNITED STATES GOVERNMENT VESSELS.

The Executive Order quoted below is published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

By direction of the President, and by virtue of the authority vested in him under The Panama Canal Act, the following regulations relative to payment of tolls and of bills for materials, supplies, repairs, harbor pilotage, towage, and other services furnished by The Panama Canal to vessels operated by the Government of the United States are hereby prescribed:

1. Any former Executive Order requiring the payment of tolls by vessels operated by the Government of the United States before such vessels are permitted to pass through the Panama Canal, or requiring the payment of bills for material, supplies, repairs, harbor pilotage, towage, and other services furnished such vessels by The Panama Canal before clearance papers may be given, is hereby amended to permit the passage of such vessels through the Canal and the issuance of clearance papers on transfer, between the proper officials of the vessel and the proper officials of The Panama Canal, of the necessary papers indicating the service rendered or the work performed. Bills for tolls and other services, or work herein indicated, shall be prepared by The Panama Canal against the department of the United States Government concerned and shall be submitted by the Governor of The Panama Canal to such department through the Secretary of War.

LINDLEY M. GARRISON,
Secretary of War.
WAR DEPARTMENT,
September 29, 1914.

Drawing Nonexpendable Property from Commissaries.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 12, 1914.
CIRCULAR No. 656-5:

1. Effective November 1, 1914, items of nonexpendable property such as table linen, kitchen and tableware, cooking utensils, china, glassware, etc., not usually carried in stock in Panama Canal storehouses, may be drawn from local commissaries on foremen's orders approved by heads of departments or divisions, or signed by certain authorized employees. Accountable officials will furnish the Auditor and Chief Quartermaster with

a list of persons authorized to draw such items for their accountability.

2. Foreman's order (Form A-152), properly signed or approved, will be submitted in quadruplicate. Full description of articles must be shown.

3. The commissary storekeeper will deliver the items called for, and will prepare the usual number of copies of invoice. One copy of the invoice will be sent to the department or division ordering the property, and the original and one copy to the commissary accountant, with the daily report of invoices issued. All copies of the foreman's order will be attached to the original invoice.

4. When foremen's orders are received in the Auditor's office, the quadruplicate (white) copy will be transmitted to the proper accountable official and charge made to his property account.

5. The original (yellow) copy will be attached to the original accounts receivable when same is sent to the head of the department or division for signature to the inspection certificate. This copy of foreman's order may be detached and retained by the signing official.

6. The provisions of Paragraph 14 of Circular 656-1 are modified to the extent that the purchasing agent on the Isthmus will not issue invoices to cover items of nonexpendable property drawn from commissary stores on foremen's orders. Purchase vouchers covering such items will be accomplished and approved by the Chief Quartermaster, or by his direction, instead of by the Depot Quartermaster

GEO. W. GOETHALS,
Governor.

Cremation.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 9, 1914,
CIRCULAR No. 624-1 (Amending Circular No. 624):
Item (b) of Paragraph 9 of Circular No. 624, is amended to include a charge of \$2 for the cremation of the remains of servants of employees.

GEO. W. GOETHALS,
Governor.

Hospital Rates for Families of Employees Receiving \$50 or Less.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 5, 1914.
CIRCULAR No. 618-3 (Amending Circular No. 618-Rev.)
Effective October 1, 1914, a charge of 50 cents per day will be made for ordinary care and treatment in hospital wards, for members of families of employees receiving \$50 or less per month, instead of the former rate of 75 cents for male and \$1 for female, as published in Circular 618-Revised.

GEO. W. GOETHALS,
Governor.

Labor Train Service.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., October 17, 1914.
TRANSPORTATION BULLETIN No. 89:

All concerned—Effective October 19, 1914, the labor train which now leaves Culebra at 5.40 a. m. will be discontinued. The labor train now leaving Culebra at 5.55 a. m. will continue in service as usual.

A labor train will leave Paraiso at 5.40 a. m. for Balboa Heights, and returning, will leave Balboa Heights at 6.25 a. m. for Paraiso.

The labor train which leaves Balboa Heights at 5.20 p. m. will tie up at Paraiso, and the train which leaves Balboa shops at 5.15 p. m. for Culebra will wait at Paraiso, making connections with labor train leaving Balboa Heights at 5.20 p. m.

F. R. BLUNT,
Superintendent, Railroad Transportation.

Use of EB. Cars.

THE PANAMA CANAL,
PANAMA RAILROAD COMPANY,
OFFICE, SUPT. OF RAILROAD TRANSPORTATION,
BALBOA HEIGHTS, C. Z., October 19, 1914.
Heads of divisions and departments and all concerned of railroad transportation department—Because of frequent reports to this office that EB cars are being used for other work than that for which they are intended, it will be necessary to take steps to have this practice discontinued at once.

Therefore, effective at once, no cars which are stencilled EB will be moved by the transportation department if loaded with any material other than spoil for the east breakwater work until instructions have been given from this office to do so.

Please take notice and be governed accordingly.

F. R. BLUNT,
Superintendent of Railroad Transportation.

Special Train for Schoolchildren.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
DIVISION OF SCHOOLS,
BALBOA HEIGHTS, C. Z., October 8, 1914.
To the principals and teachers of high school at Balboa,

and white schools at Balboa, Corozal, Pedro Miguel, Paraiso, and Culebra; Effective Monday, October 12, a special train for schoolchildren will be run from Balboa to Empire on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays, according to the following schedule:

Leave Balboa at 3.10 p. m.
Leave Corozal at 3.16 p. m.
Leave Pedro Miguel at 3.28 p. m.
Leave Paraiso at 3.31 p. m.
Leave Culebra at 3.46 p. m.
Arrive at Empire at 3.50 p. m.
Will you please notify all pupils concerned.

A. R. LANG,
Superintendent of Schools.

Supplies for the Canal.

The following steamers, with supplies for The Panama Canal and the Panama Railroad Company, arrived at the ports of Colon and Cristobal during the week ending October 3:

Panama, September 28, from New York, with 28 boxes paper napkins, one carboy acetic acid, 10 cases printing paper, 10 cases tag board, 1,232 pigs lead, 156 coils Manila rope, six cases paint, 20 cases sheet zinc, four cases oil cloth, four cases rubber packing, 25 crates glass, 120 bags bran, one crate water meters, 14 reels wire rope, 45 pieces steel bars, three packages torches, eight bales twine, five packages range parts, two coils wire, 31 kegs bolts, eight bundles rubber hose, six barrels graphite, 10 boxes locks, seven packages stationery material 18 packages miscellaneous hardware, five cases airbrake material, for stock; one package valve parts, 14 cases hardware, one box pipe-fittings, 44 packages electrical material, nine crates slates, one box bolts and nuts, eight packages insulators, one case junction boxes, one case brass tubes, 10 pieces fender chain, for lock erection; one crate slate, four boxes pipe-fittings, one case valves, one case shelf brackets, two reels wire, four boxes screens, four boxes machinery, for Division of Municipal Engineering; two pieces dipper lips, four reels wire rope, 16 pieces steel angles, 140 boiler tubes, 29 packages dredge parts, one dredge dipper, for Dredging Division; one box bolts, eight barrels batteries, 31 cases electrical material, 22 cases conduits, one reel insulated wire, one barrel porcelain knobs, seven cases insulated wire, one box testing cup, one box electrical motor, 31,002 pieces tile, 1,000 pieces bends, for Electrical Division; one box expansion bolts, one box dowel pins, two boxes mechanics' tools, one box hasps, two boxes flue cutters, 35 brake shoes, 20 bundles spring plates, one box motors, one box pliers, one box gloves, one package chain, for Mechanical Division; one box molds, one box printed matter, one box pointers, two packages blueprint paper, for Executive Secretary; one box plate glass, 72 cases electrical machinery, one crate lamp posts, for Division of Fortifications; one case hardware, one box castings, for Division of Terminal Construction; 56 crates conduit pipe, 21 cases electrical material, two boxes telephone material, one box lacquer, one case iron door, one reel cable, 31 packages track material, for Panama Railroad Company; one box chains, one package butts, three boxes brass wire cloth, two cases locks, two barrels liquid paint, for permanent buildings; one box refrigerator, one box books; 13 cases medical supplies, one package garden seeds, for Health Department; and a miscellaneous cargo, the whole consisting of 33,641 packages, weighing approximately 304 tons.

Heredia, September 30, from New Orleans, with 500 kegs white lead, two boxes paint brushes, 10 barrels cup grease, for stock; one box trucks, for depot commissary.

Metapan, September 30, from New York, with six crates wheelbarrows, two cases screws, 160 packages steel shelving, for stock; eight cases wire glass, for Mechanical Division; 49 cases valves, for Division of Municipal Engineering; one case hardware, for Division of Fortifications; nine packages brass tubing and fittings, for permanent buildings.

Abangarez, October 1, from New Orleans, with 61 cases tool handles, five kegs nuts and washers, one case glass, for stock; one case glass, for permanent buildings; one box castings, 1,706 pieces (41,330 feet) white oak lumber, 97 pieces (2,019 feet) white oak lumber, for Mechanical Division; five cases paint, for Electrical Division.

Belgian, October 2, from Liverpool, with one case pump fittings, for Dredging Division; three pieces fender chain, for lock erection.

Thelma, October 3, from Brunswick, Ga., with 609 pieces untreated piling, for stock; 411 packages structural steel, for Panama Railroad Company.

LOST—Camera, 3½ by 4½, Ensign, in leather case, between Corozal and Gamboa, Saturday night on train No. 10, leaving Panama at 11.30. Finder please return to or communicate with J. D. Kalar, Corozal, and receive reward.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold department of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective October 22:

FRESH MEATS.	Price.
Mutton—Stewing, per pound.....	10
Shoulder, trimmed, per pound.....	16
Leg (8 to 10 pounds), per pound.....	25
Cutlets, per pound.....	26
Short cut chops, per pound.....	30
Shoulder chops, per pound.....	18
Lamb—Stewing, per pound.....	13
Shoulder, trimmed, per pound.....	19
Leg (5 to 8 pounds), per pound.....	30
Chops, per pound.....	36
Chops, shoulder, per pound.....	23
Cutlets, per pound.....	36
Veal—Stewing, per pound.....	13
Shoulder, for roasting (not under 4 pounds), per pound.....	17
Chops, shoulder, per pound.....	23
Chops, per pound.....	35
Loin, for roasting, per pound.....	35
Cutlets, per pound.....	40
Beef—Suet, per pound.....	03½
Soup, per pound.....	08
Soup bones, per pound.....	02½
Stew, per pound.....	12
Plate, per pound.....	14
Corned, No. 1, per pound.....	20
Corned, No. 2, per pound.....	17
Chuck roast, 3 lbs., and over, special, per pound.....	13
Chuck roast, 3 lbs., and over, choice, per pound.....	17
Rib roast, second cut (not under 3½ pounds), special, per pound.....	18
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
Rib roast, first cut (not under 3 pounds), special, per pound.....	22
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27
Pot roast, special, per pound.....	23
choice, per pound.....	28
Rump roast, special, per pound.....	23
choice, per pound.....	28
Porterhouse roast, special, per pound.....	25
choice, per pound.....	31
Steak, chuck, special, per pound.....	15
choice, per pound.....	18
Round, bottom, special, per pound.....	15
choice, per pound.....	19
Round, top, special, per pound.....	17
choice, per pound.....	22
Rib, special, per pound.....	23
choice, per pound.....	27
Sirloin, special, per pound.....	23
Sirloin, choice, per pound.....	28
Sirloin, choice cut, special, per pound.....	26
Sirloin, choice cut, choice, per pound.....	32
Rump, special, per pound.....	23
choice, per pound.....	28
Porterhouse (not less than 1½ pounds), special, per pound.....	26
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse, short, Delmonico special, per pound.....	23
Porterhouse, short, Delmonico choice, per pound.....	28
Tenderloin, Western, special, per pound.....	40
Tenderloin, Western, choice, per pound.....	46
Pork—Hams, fresh, per pound.....	226
Shoulders, fresh, per pound.....	222
Loin, chop, or roast, per pound.....	26
Pigs' feet, fresh, each.....	08
Pigs' head, fresh, whole.....	95
Pigs' head, fresh, ½-head.....	48
Sausage, home made, per pound.....	26
MISCELLANEOUS.	
Livers—Beef, per pound.....	13
Calf, each.....	65
Half, each.....	33
Oysters, fresh per pkt.....	133
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	14
Frankfurter, per pound.....	14
Lieberwurst, per pound.....	14
Pork, per pound.....	14
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	35
per ½-dozen.....	18
Bluefish, per pound.....	9
Halibut, fresh, per pound.....	5
Salmon per pound.....	8
Yeast, per pound.....	31
Yeast, per cake.....	2
POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound.....	25

Chickens—Fancy roasting, corn fed, per pound.....	*24
Fowls, per pound.....	24
Fowls, light, per pound.....	*21
Ducks, Western, per pound.....	*25
Capons, per pound.....	*30
Broilers, milk fed, per pound.....	*24
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	125
Squabs, each.....	42
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	24
Half, per pound.....	26
Sliced, per pound.....	*32
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	35
Half, boiled, per pound.....	*36
Sliced, boiled, per pound.....	*42
Hocks, boiled, per pound.....	*10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	*1.42
Pigs' feet, per pound.....	7
Tongues, per pound.....	*22

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	*43
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	141
Young America, per pound.....	21
Swiss, per pound.....	25
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk (certified), bottle.....	*24
Milk, Sheffield Farms, per quart.....	*15
Fermentac, bottle.....	25
Ice cream, quart.....	25
½-gallon.....	50
Cream, Sheffield Farms, quart.....	*33
pint.....	*19
½-pint.....	*12

VEGETABLES.

Cauliflower, per pound.....	6
Beets, per pound.....	2½
Celery, per head.....	4
Cabbage, per pound.....	12
Carrots, per pound.....	2½
Cucumbers, per pound.....	3
Lettuce, per pound.....	110
Onions, per pound.....	2½
Peppers, per pound.....	3
Potatoes, white, per pound.....	2½
sweet, American, per pound.....	12½
Yams—Tropical, per pound.....	3
Eggplant, per pound.....	3
Rhubarb, per pound.....	*3
Turnips, per pound.....	2
Tomatoes, per pound.....	3
Squash, per pound.....	2

FRUITS.

Apples, per pound.....	13
Grapes, per pound.....	16
Grape fruit—American, each.....	*8
Tropical, each.....	3½
Lemons, per dozen.....	13
Limes, per 100.....	40
Oranges—American, each.....	2½
Jamaican, per dozen.....	18
Peaches, per pound.....	*9
Bananas, per bunch.....	38
Bananas, each.....	1
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Pears, alligator, each.....	6

* Indicates advance from preceding list.
 ** Indicates five cents allowed for return of bottle.
 † Indicates reduction from preceding list.
 ‡ Sold only from commissaries; no orders taken for delivery.
 ? Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective October 9, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Barley, patent, Robinson's, tin.....	.18	.30
Flour, tin.....	1.10	1.37
Cocoa, Van Houten's, tin.....	.76	.65
Cod roes, tin.....	.13	.20
Bloaters, Yarmouth, tin.....	.12	.15
Herring, kippered, tin.....	.12	.18
Herring, in tomato sauce, tin.....	.12	.14
Plums, greengage, tin.....	.23	.17
Paper, fly, Tanglefoot, sheet.....	.01	.01½
Food, roach, Peterman's, tin.....	.08	.10
Sal Hepatica, bottle.....	.44	.36
Oil, olive, Cresca, bottle.....	.90	.97

Basins, wash, ea.....	.22	.26
Irons, waffle, ea.....	.70	.98
Cinnamon, lb.....	.51	.34

CHANGES EFFECTIVE OCTOBER 10.

Drapery, reversible scrim, 36", yd.....	.14	.12
Tobacco, chewing, Drummond, nat. leaf, plug.....	.25	.24
Tobacco, chewing, Drummond, nat. leaf, piece.....	.08	.08
Codfish, salted, lb.....	.09	.10
Soap, special hotel, cake.....	.02	.03
Tea, I. C. T., tin.....	.21	.23
Suitcases, 24", leather, ea.....	10.90	11.00
Buckets, galvanized, 14-qt., ea.....	.20	.26
Boilers, rice, 2-qt., ea.....	.58	.62
Lamps, Juno, ea.....	1.70	1.75
Pitchers, glass, ea.....	.50	.34
Scissors, 7" and 8", ea.....	.48	.41
Padlocks, No. 850, ea.....	1.45	1.26
Mirrors, toilet, ea.....	.84	.95
Toothwash, Glyco Thymoline, bot.....	.23	.21
Needles, mitrailleuse, case.....	.08	.07
Asparagus tips, tin.....	.21	.18

CHANGES EFFECTIVE OCTOBER 11.

Pan and special bread, loaf.....	.03	.04
Butternut bread, loaf.....	.04	.05
Vienna bread, loaf.....	.03	.04
Graham bread, loaf.....	.03	.04
Rye bread, loaf.....	.63	.04

CHANGES EFFECTIVE OCTOBER 12.

Coats, pressed.....	.50	.40
Coats, cleaned and pressed.....	.75	.60
Trousers, pressed.....	.25	.20
Trousers, cleaned and pressed.....	.50	.40
Vests, pressed.....	.25	.20
Vests, cleaned and pressed.....	.35	.25
Skirts, ladies', pressed.....	.75	.40
Skirts, ladies', cleaned and pressed.....	\$1.50	\$1.25
Coats, ladies', pressed.....	.75	.40
Coats, ladies', cleaned and pressed.....	\$1.50	\$1.25
Dresses, pressed.....	1.50	1.25
Dresses, cleaned and pressed.....	5.00	2.50
Waists, silk, cleaned and pressed.....	.50	.35

CHANGES EFFECTIVE OCT. 15, 1914.

Chocolate, Fry's, Caracas, cake.....	\$0.09	\$0.10
Barley, pearl, tin.....	.14	.15
Oatmeal, coarse, tin.....	.14	.15
Tea, Young Hyson, tin.....	.16	.17
Tea, Ceylon, English, lb.....	.36	.38
Herring, fresh, tin.....	.10	.08
Spaghetti, pkg.....	.07	.08
Beef, dried, chipped.....	.27	.25
Hash, corned beef, tin.....	.17	.20
Beef, corned, tin.....	.41	.48
Beef, roast, tin.....	.20	.24
Rice, Carolina, lb.....	.07	.08
Soup, Van Camp's, tin.....	.09	.08
Asparagus, tin.....	.20	.18
Trunks, neverbreak, 36", ea.....	15.60	15.80
Drill, brown linen, 27", yd.....	.22	.23
Leggins, men's, pigskin, pr.....	3.95	4.10
Cups and saucers, plain white, ea.....	.06	.08

CHANGES EFFECTIVE OCTOBER 19.

Tid bits, jar.....	.10	.12
Peanuts, toasted, jar.....	.10	.12
Oysters, Cove, tin.....	.09	.08
Lard, prime steam, tin.....	.17	.18
Lard, prime steam, tin.....	.32	.34
Lard, prime steam, tin.....	.49	.50
Lard, prime steam, tin.....	.78	.80
Trunks, ea.....	9.40	8.65
Soap, Bouquet, cake.....	.07	.08
Rugs, 27" x 54", ea.....	.68	.57
Forms, dress, each.....	14.45	12.14
Ties, bat wing, black, ea.....	.35	.32
Mattresses, hair, single, ea.....	8.40	7.50
Pillows, hair, ea.....	1.45	.95
Lace, Valenciennes, yd.....	.65	.08
Pans, sauce, ea.....	.49	.39
Pans, sauce, ea.....	.55	.50

CHANGES EFFECTIVE OCTOBER 21.

Matches, pkg.....	.03	.04
Sauce, Worcestershire, bot.....	.25	.27
Sauce, Worcestershire, bot.....	.44	.47
Soap, Pears, transparent, cake.....	.10	.13
Brushes, hair, ea.....	.38	.41
Cloths, tea, 36" x 36", emb., H. S., ea.....	1.05	1.10
Sets, table linen, set.....	6.15	6.50
Cases, pillow, embroidered, pr.....	2.35	2.40
Blankets, single, English, ea.....	1.35	1.85
Drill, linen, Imperial, white, yd.....	.48	.51
Flannel, Saxony, 26", yd.....	.25	.28
Alpaca, black, yd.....	.91	1.02
Serge, indigo blue, yd.....	1.95	2.05
Lace, torchon, yd.....	.12	.13
Lace, torchon, yd.....	.14	.16
Lace, torchon, yd.....	.20	.19
Lace, torchon, yd.....	.30	.32
Lace, torchon, yd.....	.34	.44
Lace, torchon, yd.....	.05	.04
Lace, torchon, yd.....	.07	.06
Umbrellas, ea.....	2.20	2.40
Sets, carving, set.....	3.00	2.50
Dishes, vegetable, ea.....	.11	.09
Plates, dessert, ea.....	.05	.03

HOWARD—At Ancon Hospital, on Sunday, October 18, George Jr., son of Capt. George Howard of the dredge *Caribbean*. Age, two years and eight months.

SHIPPING INFORMATION.

Fuel and Supplies.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, per ton, \$5.40; from cars alongside wharf, handled by ship's gear, per ton, \$5.15; use of steam hoist and crane, per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.30 per barrel.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock, with a minimum charge of \$3.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Subsistence supplies, including a large stock of fresh meats, vegetables, canned groceries, fruits, bakery products, etc., are available for quick delivery at either terminal. Prices are generally lower than the retail prices in the United States, and compare favorably with prices in any port of the world.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the turning of the largest crank shafts or longest line shafts.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment in ward is \$1 per day.

Application for supplies, or for services, should be made to the captain of the port, Cristobal or Balboa.

Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired; or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case the vessel has a known representative on the Isthmus, in care of such representative.

Rainfall from October 1 to 17, 1914, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period
<i>Pacific Section—</i>			
Balboa Heights.....	1.30	11	3.50
Balboa.....	1.84	11	4.56
*Miraflores.....	1.84	11	4.25
Pedro Miguel.....	.94	7	4.04
Rio Grande.....	1.14	2	4.48
<i>Central Section—</i>			
Culebra.....	1.62	1	5.11
*Camacho.....	1.75	2	5.44
Empire.....	1.53	1	6.00
Gamboa.....	1.21	7	6.22
*Juan Mina.....	2.75	2	11.75
Alhajuela.....	3.27	17	14.26
*El Vigia.....	3.35	7	15.13
Pirjoles.....	2.51	11	13.07
*Trinidad.....	1.58	7	7.25
*Monte Lirio.....			13.43
<i>Atlantic Section—</i>			
Gatun.....	2.11	14	10.45
*Brazos Brook.....	3.17	15	18.53
Colon.....	3.99	14	16.85

*Standard rain gage—readings at 5 p. m. daily. Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, October 17, 1913. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Oct. 11.....	138.00	101.00	86.14	6.09	54.13
Mon., Oct. 12.....	132.20	98.90	86.08	6.04	54.16
Tues., Oct. 13.....	131.90	96.85	86.00	6.04	54.24
Wed., Oct. 14.....	128.20	94.08	86.05	86.08	54.10

Thurs., Oct. 15.....	136.20	100.00	86.19	86.11	54.18
Fri., Oct. 16.....	136.90	100.25	86.04	86.03	54.21
Sat., Oct. 17.....	131.10	96.84	85.97	86.00	54.28
Height of low water to nearest foot.....	125.0	91.0			

Tide Predictions.

Panama tide predictions for the remainder of the month are given in the following table:

OCTOBER.

DATE.	Time and height of high and low water.			
Wed., Oct. 21.....	4:31	10:52	16:59	23:14
	17:2	-1.8	16.7	-6.6
Thurs., Oct. 22.....	5:15	11:37	17:45	
	16.9	-1.5	16.3	
Fri., Oct. 23.....	0:00	6:01	12:25	18:33
	0.0	16.2	-0.7	15.4
Sat., Oct. 24.....	0:49	6:48	13:15	19:24
	1.0	15.1	0.4	14.4
Sun., Oct. 25.....	1:45	7:42	14:12	20:23
	2.1	13.8	1.6	13.3
Mon., Oct. 26.....	2:46	8:46	15:17	21:33
	3.1	12.6	2.6	12.4
Tues., Oct. 27.....	3:57	10:05	16:28	22:54
	3.8	11.8	3.3	12.1
Wed., Oct. 28.....	5:12	11:34	17:40	
	4.6	11.7	3.5	
Thurs., Oct. 29.....	6:08	6:23	12:47	18:43
	12.4	3.7	12.1	3.3
Fri., Oct. 30.....	1:06	7:21	13:44	19:38
	12.9	3.1	12.6	2.9
Sat., Oct. 31.....	1:56	8:08	14:29	20:24
	13.3	2.4	13.1	2.5

Panama tide predictions for November, follow:

NOVEMBER.

DATE.	Time and height of high and low water.			
Sun., Nov. 1.....	2:36	8:48	15:07	21:02
	13.8	1.8	13.4	2.2
Mon., Nov. 2.....	3:10	9:24	15:39	21:37
	14.1	1.4	13.6	2.1
Tues., Nov. 3.....	3:42	9:58	16:09	22:11
	14.3	1.1	13.7	2.1
Wed., Nov. 4.....	4:12	10:31	16:38	22:44
	14.3	1.1	13.7	2.3
Thurs., Nov. 5.....	4:41	11:05	17:07	23:1
	14.2	1.2	13.7	2.5
Fri., Nov. 6.....	5:13	11:39	17:38	23:51
	13.9	1.4	13.6	2.8
Sat., Nov. 7.....	5:45	12:15	18:13	
	13.6	1.8	13.4	
Sun., Nov. 8.....	6:32	6:21	12:56	18:54
	3.2	13.2	2.4	13.2
Mon., Nov. 9.....	1:14	7:04	13:40	19:41
	3.6	12.7	2.9	12.8
Tues., Nov. 10.....	2:07	7:54	14:34	20:39
	4.0	12.2	3.4	12.5
Wed., Nov. 11.....	3:09	8:58	15:37	21:45
	4.1	11.8	3.6	12.4
Thurs., Nov. 12.....	4:18	10:11	16:44	22:54
	3.9	11.8	3.5	12.6
Fri., Nov. 13.....	5:24	11:26	17:50	23:57
	3.3	12.2	3.0	13.3
Sat., Nov. 14.....	6:25	12:33	18:49	
	2.4	13.0	2.2	
Sun., Nov. 15.....	0:56	7:20	13:30	19:42
	14.2	1.3	14.0	1.4
Mon., Nov. 16.....	1:48	8:10	14:22	20:32
	15.2	0.1	15.0	0.6
Tues., Nov. 17.....	2:38	9:00	15:10	21:22
	16.0	-0.8	15.7	0.0
Wed., Nov. 18.....	3:25	9:47	15:58	22:09
	16.6	-1.4	16.2	-0.2
Thurs., Nov. 19.....	4:11	10:34	16:44	22:56
	16.7	-1.6	16.3	-0.1
Fri., Nov. 20.....	4:57	11:20	17:31	23:45
	16.5	-1.3	16.0	0.4
Sat., Nov. 21.....	5:45	12:10	18:19	
	15.8	-0.7	15.4	
Sun., Nov. 22.....	0:35	6:34	13:00	19:11
	1.1	14.0	0.3	14.6
Mon., Nov. 23.....	1:29	7:28	13:55	20:06
	1.9	13.9	1.4	13.8
Tues., Nov. 24.....	2:27	8:28	14:53	21:08
	2.7	12.8	2.4	13.0
Wed., Nov. 25.....	3:32	9:38	15:56	22:16
	3.4	12.0	3.2	12.5
Thurs., Nov. 26.....	4:39	10:55	17:01	23:23
	3.7	11.6	3.7	12.3
Fri., Nov. 27.....	5:45	12:09	18:04	
	3.8	11.6	3.9	
Sat., Nov. 28.....	0:25	6:44	13:10	19:00
	12.4	3.3	11.8	3.8
Sun., Nov. 29.....	1:16	7:34	13:59	19:48
	12.6	3.1	12.1	3.6
Mon., Nov. 30.....	2:00	8:15	14:39	20:30
	13.0	2.6	12.4	3.4

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings

on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS WITH PACIFIC PORTS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acajutla, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central America line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports abovenamed between Balboa and Ocos.

The Luckenbach Steamship Company is operating a 10-day service between New York and San Francisco, calling at East San Pedro both ways. Its vessels handle cargo at Balboa when sufficient business offers.

The American-Hawaiian lines between New York and San Francisco, and New York and Honolulu, discharge and take on cargo at Balboa when sufficient business offers. At present, a vessel of this company passes through the Canal about every third day.

Grace and Company maintain an irregular service between New York and San Francisco, calling at way ports. Sailings are made about every 12 days. A vessel plying between San Francisco and Valparaiso, calling at way ports makes a round voyage about every 10 weeks.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Payta, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa for Valparaiso calling at Paita, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service each way between New York and Southampton, making the following way ports: Antilla, Jamaica, Colon, Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores, and Cherbourg. Its vessels all arrive at Colon on Sundays and sail on Tuesdays.

The Compagnie Générale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curaçao, Puerto Cabello, and Barcelona.

The Compañía Trasatlántica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curaçao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every six days, direct; between Colon and New York by the United Fruit Company and the Royal Mail Company, sailings via Kingston weekly and fortnightly, respectively; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails. Arrives.

NEW YORK TO CRISTOBAL.
*Panama.....P. R. R. Oct. 16.....Oct. 22
(Continued on Page 88.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon October 18.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Oct. 12.....	Honolulu.....	American.....	American-Hawaiian S.S. Co.....	New York.....	San Francisco.....	Gen'l mdse.....	6,266	.....	.....
Oct. 12.....	Masania.....	British.....	Maclay & McIntyre.....	Norfolk.....	Tocopillo.....	Ballast.....	.....	.....	.....
Oct. 12.....	Desaba.....	British.....	Bank Line, Ltd.....	Rio de Janeiro.....	San Diego.....	Ballast.....	.....	6,311	4,314
Oct. 13.....	Barrington Court.....	British.....	Court Line.....	Pensacola.....	Portland, Or.....	Ballast.....	.....	4,802	3,575

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Oct. 13.....	Pennsylvanian.....	American.....	American-Hawaiian S. S. Co.....	San Pedro.....	New York.....	Gen'l produce.....	8,000	6,645	4,656
*Oct. 14.....	Peter H. Crowell.....	American.....	Sudden & Christianson.....	San Francisco.....	New York.....	Lumber and gen'l.....	5,500	3,102	3,031

*Arrived at Cristobal October 20.

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessels	Line	From
Oct. 11.....	Manuel Calvo.....	Compañia Transatlantica..	Barcelona.
Oct. 12.....	Danube.....	Royal Mail.....	Southampton.
Oct. 13.....	Ocland.....	Earn Line.....	Norfolk.
Oct. 13.....	Cratheus.....	Seeberg.....	Haiti.
Oct. 13.....	†Shimosa.....	N. Y. & Oriental S.S. Co.....	Pensacola.
Oct. 13.....	†Lord Antrim.....	Irish Shipowners' Co.....	New York.
Oct. 13.....	†Crown of Toledo.....	Direct Line.....	Glasgow.
Oct. 14.....	Vitalia.....	Vitalia Company.....	Manzanillo.
Oct. 14.....	John.....	F. D. Malmros.....	Grimsby.
Oct. 14.....	†Kingsway.....	Kingsway S.S. Co.....	Newport, Eng.
Oct. 15.....	Tancred.....	Earn Line.....	Norfolk.
Oct. 15.....	†Fornbo.....	Fearnley & Eger.....	Norfolk.
Oct. 16.....	Argo.....	Wilson, Sons & Co.....	Trinidad.
Oct. 16.....	†Arna.....	Arna Company.....	New York.
Oct. 16.....	†Queen Eugenie.....	T. Dunlop & Sons.....	Cardiff.
Oct. 17.....	†Lyra.....	Luckenbach S. S. Co.....	New York.
Oct. 17.....	†Texan.....	American-Hawaiian S.S. Co.....	New York.
Oct. 17.....	†Santa Cecilia.....	W. R. Grace & Co.....	New York.
Oct. 17.....	Guadeloupe.....	Cie. Gen. Transatlantique..	Bordeaux.
Oct. 18.....	†Durcombe.....	.....	Cardiff.
Oct. 18.....	†Purley.....	Houlder, Middleton & Co.....	New York.
Oct. 19.....	†Penrith Castle.....	J. Chambers & Co.....	Galveston.

*Other than ships which passed through the Canal, United Fruit Company's regular vessels, and vessels in regular connection with the United States.
†Vessels on way through the Canal.

*DEPARTURES.

Date	Vessels	Line	For
Oct. 12.....	Manuel Calvo.....	Compañia Transatlantica..	Barcelona.
Oct. 14.....	John.....	F. D. Malmros.....	Frontera, Mexico.
Oct. 14.....	Meridian.....	Horsley Line.....	Philadelphia.
Oct. 16.....	Ocland.....	Earn Line.....	Daiquiri.
Oct. 16.....	Cratheus.....	Seeberg.....	Mobile.
Oct. 16.....	Zeta.....	Robert Wilcox.....	Gulfport.

*Other than ships which passed through the Canal, United Fruit Company's regular vessels, and vessels in regular connection with the United States.

*EXPECTED ARRIVALS.

Oct. 21.....	Dronning Olga.....	Seeberg.....	Mobile.
Oct. 24.....	Bayano.....	Elders & Fyffes.....	Limon.
Oct. 25.....	Tagus.....	Royal Mail.....	Southampton.
Oct. 26.....	Centurian.....	Leyland.....	Liverpool.
Oct. 31.....	Savoya.....	La Veloce.....	Genoa.
.....	†Kanula.....	Pac. Steam Nav. Co.....	Liverpool.
.....	†Isabella.....	Luckenbach S. S. Co.....	New York.
.....	†Malakka.....	East Asiatic S. S. Co.....	Copenhagen.
.....	†Westry Grange.....	Houlder Bros. & Co.....	.....
.....	†Dovertry.....	Imperial S. S. Co.....	.....
.....	†Queen Adelaide.....	.....	.....

*EXPECTED DEPARTURES.

Oct. 21.....	Guadeloupe.....	Cie. Gen. Transatlantique..	St. Nazaire.
Oct. 25.....	Bayano.....	Elders & Fyffes.....	Bristol.
Oct. 31.....	Savoya.....	La Veloce.....	Genoa.
.....	Centurian.....	Leyland.....	.....
.....	Dronning Olga.....	Seeberg.....	.....
.....	Tancred.....	Earn Line.....	.....
.....	Vitalia.....	Vitalia Company.....	.....
.....	Argo.....	Wilson, Sons & Co.....	.....

*Other than United Fruit Company's regular vessels, and vessels in regular service to the United States. † On way through the Canal.

PORT OF BALBOA.

*ARRIVALS.

Oct. 14.....	Margareta Kron-prinzessin.....	W. R. Grace & Co.....	Valparaiso.
Oct. 15.....	†Spithead.....	Clyde Shipping Co.....	San Francisco.
Oct. 16.....	†Crown of Seville.....	Direct Line.....	San Francisco.
Oct. 16.....	†Washingtonian.....	American-Hawaiian Co.....	San Francisco.
Oct. 16.....	Peru.....	Pacific Mail.....	San Francisco.
Oct. 16.....	†Missourian.....	American-Hawaiian Co.....	Honolulu.
Oct. 16.....	†Cloughion.....	Londor & Northern S. S. Co.....	.....
Oct. 17.....	†English Monarch.....	Monarch S. S. Co.....	South Pacific.

*DEPARTURES.

Oct. 12.....	Palma.....	South American S. S. Co.....	Valparaiso.
Oct. 13.....	Frondor.....	Pacific Steam Nav. Co.....	Guayaquil.
Oct. 13.....	†Pachitea.....	Peruvian S. S. Co.....	Callao.
Oct. 14.....	†Potosi.....	Pacific Steam Nav. Co.....	Liverpool.
Oct. 17.....	Quilo.....	Pacific Steam Nav. Co.....	Taboga.

* Other than vessels which passed through the Canal.
† On way through the Canal.

*EXPECTED ARRIVALS.

Oct. 18.....	†San Rosalia.....	Isthmian S. S. Co.....	San Francisco.
Oct. 20.....	†J. J. Luckenbach.....	Luckenbach S. S. Co.....	Seattle.
Oct. 21.....	†Oregonian.....	American-Hawaiian Co.....	San Francisco.
Oct. 21.....	†Pennsylvania.....	Pacific Mail.....	San Francisco.
Oct. 28.....	†Nakar.....	East Asiatic S. S. Co.....	San Francisco.
Oct. 30.....	†Edgar H. Vance.....	.....	.....

*EXPECTED DEPARTURES.

Oct. 21.....	Peru.....	Pacific Mail.....	San Francisco.
Oct. 18.....	Aztec.....	Pacific Mail.....	San Francisco.

* Other than vessels which will have passed through the Canal.
† Vessels on way to the Canal.

(Continued from Page 87.)

(Continued from Page 87.)			Almirante..... U. F. C. Oct. 28..... Nov. 4			Cartago..... U. F. C. Oct. 15..... Oct. 22		
Sails.			Arrived.			COLON TO NEW YORK.		
*Allianca.....	P. R. R. Oct. 22.....	Oct. 28	Santa Marta.....	U. F. C. Oct. 22.....	Oct. 29	†Turrialba.....	U. F. C. Oct. 22.....	Oct. 27
*Colon.....	P. R. R. Oct. 29.....	Nov. 4	Tagus.....	R. M. Oct. 27.....	Nov. 4	Heredia.....	U. F. C. Oct. 22.....	Oct. 29
CRISTOBAL TO NEW YORK.			Metapan..... U. F. C. Oct. 29..... Nov. 5			*Will carry mail from the United States.		
†Advance.....	P. R. R. Oct. 23.....	Oct. 30	Zacapa.....	U. F. C. Nov. 5.....	Nov. 12	†Will carry mail to the United States.		
†Panama.....	P. R. R. Oct. 29.....	Nov. 4	Essequibo.....	R. M. Nov. 10.....	Nov. 18	†Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.		
†Allianca.....	P. R. R. Nov. 4.....	Nov. 10	NEW ORLEANS TO COLON.			Irregular services between Cristobal and Gulf ports of the United States, with way calls at Central American and Mexican ports, are maintained by the Leyland and Harrison Lines, sailings about every fortnight, and the Seeberg Line, sailings about every 18 days.		
†Colon.....	P. R. R. Nov. 10.....	Nov. 16	*Turrialba.....	U. F. C. Oct. 10.....	Oct. 15			
NEW YORK TO COLON.			Heredia.....	U. F. C. Oct. 14.....	Oct. 21			
Ortova.....	R. M. Oct. 10.....	Oct. 18	*Abangarez.....	U. F. C. Oct. 17.....	Oct. 22			
Metapan.....	U. F. C. Oct. 14.....	Oct. 21	Parismina.....	U. F. C. Oct. 21.....	Oct. 28			
Zacapa.....	U. F. C. Oct. 21.....	Oct. 28	COLON TO NEW ORLEANS.					
Danube.....	R. M. Oct. 24.....	Nov. 1	†Atcnas.....	U. F. C. Oct. 15.....	Oct. 20			

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, OCTOBER 28, 1914.

No. 10.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

No communication either for publication or requesting information will receive attention unless signed with the full name and address of the writer.

NOTES OF PROGRESS.

Social and Personal Items to be Omitted.

Social, personal, and church news will not be published in future issues of THE CANAL RECORD. This ruling covers the publication of club and lodge notices, either reports of past happenings or announcements of meetings, etc.; advertisements for missing men; marriages, and the activities of the Canal club-houses. Obituary notices, hereafter, will be confined to the name, home address, and date of death.

This change is made in consequence of changes in conditions on the Canal Zone, and the development of the press of Panama to the ability to give satisfactory service in the dissemination of information of this sort, and on account of changes in the scope and purpose of THE CANAL RECORD, following the practical completion of the Canal and its opening to commercial traffic.

New Diesel Engine Vessels Use the Canal.

During the week past, the Canal has been used by two vessels propelled by internal combustion engines, which are the first of their types to have appeared in the local ports. The vessels are the *Kronprinzessin Margareta*, which completed the transit of the Canal on October 21, on the way from the west coast of South America to Sweden, and the *Malakka*, which completed transit on October 26, on the way from Copenhagen, via St Thomas, to San Francisco, with calls at intermediate Pacific ports in Central America and Mexico. The *Kronprinzessin Margareta* is also the first vessel of Swedish register to use the Canal. It took on 3,000 barrels of Diesel engine oil at Balboa before making the transit.

Both of these are new vessels, built in 1914, and both were constructed by the same firm, the Burmeister and Wain Company of Copenhagen. The *Malakka* is above average size, a 4-masted vessel, 410 feet long, 55 feet in the beam, and 30.5 feet deep, with registered gross tonnage of 5,150, and net tonnage of 4,700. The *Kronprinzessin Margareta* is 360.2 feet long by 51.4 feet in the beam, and 22.1 feet deep, and registered at 3,739 gross and 2,244

net tons. Both vessels are propelled by 12-cylinder oil engines, furnished by the builders.

The *Malakka's* cylinders are 24 4/5 inches in diameter, with a stroke of 37 4/5 inches; those of the *Kronprinzessin Margareta* are 21 1/4 inches by 28 3/4 inches. The officers of both vessels expressed considerable satisfaction with the performance of the engines, both on account of fuel economy and reduced labor in operation. They pointed out, also, that by doing away with boilers and utilizing remote spaces for the stowage of fuel, the space ordinarily devoted to the means of propulsion was considerably reduced, allowing a greater cargo space in proportion to gross tonnage; and that the use of oil in place of coal diminished the trouble and expense of keeping the ship clean and in good repair.

Canal Transportation Telephone System.

In order to facilitate the despatch of vessels through the Canal, by insuring prompt and certain communication between the various points of operating control, a special telephone system has been installed, connecting on one line, in series, the offices of the port captains, the control houses at the locks, the Gamboa signal station, the Dredging Division, and the office of the Superintendent of Canal Transportation. Each station has its call signal, in combination of long and short rings, and there is a general signal for the attention of all.

Thus, at one speaking, any of the operating stations can communicate information to all the others. For instance, when a vessel clears from a terminal harbor to make the transit of the Canal, say from Cristobal, the office of the port captain at Cristobal will sound a general call; all the other offices will "Listen in" and the message will be delivered: "Cristobal. Steamship *Pacific* cleared for Gatun Locks at 7.25." The other offices will make note of this movement, and, in addition, the control house at Gatun Locks, as the point immediately concerned, will confirm its understanding of the message by replying: "Gatun. Steamship *Pacific* cleared from Cristobal for Gatun Locks at 7.25." Similar general calls and confirmations will be made from the various points of control as the vessel passes on its way through the Canal.

New Mast at Colon Radio Station.

Authority has been received for the removal of the north mast at the Colon radio station, which was damaged and declared unsafe. Bids for the erection of a new mast will be opened in the office of the Chief Quartermaster, Balboa Heights on Saturday, October 31, at 3 p. m.

Closing Down of Ancon Quarry.

The Ancon quarry plant will be shut down, effective at the close of business, Saturday, October 31. It is probable that the crusher machinery will be left in position for the present.

REVIEW OF CANAL TRAFFIC.

Nearly 600,000 Tons of Cargo Carried Through in First Two Months.

During the period of two months, from August 15 to October 15, that the Canal has been open to traffic, the commercial vessels which have been using it have carried through 583,949 tons of cargo. The traffic has followed fairly well defined trade routes, and the course of the great majority of vessels may be roughly classed in four great groups.

The heaviest traffic has been between the Atlantic and Pacific coasts of the United States. Manufactured goods of great variety and general merchandise are carried from the Atlantic seaboard, principally from New York, and secondarily from Boston, Philadelphia, and New Orleans, to the principal California and Puget Sound ports; also, to Honolulu. On the eastbound voyage, these vessels carry chiefly canned fruits, vegetables, and salmon, lumber, grain, sugar, pineapples, and wine. This trade is restricted to vessels of American registry, and nearly all the American vessels which have used the Canal have been engaged in it. During the period of Canal operation, 24 vessels have passed through eastbound on this route with 151,290 tons, and 25 westbound with 135,214 tons. These passages, 49 in all, have constituted approximately 44 per cent of all the 113 passages through the Canal. The total cargo carried on this route, 286,504 tons, has been almost exactly 50 per cent of all cargo.

A route between the eastern coast of the United States and the west coast of South America has been second in cargo through the Canal. Northbound vessels carry principally nitrates from the fields of Chile, with secondary cargo of raw material products of the western countries of South America, and southbound vessels carry manufactured goods from the United States and Europe. The northbound traffic, passing 13 vessels with 93,139 tons, through the Canal during the two month period, has considerably exceeded the southbound consisting of three vessels with 18,800 tons, and one in ballast, though the latter seems to be getting under way.

There has been a marked, though probably seasonal, traffic from the Pacific ports of the United States and southwest Canada to Europe with grain. Ten vessels, each heavily laden, have gone through eastbound, with 71,560 tons, and eight vessels, all of foreign registry, have gone from the Atlantic to the Pacific in ballast, to return on this route with grain. In addition, one vessel, which went through the Canal with 6,000 tons of manufactured goods, from Antwerp to Tacoma, is to return with grain.

The fourth great route has been from the Atlantic seaboard of the United States to China and Japan, with refined petroleum in bulk and in cases, and other petroleum products. Four vessels have gone through in this

LIST OF VESSELS, EXCLUSIVE OF CANAL EQUIPMENT, USING THE CANAL FROM AUGUST 15 TO OCTOBER 15, 1914.

trade from the Gulf of Mexico, with 24,931 tons, and four from Philadelphia and New York, with 26,570 tons, an aggregate of 51,501 tons. No vessels have gone in the other direction on this route.

Next to the four principal routes just described, the most notable development has been the coal traffic from the middle Atlantic seaboard of the United States to the Pacific coast of North and South America. Five vessels, four from Norfolk, with 22,535 tons, and one from Baltimore, with 6,000 tons, have carried coal to the upper Pacific, and one vessel from Baltimore has carried 6,010 tons to Valparaiso. The total coal carried has been 34,545 tons. None of these vessels have returned through the Canal to this time, but it is understood they will load with Pacific coast products for the eastern United States and for Europe.

The development of a line from Liverpool around South America, with vessels sailing both ways, via the Canal, has been arrested by the European war. The only vessel to have used the Canal in this route was the steamship *Potosi*, which passed through the Canal on September 25, on its way south, along the west coast of South America. It was held in the bay at Balboa, awaiting orders, but sailed on October 14.

The steamship *Desaba*, which passed through the Canal on October 12, in ballast, was on its way from Rio de Janeiro to San Pedro for a cargo of fuel oil.

The military service of the United States has used the Canal for the passage of one Army transport and one Navy collier, both from Pacific to Atlantic.

A list of the vessels which have passed through the Canal, exclusive of vessels used in Canal construction, showing the points of their departures and destinations, and the amount and general nature of their cargoes is published on this page.

Rule of Procedure of Joint Land Commission.

The rule of the Joint Land Commission relative to the preparation of trial dockets and the setting of cases for hearing, follows:

It is ordered by the Joint Land Commission that the trial docket for claims to be heard by the Joint Land Commission shall be made up of claims in accordance with their numerical order on the docket and their date of filing regardless of their location in the Canal Zone. It is further ordered that causes shall be set on each Monday afternoon for the following week, and that the secretary shall immediately cause notice of the setting to be published in the *Star and Herald*, the *Panama Morning Journal*, *THE CANAL RECORD*, and the *Gaceta Oficial*; and shall also mail or deliver copies of the setting to the respective attorneys interested therein.

It is further ordered that all rules or parts of rules in conflict with this rule be, and the same are hereby, repealed, annulled, and set aside.

By direction of the Joint Land Commission.

WILLIAM TAYLOR,

Secretary.

PANAMA, October 24, 1914.

Change in Royal Mail Sailing.

The Royal Mail Steam Packet Company's sailing to New York on November 24 will be taken by the *Magdalena*, and this steamer will also sail on December 15 for England, substituting the *Oruba*, which was announced in the company's itineraries for these dates.

Date.	Vessel.	From.	For.	Cargo.	
				Tons.	Nature.
Aug. 15.	Ancon.	New York.	Balboa.	2,787	Manufactures
Aug. 15.	Pleiades.	San Francisco.	New York.	5,400	General produce
Aug. 16.	Lasata.	Pacific.	Atlantic.	Yacht	Private yacht
Aug. 16.	Pennsylvania.	Honolulu, way.	New York.	7,178	General produce
Aug. 17.	Missourian.	New York.	Los Angeles.	8,508	Manufactures
Aug. 17.	Arizonian.	New York.	San Francisco.	11,183	Manufactures
Aug. 18.	Admiral Dewey.	New York.	San Francisco.	850	General produce
Aug. 18.	Isabella.	New York.	San Francisco.	4,475	Manufactures
Aug. 18.	Teniente Rodriguez.	Amazon River.	Peru.		Peruvian gunboat
Aug. 20.	Santa Catalina.	Antofagasta.	Hampton Roads.	7,500	Nitrates
Aug. 21.	Admiral Schley.	New York.	San Francisco.	1,100	Manufactures
Aug. 21.	Peter H. Crowell.	New York.	San Francisco.	2,423	Manufactures
Aug. 22.	Kentuckian.	Honolulu.	New York.	8,136	General produce
Aug. 22.	Daldorch.	Tacoma.	England.	6,000	Wheat
Aug. 23.	Mexican.	New York.	San Francisco.	8,000	Manufactures
Aug. 24.	Montanan.	Seattle.	New York.	4,092	General produce
Aug. 24.	California.	New York.	Los Angeles.	Yacht	Private yacht
Aug. 27.	Nebraskan.	San Francisco.	New York.	5,000	General produce
Aug. 27.	Niagara.	Pacific.	Washington, D. C.	Yacht	Private yacht
Aug. 27.	Carolyn.	New York.	San Francisco.	3,000	Manufactures
Aug. 28.	Eburna.	New Orleans.	San Pedro.	6,780	Manufactures
Aug. 29.	L. Luckenbach.	San Francisco.	New York.	6,794	General produce
Sept. 1.	Tronsvaal.	San Francisco.	Europe.	7,082	Grain
Sept. 2.	St. Kentigern.	New York.	Paita, Peru.	6,800	Manufactures
Sept. 3.	Virginian.	New York.	San Francisco.	9,993	Manufactures
Sept. 5.	Texas.	Honolulu.	New York.	11,550	General produce
Sept. 6.	Honolulu.	San Francisco.	New York.	8,100	General produce
Sept. 6.	Anglo-Saxon.	Pisagua.	Key West.	6,794	Nitrates
Sept. 7.	Pennsylvania.	New York.	San Francisco.	7,460	Manufactures
Sept. 7.	Lord Londale.	San Francisco.	St. Thomas.	7,243	Grain
Sept. 8.	Jas. Luckenbach.	New York.	San Francisco.	3,192	Manufactures
Sept. 9.	Dumora.	San Francisco.	New York.	6,200	General produce
Sept. 9.	Buford.	San Francisco.	Galveston.		U. S. A. transport
Sept. 10.	Santa Clara.	New York.	San Francisco.	5,450	Manufactures
Sept. 11.	Coya.	New York.	Valparaiso.	5,000	Manufactures
Sept. 11.	Chalister.	New York.	Moji, Japan.	9,000	Oil and merchandise
Sept. 11.	Anglo-Colombian.	Mejillones.	Key West.	7,800	Nitrates
Sept. 12.	Columbian.	San Francisco.	New York.	6,500	General produce
Sept. 12.	Iowan.	Honolulu.	New York.	8,040	General produce
Sept. 13.	Foxton Hall.	Mejillones.	New York.	6,452	Nitrates
Sept. 16.	Anglo-Californian.	Pisagua.	Key West.	9,256	Nitrates
Sept. 16.	Santa Cecilia.	San Francisco.	New York.	6,000	General produce
Sept. 16.	Pleiades.	New York.	San Francisco.	2,500	Manufactures
Sept. 16.	Orestano.	Antwerp.	San Pedro.	6,000	Manufactures
Sept. 18.	Atlantic.	Boston.	San Pedro.	7,000	Manufactures
Sept. 18.	Dunclutha.	San Francisco.	England.	5,760	Grain
Sept. 19.	Montosa.	Norfolk.	Seattle.	4,000	Coal
Sept. 19.	Georgian.	New York.	San Pedro.	7,305	Manufactures
Sept. 21.	Lyra.	San Francisco.	New York.	5,168	General produce
Sept. 22.	Angola.	Chile.	Key West.	7,100	Nitrates
Sept. 23.	Candidate.	San Francisco.	Liverpool.	6,450	Grain
Sept. 23.	Dakota.	Honolulu.	New York.	8,900	General produce
Sept. 24.	Montanan.	New York.	San Francisco.	7,000	Manufactures
Sept. 24.	J. B. Aug. Kessler.	Port Arthur.	Tien Tsin.	8,142	Refined petroleum
Sept. 24.	Farley.	Philadelphia.	San Francisco.		Ballast
Sept. 24.	Capella.	Magdalena Bay.	Norway.	3,400	Whale oil
Sept. 24.	Hidalgo.	Magdalena Bay.	Norway.		Whaler
Sept. 24.	Juarez.	Magdalena Bay.	Norway.		Whaler
Sept. 24.	Morelos.	Magdalena Bay.	Norway.		Whaler
Sept. 24.	Coila.	San Francisco.	Norfolk.	6,311	General produce
Sept. 25.	Strathlorne.	Calita Buena.	Wilmington, N. C.	6,399	Nitrates
Sept. 25.	José de Larrinaga.	New York.	San Francisco.		Ballast
Sept. 25.	Polosi.	Liverpool.	South America.	4,500	Manufactures
Sept. 27.	St. Quentin.	Taltal.	Key West.	8,400	Nitrates
Sept. 27.	Strathgyle.	Peru.	New Orleans.	6,800	Nitrates
Sept. 27.	Lewis Luckenbach.	New York.	San Francisco.	4,000	Manufactures
Sept. 27.	Volgo.	Norfolk.	Tacoma.		Ballast
Sept. 27.	Vimeria.	Norfolk.	San Francisco.	8,340	Coal
Sept. 28.	Nevadan.	San Francisco.	New Orleans.	5,500	General produce
Sept. 28.	Santa Catalina.	New York.	San Pedro.	6,000	Gen'l manufactures
Sept. 28.	Vienna.	Norfolk.	Valparaiso.	6,010	Coal
Sept. 28.	Isabella.	San Pedro.	New York.	4,000	General produce
Sept. 29.	Nebraskan.	New York.	San Francisco.	4,800	Manufactures
Sept. 29.	Craigina.	Philadelphia.	Itosaki, Japan.	5,370	Oil in cases
Sept. 29.	Headley.	San Francisco.	Tenerife.	8,230	Barley
Sept. 29.	Celia.	South Pacific.	New York.	5,000	General produce
Sept. 30.	South Pacific.	Newport News.	Portland, Or.		Ballast
Sept. 30.	Shirley.	New York.	Yokohama.	7,500	Manufactures
Sept. 30.	Copenhagen.	Peruvian ports.	Baltimore.	7,450	Nitrates and gen'l
Sept. 30.	Volumina.	San Francisco.	Antwerp.	7,973	Barley and lumber
Oct. 1.	Donax.	Port Arthur.	Tien Tsin.	4,345	Refined petroleum
Oct. 1.	Neches.	Baltimore.	San Diego.	6,000	Coal
Oct. 1.	John A. Hooper.	San Francisco.	New York.	3,759	Barley and lumber
Oct. 2.	Cassia.	New Orleans.	Sydney.	6,501	Refined petroleum
Oct. 2.	Bonkdale.	Norfolk.	Guaymas, Mex.	5,943	Coal
Oct. 2.	Ventura de Larrinaga.	New York.	Portland, Or.		Ballast
Oct. 2.	Melderskin.	Antofagasta.	St. Lucia.	6,291	Nitrates and copper.
Oct. 3.	L. K. Thurlow.	Norfolk.	Seattle.	4,252	Coal
Oct. 3.	Kentuckian.	New York.	San Pedro.	6,342	Manufactures
Oct. 3.	Gowanburn.	Baltimore.	San Francisco.		Ballast
Oct. 4.	Falls City.	Mejillones.	Key West.	7,897	Nitrates
Oct. 6.	Cowrie.	Port Arthur.	Tien Tsin.	5,943	Refined petroleum
Oct. 6.	Damara.	New York.	San Francisco.	4,900	Manufactures
Oct. 6.	Inverberie.	San Francisco.	London.	6,500	General produce
Oct. 6.	Fronkmount.	Tacoma.	Southampton.	7,500	Wheat
Oct. 6.	Camino.	San Francisco.	New York.	4,000	General produce
Oct. 7.	Bellucia.	Philadelphia.	Hiogo, Japan.	6,000	Refined petroleum
Oct. 7.	Isthmian.	San Pedro.	New York.	5,500	General produce
Oct. 8.	Crosshill.	Swansea.	Tacoma.		Ballast
Oct. 8.	Alaskan.	New York.	Los Angeles.	4,000	Manufactures
Oct. 8.	Carolyn.	San Francisco.	New York.	2,662	General produce
Oct. 9.	Mexican.	San Francisco.	Philadelphia.	8,500	General produce
Oct. 9.	Santa Cruz.	San Francisco.	New York.	6,000	General produce
Oct. 9.	Frimley.	San Francisco.	Antwerp.	7,098	Barley
Oct. 10.	St. Winifred.	Philadelphia.	Shimonoseki.	6,200	Refined petroleum
Oct. 10.	Jupiter.	Pacific Ocean.	Philadelphia.		U. S. Navy collier
Oct. 11.	Charcos.	New York.	South America.	7,000	Manufactures
Oct. 11.	Soxon Monarch.	Portland, Or.	Great Britain.	8,224	Wheat
Oct. 12.	Desaba.	Rio de Janeiro.	San Pedro.		Ballast
Oct. 12.	Honolulu.	New York.	San Diego.	6,266	Manufactures
Oct. 12.	Masurua.	Norfolk.	Tocopillo, Chile.		Ballast
Oct. 13.	Barrington Court.	Pensacola.	Portland, Or.		Ballast
Oct. 13.	Pennsylvania.	San Francisco.	Boston.	8,000	General produce

REPATRIATING LABORERS.

Work of the Government in Returning Canal Laborers to their Homes.

In the construction of the Canal, practically all of the laborers employed were brought from foreign countries. When the United States took possession of the Canal property, in May, 1904, the engineers found about 700 laborers in the employ of the second French company. The increase of this force to over 40,000, which was approximately the number of men, exclusive of skilled help, employed by the United States on the Isthmus at the height of operations, required wholesale recruiting, and with the drawing of the work to completion, and the consequent reduction of force, the Government has found it both practical and humane to repatriate numbers of these men who have been thrown out of employment.

From the first, the policy has been to furnish free transportation to their home countries to laborers brought to the Canal work under contract, upon the completion of the period of service for which they contracted. Later, the same accommodation was extended to laborers who had migrated to the Isthmus on their own responsibility, but could show a period of service equal to that stipulated in the contracts. And recently, principally as a police measure for the prevention of vagrancy and the relief of the cities of Colon and Panama, The Panama Canal has been offering free transportation to their home countries to practically all employees now out of work. In connection with this, the Republic of Panama has been requested to enforce strictly its immigration laws aimed at the exclusion of those likely to become public charges, and the enactment of additional legislation in this direction is now under consideration.

The importation of laborers under contract may be summarized, as follows:

CONTRACT LABORERS BROUGHT TO THE ISTHMUS BY THE ISTHMIAN CANAL COMMISSION.

COUNTRY.	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Spain.....			1,174	5,293	1,831						8,298
Cuba.....			500								500
Italy.....			909	1,032							1,941
Greece.....				1,101							1,101
France.....			19								19
Armenia.....			14								14
Total Europeans....			2,616	7,426	1,831						11,873
Fortune Island.....			361								361
Barbados.....	404	3,019	6,510	3,242	2,592	3,605				528	19,900
Guadeloupe.....				2,039					14		2,053
Martinique.....		2,733	585	2,224							5,542
Jamaica.....		47									37
Trinidad.....			1,079				205		143		1,427
Curacao.....			23								23
St. Kitts.....			933						9		942
St. Lucia.....									55		55
St. Vincent.....									296		296
Grenada.....									93		93
British Guiana.....									332		332
Total West Indies....	404	5,799	9,491	7,505	2,592	3,605	205		942	528	31,071
Costa Rica.....		244									244
Colombia.....		1,077	416								1,493
Panama.....		334	10	13							357
Not classified.....			69								69
Total, this group....		1,655	495	13							2,163
Grand total.....	404	7,454	12,602	14,944	4,423	3,605	205		942	528	45,107

In the first two years of the American occupation, the unskilled labor was practically all negro. With the expansion of operations, the demand for labor was such that the natural indolence of this class of labor became aggravated by a feeling of independence, and it was decided to import white labor from southern Europe. A recruiting agent in Europe sent to the Isthmus, as shown, 11,873 of this

class in the years 1906, 1907, and 1908, and his activities so stimulated emigration to the Isthmus that, after he ceased active recruiting, numbers of Spaniards made their way to the Isthmus independently. In the spring of 1910, over 2,000 of these arrived within four months; the excess of arrival of European laborers over the departures in the year 1911 amounted to 4,910.

Of the 11,873 European laborers recruited, the largest number at work at any time was 5,016, in February, 1908, at which time 472 noncontract European laborers were also employed. In February, 1912, there were 1,625 European contract laborers on the work. In the reductions of force, these men have been retained as far as practicable, but the total number of European laborers employed by The Panama Canal and the Panama railroad at present is about 1,200.

The influx of European laborers did not exceed the demand for them, to the extent of requiring repatriation, until September, 1911. A great many of those who had arrived earlier used the Isthmus as a stepping stone to the United States, or to Central and South America; at one time so many of the contract laborers were leaving for employment elsewhere, notably in Brazil, that the Isthmian Canal Commission took steps to check their emigration, and the recruiting of laborers on the Isthmus was forbidden. In September, 1911, a number of Europeans were laid off in the Central Division, and, as no other employment for them could be found, they were repatriated. Several hundred Spanish immigrants who arrived on the Isthmus in October of that year, seeking work, were returned to their country at the expense of the Isthmian Canal Commission. A canvass of the departments and divisions was made to ascertain the probable future requirements of European labor. It was found that no more would be required than were then employed,

on May 16, 1912, and about the same time took approximately 1,100 West Indians. It was estimated that up to February 25, 1912, about 9,000 Europeans had returned to Europe at their own expense.

Since that time nearly all who have returned have gone at the expense of the United States. The total number of European repatriations to date, including the volunteer labor returned in 1911, is estimated at 2,400, of which 102 were sent during the fiscal year 1913, 1,599 in the fiscal year 1914, and about 400 since July 1, 1914. At the rate of \$35 each, the expense of this part of the repatriation has been about \$84,000. In addition, though the cost of transportation to the Isthmus of contract laborers was to be deducted from their pay, numbers of the Europeans jumped their contracts, so that the collections fell short of the disbursements for this purpose by about \$30,000.

WEST INDIAN LABORERS.

The story of the recruiting of laborers in the islands of the West Indies is shown in the table above. Legal restrictions in some of the British islands caused the securing of most of the contract laborers in Barbados and the French islands, but numbers of volunteer laborers migrated to the Isthmus from those islands in which recruiting was abandoned, and a great many of them have been, and are being, repatriated like the contract laborers.

The reduction of force toward the close of 1911, which caused the return of numbers of European laborers to their countries, was followed by an increase in the latter part of 1912. To meet this increase, 1,470 additional laborers were brought from the West Indies under contract. Earlier contracts had agreed on the repatriation of the laborer after 500 days of work, but in this later recruiting it was stipulated, on account of the doubtful length of employment, that the men should be given free return transportation, unless discharged for cause, regardless of the number of days worked.

The large reduction in this class of labor began in the latter part of 1913. Estimates prepared by the heads of departments and divisions in July of that year had placed the probable reduction in the six months after October 1 at 9,659. Preparations were made for wholesale repatriation, and the possibility of using steamships of the Panama railroad for the purpose was considered, while at the same time the various steamship lines out of Colon were invited to make special rates for this traffic. The reduction was not as extensive as anticipated, the railroad vessels were not used, and such repatriation as has been necessary has been effected over the regular steamship lines. Their rates are, as follows: To Jamaica, \$6; to Trinidad, \$11; to Martinique, \$12; to Barbados, \$14; to Santiago de Cuba, \$14.50; to Antilla, \$14.75.

With the diminishing demand for labor, warnings, as before, had been sent out to the various islands, as well as to Spain, and invitations were issued to large employers of labor to recruit from the surplus on the Isthmus. In this case, also, the principal response was from the United Fruit Company, which stated in August, 1913, that it could use 1,000 men immediately at Bocas del Toro, and between 3,000 and 4,000 in Costa Rica, taking about 50 to 75 a week. Of the West Indians subsequently discharged from the

and it was decided to repatriate those who could not find work.

Warnings against further immigration were sent out, and governmental and corporate employers of this class of labor in neighboring countries were invited to recruit from the surplus in the Canal Zone. The principal response was from the United Fruit Company, which took 230 Spaniards to Puerto Barrios

Canal work, about 2,500 accepted this employment.

In connection with this reduction, it was directed that free transportation should not be given to noncontract laborers discharged from employment at 13 and 16 cents per hour as long as there were places vacant at 10 cents.

These circumstances, in connection with a liberal policy in the treatment of individual applications for passage home, have made large scale repatriation unnecessary until recently; but now that it is obvious the force will not be increased beyond its present number, and will be decreasing, the unemployed are being given free transportation, as a police measure.

Notices have recently been posted, to the effect that The Panama Canal will furnish free transportation to their islands to limited numbers of West Indian former employees. The steamship *Magdalena*, sailing on October 6, carried 145 deck passengers, of whom 140 were traveling on passes furnished by The Panama Canal. This work is still in progress; to date, about 3,400 repatriation passes have been issued by the Government to West Indian exemployees. This number includes 579 in the fiscal year 1913, 707 in the year ending July 1, 1914, and about 2,100 since July 1, 1914. At an average rate of \$12, the cost has approximated \$40,800. This is exclusive of foreign citizens removed from the Canal Zone in the course of its depopulation, and repatriated by the Department of Law.

Notice to Steamship Lines.

1. The attention of the Canal authorities has been called to the fact that several of the firms whose vessels have been using the Panama Canal have seen fit to employ agents on the Isthmus, to take care of the interests of their vessels in regard to the payment of tolls and minor charges.

2. This is not only unnecessary, but frequently results in delays which might otherwise be avoided were their business done direct with The Panama Canal.

3. Shipowners are informed that provision has been made in accordance with Canal regulations, by which deposits to cover tolls can be made with any of the Assistant Treasurers of the United States, who are to be found in larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made cable information is sent to The Panama Canal.

4. In case a vessel should desire to purchase coal or supplies at either terminal port, or contract a bill for pilotage or towage, deposits to cover these expenses can be made in the same way as for tolls.

5. The price of coal at Cristobal is \$5.40 per ton, and at Balboa \$6.40 per ton. Tug service is at the rate of \$15 per hour. The probabilities are that unless a vessel be over 15,000 gross tonnage there will be no charge for tug service; nor will there be any charge for pilotage for a vessel in transit through the Canal unless she takes on or discharges freight or passengers in a terminal port.

6. It is advisable that deposits be made somewhat in excess of the tolls, cost of supplies, and charges for services, so that there will be sufficient funds available to cover bills not anticipated, since all bills are payable in advance before a vessel is allowed to enter the Canal or clear from Canal waters.

7. Vessels that require answers to cables

should prepay them, or else deposit sufficient funds to cover in the same way as for tolls.

GEO. W. GOETHALS,
Governor.

BALBOA HEIGHTS, C. Z.,
October 15, 1914.

New Records in Canal Operations.

In the week from noon, October 20, to noon, October 27, following the resumption of traffic through the Canal after the opening of the channel opposite the New Culebra slide, 17 vessels were put through the Canal from the Pacific to the Atlantic, and 21 from the Atlantic to the Pacific, a total of 38 vessels in seven days. Up to the end of the week, 71 commercial vessels and three launches had passed through the Canal in the 27 days of October. The tolls collected on tonnage in this period amounted to \$329,704.72, as compared with the total of \$369,706.29 collected prior to October 1, in which are included charges for 115 barges towed through the Canal before its formal opening to commercial traffic on August 15.

Panama Railroad Steamship Service Through the Canal.

The Panama Railroad Steamship Line will inaugurate a service through the Panama Canal, between Cristobal and Balboa, and vice versa, with its steamers *Allianca* and *Advance*, beginning with the *Allianca*, arriving at Cristobal on Wednesday, October 28. The *Advance* will arrive at Cristobal on Wednesday, November 11.

These two steamers will, on their arrival from New York, each trip, discharge at Cristobal all Colon and Cristobal cargo, take on board cargo then on hand for which they have room, consigned to Pacific carriers, and proceed through the Canal to Balboa, and there discharge all west coast cargo they have on board.

On the return trip, they will load at Balboa all cargo delivered by Pacific carriers, routed via Panama Railroad Steamship Line to New York, as well as any cargo destined to Atlantic carriers at Colon or Cristobal, for which they have room. After discharging this cargo at Cristobal and taking on board all New York cargo offered at Colon, they will proceed to New York on the regular voyage.

It has also been decided, for the benefit of the public who may desire to make the trip

through the Canal, to carry passengers in either direction on all Panama railroad steamships that pass through the Canal, at the following rates:

Adults	\$6.00
Children under 12 years	3.00
Employees and adult members of families	4.00
Children under 12 years	2.00

The above rates will include meals and berth, when necessary.

Tickets will be on sale at Colon and Panama passenger stations, Pier 11 at Cristobal, and the wharf at Balboa. For further information as to sailing dates, application should be made to receiving and forwarding agents' office at Colon or Balboa.

Pay Roll Deductions of Red Cross Subscriptions. HEADS OF DEPARTMENTS AND DIVISIONS:

A charity ball will be given at the Hotel Tivoli, Ancon, on the evening of November 2, 1914, under the auspices of the Canal Zone Chapter of the American National Red Cross Society, the proceeds of which will be used for the Canal Zone relief cases, to help equip and defray the expenses of doctors and nurses ordered and volunteering for duty in the field armies engaged in the present European War, and for the purchase of medical supplies.

This ball has received official sanction, and payments of amounts subscribed by employees for tickets or other purposes in connection with the ball may be made by pay roll deduction if the employee so requests in writing.

GEO. W. GOETHALS,

Governor, The Panama Canal.

President, Panama Railroad Company.

BALBOA HEIGHTS, October 26, 1914.

Names Omitted from List of Dredgemen.

The names of the following should be included in the list of gold employees of the Dredging Division, published in last week's issue, who were engaged in the work of opening the Canal channel at the base of the New Culebra slide:

J. Daly, F. H. Hodges, J. T. Wallace, from the dredge *Paraiso*.

V. Salinas, L. Salling, and J. Wainio, from the dredge *Gamboa*.

Increased Force of Pilots.

Owing to the increased traffic through the Canal, authority has been granted to increase the number of pilots from 18 to 24.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Burgess, Ernest.....	51259	Barbados.....	Colon.....	Permanent Bldgs	Oct. 10, 1914.
Ferron, Lemuel.....	22514	Jamaica.....	Chorrillo.....	Dredging Div...	Oct. 13, 1914.
Hackett Arthur (Drake, Nathaniel).....	57112	Barbados.....	Corozal.....	Health Dept....	Oct. 13, 1914.
St. Thomas, Jonathan.....	59077	Fortune Island..	Colon.....	Panama railroad.	Oct. 12, 1914.
Cayesas, Leovigildo, alias P. Cortez.....	52109	Colombia.....	Corozal.....	Term. Cons....	Oct. 12, 1914.
Bridon, James.....	15192	Jamaica.....	Colon.....	Panama railroad.	Oct. 20, 1914.
Clayton, Thomas.....	32677	Jamaica.....	Balboa.....	Permanent Bldgs	Oct. 20, 1914.
Diaz, Marcelino.....	55538	Spain.....	Camp Biedr....	Term. Cons....	Oct. 17, 1914.
Harvey, William.....	43066	Barbados.....	Balboa.....	Permanent Bldgs	Oct. 19, 1914.
Levy, Stanford.....	44843	Jamaica.....	Corozal.....	Permanent Bldgs	Oct. 18, 1914.

The estates of these deceased employees of the Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

NEW P. R. R. FREIGHT HOUSE.

Work Begun on Modern Ratproof Structure in City of Panama.

Forces of the bridge and building department of the Panama railroad have begun the erection of a new ratproof freight house on Avenue B, on the site of the old building, which was recently condemned by the health authorities on account of its lack of protection against an invasion by rats. The present structure is 75 by 540 feet in plan; the new building will be 60 feet longer at the north end, making its total length 600 feet. It will be one story in height, with the exception of 40 feet in the center, where there will be a 2-story part as shown in the accompanying sketch, marked B. The walls and floors will be built of reinforced concrete.

In order to continue the use of a part of the present structure while the new one is under construction, dismantling of the old shed and construction of the new is proceeding in sections. Pouring of concrete for the outside or

inch material. There will be 28 roof trusses in the building. Where the walls separate the 2-story part from the shed, purlins will extend from the trusses and be embedded in the wall concrete. The roof covering of the shed will consist of red colored tile from the Paraiso stock pile, the same as used on the Balboa shop buildings.

The floor plan of the shed provides for a depressed track extending practically its entire length. It will be 12 feet wide, with top of rail four feet below floor level, and will be located 42 feet from the street side and 21 feet from the rear. The shed space will be entirely devoted to freight storage, with the exception of two toilets, one for the gold, and the other for silver employees. The front of the 2-story part on the lower floor will be partitioned off into two rooms, each 18½ by 23 feet in plan, one a specie room, and the other a storage room for small freight parcels. Back of these rooms will be a truckway, which will allow communication through the 2-story part from one section of

front of the shed. This wall will be pierced by four arched openings each five feet six inches wide by eight feet four inches high at the top of the arch, and at the top, will be surmounted by a 2-foot parapet with turreted corners. Access to the upper floor will be provided by two stairways, one on the outside platform, and the other on the inside of the building. The estimated cost of the freight house is \$72,000.

New Publications—Bureau of Mines.

The following new publications have been issued by the Bureau of Mines, Department of the Interior:

BULLETIN.

Bulletin 38 "The origin of coal," by David White and Reinhardt Thiessen, with a chapter on the formation of coal, by C. A. Davis. 1914, 390 pp., 54 pls.

TECHNICAL PAPERS.

Technical Paper 34 "Experiments with furnaces for a hand-fired tubular boiler," by S. C. Flagg. 1914, 32 pp., four figs.

Technical Paper 63 "Factors governing the combustion of coal in boiler furnaces," a preliminary report,

by J. K. Clement, J. C. W. Frazer, and C. E. Augustine. 1914, 44 pp., 26 figs.

Technical Paper 77—Report of the committee on resuscitation from mine gases, by W. B. Caunon, G. W. Crile, Joseph Erlanger, Vandell Henderson, and S. T. Meltzer. 1914, 33 pp., four figs.

Technical Paper 79 "Electric light for use about oil and gas wells," by H. H. Clark. 1914, 8 pp.

MINERS' CIRCULAR.

Miners' Circular 17 "Accidents from falls of rock and ore," by Edwin Higgins. 1914, 15 pp., eight figs.

Note—Only a limited supply of these publications is available for free distribution, and applicants are asked to cooperate in insuring an equitable distribution by selecting publications that are of especial interest. Requests for all papers cannot be granted without satisfactory reason. Publications should be ordered by number and title. Applications should be addressed to the Director of the Bureau of Mines, Washington, D. C.

Receipt is acknowledged by THE CANAL RECORD of a copy of MacRae's Blue Book for 1914, published by the MacRae's Blue Book Company of Chicago, Ill. It contains a list of the leading manufacturers of every article used in the construction and maintenance of railways, and has been placed in the library of the new Administration Building, Balboa Heights, for ready reference.

Colon Hospital Rates for Panamanians.

The rates for Panamanian residents of Colon at the Colon Hospital have been fixed at \$2 per day for ward room patients, and \$4 per day for patients occupying private rooms. The minimum charge for operations remains the same as fixed in the approved schedule, published in THE CANAL RECORD of June 10, 1914.

Death.

OLSON, EDITH—Aged six years; daughter of E. J. Olson of Culebra; October 15, 1914.

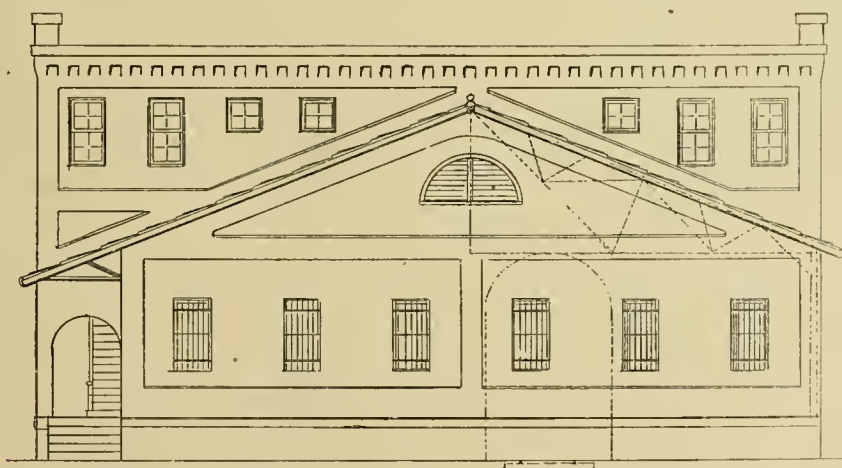


SKETCH A.—FRONT ELEVATION (SECTIONAL) OF NEW PANAMA RAILROAD FREIGHT HOUSE.

foundation walls of the new building, at the north end as far as the first fire wall, was begun on September 23. These walls will be 20 inches thick at the bottom and 12 inches thick at the floor line, reinforced by one-half and ¾-inch corrugated iron bars. When completed, the space enclosed will be filled in with earth over which there will be laid a concrete floor eight

the shed to the other. The side and end walls will be pierced at regular intervals by iron barred windows, while door openings, 10 by 10 feet in size, will be spaced at every 40 feet along the front or street side.

The 2-story part will have a battlemented front, and will be enclosed by fire walls 15 inches thick, with a reinforced concrete floor



SKETCH B.—SOUTH END ELEVATION OF PANAMA RAILROAD FREIGHT HOUSE.

inches thick, situated at an elevation of three feet four inches above the street level.

The main outside walls will be 11 inches thick rising to a height of 16 feet from the floor. The roof will be supported by iron trusses, spaced on 20-foot centers, with the top and bottom members of ¾ by 3½ by 6-inch material, and the other truss members of ¾ by 2 by 2½-

and roof. The roof will be nearly flat and will be covered with tar and gravel in accordance with Barrett specifications. The second floor will be partitioned off with 7-foot frame partitions to meet the requirements of the freight agent and his office force. The front wall of the 2-story part will extend out over the 8-foot platform which will be built along the

HOOKWORM CAMPAIGN.

Representative of International Health Commission Organizing Work on Isthmus.

Dr. L. W. Hackett, a representative of the International Health Commission, organized through the efforts of the Rockefeller Foundation, to combat the ravages of the hookworm, has been on the Isthmus for several months preparing a local campaign against the disease. As the result of his labors so far, laboratories, under the newly created Department of Uncinariasis of the National Board of Health, have been established in the city of Panama, at La Chorrera, a village of about 4,000 inhabitants 18 miles from Panama city, and at Bocas del Toro.

The Rockefeller Sanitary Commission was organized in 1909, with the special object of eradicating hookworm disease in the United States. It found more than 2,000,000 people in the Southern States infected with hookworms "Involving vast suffering, partial arrest of physical, mental, and moral growth, great loss of life, and noticeable decrease in economic efficiency over vast regions." The commission treated over 500,000 persons and ascertained that the diagnosis of the disease could be made with ease and certainty, and that it could be readily and easily prevented.

The total number of persons treated in 11 States in 1913 aggregated 186,277, an average of 616 persons a day for every working day in the year. The average number for 1912 was 720. This reduction of 14 per cent in the number of persons treated is significant when it is considered that the number of persons examined in 1913 represents an increase of 60 per cent over 1912. The territory covered in 1913, as a whole, had lighter infection than that covered in 1912; some of the territory has been covered a second time, and the results seem to indicate that the work of the health forces during the past four years accounts, in a measure, for this showing. In 1913, Kentucky led in the number of cases treated, 43,211; North Carolina was second, with 33,840, and Arkansas last, with 4,894 cases. For the 4-year period ending December 31, 1913, a total of 539,107 cases was treated in the United States. The cost to the commission in 1913 was \$195,900, or \$1.05 for each person treated. Microscopical examinations made in 1913 numbered 480,951, the increase of 60 per cent over 1912 being due to three principal reasons; first, a tendency on the part of State and field directors to require microscopical examinations as a basis for treatment; second, improvement in methods and increase of efficiency in making the examinations; and the third and probably the most significant factor, the growing desire on the part of all classes of people to seek examinations regardless of symptoms.

While the campaign in the United States was being waged, the commission began instituting inquiries into the conditions outside, resulting in the discovery that the hookworm disease prevails in a belt of territory encircling the earth for 30 degrees on each side of the equator, inhabited, according to current estimates, by more than a thousand million people. In some nations, it was found that the infection rose to include nearly 90 per cent of the entire population. It was being spread by emigration, and where it is most severe, little or nothing had been done toward its arrest or prevention.

The Rockefeller Foundation acted on the

information thus gained by making preparations to extend to other countries and peoples the work of eradicating the disease as fast as invitations were received, with the intention, so far as practicable, of following up the treatment and cure by the establishment of agencies for the promotion of public sanitation and the spread of knowledge concerning scientific medicine.

With this end in view, the International Health Commission was organized in the fall of 1913. One of the first countries to invite its assistance was the Republic of Panama, but prior to this time, Great Britain had solicited the commission's cooperation in behalf of that country's tropical possessions. There is a French and Dutch colonial service, and an Oriental service under consideration, so

it will be seen that the microscopist with his can of thymol is already plodding on his way around the world, following the equator.

The campaign against hookworm disease in the Republic of Panama has not progressed far enough as yet to furnish a statement of definite results. About a month ago a small laboratory was opened at La Chorrera, where men, women, and children can come and be treated without charge. An effort is being made to bring every inhabitant of this village within the range of the microscope, by the distribution of circulars describing in simple language the ravages of the disease; by house to house visits of investigation and instruction, and by official posters of an authoritative character. The examination and treatment has not, for good reasons, been made com-

LABOR FORCE AND QUARTERS IN SEPTEMBER.

The force report for September 23 shows the actual working force of The Panama Canal on that date to have been 24,227; of the Panama railroad, 3,914, and of contractors, 58, a total effective working force of 28,199. This is a decrease of 883, as compared with the statement of August 26. The gold force on the Canal work, composed almost exclusively of white Americans, was 4,288, divided, as follows: The Panama Canal, 3,806; Panama railroad, 474; contractors, eight, a decrease in the total gold force, as compared with the preceding month of 241. Detailed figures of the total force employed on the Isthmus, by departments or divisions, are given below:

DEPARTMENT OR DIVISION.	SILVER EMPLOYEES*												Total silver.	Total gold.	Grand total.
	Artisans.						European labor.		Laborers.						
	Monthly.	Special.	22 cents.	18 cents.	15 cents.	12 cents.	Special.	16 cents.	13 cents.	10 cents.	7 cents.	5 cents.			
Operation and Main- tenance: office & locks	100	7	30	166	278	91		1	87	75		8	843	151	994
Terminal Construct'n	616	8	45	231	588	191		444	543	731	6	26	3,429	366	3,795
Erection.....															
Electrical.....	76	12	26	76	164	114		1	38	105		1	613	236	849
Municipal Eng.....	260		89	258	427	201		39	112	520	4	26	4,936	103	2,039
Dredging.....	1,681		5	13	48	1	2	17	168			2	1,937	285	2,222
Mechanical.....	159	14	84	114	602	782		19	55	175	7	14	2,025	903	2,928
Canal Transporta'on	84												84	32	119
Fortifications.....	110		54	134	276	103	37	3	325	89	1	5	1,137	95	1,232
General Construct'n	37		3	6	14	4	4	158	35	100		6	367	18	385
Total.....	3,123	41	336	998	2,397	1,487	43	682	1,363	1,795	18	88	12,371	2,192	14,563
Supply: main office.....	5												5	28	33
Commissary.....	626		4	9	8	5	177	2		145	10		986	169	1,155
Subsistence.....	560	1	1	1	1	2							566	32	598
Quartermaster.....	926	364	231	428	935	215		345	818	1,264	2	44	5,572	665	6,237
Accounting.....	14												14	134	148
Health.....	386		3	3	7				3	300		50	752	185	937
Executive.....	155												155	401	556
Panama railroad.....	412	108	75	158	246	395		73	680	1,257	2	34	3,440	474	3,914
Contractors.....										50			50	8	58
Grand total.....	6,267	514	650	1,597	3,594	2,104	220	1102	2,864	4,811	32	216	23,911	4,288	28,199
Month previous.....	6,477	503	594	1,647	3,579	2,310	231	999	2,928	4,842	38	206	24,354	4,529	28,883
Changes.....	-270	+11	+56	-50	+15	-206	-11	+103	-64	-31	-6	+10	-443	-241	-684

*The wages are stated in United States currency.

QUARTERS.

A report of Canal and Panama railroad quarters occupied on September 30, follows:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Children	Men	Women	Children	Men	Women	Children
Ancon ¹	799	339	299	.....	.....	.....	655	54	6
Balboa	728	87	89	303	14	22	1,519 ²	450	562
Corozal ³	797	213	261	122 ⁴	.....	.....	661 ⁵	59	52
Cristobal ⁶	958	337	333	72	.....	.....	1,216 ⁷	169	377
Culebra ⁸	200	168	143	10	11	19	549	251	80
Gamboa	18	6	4	.....	.....	.....	111	25	22
Gatun	280	165	178	193	5	14	381	47	154
Paraiso	261	71	85	95	5	16	328	119	85
Pedro Miguel	186	103	113	37	.....	.....	261	13	23
Toro Point	2	.....	.....	.....	.....	.....	120	.....	.....
Total	4,229	1,489	1,505	832	35	71	5,801	1,187	1,661

(1) Includes seven American negroes, and two Panamanians on the gold roll. (2) Includes Sabanas police station, Taboga Island, Naos Island, Culebra Island, and Palo Seco. (3) Includes Miraflores. (4) Includes one Asiatic. (5) Includes 51 Panamanians. (6) Includes Empire, Las Cascadas, and Bas Obispo. (7) Includes Colon Beach and Colon Hospital. (8) Includes 32 East Indians, 13 American citizens, and 78 Panamanians. Gold force of contractors (included above), 59 bachelors.

pulsory, but it is possible to be somewhat inconsistent, as the laboratory is a Government institution, and is clothed with some authority.

Out of the first thousand men, women, and children reporting at La Chorrera laboratory, more than 700, upon examination, were found to be harboring hookworms, and evidenced the accompanying anemia. On the laboratory table at that place there is a bottle containing some 2,000 of these parasites recovered from a boy of 10, who appeared to be only seven, and whose blood made a pale yellow spot on a blotter, registering about 10 per cent of normal richness and color. These $\frac{1}{2}$ -inch worms, about the size of a basting thread, bite and suck blood, injecting a poison which pervades the system. In adults, they produce paleness, anemia, debility, and indigestion—that "Tired feeling." They keep children from developing, both mentally and physically, but they often do it so gradually that the boy is never really sick, and even the parents do not suspect the presence of the disease. The child is simply a little pale, a little small for his age, a little behind in his studies.

How is the presence of the parasites detected? In bad cases, the appearance alone is indicative of the disease—the waxy pallor, the white lips and tongue, the swollen cheeks, the prominent abdomen, and loss of strength. Often a mere suspicion may be developed into certainty by eliciting from the patient a story of an attack of ground itch or *mazamorra*. The microscopic larvæ of these worms live on the surface of the ground in muddy places, and when a barefooted person steps there, they stick to the feet, and will at once begin to bore their way through the skin, particularly between the toes where dirt usually clings for awhile and the skin is tender. Many hundreds of these minute creatures may enter the body in this way within a short time, and their boring causes intense itching with accompanying inflammation.

Not every one who has had *mazamorra* contains the worms, for the parasite cannot multiply within the body, and will die off within a few years, provided no more gain entrance through the skin. Entire freedom from *mazamorra* may not argue the absence of hookworms, for the larvæ may get into the stomach with the food. The best and surest way to diagnose the disease has been found to be the examination of stools for hookworm eggs. Each worm lays thousands of eggs every day, which may easily be found in the excrement with a microscope. It is a good rule to follow for people living in regions where the hookworm is found to have themselves examined periodically, even if they do not seem to feel any symptoms of the disease.

Infection is spread by allowing human excrement to remain on the surface of the ground. The eggs of the hookworm after being ejected hatch on the ground into minute worms, which can enter other human beings through the skin. It will be seen, therefore, that the treatment of infected persons does not solve the entire problem. They are bound to become reinfected in time if they continue to live utterly careless of personal cleanliness and sanitation. On the other hand, the effect of treatment alone is by no means ephemeral. For example, in the case of an isolated village in Porto Rico, thoroughly treated 10 years ago, where, in 1,000 cases taken at random, the blood averaged only 40 per cent of normal,

this spring it was found that it still remained above 70 per cent.

In the city of Panama, where the streets are paved and all the houses have sewer connections, the disease probably cannot extend. However, as hookworms can live in the human body as long as 10 years, persons coming from the interior within that period may still be infected. This probably explains an incidence of about 20 per cent in Panama city.

The first principles of prevention are summed up in the advice given on the posters "Wear shoes and keep the ground clean." It is necessary to raise the whole sanitary condition of the people to that extent if the disease is to be extirpated. The work of the International Health Commission is undertaken on the assumption that, in the end, the countries interested in a campaign against the disease will assume the burden of responsibility. With that in view, assistance is given by the commission in organizing and bringing into play latent public health forces, leaving the permanence of the work in the hands of the Government.

A laboratory has recently been opened by Dr. Hackett at Bocas del Toro, and it is proposed to establish others from time to time, and to move these laboratories from place to place until, in the end, every accessible group of people in the country will have been visited and examined. At the laboratory maintained by the Department of Uncinariasis in the old Canal building in Panama city, any one may obtain details of the examination and treatment. Any person who desires will be examined and will receive treatment free of charge. No general medical examination will be made, however, and medicines for other diseases will not be dispensed. The Government is ably seconding the work along this line.

Red Cross Finances.

The financial statement of the Canal Zone Chapter, American National Red Cross, for the months of July, August, and September is, as follows:

RECEIPTS.	
Balance on hand July 1, 1914.	\$3,655.74
Aug. 2. Balance after making necessary purchases and expenditures in case of paroled and deported American woman.	21.58
Sept. 30 Interest July, August, and September.	18.29
Total.	\$3,695.61
DISBURSEMENTS.	
July 15 Relief of American woman.	10.00
Expense of investigation, Las Cascadas.	2.00
28 Relief American woman.	15.00
Relief stranded American woman.	12.00
Aug. 1 Relief stranded American.	15.00
10 Relief stranded Cuban.	5.00
17 Relief Barbadian woman.	20.00
Sept. 19 Relief young American girl.	35.00
Total.	\$114.00
30 Balance on hand.	\$3,581.61
T. L. CLEAR,	
Treasurer.	
Approved:	
C. A. McILVAINE,	
Chairman.	

Hotel Aspinwall Launch Service.

The launch *Louise* will sail from the dredge landing at Balboa for the Hotel Aspinwall on Taboga Island at 9.25 a. m., on Monday, Thursday, and Saturday of each week. The time of sailing permits connection to be made with train No. 3, which arrives at Panama from Colon at 9.05 a. m., daily.

JOINT LAND COMMISSION.

Awards.

Award No. 60, October 12, 1914. In the matter of sundry claims—An award is hereby made against the United States, in favor of the persons hereinafter named, in the sum of \$335, United States currency.

This award shall be paid to the respective claimants hereinafter named, in the amounts hereinafter specified, on or before the 12th day of November, 1914, and if payment or tender of payment of any items of this award is not made on or before that date, such items shall thereafter bear interest at the rate of six per centum per annum until paid:

Gordon, James, docket No. 395—For all rights, claims, and other interests in growing crops, fruit trees, buildings, and any other improvements which the said Gordon may possess or may have possessed on lands of the Panama Railroad Company, designated as Lot 2 on the Harrison-Arosemena map, the sum of thirty dollars (\$30), United States currency.

Julio, Tomas, docket No. 400, for all rights, claims, and other interests in growing crops, fruit trees, house without tax number, and any other buildings, and any other improvements which the said Julio may possess or may have possessed on the lands of the Panama Railroad Company, designated as Lot 3 on the Harrison-Arosemena map, the sum of fifty dollars (\$50), United States currency.

Nugent (Nullon), Robert, docket No. 399—For all rights, claims, and other interests in growing crops, fruit trees, house without tax number, and any other buildings and any other improvements which the said Nugent (Nullon) may possess or may have possessed on land designated as Lot 3 on the Harrison-Arosemena map, the sum of one hundred twenty-five dollars (\$125), United States currency.

Robinson, William, docket No. 390—For all rights, claims, and other interests in growing crops, fruit trees, buildings, and any other improvements which the said Robinson may possess or may have possessed on lands of the Panama Railroad Company, designated as Lot 3 on the Harrison-Arosemena map, the sum of sixty-five dollars (\$65) United States currency.

Sewell (Snill), Joseph, docket No. 394—For all rights, claims, and other interests in growing crops, fruit trees, buildings, and any other improvements which the said Sewell (Snill) may possess or may have possessed on lands of the Panama Railroad Company, designated as Lot 3 on the Harrison-Arosemena map, the sum of sixty-five dollars (\$65), United States currency.

Total, \$335, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Award No. 61, docket No. 858, October 13, 1914. In the matter of the claim of Joseph Lambie, for property located near Ahorca Lagarto—An award is hereby made against the United States, in favor of the person hereafter named, in the sum of \$100, United States currency.

This award shall be paid to the claimant hereinafter named, in the amount specified, on or before the 13th day of November, 1914, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid:

Lambie, Joseph, docket No. 858—For all rights, claims and other interests in growing crops, fruit trees, building, and any other improvements which the said Lambie may possess or may have possessed at or near Ahorca Lagarto, said property being distinct from house tax No. 133, and other improvements near Bohio, for which payment was made to Joseph Lambie in 1910, the sum of \$100, United States currency.

The claim in so far as it relates to property at Red Tank is hereby dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Award No. 62, October 19, 1914. In the matter of sundry claims—An award is hereby made against the United States, in favor of the persons hereinafter named in the sum of \$570, United States currency. This award shall be paid to the respective claimants hereinafter named, in the amounts hereinafter specified, on or before the 19th day of November, 1914, and if payment or tender of payment of any items of this award is not made on or before that date, such items shall thereafter bear interest at the rate of six per centum per annum until paid:

Hughes (Huse), Robert, docket No. 1127—For all rights, claims, and other interests in growing crops, fruit trees, buildings, and any other improvements which the said Hughes (Huse) may possess or may have possessed at or near Ahorca Lagarto, the sum of \$45, United States currency.

Morgan, Alexander, docket No. 1149—For all rights, claims, and other interests in growing crops, fruit trees, buildings, and any other improvements which the said Morgan may possess or may have possessed on lands of

the Panama Railroad Company, designated as Lot 3 on the Harrison-Arosemena map, the sum of \$150, United States currency.

Walker, David, docket No. 403—For all rights, claims, and other interests in frame house, tax No. 566, and a chicken coop, located on the Bosque Estate at or near Matachin, not covered by award No. 44 of September 22, 1913, the sum of \$250, United States currency.

Williams, Nathaniel, docket No. 1172—For all rights, claims, and other interests in growing crops, fruit trees, house without tax number, and any other buildings, and any other improvements which the said Williams may possess or may have possessed on lands of the Panama Railroad Company designated as Lot 3 on the Harrison-Arosemena map, the sum of \$125, United States currency. Total, \$570, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Award No. 63, docket No. 1422, October 21, 1914. In the matter of the claim of Ursula Rodriguez, for property located near Ahorca Lagarto—An award is hereby made against the United States, in favor of the person hereinafter named, in the sum of \$200, United States currency.

This award shall be paid to the claimant hereinafter named, in the amount specified, on or before the 21st day of November, 1914, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

Rodriguez, Ursula, docket No. 1422, for all rights, claims, and other interests in growing crops, fruit trees, house without tax number and any other buildings and any other improvements which the said Rodriguez may possess or may have possessed at or near Ahorca Lagarto, the sum of \$200, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rules of Dismissal.

Rule of dismissal No. 141, October 10, 1914. In the matter of sundry claims—With reference to the claims for improvements of the persons hereinafter named, the evidence before the commission is that previous payments have been made. A careful examination has been made of all cases in which payment has been reported, and the commission has reached the conclusion that the claimants have no property for which an award could be sought from this commission which is not covered by the previous payments hereinafter noted:

Crawford, Thomas, docket No. 391—The property included in this claim was covered by payment of the Panama Railroad Company to the claimant on September 19, 1911, for a "House and miscellaneous fruits and cultivations on land owned by the Panama Railroad Company in the valley of the Chagres River which are situated below contour line of 87 feet above sealevel."

Coney, William, docket No. 392—The property included in this claim was covered by payment of the Panama Railroad Company to the claimant on September 19, 1911, for a "House and miscellaneous fruits and cultivations on land owned by the Panama Railroad Company in the valley of the Chagres River, which are situated below contour line of 87 feet above sealevel."

Clarke, Samuel, docket No. 396—The property included in this claim was covered by payment of the Panama Railroad Company to the claimant on September 19, 1911, for a "House and miscellaneous fruits and cultivations on land owned by the Panama Railroad Company in the valley of the Chagres River, which are situated below contour line of 87 feet above mean sealevel."

Bradley, John (Broley, Llan), docket No. 397—The property included in this claim was covered by payment of the Panama Railroad Company to the claimant on September 19, 1911, for a "House and miscellaneous fruits and cultivations on land owned by the Panama Railroad Company in the valley of the Chagres River, which are situated below contour line of 87 feet above sealevel."

Harrison, David, docket No. 398—The property included in this claim was covered by payment of the Panama Railroad Company to the claimant on September 19, 1911, for a "House, miscellaneous fruits and cultivations on land owned by the Panama Railroad Company in the valley of the Chagres River, which are situated below contour line of 87 feet above sealevel."

Lilly, David, docket No. 402—The property included in this claim was covered by payment of the Panama Railroad Company to the claimant on September 19, 1911, for a "House and miscellaneous fruits and cultivations on land owned by the Panama Railroad Company in the valley of the Chagres River, which are

situated below contour line of 87 feet above sealevel."

Pitt (Sesilio), Cecilio, docket No. 1133—The property included in this claim was covered by payment of the Panama Railroad Company to the claimant on November 10, 1910, for "One house, pear, pisa, lime, rubber, and orange trees and coffee bushes on land owned by the Panama Railroad Company in the valley of the Trinidad River, which are situated below a contour line of 87 feet above sealevel."

In view of the payments herein noted, no claims against the United States of America can be recognized by the Joint Land Commission, and these claims are accordingly hereby dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of dismissal No. 142, docket No. 262, October 10, 1914. In the matter of the claim of Fabian Bayonne, for property located near Matachin—In the case of Fabian Bayonne, docket above shown, an examination of the evidence shows that he entered upon the possession of the lands on which he claims improvements, under a lease from the Isthmian Canal Commission. In a decision in the case of Agusta Dunlop, rendered April 16, 1913, the commission said:

"We have, therefore, reached the conclusion that it is not within the province of the Joint Land Commission to take cognizance of claims arising out of the revocation of revocable leases or licenses issued by the Isthmian Canal Commission. Such claims have no organic relation to the grants contained in the Treaty, nor to the international obligations which the United States has agreed to discharge under the Treaty, and for the adjudication of all such claims the claimants must seek a remedy through the procedure afforded by municipal laws."

In accordance with the foregoing decision, the claim of Fabian Bayonne, above shown, is hereby dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of dismissal No. 144, docket numbers as shown, October 13, 1914. In the matter of sundry claims—With reference to the claims for improvements of the persons hereinafter named, the evidence before the commission is that previous payments have been made. A careful examination has been made of all cases in which payment has been reported, and the commission has reached the conclusion that the claimants have no property for which an award could be sought from this commission, which is not covered by the previous payments hereinafter noted:

Allen, Robert Samuel (Haly, Robert), docket No. 363—The property included in this claim was covered by payment of the Panama Railroad Company to the claimant on September 19, 1911, for a "House and miscellaneous fruits and cultivations on land owned by the Panama Railroad Company in the valley of the Chagres River, which are situated below a contour line of 87 feet above sealevel."

Orozco, José, docket No. 1091—The property included in this claim was covered by payment of the Panama Railroad Company to the claimant on September 19, 1911, for a "House and miscellaneous fruits and cultivations on land owned by the Panama Railroad Company in the valley of the Chagres River, which are situated below a contour line of 87 feet above sealevel."

Williams, John, docket No. 1035—The property included in this claim was covered by payment of the Panama Railroad Company to the claimant on September 19, 1911, for "Houses and miscellaneous fruits and cultivations on land owned by the Panama Railroad Company in the valley of the Chagres River, which are situated below a contour line of 87 feet above sealevel."

In view of the payments herein noted, no claim against the United States of America can be recognized by the Joint Land Commission, and these claims are accordingly hereby dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of dismissal No. 145, docket No. 1134, October 17, 1914. In the matter of the claim of William Pitt—With reference to the claim of William Pitt for improvements which were located in the valley of the Chagres River, near Lion Hill, the evidence before the commission is that a previous payment has been made. A careful examination has been made by the commission of all cases in which payments have been reported and the commission has reached the conclusion that the claimant, William Pitt, has no property for which an award could be sought from this commission which is not covered by the previous payment hereinafter noted:

William Pitt, docket No. 1134. The property included in this claim was covered by payment of the Disbursing Officer to the claimant in December, 1911, voucher No. 17739 for "All growing crops and fruit trees, one frame and zinc house, tax No. 174, and all

other improvements in the valley of the Chagres River, which it became necessary to destroy by reason of the Atlantic Division clearing area to be covered by Gatun Lake."

In view of the payment herein noted, no claim against the United States of America can be recognized by the Joint Land Commission, and the claim of William Pitt is accordingly dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of dismissal No. 143, docket No. 1883, October 12, 1914. In the matter of the claim of Robert Nugent, for property located near Lion Hill—The records of the commission show that in the following instance duplicate claim has been filed with the commission, covering property for which prior claim has already been disposed of, as hereinafter shown:

Robert Nugent, docket No. 1883—This claim, covering improvements on lands near Lion Hill, is a duplicate of docket No. 399, filed by Robert Nulton (Nugent), for which an award was made by the commission under award No. 60.

In view of the facts above referred to, this claim calls for no further action on the part of the commission, and is accordingly dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of dismissal No. 146, docket No. 1442, October 21, 1914. In the matter of the claim of José Pinillo, for improvements near Tabernilla—The claim of José Pinillo, docket No. 1442, for improvements said to have been located near Tabernilla close to the Frijoles Grande River, is hereby dismissed for the reason that the evidence submitted to the commission does not justify an award being made.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of dismissal No. 147, docket No. 1434, October 21, 1914. In the matter of the claim of James Palmer, for property near Tabernilla—With reference to the claim of James Palmer for improvements which were located in the Valley of the Chagres River, near Tabernilla, the evidence before the commission is that a previous payment has been made. A careful examination has been made by the commission of all cases in which payments have been reported and the commission has reached the conclusion that the claimant, James Palmer, has no property for which an award could be sought from this commission which is not covered by the previous payment hereinafter noted:

Palmer, James, docket No. 1434—Payment of the Disbursing Officer in January, 1912 to James Palmer and Susan Bell, voucher No. 18567, for the purchase of houses, tax numbers 1281 and 1282, and all other improvements in or near the town of Tabernilla, Canal Zone, which it became necessary to destroy by reason of the work of the Atlantic Division in clearing the land to be covered by the waters of Gatun Lake.

In view of the payment herein noted, no claim against the United States of America can be recognized by the Joint Land Commission, and the claim of James Palmer is accordingly dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of dismissal No. 148, docket numbers as shown, October 23, 1914. In the matter of sundry claims—With reference to the claims for improvements of the persons hereinafter named, the evidence before the commission is that previous payments have been made. A careful examination has been made of all cases in which payment has been reported, and the commission has reached the conclusion that the claimants have no property for which an award could be sought from this commission which is not covered by the previous payments hereinafter noted:

Villaverde, Heriberto, docket No. 1555, for the settlement of all rights, claim, or interest in all growing crops, fruit trees, buildings, and of all other improvements of every kind, and all other rights claimed in land located on the estate of Mamey Y Culo Seco, east bank, near Frijoles, under award of the Joint Land Commission dated July 3, 1913, voucher No. 25901.

Mondello, Clementino, docket No. 390, for house, tax number 1259, and all other improvements in or near the town of Tabernilla, Canal Zone, which it became necessary to destroy by reason of the work of the Atlantic Division, clearing the land to be covered by the waters of Gatun Lake, payment by the Disbursing Officer under date of January, 1912, voucher No. 1854.

In view of the payments herein noted, no claim against the United States of America can be recognized by the Joint Land Commission, and these claims are accordingly hereby dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

OFFICIAL CIRCULARS.

Landscape Architect's Work.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., October 13, 1914.

CIRCULAR No. 660-22:

Effective November 1, 1914, the work in Balboa under the Landscape Architect will be transferred to the Division of Municipal Engineering.

GEO. W. GOETHALS,
Governor.

Hospital Rates for Families of Employees Receiving Between \$50 and \$100.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., October 16, 1914.

CIRCULAR No. 618-4 (Amending Circular No. 618 Revised):

Effective this date, a charge of \$1 per day will be made for ordinary care and treatment in hospital wards, for members of families of employees receiving more than \$50 and not over \$100 per month, instead of the former rate of \$1.50 for male and \$2.50 for female, as published in Circular No. 618-Revised.

GEO. W. GOETHALS,
Governor.

Pilotage for Vessels Passing Through Canal.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., October 21, 1914.

CIRCULAR No. 681-1 (Amending Circular No. 681):

Effective this date, the regulations concerning charges for pilotage are so far amended that, in future, when vessels enter for the purpose of passing through the Canal, and do not take on or discharge freight or passengers, but do take coal or supplies, they will not be charged for pilotage.

GEO. W. GOETHALS,
Governor.

Clothing Allowance for Employees at Corozal Farm.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., October 21, 1914.

CIRCULAR No. 625-1. (Amending Circular No. 625):

Paragraph 4 of Circular No. 625 is hereby amended to read, as follows:

Employees will be furnished bachelor quarters, and subsistence similar to that now furnished at kitchens and messes of the Supply Department. Those on the farm 20 days or more each month will be paid \$1 with which to purchase clothes or pay for laundry.

GEO. W. GOETHALS,
Governor.

Chagres River Gravel to be used in Place of Chame Sand and Ancon Rock.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., October 24, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

With the closing down of the Chame sand service, effective at once, and the closing down of Ancon quarry, effective October 31, heads of departments and divisions will arrange to use, starting in as soon as practicable, run-of-bank Chagres River gravel to meet their requirements for concrete and for other uses in which sand and broken stone have heretofore been utilized. For work of a special or of an important character, sand and Ancon quarry rock may be used as heretofore. As soon as the new screening outfit has been installed on the Chagres River, it will be possible to deliver Chagres River sand as well as screened gravel.

GEO. W. GOETHALS,
Governor.

Duties of Head of Property and Requisition Bureau.

THE PANAMA CANAL,
OFFICE OF EXECUTIVE SECRETARY.

BALBOA HEIGHTS, C. Z., October 21, 1914.

All concerned:

Effective October 22, 1914, Mr. H. H. Hammer, as head of the Property and Requisition Bureau, Executive Office, is placed in charge of the work of recording and accounting for the property charged to all accountable officials of The Panama Canal and Panama railroad.

The present general system of property accounting will be continued, but the methods of accomplishing the desired ends and the force to perform the work will be under the control of the head of the bureau.

He will also assist and direct those in custody of property in proper methods of caring for the property in their charge.

He will also prepare all work requests and requisitions for the offices in the Administration Building and

be prepared, on demand, to give information concerning same at any time.

C. A. McILVAINE,
Executive Secretary.
Approved: GEO. W. GOETHALS,
Governor.

Connections for Steamers from Las Cascadas Branch.

THE PANAMA CANAL,
PANAMA RAILROAD COMPANY,
OFFICE, SUPT. OF RAILROAD TRANSPORTATION,
BALBOA HEIGHTS, C. Z., October 22, 1914.

TRANSPORTATION BULLETIN No. 94:

All concerned—Effective at once, it will be necessary for passengers on the Las Cascadas branch who sail on Panama railroad steamers, or other steamers, from Cristobal, to check their baggage the night before date of sailing. And in view of the fact that the train which formerly left Las Cascadas at 10.45 a. m., has been discontinued, passengers will necessarily have to use train No. 31, which leaves Las Cascadas at 7 a. m., connecting with Pedro Miguel with train No. 4, which leaves Panama at 7.10 a. m.

All concerned will please be governed accordingly.
F. R. BLUNT,
Superintendent of Railroad Transportation.

Approved: C. H. MOTSETT,
Superintendent.

Examinations by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 308, on Wednesday, November 4, 1914, beginning promptly at 2 p. m., for persons desiring the following classes of licenses: Pilot, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa, at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

By direction of the chairman of the board.
F. M. NIXON,
Recorder, Board of Local Inspectors.

Proposals for Clearing Trails.

THE PANAMA CANAL,
OFFICE OF THE CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, until November 25, 1914, at 3 p. m., and then opened for:

Completely cutting to within three inches of the ground all growth and burning all material so cut, over an area of 68 miles of trail 20 feet wide, situated in various parts of the Canal Zone. The general location of this work will be shown on maps in the office of the Assistant Engineer, Division of Fortifications, between 2 and 5 p. m., November 14. This work will be done in January and February, 1915. All bids should be for a lump sum for the entire job.

Bids must be accompanied by cash certified check, or post-office money order for five per cent of the amount bid.

Form of contract and bond, including specifications may be obtained on application to this office. The Government reserves the right to reject all bids. Bids should be marked "Proposal for clearing trails."

W. R. GROVE,
Chief Quartermaster.

Proposals for Clearing Land Defenses.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until

3 p. m., November 25, 1914, and then opened for:

Cutting to within six inches of the ground all growth and burning all material so cut, over an area of 3,075 acres, more or less, situated near Pedro Miguel, Gatun, and Toro Point. One complete trip, occupying two days, viz., November 16 and 17, will be made over the whole area by a representative of the Division of Fortifications for the purpose of showing bidders the country and conditions. All bids should be in a lump sum for the entire job. This work will be done in January and February, 1915.

Bids must be accompanied by cash, certified check, or post-office money order for five per cent of the amount bid. Form of contract and bond, including specifications, may be obtained upon application to this office. The Government reserves the right to reject all bids. Bids should be marked "Proposals for clearing land defenses."

W. R. GROVE,
Chief Quartermaster.

Proposals for Drilling Holes, Sosa Hill Quarry.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., November 2, 1914, and then opened for:

Furnishing necessary labor for drilling and cleaning out holes ready for emplacement of explosives for blasting, including moving and connecting the drills. The necessary power and equipment will be furnished by The Panama Canal.

Form of contract and bond and complete specifications may be obtained upon application to this office. The Government reserves the right to reject all bids. Bids should be marked "Proposals for drilling holes, Sosa Hill quarry."

W. R. GROVE,
Chief Quartermaster.

Proposals for Removal of North Mast, Colon Radio Station.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, until 3 p. m., October 31, 1914, and then opened for taking down the north mast at the naval radio station, Colon, R. P. Specifications may be obtained upon application to this office.

The Government reserves the right to reject all bids. Bids should be marked "Proposal for removal of north mast, Colon radio station."

W. R. GROVE,
Chief Quartermaster.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., October 26, 1914.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressees.

Benchoff, Alfred	Kellar, John J.
Brown, Miss Viola	Liticky, Joseph
Barrow, Solomon	Lopez, Benigno Cuerdo
Carrera, Matias	McPherson, L. R.
Chaddock, Clarence W.	Mott, C. H.
Claus, S. M.	Pard, F. J. B.
De Vine, Tim	Pittman, George T.
Drohan, James J.	Quake, Joshua (3)
Dunn, John M.	Reid, Mr. and Mrs.
Feiner, H.	Roche, Charles H.
Ferris, Walter	Rose, L. E.
Freeman, William	Rowley, Wm. (paper).
Harris, Charlie	Solzer, B.
Hoag, Lt. John	Thomas, E.
Horgan, Mrs. M. H.	Tucker, Edward (2)
Hughes, John	Villott, Mrs. F. W.
Inniss, Archibald, (paper)	Woodworth, Henry

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, October 24, 1914. All heights are in feet above mean sealevel:

DAY AND DATE.	STATIONS.				
	Vigia.	Alajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Oct. 18.....	130.20	95.68	86.02	86.03	54.18
Mon., Oct. 19.....	129.30	95.09	86.08	86.06	54.10
Tues., Oct. 20.....	131.35	96.40	86.12	86.08	54.15
Wed., Oct. 21.....	129.60	95.52	86.05	86.08	54.21
Thurs., Oct. 22.....	130.60	95.99	86.06	86.08	54.12
Fri., Oct. 23.....	130.10	95.54	86.07	86.09	54.15
Sat., Oct. 24.....	131.50	96.32	86.57	86.03	54.30
Height of low water to nearest foot.....	125.0	91.0			

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective October 29:

FRESH MEATS.	Price.
Mutton—Stewing, per pound.....	10
Shoulder, trimmed, per pound.....	16
Leg (8 to 10 pounds), per pound.....	25
Cutlets, per pound.....	26
Short cut chops, per pound.....	30
Shoulder-chops, per pound.....	18
Lamb—Stewing, per pound.....	13
Shoulder, trimmed, per pound.....	19
Leg (5 to 8 pounds), per pound.....	30
Chops, per pound.....	36
Chops, shoulder, per pound.....	23
Cutlets, per pound.....	36
Veal—Stewing, per pound.....	13
Shoulder, for roasting (not under 4 pounds), per pound.....	17
Chops, shoulder, per pound.....	23
Chops, per pound.....	35
Loin, for roasting, per pound.....	35
Cutlets, per pound.....	40
Beef—Suet, per pound.....	03½
Soup, per pound.....	08
Soup bones, per pound.....	02½
Stew, per pound.....	12
Plate, per pound.....	14
Corned, No. 1, per pound.....	20
Corned, No. 2, per pound.....	17
Chuck roast, 3 lbs., and over, special, per pound.....	13
Chuck roast, 3 lbs., and over, choice, per pound.....	17
Rib roast, second cut (not under 3½ pounds), special, per pound.....	18
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
Rib roast, first cut (not under 3 pounds), special, per pound.....	22
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27
Pot roast, special, per pound.....	23
choice, per pound.....	28
Rump roast, special, per pound.....	23
choice, per pound.....	28
Porterhouse roast, special, per pound.....	25
choice, per pound.....	31
Steak, chuck, special, per pound.....	15
choice, per pound.....	18
Round, bottom, special, per pound.....	15
choice, per pound.....	19
Round, top, special, per pound.....	17
choice, per pound.....	22
Rib, special, per pound.....	23
choice, per pound.....	27
Sirloin, special, per pound.....	23
Sirloin, choice, per pound.....	28
Sirloin, choice cut, special, per pound.....	26
Sirloin, choice cut, choice, per pound.....	32
Rump, special, per pound.....	23
choice, per pound.....	28
Porterhouse (not less than 1½ pounds), special, per pound.....	26
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse, short, Delmonico special, per pound.....	23
Porterhouse, short, Delmonico choice, per pound.....	28
Tenderloin, Western, special, per pound.....	40
Tenderloin, Western, choice, per pound.....	46
Pork—Hams, fresh, per pound.....	\$26
Shoulders, fresh, per pound.....	\$22
Loin, chop, or roast, per pound.....	†24
Pigs' feet, fresh, each.....	08
Pigs' head, fresh, whole.....	95
Pigs' head, fresh, ½-head.....	48
Sausage, home made, per pound.....	26

MISCELLANEOUS.

Livers—Beef, per pound.....	13
Calf, each.....	65
Half, each.....	33
Oysters, fresh per pkt.....	33
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	14
Frankfurter, per pound.....	14
Lieberwurst, per pound.....	14
Pork, per pound.....	18
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	35
per ½-dozen.....	18
Bluefish, per pound.....	9
Halibut, fresh, per pound.....	5
Salmon per pound.....	8
Yeast, per pound.....	31
Yeast, per cake.....	2

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound.....	25
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Chickens—Fancy roasting, corn fed, per pound.....	24
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	30
Broilers, milk fed, per pound.....	*25
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	25
Squabs, each.....	42
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	24
Half, per pound.....	26
Sliced, per pound.....	32
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	35
Half, boiled, per pound.....	36
Sliced, boiled, per pound.....	42
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.42
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	43
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Requefort, per pound.....	41
Young America, per pound.....	21
Swiss, per pound.....	*30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk (certified), bottle.....	**24
Milk, Sheffield Farms, per quart.....	**15
Fermilac, bottle.....	**25
Ice cream, quart.....	†25
½-gallon.....	†50
Cream, Sheffield Farms, quart.....	**33
½-pint.....	**19
½-pint.....	**12

VEGETABLES.

Cauliflower, per pound.....	†5½
Beets, per pound.....	2½
Celery, per head.....	4
Cabbage, per pound.....	*2½
Carrots, per pound.....	2½
Cucumbers, per pound.....	3
Lettuce, per pound.....	10
Onions, per pound.....	2½
Peppers, per pound.....	3
Potatoes, white, per pound.....	2½
sweet, American, per pound.....	2½
Yams—Tropical, per pound.....	3½
Eggplant, per pound.....	3½
Rhubarb, per pound.....	3½
Turnips, per pound.....	2
Tomatoes, per pound.....	3
Squash, per pound.....	*2½

FRUITS.

Apples, per pound.....	†2½
Grapes, per pound.....	*7
Grape fruit—American, each.....	8
Tropical, each.....	3½
Lemons, per dozen.....	*19
Limes, per 100.....	40
Oranges—American, each.....	2½
Jamaican, per dozen.....	18
Peaches, per pound.....	*9
Bananas, per bunch.....	38
Bananas, each.....	½
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Pears, alligator, each.....	6

* Indicates advance from preceding list.
 **Indicates five cents allowed for return of bottle.
 † Indicates reduction from preceding list.
 ‡ Sold only from commissaries; no orders taken for delivery.
 § Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Additions to Stock.

Preserves, peach, jar.....	\$0.20
Preserves, cherry, jar.....	.20
Laces, Valenciennes, yd.....	.02
Sponges, rubber, ea.....	.45
Ties, bow, black, ea.....	.18
Chocolates and bon bons, P & T, box.....	.68
Chocolates and bon bons, P & T, box.....	.35
Chocolates, assorted, P & T, box.....	.68
Chocolates, assorted, P & T, box.....	.35
Chocolates, milk, P & T, ck.....	.04
Almonds, chocolate, P & T, box.....	.12
Caramels, Lowney's, tin.....	.21
Powder, currie, American, bot.....	.08
Beans, lima, Cresca, tin.....	.15
Gauntlets, pr.....	.14
Gloves, men's, pr.....	.11
Forks, dessert, Windsor, ea.....	.16
Barrels, (alcohol, molasses, vinegar and wine), ea.....	1.00
Barrels, (oil and soap), ea.....	.50
Drums, (gasoline), ea.....	7.00

Cylinders, (ammonia), ea.....	15.00
Kegs, (lard, pork, and tongue), ea.....	.25
Sacks, (flour, rice, etc.) light, ea.....	.01
Sacks, (flour, rice, etc.) heavy, ea.....	.05
Jars, (almond, chewing gum, and fruit) ea.....	.10
Wrappers, burlap, (meat), ea.....	.20

These containers will be charged to receiving sections by separate debit entry on binder bill on which commodity therein is charged.

When a container is transferred from one section of this depot to another, its value will be transferred to receiving section, or if sold to individuals or companies, invoices will be issued.

Retail commissaries may sell the containers at prices charged to them or return and transfer them to Depot Commissary.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective October 23, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Powder, baking, tin.....	\$1.32	\$1.08
Barley, tin.....	.15	.14
Corn meal, yellow, tin.....	.21	.22
Hominy, tin.....	.14	.13
Cocoa, bulk, lb.....	.14	.12
Tea, E. B., tin.....	.15	.17
Tea, Young Hyson, tin.....	.17	.21
Tea, Young Hyson, tin.....	.62	.85
Tea, E. B., tin.....	.54	.71
Beans, dried, lima, lb.....	.10	.11
Starch, laundry, lb.....	.03	.04
Sugar, granulated, sack.....	.40	.33
Sugar, powdered, tin.....	.23	.20
Sugar, domino, carton.....	.25	.23
Towels, E. B., ea.....	.40	.38
Paper, writing with envelopes, box.....	.26	.24
Sifters, flour, ea.....	.10	.08
Strainers, spout, ea.....	.01	.02
Kettles, tea, 2-qt, ea.....	.42	.35
Pans, fry, ea.....	.08	.12
Pans, fry, ea.....	.09	.16
Coolers, water, 2-gal, ea.....	1.25	1.05
Succotash, tin.....	.09	.11
Currants, cleaned, pkt.....	.10	.12
Buttons, pearl, doz.....	.08	.07

Telegraph Office in Administration Building.

THE PANAMA CANAL,

THE PANAMA RAILROAD COMPANY,

OFFICE OF THE CHIEF DISPATCHER.

BALBOA HEIGHTS, C. Z., October 26, 1914.

CIRCULAR NO. 49:

All concerned—Effective October 27, a telegraph office will be installed in the dispatcher's office at the Administration Building, Balboa Heights, telegraph call "MS". All business for Panama railroad officials now being handled through "D" office, and car orders being handled through dispatchers will be handled through this new office.

Commercial messages to and from the city of Panama, and Ancon, will continue to be handled through "D" office. Outgoing commercial business and also incoming for any one in the Administration Building will, of course, be handled through the new office.

The part of my circular No. 46 of October 17, which refers to messages and car orders, is hereby cancelled.

F. S. HIRSCH,
Chief Dispatcher.

Water Turned Off in Cristobal and Colon.

THE PANAMA CANAL,

DIVISION OF MUNICIPAL ENGINEERING.

BALBOA HEIGHTS, C. Z., October 20, 1914.

To all concerned—The water will be shut off from Colon and Cristobal from 8 a. m. till noon, on Sunday, November 1.

GEO. M. WELLS,
Resident Engineer.

Family Quarters.

Applications for married quarters on file on September 30 were, as follows:

DISTRICT.	List	
	No. 1.	No. 2.
Ancon.....	56 (30)	399 (125)
Ancon Hospital.....	3 (3)	6
Corozal.....	4 (3)	149 (35)
Paraiso.....		189 (27)
Gatun.....		125 (3)
Cristobal.....		160 (29)
Total.....	63 (36)	1 028 (219)

NOTE—The figures in parentheses show the number of applicants already occupying regular or nonhouse-keeping family quarters at stations other than those at which applications are filed.

SHIPPING INFORMATION.

Fuel and Supplies.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.30 per barrel.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock, with a minimum charge of \$3.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Subsistence supplies, including a large stock of fresh meats, vegetables, canned groceries, fruits, bakery products, etc., are available for quick delivery at either terminal. Prices are generally lower than the retail prices in the United States, and compare favorably with prices in any port of the world.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the turning of the largest crank shafts or longest line shafts.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment in ward is \$1 per day.

Application for supplies, or for services, should be made to the captain of the port, Cristobal or Balboa.

Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired; or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case the vessel has a known representative on the Isthmus in care of such representative.

Tide Predictions.

Panama tide predictions for the next six weeks are given in the following table:

OCTOBER.

DATE.	Time and height of high and low water.			
Wed., Oct. 28.....	3.8	11.8	3.3	12.1
Thurs., Oct. 29.....	5:12	11:34	17:40	.....
	4.0	11.7	3.5	.....
Fri., Oct. 30.....	0:08	6:23	12:47	18:43
	12.4	3.7	12.1	3.3
Sat., Oct. 31.....	1:06	7:21	13:44	19:38
	12.9	3.1	12.6	2.9
	1.56	8:08	14:29	20:24
	13.3	2.4	13.1	2.5

NOVEMBER.

Sun., Nov. 1.....	2:36	8:48	15:07	21:02
Mon., Nov. 2.....	13.8	1.8	13.4	2.2
	3:10	9:24	15:39	21:37
Tues., Nov. 3.....	14.1	1.4	13.6	2.1
	3:42	9:58	16:09	22:11
Wed., Nov. 4.....	14.3	1.1	13.7	2.3
	4:12	10:31	16:38	22:44
Thurs., Nov. 5.....	4:41	11:05	17:07	23:1
	14.2	1.2	13.7	2.5
Fri., Nov. 6.....	5:13	11:39	17:38	23:51
	13.9	1.4	13.6	2.8
Sat., Nov. 7.....	5:45	12:15	18:13	.....
	13.6	1.8	13.4	.....
Sun., Nov. 8.....	0:32	6:21	12:56	18:54
	3.2	13.2	2.4	13.2
Mon., Nov. 9.....	1:14	7:04	13:40	19:41
	3.6	12.7	2.9	12.8
Tues., Nov. 10.....	2:07	7:54	14:34	20:39
	4.0	12.2	3.4	12.5
Wed., Nov. 11.....	3:09	8:58	15:37	21:45
	4.1	11.8	3.6	12.4
Thurs., Nov. 12.....	4:18	10:11	16:44	22:54
	3.9	11.8	3.5	12.6
Fri., Nov. 13.....	5:24	11:26	17:50	23:57
	3.3	12.2	3.0	13.3
Sat., Nov. 14.....	6:25	12:33	18:49	.....
	2.4	13.0	2.2	.....
Sun., Nov. 15.....	0:56	7:20	13:30	19:42
	14.2	1.3	14.0	1.4
Mon., Nov. 16.....	1:48	8:10	14:22	20:32
	15.2	0.1	15.0	0.6

DATE.	Time and height of high and low water.			
Tues., Nov. 17.....	2:38	9:00	15:10	21:22
	16.0	-0.8	15.7	0.0
Wed., Nov. 18.....	3:25	9:47	15:58	22:09
	16.6	-1.4	16.2	-0.2
Thurs., Nov. 19.....	4:11	10:34	16:44	22:56
	16.7	-1.6	16.3	-0.1
Fri., Nov. 20.....	4:57	11:20	17:31	23:45
	16.5	-1.3	16.0	0.4
Sat., Nov. 21.....	5:45	12:10	18:19	.....
	15.8	-0.7	15.4	.....
Sun., Nov. 22.....	0:35	6:34	13:00	19:11
	1.1	14.9	0.3	14.6
Mon., Nov. 23.....	1:29	7:28	13:55	20:06
	1.9	13.9	1.4	13.8
Tues., Nov. 24.....	2:27	8:28	14:53	21:08
	2.7	12.8	2.4	13.0
Wed., Nov. 25.....	3:32	9:38	15:56	22:16
	3.4	12.0	3.2	12.5
Thurs., Nov. 26.....	4:39	10:55	17:01	23:23
	3.7	11.6	3.7	12.3
Fri., Nov. 27.....	5:45	12:09	18:04	.....
	3.8	11.6	3.9	.....
Sat., Nov. 28.....	0:25	6:44	13:10	19:00
	12.4	3.5	11.8	3.8
Sun., Nov. 29.....	1:16	7:34	13:59	19:48
	12.6	3.1	12.1	3.6
Mon., Nov. 30.....	2:00	8:15	14:39	20:30
	13.0	2.6	12.4	3.4

DECEMBER.

Tues., Dec. 1.....	2:38	8:54	15:14	21:09
	13.3	2.1	12.7	3.1
Wed., Dec. 2.....	3:12	9:31	15:44	21:46
	13.5	1.7	13.0	2.8
Thurs., Dec. 3.....	3:45	10:07	16:14	22:20
	13.7	1.4	13.4	2.6
Fri., Dec. 4.....	4:18	10:43	16:47	22:58
	13.9	1.2	13.7	2.4
Sat., Dec. 5.....	4:54	11:19	17:22	23:35
	13.9	1.1	14.0	2.5
Sun., Dec. 6.....	5:29	11:57	18:00	.....
	13.9	1.3	14.1	.....
Mon., Dec. 7.....	0:17	6:09	12:37	18:42
	2.5	13.7	1.5	14.0
Tues., Dec. 8.....	1:01	6:52	13:22	19:27
	2.6	13.4	1.9	13.8
Wed., Dec. 9.....	1:50	7:40	14:11	20:18
	2.8	13.1	2.4	13.6

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Goedetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used in Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from Oh (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Rainfall from October 1 to 24, 1914, Inclusive.

STATIONS.	Maximum one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa Heights.....	1.80	19	5.51
Balboa.....	1.84	11	6.05
*Miraflores.....	1.84	11 & 21	6.37
Pedro Miguel.....	.94	7	5.17
Rio Grande.....	1.14	2	5.17
<i>Central Section—</i>			
Culebra.....	1.62	1	5.68
*Camacho.....	1.75	2	6.30
Empire.....	1.53	1	6.71
Gamboa.....	1.21	7	7.14
*Juan Mina.....	2.75	2	17.54
Alhajuela.....	3.27	17	19.57
*El Vigia.....	3.35	7	19.82
Frijoles.....	2.51	11	16.27
*Monte Lirio.....	.....	.....	14.11
<i>Atlantic Section—</i>			
Gatun.....	2.11	14	11.11
*Brazos Brook.....	3.17	15	19.13
Colon.....	3.99	14	19.74

*Standard rain gage—readings at 5 p. m. daily. Automatic rain gage at unstarred stations—values midnight to midnight.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS WITH PACIFIC PORTS.
The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acajutla, San José de Guatemala, Champerico, Ocos Salina Cruz, Acapulco, Manzanillo, San

Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central America line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports abovenamed between Balboa and Ocos.

The Luckenbach Steamship Company is operating a 10-day service between New York and San Francisco, calling at East San Pedro both ways. Its vessels handle cargo at Balboa when sufficient business offers.

The American-Hawaiian lines between New York and San Francisco, and New York and Honolulu, discharge and take on cargo at Balboa when sufficient business offers. At present, a vessel of this company passes through the Canal about every third day.

Grace and Company maintain an irregular service between New York and San Francisco, calling at way ports. Sailings are made about every 12 days. A vessel plying between San Francisco and Valparaiso, calling at way ports makes a round voyage about every 10 weeks.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Payta, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa for Valparaiso calling at Paíta, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service each way between New York and Southampton, making the following way ports: Antilla, Jamaica, Colon, Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores, and Cherbourg. Its vessels all arrive at Colon on Sundays and sail on Tuesdays.

The Compagnie Générale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veleioce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curaçao, Puerto Cabello, and Barcelona.

The Compania Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curaçao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line; vessels sailing about every six days, direct; between Colon and New York by the United Fruit Company and the Royal Mail Company, sailings via Kingston weekly and fortnightly, respectively; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

	Sails.	Arrives.
NEW YORK TO CRISTOBAL.		
*Allianca.....	P. R. R., Oct. 22.....	Oct. 28
*Colon.....	P. R. R., Oct. 29.....	Nov. 4
CRISTOBAL TO NEW YORK.		
†Panama.....	P. R. R., Oct. 29.....	Nov. 4
†Allianca.....	P. R. R., Nov. 4.....	Nov. 10
†Colon.....	P. R. R., Nov. 10.....	Nov. 16
NEW YORK TO COLON.		
Zacapa.....	U. F. C., Oct. 21.....	Oct. 28
Danube.....	R. M., Oct. 24.....	Nov. 1
Steamer.....	U. F. C., Oct. 28.....	Nov. 4
Steamer.....	U. F. C., Nov. 4.....	Nov. 11
Tagus.....	R. M., Nov. 7.....	Nov. 15
*Zacapa.....	U. F. C., Nov. 11.....	Nov. 18
COLON TO NEW YORK.		
Steamer.....	U. F. C., Oct. 29.....	Nov. 5
Zacapa.....	U. F. C., Nov. 5.....	Nov. 12
Essequibo.....	R. M., Nov. 10.....	Nov. 18
Santa Marta.....	U. F. C., Nov. 12.....	Nov. 19
Steamer.....	U. F. C., Nov. 19.....	Nov. 26
NEW ORLEANS TO COLON.		
Parismina.....	U. F. C., Oct. 21.....	Oct. 28

(Continued on Page 100.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon October 25.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Oct. 19.	Shimosa	British	N. Y. & Oriental S.S. Co.	Pensacola	Yokohama	General mdse.	5,200	5,193	3,777
Oct. 19.	Crown of Toledo	British	Direct Line	Glasgow	San Francisco	Coal	6,499	7,721	5,438
Oct. 19.	Lord Antrim	British	Irish Shipowners' Co.	New York	Callao	General mdse.	6,200	4,645	3,294
Oct. 19.	Kingsway	British	Kingsway S.S. Co.	Newport, Eng.	Esquimaux	Coal	4,659	4,063	2,320
Oct. 19.	Santa Cecilia	American	W. R. Grace & Co.	New York	San Pedro	General mdse.	6,000	6,748	4,612
Oct. 20.	Purley	British	Houlder, Middleton & Co.	New York	Auckland	General mdse.	8,698	5,805	4,424
Oct. 20.	Texan	American	American-Hawaiian S.S. Co.	New York	San Pedro	General mdse.	6,768	8,696	6,456
Oct. 20.	Lyra	American	Luckenbach S.S. Co.	New York	San Pedro	General mdse.	4,500	4,708	3,637
Oct. 20.	Fornebo	British	Fearnley & Eger	Norfolk	North Pacific	Ballast		4,488	2,993
Oct. 20.	Arna	Norwegian	Arna Company	New York	South America	General mdse.	5,000	6,257	4,767
Oct. 21.	Queen Eugenie	British	T. Dunlop & Sons	Cardiff	Puget Sound	Ballast		4,707	2,801
Oct. 22.	Burcombe	British	Burcombe S.S. Co.	Cardiff	Esquimaux	Coal	4,550	4,447	2,178
Oct. 22.	Penrith Castle	British	J. Chambers & Co.	Galveston	Yokohama	Cotton	3,270	4,371	3,323
Oct. 22.	Strathgyle	British	Burrell & Son	New Orleans	Tacoma	Ballast		4,644	3,418
Oct. 22.	Pacific	American	Emery Line	Boston	San Francisco	General mdse.	3,300	5,398	3,394
Oct. 22.	Harry Luckenbach	American	Luckenbach S.S. Co.	New York	San Pedro	General mdse.	3,300	3,001	2,047
Oct. 23.	Kenia	British	Glasgow King Shipping Co.	Liverpool	South America	General mdse.	1,032	6,440	4,917
Oct. 23.	King Edgar	British	American-Hawaiian S.S. Co.	Cardiff	Port Townsend	Ballast		4,486	2,443
Oct. 24.	Town	American	American-Hawaiian S.S. Co.	New York	San Pedro	General mdse.	5,107	6,649	4,064
Oct. 24.	Erslevia	British	Suewrights, Bacon & Co.	Manchester	Portland, Or.	Ballast		4,218	2,385
Oct. 24.	Malakka	Danish	East Asiatic S.S. Co.	St Thomas	Champerico	General mdse.	5,500	7,022	5,328

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Oct. 18.	Kronprinzessin Margareta	Swedish	W. R. Grace & Co.	Valparaiso	Malmo	Nitrates	5,987	5,289	4,006
Oct. 19.	Washingtonian	American	American-Hawaiian S.S. Co.	San Francisco	Philadelphia	General produce	8,200	6,844	4,699
Oct. 19.	Missourian	American	American-Hawaiian S.S. Co.	Hawaii	New York	General produce	11,217	10,100	7,469
Oct. 19.	Spithead	British	Clyde Shipping Co.	San Francisco	Avonmouth	Barley	7,771	5,169	3,691
Oct. 20.	Crown of Seville	British	Direct Line	San Francisco	London	General produce	8,600	7,684	5,465
Oct. 20.	Croughton	British	London & Northern S.S. Co.	Seattle	Newport News	Wheat	6,496	5,601	4,152
Oct. 23.	English Monarch	British	Monarch Steamship Co.	Seattle	Dublin	Wheat	7,202	5,437	4,089
Oct. 23.	Davenry	British	Imperial Steamship Co.	San Francisco	Madeira	Barley	5,818	4,345	3,276
Oct. 23.	St. Helena	American	E. J. Dodge Co.	San Francisco	New York	General	2,530	1,642	769
Oct. 23.	J. L. Luckenbach	American	Luckenbach S.S. Co.	San Francisco	New York	General produce	5,200	5,114	3,246
Oct. 23.	Oldfield Grange	British	Empire Transport Co.	Cruz Grange	Philadelphia	Iron ore	7,100	5,188	3,861
Oct. 23.	Ohioan	American	American-Hawaiian S.S. Co.	San Pedro	Philadelphia	General produce	6,000	6,844	4,699
Oct. 23.	Oregonian	American	American-Hawaiian S.S. Co.	Seattle	New York	Lumber	6,000	5,903	4,135
Oct. 25.	Barneson	British	Bank Line	San Francisco	Great Britain	Gasoline	7,760	6,271	4,381
Oct. 25.	Ocean Monarch	British	Monarch S.S. Co.	Valparaiso	Falmouth	Barley	6,200	4,708	3,436

EXPECTED ARRIVALS FOR TRANSIT FROM ATLANTIC.

Oct. 26.	City of Naples	Hall Line	Unknown	Gulfport
Oct. 26.	Arlington Court	Court Line	New York	Philadelphia
Oct. 26.	Isabella	Luckenbach S.S. Co.	Philadelphia	Unknown
Oct. 26.	Caldergrove	J. Hardie & Co.	Unknown	Port Arthur
Oct. 27.	Panaman	American-Hawaiian S.S. Co.	Unknown	Trinidad
Oct. 28.	Brodmount	Blue Star Line	Unknown	
Oct. 28.	Queen Adelaide	Dunlop S.S. Co.	Unknown	
Oct. 31.	Natica	Anglo-Saxon Petroleum Co.	Unknown	
Oct. 31.	Jamaica	Royal Mail	Unknown	

EXPECTED ARRIVALS FOR TRANSIT FROM PACIFIC.

Oct. 28.	George Fenwick	W. R. Grace & Co.	San Francisco
Oct. 28.	Nakar	East Asiatic S.S. Co.	San Francisco
Oct. 29.	Arizonian	American-Hawaiian S.S. Co.	San Francisco
Oct. 30.	Edgar H. Vance	Nehalem S.S. Co.	San Francisco

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessels	Line	From
Oct. 22.	Alm	Seeberg S.S. Co.	St. Thomas
Oct. 23.	Falk	Atlas Line	St. Thomas
Oct. 24.	Bayano	Elders & Fyffes	Limon

*DEPARTURES.

Date	Vessels	Line	For
Oct. 20.	Orotava	Royal Mail	Southampton
Oct. 20.	Vitalia	Vitalia Company	Philadelphia
Oct. 22.	Tancred	Earn Line	Galveston
Oct. 22.	Argo	Wilson, Sons & Co.	Norfolk
Oct. 23.	Gadeloupe	Cie. Gen. Transatlantique	St. Nazaire
Oct. 24.	Alm	Seeberg S. S. Co.	Bocas del Toro
Oct. 24.	Bayano	Elders & Fyffes	Bristol

*EXPECTED ARRIVALS.

Oct. 26.	Tagus	Royal Mail	Southampton
Oct. 26.	Dronning Olga	Seeberg S.S. Co.	Mobile
Oct. 26.	Centurian	Leyland Line	Liverpool
Oct. 29.	Evanger	H. W. Larsen	Unknown
Oct. 31.	Savaya	La Veloce	Genoa

*EXPECTED DEPARTURES.

Oct. 26.	Falk	Atlas Line	Limon
Oct. 26.	Centurian	Leyland Line	Unknown
Oct. 26.	Nubian	Leyland Line	Unknown
Oct. 26.	Dronning Olga	Seeberg S.S. Co.	Unknown
Nov. 3.	Falk	Atlas Line	Unknown
Nov. 3.	Danube	Royal Mail	Southampton
Nov. 3.	Savaya	La Veloce	Genoa

*Other than vessels using the Canal, United Fruit Company's regular vessels, and vessels in regular service with the United States.

PORT OF BALBOA.

*ARRIVALS.

Oct. 20.	Limari	South American S.S. Co.	Valparaiso
Oct. 21.	Mantaro	Peruvian S.S. Co.	Callao
Oct. 22.	Pennsylvania	Pacific Mail	San Francisco

*DEPARTURES.

Oct. 18.	Aztec	Pacific Mail	Iquique
Oct. 19.	Acajulla	Salvador S.S. Co.	Salina Cruz
Oct. 23.	Peru	Pacific Mail	San Francisco

*EXPECTED ARRIVALS.

Oct. 26.	Manavi	Pac. Steam Nav. Co.	Colombian ports
Oct. 27.	Tricolor	W. R. Grace & Co.	San Francisco
Oct. 29.	Chile	Pac. Steam Nav. Co.	Chilean ports
Oct. 29.	Quilpue	Pac. Steam Nav. Co.	Guayaquil

*EXPECTED DEPARTURES.

Oct. 26.	Limari	South American S.S. Co.	Valparaiso
Oct. 26.	Mantaro	Peruvian S.S. Co.	Guayaquil
Oct. 30.	Pennsylvania	Pacific Mail	San Francisco

*Other than vessels using the Canal.

(Continued from Page 99.)

COLON TO NEW ORLEANS.

Sails	Arrives	
*Atenas	U. F. C. Oct. 24	Oct. 29
Cartago	U. F. C. Oct. 28	Nov. 4
*Turrialba	U. F. C. Oct. 31	Nov. 5
Heredia	U. F. C. Nov. 4	Nov. 11
†Abangarez	U. F. C. Oct. 29	Nov. 3
Pariguina	U. F. C. Oct. 29	Nov. 5
†Atenas	U. F. C. Nov. 5	Nov. 10
Cartago	U. F. C. Nov. 5	Nov. 12

*Will carry mail from the United States

†Will carry mail to the United States.

*Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.

Irregular services between Cristobal and Gulf ports of the United States, with way calls at Central American and Mexican ports, are maintained by the Leyland and Harrison Lines, sailings about every fortnight, and the Seeberg Line, sailings about every 18 days.



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama

No communication either for publication or requesting information will receive attention unless signed with the full name and address of the writer.

NOTES OF PROGRESS.

Statement of Canal Tolls to November 1.

Tolls collected on tonnage through the Canal from August 15, the date of its opening, to November 1, amounted to \$735,182.32. To this should be added tolls on freight transported through the Canal prior to August 15 on barges operated by the Panama railroad, which amounted to \$11,610.69, making the grand total of tolls collected to November 1, \$746,793.01. The collections in detail were, as follows:

	Amt.
Prior to August 15.....	\$11,610.69
August 15 to August 31.....	88,232.60
September.....	269,863.00
October.....	377,086.72
Total.....	\$746,793.01

The collections in October show an increase over the previous month of \$107,223.72, or about 40 per cent.

The number of vessels that passed through the Canal northward during October was 40; number southbound, 45, including three launches.

Second Suspension of Canal Traffic.

Further movement at the base of the New Culebraside on Saturday, October 31, caused a second suspension of Canal traffic, which lasted until 2 p. m., Wednesday, November 4. After the clearing of the channel at this point on October 20, the dredges continued their operations there, widening and deepening the channel, but the second movement of the slide was sufficient to overcome the headway which had been made. Material was pushed forward into the channel, and at the same time upward from the bottom. The *Arizonan*, on the way from Pedro Miguel Lock to Gamboa, grounded opposite the slide on October 31, and was pulled off by tugs and returned to Pedro Miguel. All traffic past the slide was suspended, but vessels seeking transit were moored at Pedro Miguel Lock, Gamboa, and in the anchorage basin south of Gatun Locks, in readiness to be put through at the earliest practicable time. Since the resumption of traffic Wednesday afternoon, northbound vessels are being passed from Pedro

Miguel Lock to Gatun Lake; as soon as they are out of the way the transit of southbound vessels is to be resumed.

Award of Contract for Balboa Heights Station.

Contract for furnishing all labor necessary to erect and finish completely the passenger station of the Panama railroad at Balboa Heights, with waiting platforms and two public comfort stations, has been awarded to Eladio Lasso, for \$19,567.35. The contractor agrees to have the work acceptably completed within 140 days after receiving notice to begin work. He has been notified to begin not later than November 15.

Arrival of Lock Entrance Caisson.

The floating lock entrance caisson No. 1 arrived at Balboa on Thursday, October 29, in tow of the tug *Hercules*, from San Francisco. It has since been moored alongside the concrete wharf at Balboa, undergoing repairs and adjustments preliminary to the final test, which is to be made at the south end of Miraflores Locks. The voyage from San Francisco consumed 43 days, during the greater part of which unusually rough weather was encountered; this, in connection with the unusual height of the caisson, as compared to its length, made its towing difficult and hazardous. The seamen stationed aboard the caisson deserted at the first port of call, declaring that they would not risk their lives further, and the voyage was completed without a crew on the tow. The *Hercules* sailed from Balboa on October 31, on its return voyage to San Francisco.

Task Work on New Cristobal Pier.

The employment of laborers on the "Task" plan has been extended to include several features of the work on new pier No. 7 at Cristobal, and a scale of prices for such work has been authorized. The clamping and drifting of the caissons will be performed by a team of five men, three men to do the clamping, and two to do the drifting, at the rate of \$1.50 per section. The work of bolting the caissons will be performed by the same team as the one doing the riveting, which consists of three men. The approved price for riveting is \$1 per section, and for bolting 10 cents per section, making a total cost of this work per section \$1.10. The rate fixed for excavating the 6-foot cylinders is \$1 per lineal foot; for excavating the frustrums below the cylinders the price will be \$2 per cubic yard. This work is to be accomplished by a team of two men. The material to be excavated from the cylinders consists of clay, soft rock, and hard rock; the material in the frustrums below the cylinders is mostly hard rock. The price for unloading cement, in sacks, from box cars has been fixed at 20 cents per 100 sacks, the work to be performed by one man; the work of tying the empty sacks in bundles will be paid for at the rate of 10 cents per bundle of 100, to be handled by one man.

COTTON THROUGH CANAL.

First Cargoes of Southern Staple to Orient.—Saving by This Route.

The steamship *Penrith Castle*, which passed through the Canal on October 22-23, en route from Galveston to Yokohama with a cargo of 3,270 tons of cotton, was the first vessel to use the Canal in this traffic, which will, in all probability, become important. The importation of American cotton into Japan amounted to \$11,326,819 in value, in 1911, and had increased to \$32,573,054 in 1913, which amounts, at 10 cents per pound, to 325,730,540 pounds, or 162,865 tons. It is predicted that the importation in 1914 will be increased, rather than diminished, by the effects of the European war.

By using the Panama Canal, the *Penrith Castle* will save at least 5,280 nautical miles of travel. The distance from Galveston to Yokohama, via the Panama Canal, San Francisco, and the Great Circle, is 9,294 miles; via the Suez Canal and most direct sailing, about 14,575 miles. Rating the vessel's speed at 10 knots, the time saving will approximate 22 days on the outward voyage alone.

The *Penrith Castle* is 361 feet long, 42.6 feet in the beam, with a mean draft of 17.6 feet, and with a net registered tonnage of 2,337, Lloyd's rules, and is propelled by a 3-cylinder, triple expansion engine, with 24, 40, and 67-inch cylinders, and 45-inch stroke. The crew numbers 28 officers, and men. If its operating expenses on this route be rated at \$230 per day, the saving in cost for the outward voyage alone will amount to \$5,060.

The tolls collected, \$1.20 per ton on 3,418 tons, (including 111 tons of deck load) or \$4,101.60, should not be deducted from this saving, as an equivalent amount would have been collected for the use of the Suez route. If the vessel had elected to go by way of the Strait of Magellan, it would have had to travel 5,777 more miles than by the Panama Canal; this amounts to approximately 24½ more days at sea than required, or a cost of \$5,635. Subtracting the amount of Panama Canal tolls from this leaves a balance of \$1,533.40 in favor of the Canal route. The Cape of Good Hope route would have required about 7,700 more miles of travel than this route, or over 32 extra days at sea, which would cost at least \$3,258.40 more than the use of the Canal, on the basis of the figures given above. A second vessel carrying cotton to Japan made the transit of the Canal on October 30. This was the *City of Naples*, en route from Galveston to Yokohama, and carrying a cargo of 4,044 tons of cotton, and 1,000 tons of pig iron.

Work on New Canal Colliers Ahead of Schedule.

The progress report for the month ending September 30, on the new Canal colliers *Achilles* and *Ulysses*, now under construction at the yards of the contractor at Sparrow's Point, Md., shows that the estimated degree

of completion of the *Achilles*, as of that date, under the hull specifications, including equipment and installation of ordnance, was 45.1 per cent, of which 35.4 per cent was represented by work on the vessel, and 9.7 per cent by material on hand. The elapsed time since the date of the contract is 5.6 months; therefore, it is estimated that work on the vessel is 12 months ahead of contract time.

The estimated degree of completion of the *Ulysses*, under the hull specifications, including equipment and installation of ordnance, on September 30, was 50.9 per cent, of which 43.7 per cent represented work on the vessel, and 7.2 per cent material on hand. The elapsed time since the date of the contract is 5.6 months; therefore, it is estimated that the work is 1.8 months ahead of contract time. So far as can be judged at present, the progress made on the machinery is such that the completion of the vessels will not be retarded thereby.

Termination of Service.

All concerned—The following instructions will govern in the preparation of papers incident to terminating the services of employees:

1. Termination of service papers will be prepared in the Personnel Bureau for all divisions, with the exception of the Dredging and Mechanical Divisions, which will handle their personnel papers as formerly, and proper information should be furnished the organization clerks.

2. (a) The proper organization clerk in the Personnel Bureau should be informed of the last day upon which the employee will actually perform service. This date should not be changed unless absolutely necessary, and then only after first notifying the organization clerk, as the papers he prepares are based on the information he receives from the field, and any subsequent change without his knowledge nullifies them.

(b) Terminations should be made effective only at the close of business, except in case of immediate discharge for cause.

3. If the amount of leave due an employee is unknown, it can be ascertained by telephoning the leave clerk in the Personnel Bureau (Telephone 168, Balboa Heights.)

4. (a) If the amount of leave due an employee is five (5) days, or less, report of absence (form FC 484) should be prepared, effective on the next working period after the employee has ceased work, and immediately forwarded to the chief timekeeper, remark being made thereon showing cause for termination of service.

(b) If the amount of leave due an employee is in excess of five (5) days, request for leave should be prepared on form PC 194-4, effective on the next working period after the employee has ceased work, and immediately forwarded to the Personnel Bureau. All information required on this form should be shown.

5. In all cases of termination of service it is necessary that the Personnel Bureau be given the following information:

- Steamship transportation desired.
- Workmanship and conduct ratings.
- Reasons for termination of service.
- Address on Isthmus.
- Address in United States.
- Last period actually worked.
- Is service letter desired?

6. The organization work of the various departments is being handled by the following clerks, and telephone communications

between the field offices and the Personnel Bureau should be made direct with these clerks:

Mr. Graff, Supply Department, Telephone 211.

Mr. Fisher, lock operation, canal transportation, electrical, municipal engineering, fortifications, general construction, Telephone 294.

Mr. Cain, health, accounting, Executive Office, dredging, mechanical, terminal construction, Telephone 280.

Mr. Becker, Panama Railroad Company, Telephone 280. C. A. McILVAINE,

Executive Secretary.

BALBOA HEIGHTS, C. Z., October 20, 1914.

Red Cross Benefit Ball to be Held November 7.

All concerned: It has been decided to hold the Red Cross benefit ball on Saturday evening, November 7, beginning at nine o'clock, as it was found that the date previously adopted, Monday, November 2, is a day held in great veneration by the members of the Catholic Church, and, as the members of this church have given the Red Cross loyal support, it is desired to avoid any action that might in any way be misconstrued.

For the Executive Committee.

C. A. McILVAINE, *Chairman.*

BALBOA HEIGHTS, October 30, 1914.

Inhabitants of Limon Village Receive Considerate Treatment.

The village of Limon, situated on an island in Gatun Lake, forms a part of the area to be taken over by the United States for Canal purposes. There are about 75 people in the village and vicinity living on small islands. Settlement has been made with about 50 of them, not only for their homes, but for their fields and improvements they have on the islands and on the mainland below the 100-foot contour line.

The inhabitants have been advised that they may continue in undisturbed possession of the property until the beginning of the dry season, when an opportunity will be afforded

them of removing the material in their houses to the mainland. In case they desire to locate a new townsite on the mainland, in the same general vicinity, and above the 100-foot contour line, the services of the Canal engineers will be loaned them for the purpose.

Report of Board on New Ancon Hospital.

The board, consisting of Lieut.-Col. G. D. Deshon, Capt. R. E. Wood, and C. M. Hitt, appointed by the Governor to consider a site for the permanent hospital at Ancon, has submitted its report and recommendations, which have been approved. The board found but two available sites, one near the entrance to the present hospital reservation, now occupied by the residence of the hospital superintendent and others on his staff; and the other on the site of the present wards, Nos. 1, 2, 3, 4, and 5. The latter site was recommended as the best for the purpose. The project as recommended calls for five groups of ward buildings erected on the edge of the hill, with a kitchen and dining room, and administration and out-patients buildings in the center of the group. It is planned to have the admitting office and dispensary in a detached building farther down the hill. The board considered that the above would comprise all of the necessary new construction, with the exception of quarters. Later, it might be thought advisable to build a new nurses' home on the site of present wards Nos. 11 and 12. The board further recommended that the construction planned be completed in a period of five years. An inspection has shown that the present buildings will be good for some time to come. No steps can be taken toward carrying out the above recommendations until the money has been appropriated by Congress therefor.

Increased School Accommodations at Culebra.

It has been found necessary to increase the accommodations for white schoolchildren at Culebra by using a part of the upper floor of the old administration building. Since school opened it has been using the rooms on the lower floor of this building, formerly occupied

CANAL EXCAVATION TO OCTOBER 1, 1914.

By French companies.....	78,146,960
French excavation useful to present Canal.....	29,908,000
By Americans—	
Dry excavation.....	130,299,936
Dredges.....	95,961,328
Total.....	226,261,264
May 4 to December 31, 1904.....	243,472
January 1 to December 31, 1905.....	1,799,227
January 1 to December 31, 1906.....	4,948,497
January 1 to December 31, 1907.....	15,765,290
January 1 to December 31, 1908.....	37,116,735
January 1 to December 31, 1909.....	35,096,166
January 1 to December 31, 1910.....	31,437,677
January 1 to December 31, 1911.....	31,603,899
January 1 to December 31, 1912.....	30,269,349
January 1 to December 31, 1913.....	27,177,960
January 1 to September 30, 1914.....	10,802,992

TOTALS BY SECTIONS AND AMOUNT TO BE EXCAVATED.

SECTIONS.	Amount excavated.	Remaining to be excavated.
<i>Atlantic</i> —		
Dry excavation.....	Cu. yds. 8,861,424	Cu. yds. 25,553
Wet excavation.....	41,677,686	2,840,224
Total.....	50,539,110	2,865,777
<i>Central</i> —		
Chagres section.....	12,945,824	251,000
Culebra section.....	104,171,589	3,662,231
Total.....	117,117,413	3,913,231
<i>Pacific</i> —		
Dry excavation.....	11,349,068	.....
Wet excavation.....	47,255,673	5,805,315
Total.....	58,604,741	5,805,315
Grand total.....	226,261,264	12,584,323

by the Supply Department, and by the drafting force of the Division of Operation and Maintenance, but due to the unexpectedly large enrollment they have become overcrowded. The enrollment on the opening day of this year was 84, as compared with 10 in June last year. The entire school arrangement at Culebra is temporary, but it will probably have to be continued for the greater part of the present term.

Notice to Employees.

The chiefs of clinic of Ancon Hospital report that many employes and members of their families come to the hospital for office consultations without having first consulted their own district physician. This custom has grown until it constitutes an abuse. Inasmuch as The Panama Canal provides physicians in each district for the express purpose of examining and treating employes and their families who are not in need of hospital care, these physicians should be consulted before applying at the outpatients department of the hospitals, and patients will ordinarily be referred to the chiefs of clinic when, in the opinion of the district physicians this is necessary, by note from the latter physician.

Ordinarily, return transportation will not be issued by the chiefs of clinic, except to those patients who have a proper request from district physicians or appointment card from the clinic. CHAS. F. MASON,

Approved: Chief Health Officer.

GEO. W. GOETHALS,

Governor.

BALBOA HEIGHTS, C. Z., Oct. 30, 1914.

Campaign of Rat Killing at the Wharves.

As part of the precautions against the introduction of plague on the Isthmus, vessels coming to the Canal ports from plague infected ports are being treated in the harbors according to the quarantine regulations set forth in circular No. 626. On docking, they are required to breast off at least six feet from the wharf or pier; to provide all braces and lines with approved ratguards, and to keep their gang planks raised at night. In addition, the forces of the Panama railroad in charge of the wharves are keeping up a campaign for destroying the rats already infesting the wharves. At Balboa, a gang of seven men is engaged regularly in trapping and poisoning rats and destroying their nests, and a smaller force is similarly engaged at Cristobal and Colon. The principal wharf now in use at Balboa, the French steel pier, and the old pile piers at Colon, were built before the development of modern ideas of ratproof construction, and afford many places for hiding and nesting. Although the new terminal wharves were built according to the most advanced practice with respect to rats, it is found that they harbor a small number.

School Boys Employed in Commissaries.

As a part of the industrial training plan, started under the direction of the Supervisor of Industrial Training in the Canal Zone schools, arrangements have been made to employ seven high school boys a part of their time in the commissary stores.

Died.

EVANS—At Ancon Hospital, November 3, Mrs. Mary E. Evans, wife of W. E. Evans of Cristobal.

CANAL WORK IN SEPTEMBER.

Monthly Report of the Governor to the Secretary of War.

BALBOA HEIGHTS, C. Z.,

October 26, 1914.

The Honorable the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of operations on the Isthmus for the month of September, 1914:

Department of Operation and Maintenance.

WORK UNDER ENGINEER OF MAINTENANCE.

Lock construction and maintenance—Five towing locomotives were received, making a total of 35 to the end of the month. The transformer rooms at Miraflores were completed and this completes all transformer rooms for the locks. The mechanical and electrical installation of chain fender machines for all locks is about 97 per cent completed. Twenty-four fender chains have been ordered, of which seven have been installed at Gatun and three at Pedro Miguel.

The floating caisson in tow of the tug *Hercules* left San Francisco on September 16, and is expected to arrive at Balboa during the last week of October.

Sixty-five lockages were made during September at Gatun, 65 at Pedro Miguel, and 63 at Miraflores. There were 54 through commercial lockages consisting of 56 seagoing vessels.

Municipal engineering—In addition to the maintenance work in both the north and south districts, the Division of Municipal Engineering began construction of the permanent fuel oil handling plant at the Atlantic entrance and the preparation of site for the new quarantine station at the Pacific entrance. Construction of the new waterworks for Panama and the southern district was continued. Cast iron pipe was received for the Gamboa-Miraflores pipeline, and several thousand feet of rock trench for the line were excavated.

Meteorology and hydrography—The rainfall for the month of September was generally above the normal, being heaviest over the upper Chagres River basin and along the Atlantic coast, monthly totals ranging from 6.38 at Miraflores, to 28.92 inches at Indio on the upper Chagres. The maximum precipitation recorded in any one day was 3.39 inches at Trinidad on the 16th. The average rainfall over the Chagres River basin figures 33 per cent above normal—15.97 inches against a 14-year average of 12.02 inches.

Division of Terminal Construction.

PACIFIC TERMINALS.

Shops—At Balboa shops, the contractor completed the erection of steel rolling doors. The addition of a paint grinding plant, and of a 10-ton crane to serve the 150-ton riveter was authorized.

Dry dock—Design work on the dry dock and entrance basin was advanced. Construction included excavation of 13,881 cubic yards from the north wall and the completion of excavation at the head wall as far around on the south side as the axis line of the dock. A plant, consisting of four $\frac{1}{2}$ -yard mixers, and locomotive cranes for placing, laid 15,295 cubic yards of concrete. About 900 feet of the south wall has been brought up to elevation -30, and some of the monoliths to elevation -20.5. At elevation -39, the wall was built up in alternate monoliths 60 feet long, each monolith being separated from the adjacent monolith by an open key four feet by four feet, which will be filled later. Expanded metal has been used on the east and west

edges of all these keys to insure watertightness. Foundations were prepared for the north wall of the entrance pier which will form the south wall of the proposed dry dock No. 2. The rock exposed varies from hard andesite to a conglomerate of boulders embedded in rotten rock, which overlies the hard, yellow seamy rock. Preparations were made for putting in rail anchorages, and the mixing plant was made ready for laying of concrete.

Coal pockets—Rock fill was placed around the runway piers in the west area in the coal pocket, and 114 cubic yards of concrete were placed.

Quay wall and pier—Excavation in the quay wall, Section d-e-f, was easier than in previous months, because it was out in the water and free from obstruction. The total amount excavated from cylinders was 537 cubic yards, 80 per cent of which was rock. All of the cylinders in Section e-f were on rock at the end of the month, and 1,771 cubic yards of concrete had been placed as filler. The labor cost for mixing concrete was materially reduced.

The laying of brick on pier No. 1 was retarded by wet weather, but 56,052 square feet were laid and grouted.

Fuel oil plants—High tides retarded the work of placing cylinders for the fuel oil handling plant. In one place, a large part of the false work built to support the 60-foot cylinders was torn out. Rock was encountered in the cylinders at approximately 60 feet below mean sealevel.

Quarries—At Sosa Hill, three shovels were operated, and 53,557 cubic yards were excavated. Of this amount, 37,763 cubic yards consisted of rock.

At Ancon quarry, 47,565 cubic yards of rock were crushed.

ATLANTIC TERMINALS.

East breakwater—The construction of trestle for the east breakwater fill was continued. The dry fill was begun on September 16, and the wet fill on September 22. The total fill in place at the end of the month measured 29,586 cubic yards.

Coaling plant—The filling of caissons under the reloader wharf was begun on September 18. The concrete piers for viaduct posts on the east side, and the additional piers for jack supports for the bridge trucks were completed. The wet fill necessary to bring the area at the south end of the coal storage up to 10 feet above sealevel, and that back of the west bridge track wall, were completed. A lack of caisson material retarded the work. One thousand two hundred and sixty feet of cylinders were borrowed from other parts of the work and placed in use. A concrete cylinder was set under the south end of the unloader wharf on September 4, and at the end of the month was resting on rock, having penetrated 34 feet of coral rock and sand. No difficulty was experienced in sinking the cylinder, the conditions appearing to be more favorable than at Balboa where the material is stiff clay and sand. A task work system for several of the operations connected with the sinking of caissons was approved, and the work will be begun on October 1.

FLOATING CRANES.

At the end of the last month, the jib for the *Ajax* had been completed preparatory to floating it over the lock chamber. It was lowered on September 28 upon the roller supports. The pressure at the head roller was such that

the bottom angles of the lower chord were bent at the line of contact. The work was suspended, and at the end of the month the alterations had not been completed.

During the month, the installation of machinery in the winch house on the crane *Ajax* was completed, except the driving mechanism for the storage drums. All the electrical connections have been made, some, however, are only temporary. Steam was raised in the boilers on the 21st, and the power plant unit and exciter unit were run without load for three days, in order to dry out the generators, after which the main hoist machinery was allowed to run light for eight hours. It is planned to test the luffing mechanism at the beginning of next month, and after operating successfully, the crosshead will be run to the top and the connecting links will be pinned to the same. The crane will then be ready for the attachment of the jib.

On the jib for the *Hercules*, one riveting gang is completing the work, and it is thought that in one week all the riveting on this jib will be finished, when arrangements can be started to prepare the jib for attachment to the crane structure.

LANDSCAPE ARCHITECT.

A general plan was prepared for the terraces in front of and at the sides of the Administration Building at Balboa Heights. The laying of concrete for the carriage turn and other municipal work at Balboa Heights was done.

Dredging Division.

The status of dredging on September 30 was, as follows:

LOCATION.	September excavation. Cu. yds.	Remaining Sept. 30. Cu. yds.
Miraflores Locks to Pacific.	108,189	1,392,357
Miraflores Lake.....		306,434
Culebra Cut.....	376,177	3,662,231
Gatun Lake.....		51,000
Gatun Locks to Atlantic..	55,621	387,886
Total Canal prism.....	539,987	5,799,908
Balboa terminals.....	282,796	
Atlantic terminals.....	337,287	
Gravel.....	36,700	
Sand.....	16,200	
Grand total.....	1,212,970	

A new slide developed on the east bank of Culebra Cut allowing the Obispo Diversion to flow into the Canal. About 60,000 cubic yards of rock moved into the prism.

The hydraulic grader surfaced an area of 13,000 square yards of the banks preparatory to sowing them with Bermuda grass.

The destruction of water hyacinths was continued; 15,000 square yards of plants were poisoned and 2,680 square yards were pulled and piled on the bank. The greater part of the work was in the Obispo River, which is choked with lettuce and grass with hyacinths scattered throughout. The whole area is being covered, in order that all the hyacinths may be destroyed.

Mechanical Division.

The general character of the work performed was the same as in the previous months, with a further reduction in volume resulting in a decrease in force of 81 gold roll and 94 silver roll employees. Night shifts were taken off in the machine and blacksmith shops at Balboa, and in the machine shop at Cristobal, but night work was continued in the boiler shops at both places on account of the urgent necessity of supplying caisson cylinders.

Shop orders authorized during the month numbered 841; those left over from previous

months, 431; those completed during September, 812; carried forward into October, 460. The output of the foundry was 220,701 pounds of iron; 83,360 pounds of steel, and 17,035 pounds of brass. Hostling was done on 4,989 pieces of equipment. Shop repairs were made on 1,497 cars, and field repairs on 4,850.

Department of Canal Transportation.

Fifty-two ships passed through the Canal in September, 27 southbound and 35 northbound. Collections for tolls amounted to \$263,220; for pilotage, \$2,835; launch service, \$36.30, or a total of \$266,091.30. From the number of Canal certificates issued and the amount of correspondence with relation to the navigation, it is judged that there will be a decided increase in traffic in the near future. The training of pilots, and of the forces at the locks, has materially reduced the time of transit.

Twenty-one vessels were admeasured, 34 inspected to see that their certificates conform to the rules, and seven were remeasured. Tables appended to this report (*) show the business at the Atlantic and Pacific entrances, and through the Canal, during September. The Auditor is now at work on a statistical statement, which is designed to give in brief form the details of Canal business.

Supply Department.

The force report for the last Wednesday in September showed a total of 28,199 employees of The Panama Canal and Panama Railroad Company, of whom 4,288 were white Americans and 23,911 were laborers. Of the latter, approximately 1,100 were Europeans, and the balance West Indian negroes. The occupants of government quarters numbered 7,223 white Americans, of whom 4,229 were men, 1,489 women, and 1,505 children; 938 Europeans, of whom 832 were men, 35 women, and 71 children; 8,649 West Indians, of whom 5,801 were men, 1,187 women, and 1,661 children. The total force was reduced 684; the force of white Americans 241, and of laborers 443, during the month.

Congestion in family quarters in Ancon and Balboa continued, due to the removal from Culebra and Empire of the administrative offices. Practically all bachelors have been transferred from Culebra, and the quarters formerly occupied by them have been converted into nonhousekeeping quarters for families who are living in specially assigned houses at Empire. Rent is charged for all these quarters, as well as for regular quarters at Culebra especially assigned. The applications for assignment to rented quarters have been far in excess of the number of quarters available.

Buildings—The removal of the administrative forces to the new Administration Building at Balboa Heights was completed during this month. Gatun substation was completed. Work was begun on the medical storehouse at Ancon, and on the dairy farm buildings at Corozal. Plans and specifications were prepared for the new railroad station at Balboa Heights, which is to be constructed by contract.

Material and supplies—The value of material received during the month of September was \$669,832.44. It came forward in 26 steamers, and the total weight of the cargo exclusive of lumber and piling was 14,512 tons.

*The tables alluded to are not printed in the CANAL RECORD, as a table containing similar information was published in its issue of October 28.

Accounting Department.

The cash balance in Canal construction appropriations on September 30, was \$19,992,805.46; in the fortifications appropriations, \$4,883,856.14. The pay rolls for September, exclusive of the Panama railroad and the fortifications, amounted to \$1,119,949.60, and the fortifications roll amounted to \$52,280.42. Payments by the disbursing clerk in Washington amounted to \$1,028,133.59; by the Paymaster on the Isthmus, \$1,601,757.39. Collections on the Isthmus amounted to \$973,432.74, of which \$466,805.27 was repaid to appropriations, \$231,909.23 was trust funds, and \$274,718.24 was covered into the Treasury as miscellaneous receipts. Of the miscellaneous receipts, \$263,220 was collected on account of tolls, as compared with \$98,066.19 in August. Deposits in the amount of \$168,591.01 were made with Assistant Treasurers to be applied in payment of tolls and other charges. Revenues from Canal Zone and miscellaneous funds were \$304,412.14, and disbursements under the same heading amounted to \$355,161.86.

Health Department.

No cases of yellow fever, smallpox, or plague originated on or were brought to the Isthmus during the month. The health of employes continued good. The number of names on the rolls for the preceding month was 40,623. On this basis, the admissions to hospitals and quarters on account of illness, 1,238, gave a rate of 365.70 per thousand, as compared with 367.62 for the preceding month, and 484.12 for the corresponding month last year.

The total number of deaths from all causes was 22; eighteen from disease, or 5.31 per thousand, as compared with 7.30 per thousand for the corresponding month last year. The admission rate to hospitals and death rate for disease for black employes were 144.84 and 5.36 per thousand, respectively, as compared with 366.04 and 5.41 for white employes. The admission rate to hospitals and quarters for malaria was 64.30 per thousand for blacks, as compared with 144.25 for whites. The death rate for Americans was 9.43, as compared with 7.66 for Europeans. The admission rate to hospitals for Europeans for disease was 382.69, and for Americans, 360.85. The admission rate for malaria among Europeans was 130.18; for Americans, 63.68.

On July 31, one case of beriberi was admitted to Santo Tomas Hospital. During the month of August, two more cases were admitted, and in the month of September 16 cases. All were Panamanian adult males. Nine cases were from Chiriqui prison, five from the city of Panama, four from the city of David, and one from the city of Colon. Among the 19 cases there were five deaths. The outbreak is being carefully investigated, and a full report will be made next month.

Executive Department.

Executive Office—Incident to the concentration of administrative forces in the new Administration Building at Balboa Heights, a new system of handling administrative work was instituted in the Executive Office. The plan of each division or department head having a clerical force under his direction was abandoned, and in its place is a system by which the Executive Office does all of the administrative work for all of the departments and divisions whose heads are housed in the new Administration Building. This excludes only the Dredging and Mechanical Divisions,

the Commissary Department, and such small clerical force as must be maintained at various offices in the field. Readjustment to the new conditions had practically been effected at the end of the month. It is already evident that a great volume of work will be handled more expeditiously, and at less cost, under the new system than would have been possible under the old, where inherently there was much duplication of administrative work.

Division of Civil Affairs—Approximately double the normal business of any prior month was done by the customs service. The new customs regulations have been in force and are meeting present requirements, although further simplifications will be possible. Customs inspectors, acting as boarding officers, have begun to take orders for water, coal, commissary supplies, and to transact other miscellaneous business with vessels on behalf of the captains of the ports, and under their direction.

Administration of estates—Thirty-eight estates were settled during the month, with a total value of \$2,981.48, and 42 estates were in course of settlement.

Postal service—Postmasters remitted on account of stamp sales, second-class mail collections, and postage due collections, \$6,115.72. The money order business aggregated \$256,502.20, and the fees on this business amounted to \$1,212.90. Postal savings deposits for the month amounted to \$180,321, and the withdrawals to \$180,474. There was a balance of postal savings funds on hand at the close of the month of \$771,728. On September 8, the Executive Order authorizing the substitution of deposit money orders without fee, instead of postal savings certificates, was signed, and this system became effective October 1. The postal laws and regulations of the United States not locally inapplicable were extended to the Canal Zone on August 14.

THE CANAL RECORD—Arrangements were made for publication in **THE CANAL RECORD** of statistics of traffic through the Canal, and it is planned to devote as much space as possible to shipping news.

Police and Fire Division—Arrests during the month numbered 511, of which 496 were of males and 15 females. Sixty-nine convicts were confined in the penitentiary during the month. The cost of subsisting and guarding them was \$1,304.96, and the value of the labor performed by them was \$1,073. Two fires and one false alarm were reported during the month.

Courts—In the District Court seven civil, 43 criminal, and 23 probate cases were settled; five civil, 47 criminal, and 40 probate cases were filed; 116 cases of all kinds were pending on September 30. In the Magistrates' Courts, 26 civil and 508 criminal cases were tried.

Panama Railroad.

Cargo handled at Colon and Cristobal amounted to approximately 70,755 tons, which includes 12,000 tons of cargo rehandled on account of car shortage and necessary separations of cargo. Approximately 7,000 tons of coal were bunkered into 20 steamers during the month.

At Balboa, approximately 12,000 tons of cargo were handled from 19 ships arriving, and approximately 10,000 tons handled for 21 ships departing.

The preparation of contract drawings for pier No. 7 was continued during the month. Trestle work was continued, and about 60

per cent of the total is in place. Wash drill soundings were continued, 44 per cent of the total soundings required being completed.

Work on the duct line was continued by the telephone and signal forces, and a total of five miles was completed, making the entire line 95 per cent completed.

Respectfully submitted,

GEO. W. GOETHALS,
Governor.

Emigration from the Isthmus Continues.

The report of quarantine operations at the Atlantic and Pacific terminal ports for the month of September shows an excess of emigration over immigration of 1,155 persons, as compared with a net emigration in August of 701. The total net emigration since the exodus first began in July, 1913, has been 17,877 persons, the greater part of whom were laborers returning to their former homes on account of the closing down of Canal work.

The total number of persons embarking at the ports of Cristobal and Colon for foreign ports during September was 3,978, consisting of 1,602 cabin, and 2,376 steerage passengers. The number of persons landing from foreign ports was 1,388 cabin, and 1,169 steerage passengers. The excess of those who embarked over those who landed was 1,421.

The immigration from Europe in the steerage class has almost entirely ceased, due probably to the war, the figures for September constituting a new low record, only five deck passengers having been reported for the month. As usual, Jamaica and the other West India islands contributed a large part of the arrivals in the steerage class, 468, but the number of arrivals was approximately 25 per cent less than for August. Three hundred and eighty-three deck passengers came from the United States, 151 from Colombia, 89 from Costa Rica, and 29 from Cuba. The number of passengers arriving from the United States in steerage in September was unusually large. A total of 231 persons entered the Atlantic ports from Bocas del Toro, and 294 from other coast towns of the republic; the arrivals from Bocas del Toro were about 60 per cent less than in August. Of the arrivals at Cristobal and Colon, 1,684 were men, 617 were women, and 291 were children. The number of persons arriving "In transit," 876, shows a considerable falling off.

The number of persons arriving at the ports of Balboa and Panama from foreign ports during September was 475, consisting of 355 cabin, and 120 steerage passengers. The number of persons embarking at these ports was 209, consisting of 173 cabin, and 36 steerage passengers. The number of those who landed over those who embarked was 266. No quarantinable disease was discovered among the arrivals during the month.

Ninety-three vessels entered at the Atlantic ports, and 47 at the Pacific ports, a total of 140, as compared with 124 for the preceding month.

Joint Land Commission Calendar of Cases.

The following is a calendar of cases set for hearing by the Joint Land Commission, National Palace, Panama, for the week ending November 7:

Wednesday, November 4—Docket No. 1433, Las Cascadas Estates Company, Limited.

WILLIAM TAYLOR, Secretary.

JOINT LAND COMMISSION.

Opinion.

Opinion No. 150, docket No. 1884, October 26, 1914, in the matter of the claim of Antonio Enseñat for property located in Empire—This case came on to be heard on a motion filed herein on behalf of the claimant by his attorneys, which motion was joined in by practically all the attorneys practicing before the commission, to determine the question of the jurisdiction of the commission in claims of this class.

It is admitted by the attorneys for the claimant, Antonio Enseñat, and by the attorneys for the Government of the United States, that the Panama Railroad Company is now, and for more than half a century has been, a duly organized corporation under the laws of the State of New York, and that said railroad company, on or about the first day of July, 1907, owned certain lands in the Canal Zone in fee simple, and on said date was owning and operating a railroad across the Isthmus of Panama, known as the Panama railroad; that on said date the said Panama Railroad Company executed to the claimant a lease for a certain portion of its lands within the Canal Zone for a period of 15 years:

That said contract of lease was in writing and provided for the revocation of said lease by the said Panama Railroad Company, as is set out in Article 10 of said lease, as follows:

"Article 10. Irrespective of and in addition to any other provisions hereof, the lessor company reserves the right, hereby agreed to by the lessee, at any time to rescind and annul this agreement of lease upon 30 days' notice in writing to the lessee and thereupon all the rights of the lessee hereunder, or otherwise, shall come to an end, but in case of such termination the lessee shall be at liberty to remove within 15 days after the expiration of said 30 days any buildings or other improvements which he may have erected upon said land and which can be removed therefrom and shall be entitled to be paid by the lessor company the fair and reasonable value, at that time, of such buildings or other improvements which cannot be removed, and also for the fair and reasonable value of the then unexpired term of this agreement of lease, all such fair and reasonable value to be conclusively determined and be payable in the manner following and in such manner only:

"Each of the parties hereto shall, upon the demand of the other, appoint one arbitrator and the two so nominated shall choose and appoint a third arbitrator, and the arbitrators so constituted shall proceed to fix and determine such fair and reasonable value. If either party within 30 days of such demand fail to appoint an arbitrator, such arbitrator may be appointed by the other party to this lease. The award of such arbitrators, or a majority of them, shall be binding and conclusive upon the parties hereto, and the lessor company shall pay to the lessee and the lessee shall accept from the lessor company the sum so fixed by said arbitrators or the majority thereof, within 30 days after the rendering of the decision in full demand and satisfaction for such buildings or other improvements."

It is further admitted that by Act of Congress of the United States, approved August 24, 1912, entitled, "An Act to provide for the opening, maintenance, protection, and operation of the Panama Canal, and the sanitation and government of the Canal Zone," it is provided, in Sections 1 and 3 of said Act, as follows:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the zone of land and land under water of the width of 10 miles extending to the distance of five miles on each side of the center line of the route of the Canal now being constructed thereon, which zone begins in the Caribbean Sea three marine miles from mean low water mark and extends to and across the Isthmus of Panama into the Pacific Ocean to the distance of three marine miles from mean low water mark, excluding therefrom the cities of Panama and Colon and their adjacent harbors located within said zone, as excepted in the Treaty with the Republic of Panama dated November 18, 1903, but including all islands within said described zone, and in addition thereto the group of islands in the Bay of Panama named Perico, Naos, Culebra, and Flamenco, and lands and waters outside of said limits above described which are necessary or convenient or from time to time may become necessary or convenient for the construction, maintenance, operation, sanitation, or protection of the said Canal or of any auxiliary canals, lakes, or other works necessary or convenient for the construction, maintenance, operation, sanitation, or protection of said Canal, the use, occupancy, or control whereof were granted to the United States by the Treaty between the United States and the Republic of Panama, the ratifications of which were exchanged on the twenty-sixth day of February, 1904, shall be known and designated as the Canal Zone, and the Canal now being constructed thereon shall hereafter be known and designated as the Panama Canal. The President is authorized by treaty with the Republic of Panama to acquire any additional land or land under water not already granted, or which was excepted from the grant, that he may deem necessary for the operation, maintenance,

sanitation, or protection of the Panama Canal, and to exchange any land or land under water not deemed necessary for such purpose for other land or land under water which may be deemed necessary for such purposes, which additional land or land under water so acquired shall become part of the Canal Zone.

"Section 3. That the President is authorized to declare by Executive Order that all land and land under water within the limits of the Canal Zone is necessary for the construction, maintenance, operation, sanitation, or protection of the Panama Canal, and to extinguish, by agreement when advisable, all claims and titles of adverse claimants and occupants. Upon failure to secure by agreement title to any such parcel of land or land under water the adverse claim or occupancy shall be disposed of and title thereto secured in the United States and compensation therefor fixed and paid in the manner provided in the aforesaid Treaty with the Republic of Panama, or such modification of such Treaty as may hereafter be made."

It is further admitted that in compliance with said Act, the President of the United States of America, on the 5th day of December, 1912, issued his Executive Order, which is in words and figures following:

EXECUTIVE ORDER.

"By virtue of the authority vested in me by the Act of Congress entitled 'An Act to provide for the opening, maintenance, protection, and operation of the Panama Canal, and the sanitation and government of the Canal Zone,' approved August 24, 1912, I hereby declare that all land and land under water within the limits of the Canal Zone are necessary for the construction, maintenance, operation, protection, and sanitation of the Panama Canal, and the Chairman of the Isthmian Canal Commission is hereby directed to take possession, on behalf of the United States, of all such land and land under water; and he may extinguish, by agreement when practicable, all claims and titles of adverse claimants to the occupancy of said land and land under water."

WM. H. TAFT,

THE WHITE HOUSE,
December 5, 1912."

It is further admitted that on the fifth day of June, 1914, the Panama Railroad Company sought to cancel the aforesaid lease held by the claimant, by serving upon him the notice provided in Article 10 of said lease, which notice is, as follows:

"THE PANAMA CANAL Canal Zone LAND OFFICE.

Ancon, June 5, 1914.

A. Enseñat,
Empire.

SIR:

"Your lease for Lot 8, Block 5, village of Empire, is hereby cancelled effective June 30, 1914, as provided by the articles of the lease.

"No further rentals will be collected for periods beyond June 30, 1914, although you will be permitted to continue the occupancy of this lot until September 30, 1914, and on the day after this latter date you will be expected to remove the improvements of all and every kind from the leased property.

Respectfully,

R. S. CARLSON,
Land Agent."

It is contended by the attorneys for the claimant that claimant's right for damages is against the Government of the United States under the Treaty between the United States of America and the Republic of Panama, ratified February 26, 1904, and is, therefore, within the jurisdiction of the Joint Land Commission by reason of the fact that the claimant's lease was terminated by the Government of the United States for Canal purposes.

On the other hand, it is strongly insisted by the attorneys for the United States that said claim grew out of a contract with the Panama Railroad Company, which is a private corporation separate and distinct from the Government of the United States, and that said claim is not within the scope of said Treaty and, therefore, not cognizable by the Joint Land Commission.

Without giving any consideration to the merits of the claim involved, the Joint Land Commission in this instance has limited its consideration solely to the determination of the question of jurisdiction.

The Joint Land Commission recognizes the law to be well established that the commission has only such powers as may be conferred upon it by the Treaty of the high contracting parties, and has no jurisdiction whatever to hear and determine matters not within the provisions of said Treaty.

By Section 3 of the Act of Congress approved August 24, 1912, cited above, the President of the United States is authorized to declare by Executive Order that all land and land under water within the limits of the Canal Zone is necessary for the construction, maintenance, operation, sanitation, or protection of the Panama Canal, and to extinguish, by agreement when advisable, all claims and titles of adverse claimants and occupants, and that upon failure to secure by agreement title to any such parcel of land or land under water, the adverse claim or occupancy shall be disposed of

and title thereto secured in the United States and compensation therefor fixed and paid in the manner provided in the aforesaid Treaty with the Republic of Panama, or such modifications of said Treaty as may hereafter be made.

The President of the United States, on the fifth day of December, 1912, by his Executive Order as hereinabove set out, declared that all land and land under water within the limits of the Canal Zone are necessary for the construction, maintenance, operation, protection, and sanitation of the Panama Canal, and directed the Chairman of the Isthmian Canal Commission to take possession, on behalf of the United States, of all such land and land under water, and to extinguish, by agreement when practicable, all claims and titles of adverse claimants to the occupancy of such land and land under water.

It is a principle of law that when, under a statutory provision, lands shall be taken as shall be by proper authority declared to be requisite for any exercise of the right of eminent domain on the part of a sovereign, the date of such decision is to be considered the date of the appropriation.

By means of said Executive Order of the President of the United States, the United States *co instanti* took possession of all lands and interests in lands within the Canal Zone, and thereby expropriated all such lands and all interests in such lands.

Hence, by said Executive Order of the President of the United States, issued on the fifth day of December, 1912, all rights, interests and title to lands in the Canal Zone then owned by the Panama Railroad Company were extinguished, and the title to said lands vested in the United States, and from the moment of the issuing of said Executive Order the Panama Railroad Company ceased not only to have any interest in the lands it formerly owned in the Canal Zone but also lost all right of control and occupancy of said lands, and also ceased to have any rights whatever under the lease given to the claimant.

By the same Executive Order of the President of the United States, the leasehold of the claimant herein was also expropriated, cancelled, and terminated.

It is provided in Article 2016 of the Civil Code, in force in the Canal Zone, that the right of the lessor over the thing leased having been extinguished through a cause beyond his control, the lease shall expire even before the expiration of the term stipulated for its duration.

Furthermore, the doctrine is established in Article 2018 of said Civil Code, that in cases of expropriation by reason of public utility, if a lease shall have been granted and is still pending at the time of the expropriation, the lessee shall be entitled to damages from the nation making the expropriation.

Hence, the Panama Railroad Company had no power on the fifth day of June, 1914, over the lease which had formerly existed between it and the claimant, and could not, by any act on the part of said railroad company, terminate a leasehold interest, which had already been expropriated by the Executive Order of the President on the fifth day of December, 1912.

If, therefore, by the termination of the lease of the claimant by the expropriation on the part of the United States Government of the lands or things covered thereby, any loss or damage has accrued to the claimant, he can have no right to prosecute an action to recover for his said loss against the Panama Railroad Company. But if such lease with the Panama Railroad Company was cancelled or expropriated by the act of the United States for the sole purpose of the construction, maintenance, operation, sanitation, or protection of the Panama Canal, his remedy for damages, if he has sustained any damages thereby, must be against the Government of the United States.

By Article VI of the Treaty between the United States of America and the Republic of Panama, it was agreed between the high contracting parties that all damages caused to the owners of private land or private property of any kind by reason of the grants contained in said Treaty or by reason of the operations of the United States, its agents or employees, or by reason of the construction, maintenance, operation, sanitation, or protection of the Canal or of the works of sanitation and protection provided for in said Treaty, shall be appraised and settled by a joint commission appointed by the President of the United States and the President of the Republic of Panama, whose decisions as to such damage shall be final, and that no part of the work on said Canal or the Panama railroad or any auxiliary works relating thereto and authorized by the terms of the said Treaty shall be prevented, delayed, or impeded by or pending such proceedings to ascertain such damages.

It, therefore, follows that the Joint Land Commission as provided for in said Article VI of the Treaty between the United States of America and the Republic of Panama, ratified February 26, 1904, is the proper and only tribunal to hear and pass upon claimant's claim for damages.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE
KAGY, S. LEWIS, Commissioners.

OFFICIAL CIRCULARS.

Acting Chief Health Officer.

THE PANAMA CANAL,

EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., October 27, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective October 31, 1914, Maj. Percy M. Ashburn will act as Chief Health Officer during the temporary absence of Lieut.-Col. Charles F. Mason on official business.

GEO. W. GOETHALS,
Governor.

Railway Transportation.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., October 27, 1914.

CIRCULAR NO. 600-23:

1. Effective November 1, 1914, Mr. C. H. Motsett, superintendent of the Panama railroad, will be in charge of all rail transportation, both for the Panama Railroad Company and The Panama Canal.

2. Mr. F. R. Blunt is appointed master of transportation and will perform such duties as may be assigned by the superintendent of the Panama Railroad Company.

3. No transfer of forces need be made as a result of this order.

GEO. W. GOETHALS,
Governor, The Panama Canal.
President, The Panama Railroad Company.

Purchase of Material and Supplies.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., October 23, 1914.

CIRCULAR NO. 690:

1. Effective at once, the Chief Quartermaster is designated as Purchasing Agent on the Isthmus, and all purchases on the Isthmus will be made by him or by his direction.

2. All invoices for material and supplies purchased in the United States will be certified by the Chief Quartermaster, or by direction of the Chief Quartermaster by an employee of the Supply Department designated by him.

3. All items of nonexpendable property purchased either locally or in the United States which are not taken into stock shall be invoiced by the Auditor to the division concerned. (Paragraph 14, circular No. 656-I, is amended accordingly.)

4. Instructions in regard to handling routine papers outlined above will be arranged between the Chief Quartermaster and the Auditor.

GEO. W. GOETHALS,
Governor.

Appraisals of Equipment.

THE PANAMA CANAL,

EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., October 21, 1914.

CIRCULAR NO. 656-6:

The following regulations covering the appraisal of equipment are hereby prescribed:

Equipment in construction service—

1. Equipment in construction service and not permanently transferred to "Operation and maintenance," will be recorded on cards kept in the Auditor's office, their value remaining in construction accounts; such items will not be appraised.

Equipment retired prior to July 1, 1914—

2. Equipment items retired from construction service prior to July 1, 1914, will be eliminated from store inventories and recorded on cards filed in the Auditor's office. Their value will remain in construction accounts until sold or transferred permanently to "Operation and maintenance;" such items will not be appraised.

Equipment retired after July 1, 1914—

3. Equipment items retired from construction service subsequent to July 1, 1914, will be recorded in the Auditor's office on cards sent in by divisions, as required by Paragraph 10 of circular No. 656-1.

Accounting for equipment in obsolete store—

4. All equipment retired from construction service will be recorded and accounted for by the obsolete storehouse. This accounting will be physical only, and a complete record will be kept as to division retiring same, value, length of service, original cost, etc., which data must be shown on all invoices covering its movement or disposition.

Equipment transferred to "Operation and maintenance"—

5. Equipment permanently transferred to "Operation and maintenance," will be appraised at the percentages of the cost of such equipment, as recommended in the surveying officer's memoranda of May 29, and August 25, 1914, it being understood that such appraisal is not set for sale purposes.

Exchange of equipment—

6. Equipment may be turned into the Supply De-

partment in exchange for other retired equipment of like capacity and cost, in better physical condition, without additional financial charge being made therefor, but in the exchange of equipment of the same class but of different capacities and costs, an adjustment of equipment charges will be made. No exchange of equipment will be effected under this authority without approval of the Governor, requests for such exchanges being made direct to the surveying officer.

GEO. W. GOETHALS,
Governor, The Panama Canal.
President, The Panama Railroad Company.

Rates for Miscellaneous Services.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 16, 1914.

CIRCULAR No. 692:

The rates quoted below are effective this date, for the following services furnished individuals, companies, and others:

1. For service of a diver, his assistants, and apparatus, for the first four hours or fraction thereof, from time of arrival at point of diving.....\$60.00
- For each succeeding hour or fraction thereof.....10.00
2. Compressed air, per 1,000 cubic feet.....12
3. For giving cable notice of deposits with the Treasurer or Assistant Treasurers of the United States to be applied in payment of tolls, material, supplies, and services 5.00

GEO. W. GOETHALS,
Governor.

Employees' 24-trip Tickets.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 27, 1914.

CIRCULAR No. 608-2:

Hereafter, no 24-trip tickets will be issued to replace those lost by employees.

GEO. W. GOETHALS,
Governor, The Panama Canal.
President, The Panama Railroad Company.

Occupants of Offices in the new Administration Building.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 21, 1914.

It is directed that when offices are vacated for the noon hour and in the evening the doors be closed and locked. Employees or others who may have business in the offices outside of regular working hours, and who are not supplied with keys, can obtain admission to the offices on application to the watchman or janitor. Keys will be supplied to as many of the officials and members of the office force as need them, so far as possible.

The only entrance to the building after 6 p. m. will be through the main doors; all other doors will be locked.

GEO. W. GOETHALS,
Governor.

Task Work on Panama Canal and Panama Railroad.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 25, 1914.

TASK WORK BULLETIN No. 1:

EXCAVATION BY DECAUVILLE.

Obispo Diversion—

- Per car (four men to a car).....\$0.09
- Hauls less than 200 feet......10
- Hauls more than 200 feet......10

Mount Hope, material, earth and rock.—

- Per car.....
- Hauls up to 150 feet......10
- Hauls 150 feet to 300 feet......11
- Hauls 450 feet to 700 feet......12
- (Minimum a man can earn and hold his job: \$1.50 a day.)

New Administration Building—

- Per car on east side......12
- (This rate fixed in view of hard digging and the fact that men were required to sort out the hard rock.)

- Per car on south side......10

New Panama waterworks, Miraflores—

- Maximum per car......13

Point B, Canal prism—

- Contract for excavating about 112,450 cubic yards at 21½ cents.
- (After removing 103,896 cubic yards at 21½ cents, and 5,096 cubic yards at 31½ cents, the subcontractor signified his inability to complete the contract, claiming that he had lost \$10,000.)

Panama railroad relocation—

- Per car (three men to a car)......10
- (Daily output limited to 45 cars.)

Noos Island—

- Per car......10
- (15 cars to constitute a day's work—drilling, blasting, and breaking the rock to a size to admit of handling, done by the Fortification Division.)

Cristobal Docks—

- 3-foot caissons (earth and loose rock) per lineal foot......40 to .50
- 4-foot caissons (earth and loose rock) per lineal foot......50
- 6-foot caissons (earth and loose rock) per lineal foot......1.00
- 6-foot caissons (solid rock) per lineal foot......2.00
- (40-cent rate experimental—increased to 50 cents.)

Cristobal cooling plant—

- 6-foot caissons (for softer material) per lineal foot......1.00
- 6-foot caissons (for hard rock) per lineal foot......2.00
- (Three men in a crew, Panama Canal to move hoists and clear holes of water before men begin work in morning.)

Anywhere in Pacific Terminals—

- 6-foot caissons (for softer material and where no shooting is required) per lineal foot......1.00
- 6-foot caissons (for harder material) per lineal foot......1.50

MAKING CONCRETE BLOCKS.

- Pier 7, Cristobal—two-thirds of two cents each.

RAILS CUT AND BROKEN.

- Pier 7, Cristobal—two-thirds of 20 cents each.

BENDING RODS.

- Pier 7, Cristobal—two-thirds of two cents each.

CUTTING RODS.

- Pier 7, Cristobal—two-thirds of \$0.015 each.

HEADING PILES.

East breakwater—

- Per pile......18
- (Tried out on only a portion of the pile heading work.)

DRILLING HOLES IN CONCRETE FOR CABLE HANGERS.

- Noos Island—Per hole......05

RIVETING CAISSONS.

- Pier No. 7, Cristobal—Per section......1.00
- (Did not include placing, clamping, pinning, or bolting the sections together.)

ASSEMBLING AND RIVETING CAISSONS.

- Cristobal cooling plant—For completed section (18 men required), \$3.99, or seven cents per rivet. (Consisted of clamping, bolting, riveting, and caulking.)

ASSEMBLING SPIRAL REINFORCEMENT.

- Cristobal cooling plant—Per pound......0025

FILL.

- Dam at Toro Point—(Material: earth.) Per cubic yard......25
- (Eight Decauville cars or four cubic yards for a day's work.)

The above is for general information.

C. A. McILVAINE,
Executive Secretary.

Changes in Hotel Meal Hours.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARtermaster,
BALBOA HEIGHTS, C. Z., October 29, 1914.

To stewards at Balboa, Ancon, and Cristobal—Please arrange to keep your hotels open until 1.30 p. m., for the noon meal and 7.30 p. m., for the evening meal. The closing hour for Sunday morning breakfast will be 8.30 a. m.

W. R. GROVE,
Chief Quartermaster.

Ordinance Relating to the Maintenance of Sidewalks, Yards, Etc., in the Cities of Panama and Colon.

THE PANAMA CANAL,
HEALTH DEPARTMENT,
OFFICE OF CHIEF HEALTH OFFICER,
BALBOA HEIGHTS, C. Z., October 22, 1914.

By virtue of the authority vested in me by Article VII of the Treaty, between the United States and the Republic of Panama, signed November 18, 1903, and Presidential Decree No. 23 of July 8, 1904, the Sanitary Rules and Regulations for the cities of Panama and Colon in the Republic of Panama, promulgated by Executive Decree No. 14 of March 15, 1913, are hereby amended, effective November 15, 1914, by the addition thereto of the following section:

Section 131. Every owner, tenant, lessee and occupant of any building or lot (whether vacant or occupied) within or near the built-up portions of the city, shall keep and cause to be kept the sidewalk and curbstone in front thereof, clean, in good repair, and free from obstructions and nuisances of every kind, and shall not allow anything in the area or yard, or on or about his premises to become a nuisance, or dangerous or prejudicial to life or health.

Any violation of the provisions of this section shall

be punished by a fine of not less than five balboas nor more than 50 balboas, at the discretion of the Health Officer.

Approved: CHAS. F. MASON,
GEO. W. GOETHALS,
Governor. Chief Health Officer.

Ordinance Relating to Contagious and Infectious Diseases in the Cities of Panama and Colon.

THE PANAMA CANAL,
HEALTH DEPARTMENT,
OFFICE OF CHIEF HEALTH OFFICER,
ANCON, C. Z., September 17, 1914.

By virtue of the authority vested in me by Article VII of the Treaty, between the United States and the Republic of Panama, signed November 18, 1903, and Presidential Decree No. 23 of July 8, 1904, Section 22 of the Sanitary Rules and Regulations for the cities of Panama and Colon in the Republic of Panama, promulgated by Executive Decree No. 14 of March 15, 1913, is hereby amended, effective November 15, 1914, to read, as follows:

CONTAGIOUS AND INFECTIOUS DISEASES.

Section 22. The following named diseases and disabilities are hereby made notifiable and the occurrence of cases shall be reported as herein provided:

Group 1—Infectious diseases:

- Actinomycosis.
- Anthrax.
- Chickenpox.
- Cholera, Asiatic (also cholera nostras when Asiatic cholera is present, or its importation threatened.)
- Continued fever lasting seven days.
- Dengue.
- Diphtheria.
- Dysentery.

- (a) Amebic.
- (b) Bacillary.
- Favus.
- German measles.
- Glanders.
- Hookworm disease.
- Leprosy.
- Malaria.
- Measles.
- Meningitis:

- (a) Epidemic cerebrospinal.
- (b) Tuberculous.
- Mumps.
- Ophthalmia neonatorum (conjunctivitis of newborn infants.)
- Paragonimiasis (endemic hemoptysis.)
- Paratyphoid fever.
- Plague.
- Pneumonia (acute.)
- Poliomyelitis (acute infectious.)
- Rabies.
- Scarlet fever.
- Septic sore throat.
- Smallpox.
- Tetanus.
- Trachoma.
- Trichinosis.
- Tuberculosis (all forms, the organ or part affected in each case to be specified.)
- Typhoid fever.
- Typhus fever.
- Whooping cough.
- Yellow fever.
- Relapsing fever.

Group 2—Venereal diseases:

- Gonococcus infection.
- Syphilis.

Group 3—Diseases of unknown origin:

- Pellagra.
- Cancer.

(c) Each and every physician who treats or examines any person suffering from or afflicted with, or suspected to be suffering from or afflicted with, any one of the notifiable diseases shall immediately report such case of notifiable disease in writing to the local Health Officer. Said report shall be forwarded either by mail or by special messenger, and shall give the following information:

1. The date when the report is made.
2. The name of the disease or suspected disease.
3. The name, age, sex, color, occupation, address, and school attended or place of employment of patient.
4. Number of adults and children in the household.
5. Source or probable source of infection or the origin or probable origin of the disease.
6. Name and address of the reporting physician.

Provided, that if the disease is, or is suspected to be, smallpox, the report shall, in addition, show whether the disease is of the mild or virulent type and, whether the patient has ever been successfully vaccinated, and if the patient has been successfully vaccinated, the number of times and dates or approximate dates of such vaccination; and if the disease is, or is suspected to be, cholera,

diphtheria, plague, scarlet fever, smallpox, or yellow fever, the physician shall, in addition to the written report, give immediate notice of the case to the Health Officer in the most expeditious manner available; and if the disease is, or is suspected to be, typhoid fever, scarlet fever, diphtheria, or septic sore throat, the report shall also show whether the patient has been, or any member of the household in which the patient resides is, engaged or employed in the handling of milk for sale or preliminary to sale; *And provided further*, that in the reports of cases of the venereal diseases the name and address of the patient need not be given.

(b) The requirements of the preceding paragraph shall be applicable to physicians attending patients ill with any of the notifiable diseases in hospitals, asylums, or other institutions public or private; *Provided*, that the superintendent or other person in charge of any such hospital, asylum, or other institution in which the sick are cared for may, with the written consent of the Health Officer having jurisdiction, report in the place of the attending physician or physicians the cases of notifiable diseases and disabilities occurring in or admitted to said hospital, asylum, or other institution in the same manner as that prescribed by physicians.

(c) Whenever a person is known, or is suspected, to be afflicted with a notifiable disease, or whenever the eyes of an infant under two weeks of age become reddened, inflamed, or swollen, or contain an unnatural discharge, and no physician is in attendance, an immediate report of the existence of the case shall be made to the local Health Officer by the midwife, nurse, attendant, or other person in charge of the patient.

(d) Teachers or other persons employed in, or in charge of, public or private schools, including Sunday schools, shall report immediately to the local Health Officer each and every known or suspected case of a notifiable disease in persons attending or employed in their respective schools.

Health Officer, by the Health Department.

(f) Local health officers shall within seven days after the receipt by them of reports of cases of the notifiable diseases forward by mail to the Chief Health Officer the original written reports made by physicians, after first having transcribed the information given in the respective reports in a book or other form of record for the permanent files of the local health office. On each report thus forwarded the health officer shall state whether the case to which the report pertains was visited or otherwise investigated by a representative of the local health office and whether measures were taken to prevent the spread of the disease or the occurrence of additional cases.

(g) Any person who shall conceal, or fail to report any case of the infectious or contagious diseases above enumerated, shall be fined not less than five balboas nor more than 50 balboas, or imprisoned for a period not exceeding 30 days, or both.

Approved: CHAS. F. MASON,
Chief Health Officer.
GEO. W. GOETHALS,
Governor.

Ordinance Amending Sections 103 to 121, Inclusive, of the Sanitary Rules and Regulations for the Cities of Panama and Colon in the Republic of Panama.

THE PANAMA CANAL,
HEALTH DEPARTMENT.
OFFICE OF CHIEF HEALTH OFFICER,
BALBOA HEIGHTS, C. Z., October 1, 1914.

By virtue of the authority vested in me by Article VII of the Treaty between the United States and the Republic of Panama, signed November 18, 1903, and Presidential Decree No. 23 of July 8, 1904, Sections 103 to 121, inclusive, of the Sanitary Rules and Regu-

effective November 15, 1914, so as to read, as follows:

Section 103. Every building, outhouse, and other superstructure hereafter to be erected, altered, or repaired, shall be ratproofed in the manner hereinafter provided for.

(a) For the purpose of ratproofing all buildings, outhouses, and other superstructures, except stables, shall be divided into two classes, to-wit: Class A and Class B, and the same shall be ratproofed in the manner following, to-wit:

CLASS A.

All buildings, outhouses, and other superstructures of Class A shall have concrete floors, and such floor shall rest, without any intervening space between, upon the ground or upon filling to be approved by the Health Officer; said floor shall extend, and be hermetically sealed, to walls surrounding said floor, which walls shall be made of concrete, stone, or brick laid in cement mortar, and each wall to be not less than six inches thick, and shall extend into and below the surface of the surrounding ground at least two feet, except where such foundation walls are built upon solid rock, and shall extend not less than one foot above the surface of said floor. If it is desired to place a wooden floor over the concrete floor, sleepers not less than two inches by two inches shall be embedded in the concrete with the upper surface flush with the top of the same. Over these sleepers the wooden floor must be nailed, and there shall be no free space between the wood and the concrete.

CLASS B.

All buildings, outhouses, and other superstructure of Class B shall be set upon pillars, so that there shall be a clear space of not less than three feet between the ground and the sills of any house, except in buildings erected as in Class A. In case the building is located on sloping ground, the sills of the building at the end nearest the ground must be not less than 18 inches above the ground level. When the space between the sills and ground is more than three feet and not less than six feet, and is properly concreted, it may be utilized for such purposes as may be approved by the Health Officer, with this exception, no refuse or material of any kind shall be stored or allowed to remain in the space beneath the house.

(b) Every slaughterhouse, abattoir, market (public and private), bakery, rendering plant, candy factory, ice cream manufactory, hotel kitchen, restaurant kitchen, warehouse where grain or cereals are stored, milk depot where milk is received or stored for distribution or sale, or where milk is converted into cream cheese or other products, dairy, building wherein poultry, game, animals, or birds are stored or kept for sale, or sold, produce and commission houses, hide stores, and other buildings wherein foodstuffs are manufactured and prepared, shall be ratproofed in the manner provided for hereinabove as Class A. All other buildings, residences, outhouses and superstructures, except stables, not hereinabove specified as Class A, shall be ratproofed in the manner provided hereinabove as Class B, provided that in plague infected areas, or where, from any cause, a building or outhouse or other superstructure, is, or may become, in his opinion, a menace or dangerous to public health, the Health Officer may require any such building, outhouse, or other superstructure, hereinabove required to be ratproofed as a building of Class B, to be ratproofed as a building of Class A, provided that the owner of any building, residence, or superstructure in Class B may ratproof same as provided in Class A if he so elects.

(c) All building material shall be of such quality and dimensions as may be considered by the Health Officer consistent with public health and safety.

(d) All wall space, accidental and unnecessary spaces, and holes, ventilators, and other openings other than doors and windows in every building, outhouse, and other superstructure in the city shall be closed with cement or screened with wire having not more than one-half inch mesh, as the case may require, in such manner as to prevent the ingress or egress of rats: *Provided*, that in all buildings, outhouses, and other superstructures of Class A, and in all stables, where there are any spaces in walls between the wall proper and the covering or same, or in ceilings, between the ceiling and floor, or other ceiling covering above, said spaces shall be eliminated by the removal of said covering, or so closed as to prevent the ingress or egress of rats, and the whole, as determined and in such manner as shall be approved by the Health Officer of the city.

Section 104. When buildings are not constructed with party walls or adjoining walls without intervening space, there shall be a space between adjacent buildings of not less than three feet, clear from ground to sky, provided that those lots in the city of Colon, beginning at the east side of E street, as shown on Panama railroad map of said city, shall have a clear space from ground to sky of 10 feet between adjacent buildings.

Section 105. When two or more buildings are to be erected, from front to rear, on a single lot there shall be a space of not less than 10 feet clear from ground to sky between buildings.

Section 106. There shall be no frame buildings erect-

NOTIFICATION BLANK.

(Face of card.)

.....191..

Disease or suspected disease

Patient's name....., age....., sex....., color

Patient's address..... occupation.....

School attended or place of employment.....

Number in household: Adults..... Children.....

Probable source of infection or origin of disease.....

If disease is smallpox, type....., number of times
successfully vaccinated and approximate dates.....

If typhoid fever, scarlet fever, diphtheria, or septic sore throat, was patient, or is any member of
household engaged in the production or handling of milk.....

Address of reporting physician.....

Signature of physician.....

(Reverse of card.)

For use of local health officer.

.....191..

Was case investigated by health department?

Was nature of disease verified?

What measures were taken to prevent the spread
or the occurrence of additional cases from same
onight?

Health Department,

(City)

(e) The written reports of cases of the notifiable disease required by this regulation of physicians shall be made upon blanks supplied for the purpose, through the

lations for the cities of Panama and Colon in the Republic of Panama, promulgated by Presidential Decree No. 14 of March 15, 1913, are hereby amended,

ed which provide for more than a single wall, except upon permission in writing from the Health Officer, and when double walls are allowed it shall be stipulated in the permit that there shall be at least eight inches of concrete between the walls immediately above the sills of each floor, placed in such manner as to entirely fill all openings.

Section 107. No building shall have a living or bedroom smaller than 10 feet by 10 feet by 10 feet, and each room shall have not less than one window, three feet by five feet, and one door not less than two feet six inches by seven feet, one of which shall open on a yard, street, alley, or patio.

Section 108. In all tenement or lodging houses there shall be an opening over each door and for 12 inches above. This opening may be protected by wire screens or battens, the battens not to diminish the ventilating space by more than one-third.

Section 109. All buildings of more than one story shall be provided with a stairway not less than three feet wide for every 12 rooms or major fraction thereof.

Section 110. Balconies may extend to the curb of streets. Balconies that do not extend to the curb shall not exceed five feet in width and shall be supported by brackets of sufficient strength. No balcony shall be less than two feet six inches in width. No passage through a house shall be less than three feet in width.

Section 111. The minimum clear space to be allowed for bath and water closet fixtures, shall be, as follows: Water closets, three feet by four feet; shower baths, three feet by four feet, bath tubs, five feet by six feet.

Section 112. Kitchen space shall be provided for on each floor of tenement house, at the rate of six square feet for each living room thereon.

Section 113. Each building must contain a sufficient number of baths, water closets, and sinks, to comply with plumbing regulations, and they shall be distributed in such manner as to be convenient of access to the occupants of the house.

Section 114. Toilet and baths, wherever possible, shall be confined to one section of the building, and shall have concrete floors, and be well lighted and ventilated. In no case shall a toilet or bathroom open into a kitchen.

Section 115. Attic space must have an opening into it of not less than two feet square and shall be closed by a trap door, which can be opened for the purpose of inspection; under no circumstances shall any article or articles of any nature whatsoever be stored in this attic space.

Section 116. The space or alley way between adjacent buildings shall be graded and cemented in such manner that it will drain to the street gutter. All patios must be cemented, graded, and trapped to sewer where practicable. When it is impracticable to trap the patio to sewer, the patio will be so graded that it will drain all water to the street gutters.

For the purpose of light and ventilation a patio of sufficient size, to be determined by the Health Officer, shall be left unoccupied from ground to sky.

Section 117. The concrete for yards, alleys, and patios shall be not less than three and one-half inches thick with a cement mortar finish of not less than one-half inch thickness.

Section 118. New buildings, or old buildings having been vacated for the purpose of undergoing repair, shall not be occupied until the sanitary and building rules and regulations have been complied with, and a permit in writing to occupy the same has been obtained from the Health Officer.

Section 119. All premises, improved and unimproved, and all open lots and areas, shall be kept clean and free from all rubbish and similar loose material that might serve as a harborage for rats, and all lumber, boxes, barrels, loose iron, and similar material that may be permitted to remain on such premises, and that may be used as a harborage by rats, shall be placed on supports and elevated not less than two feet from the ground, with a clear intervening space beneath to prevent the harboring of rats.

Section 120. All planking and plank walks on and in yards, alleys, alley ways, or other open areas, shall be removed and replaced with concrete, brick, or stone, laid in cement, gravel, or cinders, or the ground left bare.

CHAS. F. MASON,
Chief Health Officer.

Approved,
GEO. W. GOETHALS,
Governor.

Ordinance Relating to Garbage in the Cities of Panama and Colon.

THE PANAMA CANAL,
HEALTH DEPARTMENT,
OFFICE OF CHIEF HEALTH OFFICER,
ANCON, C. Z., September 16, 1914.

By virtue of the authority vested in me by Article VII of the Treaty, between the United States and the Republic of Panama, signed November 18, 1903, Section 14 of the Sanitary Rules and Regulations for the cities of Panama and Colon in the Republic of Panama,

promulgated by Presidential Decree No. 14 of March 15, 1913, is hereby amended, effective November 15, 1914, to read, as follows:

GARBAGE.

Section 14. The owner, agent, and occupant of every premises, improved or unimproved, wherein or wherein garbage shall be created, shall provide a metal, watertight container or containers, each with a tightfitting cover of a pattern approved by the Health Officer, such container or containers to be of such size as to be easily manhandled, and of such number as to receive the garbage accumulations of 24 hours from each such premises and shall place or cause to be placed such container or containers, for the purpose of having their contents removed, on the sidewalks or open alleys in front or rear of said premises, as the times required by the Health Officer.

(a) It shall be unlawful for any owner, agent or occupant of any such premises to have, maintain, or keep any garbage on any premises, except in such garbage containers as are provided for in first paragraph of this section.

(b) Such garbage containers shall be kept tightly covered at all times, except when momentarily opened to receive the garbage or to have the contents therefrom removed, as provided for hereinafter.

(c) When such garbage container is placed on the outside of any premises, it shall be unlawful for any person engaged in the removal of garbage, or for any other person, to remove the cover from such garbage container, except for the purpose of emptying its contents into a duly authorized garbage wagon, or to throw such garbage container on the street or sidewalk, or to injure it in any way so as to make it leak or to bend it or its cover so as to prevent said garbage container from being tightly covered; and all persons engaged in the removal of garbage shall, after emptying said container, replace the cover tightly on said container.

(d) The owner, agent, or occupant of every premises shall keep separate from their garbage, tin cans, broken crockery, hardware, old planks, wooden matter, paper sweepings, and other trash, and place same in a sound substantial vessel or container kept for that purpose, which vessel or container shall be placed on the sidewalk or alley in front or rear of each premises, as provided for in first paragraph of this section, for garbage containers.

(e) The provisions of this regulation shall apply to all public and private markets, as well as all places of business, hotels, restaurants, and all other premises, whether used for business, boarding, or residential purposes.

(f) For the purpose of enforcing these regulations any person living on any premise shall be deemed an occupant, and any person receiving the rent, in whole or in part, of any premises shall be deemed an agent; that on any premises where construction of any kind is in progress, and where employes or workmen eat their dinners or lunches in or about said premises, or scatter lunch or food in or about such premises the contractor or foreman or other person in charge of such workmen shall be deemed an occupant; and that the person in charge of any market, or stall in any market, shall be deemed an occupant.

(g) It shall be unlawful for any person to pick from or disturb the contents of any garbage containers or vessels, or other containers provided for in these regulations.

(h) The contents of such cans must be emptied and removed at least once in each 24 hours, and disposed of in a manner satisfactory to the Health Officer. After the can is emptied it shall be thoroughly cleaned by the owner.

CHAS. F. MASON,
Chief Health Officer.

Approved,
GEO. W. GOETHALS,
Governor.

Ordinance Relating to Keeping of Animals and Birds on Premises within the City Limits of Panama and Colon.

THE PANAMA CANAL,
HEALTH DEPARTMENT,
OFFICE OF CHIEF HEALTH OFFICER,
BALBOA HEIGHTS, C. Z., October 1, 1914.

By authority of Article VII of the Canal Treaty of 1903, between the United States and the Republic of Panama, and Presidential Decree No. 23 of July 8, 1904, I hereby establish the following health regulations for the cities of Panama and Colon, to become effective November 15, 1914:

Amending Section 16 of sanitary rules and regulations for the cities of Panama and Colon in the Republic of Panama:

Section 16. It shall be unlawful for any persons, firm, or corporation to have in his or their possession, for sale, at wholesale or retail, or to maintain, keep, or feed, for sale, within the limits of the cities of Panama and Colon, any live hares, rabbits, guinea pigs, apes, monkeys, squirrels, white mice, chickens, turkeys, geese,

ducks, doves, pigeons, parrots, birds, or other fowl, in any building which is not ratproof in the manner now or hereafter provided by law for the ratproofing of buildings, and unless same are kept in a movable or portable coop constructed with a metal, watertight bottom, and metal sides to height of at least 12 inches, the whole surmounted and covered by a metal cage of wire having not more than one-half inch to each mesh, and said coop to be elevated at least two feet from the floor on supports so constructed as to leave clear open space between the bottom of the coop and the floor.

(a) Within the area embraced in the following limits of the city of Panama, to-wit:

Beginning at Chorrillo avenue and the seawall; along Chorrillo avenue to Balboa road; along Balboa road to Ancon avenue; along Ancon avenue to Fourth of July avenue, including the National Institute; along the Canal Zone boundary line to Calle Carlos de Icaza; along Calle Carlos de Icaza to Calle P; along the course of Calle P to the nearest point on the beach; along the beach and seawall to the point of beginning in Chorrillo; and within the area embraced in the following limits of the city of Colon, to-wit:

Beginning at Bottle alley and Second street, along Second street to G street; along G Street to Third street; along Reyes alley to center of Block 18; from center of Block 18 to G street; along G street to Ninth street; along Ninth street to E street; along E street to Zone line; from Zone line on D street, along D street to Boca Grande, along Third street to following shore line of Boca Grande to Zone line; from Zone line and west end of Eleventh street, along the water front, to Third street, including docks; along Third street from water front and Third street to Bottle alley; along Bottle alley from Third street to Second street and Bottle alley, the point of beginning.

It shall be unlawful for any person, firm, or corporation to have, keep, maintain, or feed, for sale, or for private use, in any lot, open area yard, premises, or building, any live hares, rabbits, guinea pigs, apes, monkeys, squirrels, white mice, chickens, turkeys, geese, ducks, doves, pigeons, parrots, birds, or other fowl, unless the same are kept in a movable or portable coop constructed with a watertight bottom and metal sides to a height of at least 12 inches, the whole surmounted and covered by a metal cage of wire having not more than one-half inch to each mesh; and said coop to be elevated at least two feet from the floor on supports so constructed as to leave clear open space between the bottom of the coop and the floor or ground.

(b) All feed for any such live hares, rabbits, guinea pigs, apes, monkeys, squirrels, white mice, chickens, turkeys, geese, ducks, doves, pigeons, parrots, birds, or other fowl, provided for in these regulations, shall be kept in closed metal receptacles so constructed that the contents shall be inaccessible to rats, and no such feed shall be thrown or scattered on any floor area, or open space, but shall be placed only in the coops hereinabove provided for.

CHAS. F. MASON,
Chief Health Officer,
The Panama Canal.

Approved:
GEO. W. GOETHALS,
Governor.

Transfer of P. R. R. Office Timekeeping.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., October 28, 1914.

To all concerned—Effective November 1, 1914, all office timekeeping of the Panama railroad, together with the personnel necessary to handle this work, will be transferred to the timekeeping bureau of the Executive Department, Panama Canal.

GEO. W. GOETHALS,
Governor, The Panama Canal,
President, Panama Railroad Company.

Proposals for Clearing Trails.

THE PANAMA CANAL,
OFFICE OF THE CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, until November 25, 1914, at 3 p. m., and then opened for:

Completely cutting to within three inches of the ground all growth and burning all material so cut, over an area of 68 miles of trail 20 feet wide, situated in various parts of the Canal Zone. The general location of this work will be shown on maps in the office of the Assistant Engineer, Division of Fortifications, between 2 and 5 p. m., November 14. This work will be done in January and February, 1915. All bids should be for a lump sum for the entire job.

Bids must be accompanied by cash certified check, or post-office money order for five per cent of the amount bid.

Form of contract and bond, including specifications may be obtained on application to this office.

The Government reserves the right to reject all bids. Bids should be marked "Proposal for clearing trails."

W. R. GROVE,
Chief Quartermaster.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold department, of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective November 5:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....	10	
Shoulder, trimmed, per pound.....	16	
Leg (8 to 10 pounds), per pound.....	25	
Short cut chops, per pound.....	30	
Shoulder chops, per pound.....	18	
Lamb—Stewing, per pound.....	13	
Shoulder, trimmed, per pound.....	19	
Leg (5 to 8 pounds), per pound.....	30	
Chops, per pound.....	36	
Chops, shoulder, per pound.....	23	
Veal—Stewing, per pound.....	13	
Shoulder, for roasting (not under 4 pounds), per pound.....	17	
Chops, shoulder, per pound.....	23	
Chops, per pound.....	35	
Loin, for roasting, per pound.....	35	
Cutlets, per pound.....	40	
Beef—Suet, per pound.....	03½	
Soup, per pound.....	08	
Soup bones, per pound.....	02½	
Stew, per pound.....	12	
Plate, per pound.....	14	
Corned, No. 1, per pound.....	20	
Corned, No. 2, per pound.....	17	
Chuck roast, 3 lbs. and over, special, per pound.....	13	
Chuck roast, 3 lbs. and over, choice, per pound.....	17	
Rib roast, second cut (not under 3½ pounds), special, per pound.....	18	
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24	
Rib roast, first cut (not under 3 pounds), special, per pound.....	22	
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27	
Pot roast, special, per pound.....	23	
choice, per pound.....	28	
Rump roast, special, per pound.....	23	
choice, per pound.....	28	
Porterhouse roast, special, per pound.....	25	
choice, per pound.....	31	
Steak, chuck, special, per pound.....	15	
choice, per pound.....	18	
Round, bottom, special, per pound.....	15	
choice, per pound.....	19	
Round, top, special, per pound.....	17	
choice, per pound.....	22	
Rib, special, per pound.....	23	
choice, per pound.....	27	
Sirloin, special, per pound.....	23	
Sirloin, choice, per pound.....	28	
Sirloin, choice cut, special, per pound.....	26	
Sirloin, choice cut, choice, per pound.....	32	
Rump, special, per pound.....	23	
choice, per pound.....	28	
Porterhouse (not less than 1½ pounds), special, per pound.....	26	
Porterhouse (not less than 1½ pounds), choice, per pound.....	34	
Porterhouse, short, Delmonico special, per pound.....	23	
Porterhouse, short, Delmonico choice, per pound.....	28	
Tenderloin, Western, special, per pound.....	40	
Tenderloin, Western, choice, per pound.....	46	
k—Hams, fresh, per pound.....	26	
Shoulders, fresh, per pound.....	22	
Loin, chop, or roast, per pound.....	24	
Pigs' feet, fresh, each.....	08	
Pigs' head, fresh, whole.....	95	
Pigs' head, fresh, ½ head.....	48	
Sausage, home made, per pound.....	26	
MISCELLANEOUS.		
Livers—Beef, per pound.....	13	
Calf, each.....	65	
Hall, each.....	33	
Oysters, fresh per pkt.....	33	
Steak—Hamburger, package.....	17	
Hamburger, 20-pound containers, per pound.....	14	
Sausage—Bologna, per pound.....	14	
Frankfurter, per pound.....	14	
Lieberwurst, per pound.....	14	
Pork per pound.....	18	
Sweetbread, beef, per pound.....	23	
Eggs, fresh, per dozen.....	*39	
per ½-dozen.....	*20	
Bluefish, per pound.....	9	
Halibut, fresh, per pound.....	5	
Salmon per pound.....	8	
Yeast, per pound.....	31	
Yeast, per cake.....	2	
POULTRY AND GAME.		
Chickens—Fancy, roasting, milk fed, per pound.....	25	
Chickens—Fancy roasting, corn fed, per pound.....	24	

	Price.
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	30
Broilers, milk fed, per pound.....	25
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	*20
Squabs, each.....	130
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	24
Half, per pound.....	26
Sliced, per pound.....	32
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	35
Half, boiled, per pound.....	36
Sliced, boiled, per pound.....	42
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.42
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	43
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	21
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk (certified), bottle.....	**24
Milk, Sheffield Farms, per quart.....	**15
Fernillac, bottle.....	**25
Ice cream, quart.....	125
½-gallon.....	150
Cream, Sheffield Farms, quart.....	**33
pint.....	**19
½-pint.....	**12

VEGETABLES.

Cauliflower, per pound.....	*6
Beets, per pound.....	2½
Celery, per head.....	4
Cabbage, per pound.....	2½
Carrots, per pound.....	2½
Cucumbers, per pound.....	*12
Lettuce, per pound.....	12
Onions, per pound.....	12
Peppers, per pound.....	*5
Potatoes, white, per pound.....	12
sweet, American, per pound.....	2½
sweet, tropical, per pound.....	2
Yams—Tropical, per pound.....	13
Eggplant, per pound.....	*5
Rhubarb, per pound.....	3½
Turnips, per pound.....	*2½
Tomatoes, per pound.....	3
green, piccalilli, per pound.....	1½
Squash, per pound.....	2½
FRUITS.	
Apples, per pound.....	*3
Grapes, per pound.....	7
Grape fruit—American, each.....	8
Tropical, each.....	3½
Lemons, per dozen.....	19
Limes, per 100.....	40
Oranges—American, each.....	2½
Jamaican, per dozen.....	12
Pears, per pound.....	4½
Coconuts, each.....	3
Bananas, per bunch.....	38
Bananas, each.....	16
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Pears, alligator, each.....	6

* Indicates advance from preceding list.
 **Indicates five cents allowed for return of bottle.
 † Indicates reduction from preceding list.
 ‡ Sold only from commissaries, no orders taken for delivery.
 § Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective October 29, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Cream crackers, Jacob's, tin.....	.32	.36
Apricots, tin.....	.16	.13
Water, Perrier, qt. bot.....	.14	.16
Bags, shopping, ea.....	.25	.18
Clocks, alarm, ea.....	.98	.94
Nail bleach, jar.....	.32	.27
Hats, crush, felt, ea.....	1.20	1.35
Trousers, working, with belt, pr.....	.80	.93
Boards, wash, ea.....	.43	.38
Freezers, ice cream, ea.....	2.60	2.35

CHANGES EFFECTIVE OCT. 31, 1914.

Rice, 2d quality, lb.....	.05	.03½
Trunks, steamer, 36", ea.....	17.50	16.50
Trunks, steamer, 32", ea.....	13.10	12.70
Hose, ladies', Phoenix, pr.....	.69	.62
Hooks and eyes, doz.....	.01	.01
Needles, darning, pkt.....	.02	.03
Trousers, khaki, pr.....	1.47	1.80
Sandals, infants, pr.....	1.10	1.20
Sandals, children's, pr.....	1.20	1.40
Shoes, men's, glazed, kid, oxford, pr.....	5.05	5.20
Wicks, percolator, ea.....	.04	.03
Bowls, finger, crystal, ea.....	.12	.16
Almonds, Valencia, sugared, lb.....	.23	.29
Peppermint, stick, lb.....	.23	.28
Herrings, fresh, tin.....	.08	.10
Herrings, kippered, tin.....	.18	.14
Jams, Morton's, assorted, tin.....	.12	.15
Jams, Morton's, assorted, jar.....	.29	.35
Jams, Morton's, assorted, tin.....	.58	.68
Cinnamon, stick, lb.....	.34	.55
Boilers, wash, No. 208, ea.....	1.05	1.11
Beans, dried, lima, lb.....	.11	.08

Additions to Stock.

Crepes, white, yd.....	\$0.41
Organdy, white, chantilly, yd.....	.16
Hats, felt, crusher, ea.....	1.00
Shoes, misses, gun metal, button, pr.....	2.20
Shoes, misses, tan, vici, button.....	2.20
Shoes, boys', choc., tan, blu., double sole, pr.....	2.40
Shoes, men's, choc., tan, blu., double sole, pr.....	2.95
Griddles, cake, ea.....	.56
Tubs, foot, oval, ea.....	.54
Bags, ham, walrus, 18", ea.....	8.20
Bags, ham, cowhide, 18", ea.....	10.00
Bags, hand, cowhide, 16", ea.....	6.55
Bags, hand, cowhide, 18", ea.....	9.05

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, October 31, 1914. All heights are in feet above mean seal level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gatun Lake.	Miraflores Lake.	
Sun., Oct. 25.....	129.10	94.93	86.05	86.04	54.10
Mon., Oct. 26.....	129.45	94.86	86.00	86.04	54.04
Tues., Oct. 27.....	129.30	94.98	85.96	89.99	54.16
Wed., Oct. 28.....	130.20	95.49	86.02	86.06	54.03
Thurs., Oct. 29.....	132.30	97.12	86.06	86.06	54.28
Fri., Oct. 30.....	129.50	95.09	86.05	86.04	54.13
Sat., Oct. 31.....	128.40	94.13	86.08	86.08	54.14
Height of low water to nearest foot.....	125.0	91.0			

Misdirected Letters.

BALBOA HEIGHTS, C. Z., October 31, 1914.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Bartel, H.	Hall, Frank O.
Barth, Geo. H.	*Hillerman, Mrs. Abbie
Blackwood, Sarah	*Holstein, Mrs. O. A.
Brayton, R. A.	*Lawrence, T. B.
Chapman, Floyd	†Mettkie, Miss Emma
Cotter, S. J.	Pennock, Mrs. L.
Eby, Ed. B.	Ros, Dr. G. A.
Edwards, Thomas	Townsend, A. B.
Foster, Capt. C. B.	Terwilliger, Ruth
Fraser, Howard	Wagner, Capt. R. F.
Ginther, Charles	Wolson, Capt. George H.
* Paper.	*Wrights, Geo. T.
† Music.	

Examinations by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 308, on Wednesday, November 18, 1914, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats

will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

By direction of the chairman of the board.

F. M. NIXON,
Recorder, Board of Local Inspectors.

Proposals for Clearing Land Defenses. THE PANAMA CANAL.

OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., November 25, 1914, and then opened for:

Cutting to within six inches of the ground all growth and burning all material so cut, over an area of 3,075 acres, more or less, situated near Pedro Miguel, Gatun, and Toro Point. One complete trip, occupying two days, viz., November 16 and 17, will be made over the whole area by a representative of the Division of Fortifications for the purpose of showing bidders the country and conditions. All bids should be in a lump sum for the entire job. This work will be done in January and February, 1915.

Bids must be accompanied by cash, certified check, or post-office money order for five per cent of the amount bid. Form of contract and bond, including specifications, may be obtained upon application to this office. The Government reserves the right to reject all bids. Bids should be marked "Proposals for clearing land defenses."

W. R. GROVE,
Chief Quartermaster.

SHIPPING INFORMATION.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies, may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.30 per barrel, reduced to 60° Fahrenheit.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the

turning of the largest crank shafts or longest line shafts.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment in ward is \$1 per day.

Application for supplies, or for services, should be made to the captain of the port, Cristobal or Balboa.

Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired; or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case the vessel has a known representative on the Isthmus in care of such representative.

Tide Predictions.

Panama tide predictions for the next six weeks are given in the following table:

NOVEMBER.				
DATE.	Time and height of high and low water.			
Wed., Nov. 4.....	4:12	10:31	16:38	22:44
	14.3	1.1	13.7	2.3
Thurs., Nov. 5.....	4:41	11:05	17:07	23:1
	14.2	1.2	13.7	2.5
Fri., Nov. 6.....	5:13	11:39	17:38	23:51
	13.9	1.4	13.6	2.8
Sat., Nov. 7.....	5:45	12:15	18:13	.....
	13.6	1.8	13.4	.....
Sun., Nov. 8.....	6:32	6:21	12:56	18:54
	3.2	13.2	2.4	13.2
Mon., Nov. 9.....	1:14	7:04	13:40	19:41
	3.6	12.7	2.9	12.8
Tues., Nov. 10.....	2:07	7:54	14:34	20:39
	4.0	12.2	3.4	12.5
Wed., Nov. 11.....	3:09	8:58	15:37	21:45
	4.1	11.8	3.6	12.4
Thurs., Nov. 12.....	4:18	10:11	16:44	22:54
	3.9	11.8	3.5	12.6
Fri., Nov. 13.....	5:24	11:26	17:50	23:57
	3.3	12.2	3.0	13.3
Sat., Nov. 14.....	6:25	12:33	18:49	.....
	2.4	13.0	2.2	.....
Sun., Nov. 15.....	0:56	7:20	13:30	19:42
	14.2	1.3	14.0	1.4
Mon., Nov. 16.....	1:48	8:10	14:22	20:32
	15.2	0.1	15.0	0.6
Tues., Nov. 17.....	2:38	9:00	15:10	21:22
	16.0	-0.8	15.7	0.0
Wed., Nov. 18.....	3:25	9:47	15:58	22:09
	16.6	-1.4	16.2	-0.2
Thurs., Nov. 19.....	4:11	10:34	16:44	22:56
	16.7	-1.6	16.3	-0.1
Fri., Nov. 20.....	4:57	11:20	17:31	23:45
	16.5	-1.3	16.0	0.4
Sat., Nov. 21.....	5:45	12:10	18:19	.....
	15.8	-0.7	15.4	.....
Sun., Nov. 22.....	0:35	6:34	13:00	19:11
	1.1	14.9	0.3	14.6
Mon., Nov. 23.....	1:29	7:28	13:55	20:06
	1.9	13.9	1.4	13.8
Tues., Nov. 24.....	2:27	8:28	14:53	21:08
	2.7	12.8	2.4	13.0
Wed., Nov. 25.....	3:32	9:38	15:56	22:16
	3.4	12.0	3.2	12.5
Thurs., Nov. 26.....	4:39	10:55	17:01	23:23
	3.7	11.6	3.7	12.3
Fri., Nov. 27.....	5:45	12:09	18:04	.....
	3.8	11.6	3.9	.....
Sat., Nov. 28.....	0:25	6:44	13:10	19:00
	12.4	3.5	11.8	3.8
Sun., Nov. 29.....	1:16	7:34	13:59	19:48
	12.6	3.1	12.1	3.6
Mon., Nov. 30.....	2:00	8:15	14:39	20:30
	13.0	2.6	12.4	3.4

DECEMBER.

Tues., Dec. 1.....	2:38	8:54	15:14	21:09
	13.3	2.1	12.7	3.1
Wed., Dec. 2.....	3:12	9:31	15:44	21:46
	13.5	1.7	13.0	2.8
Thurs., Dec. 3.....	3:45	10:07	16:14	22:20
	13.7	1.4	13.4	2.6
Fri., Dec. 4.....	4:18	10:43	16:47	22:58
	13.9	1.2	13.7	2.4
Sat., Dec. 5.....	4:54	11:19	17:22	23:35
	13.9	1.1	14.0	2.5
Sun., Dec. 6.....	5:29	11:57	18:00	.....
	13.9	1.3	14.1	.....
Mon., Dec. 7.....	0:17	6:09	12:37	18:42
	2.5	13.7	1.5	14.0
Tues., Dec. 8.....	1:01	6:52	13:22	19:27
	2.6	13.4	1.9	13.8
Wed., Dec. 9.....	1:50	7:40	14:11	20:18
	2.8	13.1	2.4	13.6
Thurs., Dec. 10.....	2:45	8:35	15:06	21:14
	2.9	12.8	2.8	13.4
Fri., Dec. 11.....	3:44	9:38	16:06	22:14
	3.0	12.5	3.0	13.3
Sat., Dec. 12.....	4:37	10:46	17:11	23:18
	2.8	12.5	3.0	13.4
Sun., Dec. 13.....	5:30	11:56	18:14	.....
	2.3	12.8	2.7	.....
Mon., Dec. 14.....	0:21	6:50	13:01	19:14
	13.9	1.5	13.4	2.1
Tues., Dec. 15.....	1:20	7:46	14:01	20:10
	14.6	0.7	14.2	1.5
Wed., Dec. 16.....	2:16	8:40	14:55	21:04
	15.2	-0.1	14.9	0.9

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Goedetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used in Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS WITH PACIFIC PORTS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acapulco, San José de Guatemala, Champerico, Ocosingo, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central America line, between Balboa and Ocosingo, making one round voyage monthly, and calling at all the ports abovenamed between Balboa and Ocosingo.

The Luckenbach Steamship Company is operating a 10-day service between New York and San Francisco, calling at East San Pedro both ways. Its vessels handle cargo at Balboa when sufficient business offers.

The American-Hawaiian lines between New York and San Francisco, and New York and Honolulu, discharge and take on cargo at Balboa when sufficient business offers. At present, a vessel of this company passes through the Canal about every third day.

Grace and Company maintain an irregular service between New York and San Francisco, calling at way ports. Sailings are made about every 12 days. A vessel plying between San Francisco and Valparaiso, calling at way ports makes a round voyage about every 10 weeks.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Payta, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa for Valparaiso calling at Paíta, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service each way between New York and Southampton, making the following way ports: Antilla, Jamaica, Colon, Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores, and Cherbourg. Its vessels all arrive at Colon on Sundays and sail on Tuesdays.

The Compagnie Générale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curaçao, Puerto Cabello, and Barcelona.

The Compania Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curaçao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line vessels sailing about every six days, direct; between Colon and New York by the United Fruit Company and the Royal Mail Company, sailings via Kingston weekly and fortnightly, respectively; between Cristo-

(Continued on page 112.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon November 1.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Oct. 27.....	Panaman.....	American.....	American-Hawaiian S.S. Co.	New York.....	Los Angeles.....	General mdse.....	5,263	6,937	4,768
Oct. 28.....	Isabela.....	American.....	Luckenbach S. S. Co.	New York.....	San Pedro.....	General mdse.....	4,000	3,224	2,198
Oct. 30.....	Allianca.....	American.....	Panama Railroad.....	New York.....	Batboa.....	General mdse.....	487	4,120	2,670
Oct. 30.....	City of Naples.....	British.....	Hall Line.....	Galveston.....	Yokohama.....	Cotton, iron.....	5,044	6,335	4,722
Nov. 1.....	Caldergrove.....	British.....	Clutha Shipping Co.	Philadelphia.....	Auckland.....	Oil in cases.....	6,200	4,765	3,759
Nov. 1.....	Nevadan.....	American.....	American-Hawaiian S.S. Co.	New York.....	San Diego.....	General mdse.....	4,074	4,543	3,080
Nov. 1.....	Howick Hall.....	American.....	American-Hawaiian S.S. Co.	New York.....	Callao.....	General mdse.....	5,000	6,041	4,344
Nov. 1.....	John A. Hooper.....	American.....	Sudden & Christiansen.....	New York.....	Seattle.....	Coal.....	3,995	2,462	1,536

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Oct. 27.....	Stanley Dollar.....	American.....	Luckenbach S.S. Co.	San Francisco.....	New York.....	General produce.....	2,185	1,840	925
Oct. 27.....	San'a Rosalia.....	American.....	Isthmian Line.....	San Francisco.....	Avonmouth.....	General produce.....	7,000	5,865	4,530
Oct. 28.....	Inveric.....	British.....	A. Weir & Co.	Portland.....	Cork.....	Wheat.....	6,513	5,174	3,812
Oct. 28.....	Knight of the Thistle.....	British.....	Knight S.S. Co.	San Francisco.....	Leith.....	Barley.....	9,507	7,266	5,415
Oct. 29.....	San'o Clara.....	American.....	W. R. Grace & Co.	San Francisco.....	New York.....	General produce.....	7,000	6,748	4,475
Oct. 29.....	Pleiadés.....	American.....	Luckenbach S. S. Co.	San Francisco.....	Galveston.....	General produce.....	4,700	4,147	3,255
Oct. 29.....	Queen Adelaide.....	British.....	Queen Line.....	Portland.....	Queenstown.....	Grain.....	7,397	5,413	4,018
Oct. 30.....	Arizona.....	American.....	American-Hawaiian S.S. Line.....	Seattle.....	New York.....	General produce.....	11,780	8,759	6,576
Oct. 30.....	Henry T. Scott.....	American.....	Sudden & Christiansen.....	San Francisco.....	New York.....	Lumber.....	3,000	1,763	892
Oct. 31.....	E. H. Vance.....	American.....	Nehalem S.S. Co.	San Francisco.....	New York.....	General produce.....	3,700	2,555	1,433

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessels	Line	From
Nov. 1.....	Tremcadow.....	Hain S. S. Co.	Cardiff
Nov. 1.....	Dunraven.....	Evan Thomas.....	Newport, Wales.
Nov. 2.....	Arlington Court.....	Court Line.....	Gulfport.
Nov. 2.....	Brodmount.....	Blue Star Line.....	
Nov. 2.....	Jamaico.....	Royal Mail.....	Trinidad.
Nov. 2.....	S. V. Luckenbach.....	Luckenbach S.S. Co.	New York
Nov. 3.....	Chimu.....	N. Y. & Pacific S. S. Co.	New York.
Nov. 11.....	Natica.....	Anglo-Saxon Petroleum Co.	Port Arthur.
Nov. 10.....	Discoverer.....	Harrison Line.....	Liverpool.
Nov. 20.....	Esmeraldas.....	Pacific Steam Nav. Co.	Spain.
Nov. 20.....	American Transport.....	Transport Line.....	Unknown.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessels	Line	For
Nov. 1.....	Bellgrano.....	Bellgrano S.S. Co.	Arica.
Nov. 6.....	Natal.....	East Asiatic S.S. Co.	San Francisco.
Nov. 6.....	Columbian.....	W. R. Grace & Co.	San Pedro.
Nov. 5.....	Lewis Luckenbach.....	Luckenbach S.S. Co.	San Francisco.
Nov. 7.....	Kronprins Gustaf.....		
Nov. 15.....	Adolf.....	A. A. Johnson.....	San Francisco.
Nov. 15.....	Damara.....	Luckenbach S.S. Co.	San Francisco.
Nov. 15.....	George Fenwick.....	W. R. Grace & Co.	San Francisco.

*Vessels which will pass through the Canal.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Oct. 26.....	Tagus.....	Royal Mail.....	Southampton.	Oct. 26.....	Folk.....	Atlas Line.....	Limon.
Oct. 26.....	Tordenskjold.....	Earn Line.....	Norfolk.	Oct. 30.....	Tordenskjold.....	Earn Line.....	Dalquiri.
Oct. 26.....	Evangel.....	West Indian S.S. Co.	Jacksonville.	Oct. 31.....	Centurian.....	Harrison Line.....	Belize.
Oct. 27.....	Centurian.....	Harrison Line.....	Liverpool.	Oct. 31.....	Nickerie.....	Dutch Royal Mail.....	Haiti.
Oct. 29.....	Nickerie.....	Dutch Royal Mail.....	Europe.				
Oct. 30.....	Savoia.....	La Veloce.....	Genoa.				
Oct. 31.....	Dronning Olga.....	Seeberg S.S. Co.	Gulfport.				

*EXPECTED ARRIVALS.

Nov. 2.....	Porto Rico.....	Cie. Gen. Transatlantique.	Bordeaux.....
Nov. 8.....	Trent.....	Royal Mail.....	Southampton.
Nov. 12.....	Nubian.....	Leyland Line.....	Liverpool.

*EXPECTED DEPARTURES.

Nov. 3.....	Savoia.....	La Veloce.....	Genoa.
Nov. 3.....	Danube.....	Royal Mail.....	Southampton.
Nov. 3.....	Nubian.....	Leyland Line.....	
Nov. 3.....	Dronning Olga.....	Seeberg S.S. Co.	
Nov. 3.....	Evangel.....	West Indian S.S. Co.	
Nov. 3.....	Porto Rico.....	Cie Gen. Transatlantique.....	

*Other than vessels using the Canal, United Fruit Company's regular vessels, and vessels in regular service with the United States.

PORT OF BALBOA.

*ARRIVALS.				*DEPARTURES.			
Oct. 27.....	Barracouta.....	Pacific Mail S.S. Co.	San Francisco.	Oct. 26.....	Mantero.....	Peruvian S.S. Co.	Guayaquil.
Oct. 27.....	Manavi.....	Pacific Steam Nav. Co.	Colombian ports.	Oct. 26.....	Limari.....	South Am. S.S. Co.	Valparaiso.
Oct. 28.....	Tricolor.....	W. R. Grace.....	Portland.				
Oct. 28.....	Chile.....	Pac. Steam Nav. Co.	Valparaiso.				
Oct. 29.....	Hercules (with caisson).....		San Francisco.				

*EXPECTED ARRIVALS.

Nov. 4.....	Huasco.....	South Am. S.S. Co.	Valparaiso.
Nov. 5.....	San José.....	Pacific Mail S.S. Co.	San Francisco.

*EXPECTED DEPARTURES.

Nov. 2.....	Pennsylvania.....	Pacific Mail.....	San Francisco.
Nov. 5.....	Quilpué.....	Pac. Steam Nav. Co.	Guayaquil.
Nov. 7.....	Tricolor.....	W. R. Grace & Co.	Valparaiso.

*Other than vessels using the Canal.

(Continued from page 111.)
 bal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails.	Arrives.
NEW YORK TO CRISTOBAL.	
*Colon.....P. R. R..Oct. 29.....Nov. 4	
*Advance.....P. R. R..Nov. 4.....Nov. 11	
*Panama.....P. R. R..Nov. 10.....Nov. 16	
*Allianca.....P. R. R..Nov. 16.....Nov. 22	
*Colon.....P. R. R..Nov. 23.....Nov. 29	
CRISTOBAL TO NEW YORK.	
†Panama.....P. R. R..Oct. 29.....Nov. 4	
†Allianca.....P. R. R..Nov. 4.....Nov. 10	
†Colon.....P. R. R..Nov. 10.....Nov. 16	

†Advance.....P. R. R..Nov. 16.....Nov. 23	
†Panama.....P. R. R..Nov. 22.....Nov. 28	
†Allianca.....P. R. R..Nov. 28.....Dec. 4	
NEW YORK TO COLON.	
Steamer.....U. F. C..Oct. 28.....Nov. 4	
Steamer.....U. F. C..Nov. 4.....Nov. 11	
Tagus.....R. M..Nov. 7.....Nov. 15	
*Zacapa.....U. F. C..Nov. 11.....Nov. 18	
COLON TO NEW YORK.	
Zacapa.....U. F. C..Nov. 5.....Nov. 12	
Essequibo.....R. M..Nov. 10.....Nov. 18	
Santa Marta.....U. F. C..Nov. 12.....Nov. 19	
Steamer.....U. F. C..Nov. 19.....Nov. 26	
NEW ORLEANS TO COLON.	
Cartago.....U. F. C..Oct. 28.....Nov. 4	
*Turrialba.....U. F. C..Oct. 31.....Nov. 5	

Heredia.....U. F. C..Nov. 4.....Nov. 11	
*Abangarez.....U. F. C..Nov. 7.....Nov. 12	
Parismina.....U. F. C..Nov. 11.....Nov. 18	
COLON TO NEW ORLEANS.	
†Atenas.....U. F. C..Nov. 5.....Nov. 10	
Cartago.....U. F. C..Nov. 5.....Nov. 12	
†Turrialba.....U. F. C..Nov. 12.....Nov. 17	
Heredia.....U. F. C..Nov. 12.....Nov. 19	
*Will carry mail from the United States.	
†Will carry mail to the United States.	
*Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.	
Irregular services between Cristobal and Gulf ports of the United States, with way calls at Central American and Mexican ports, are maintained by the Leyland and Harrison Lines, sailings about every fortnight, and the Seeberg Line, sailings about every 18 days.	

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, NOVEMBER 11, 1914.

No. 12.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

The "Jamaica" to Take the Place of the "Quito."

The steamship *Jamaica*, which arrived at Cristobal from Trinidad on November 3, and was despatched through the Canal to Balboa on November 5, has been transferred by the Royal Mail Steam Packet Company from its Caribbean service to the service of its affiliated company, the Pacific Steam Navigation Company, along the west coast of South America. The *Jamaica* is to take the place of the *Quito*, which was refused a passenger certificate on its last inspection by the Board of Local Inspectors. The *Jamaica* was built in 1908 at Middlesborough, England, and is a vessel of 1,138 tons gross register, with a length of 220 feet, breadth of 34 feet, and depth of 14.9 feet. The *Quito* was built in 1888, at Birkenhead, and is of 1,089 tons gross register, with a length of 216 feet, breadth of 35.2 feet, and depth of 14.9 feet.

Canal Traffic Moving Normally.

The steamship *Arizonan*, of the American-Hawaiian Line, which was held at Pedro Miguel Lock by the second movement of the New Culebra slide on October 31, sailed for New York on Sunday, November 8, having been held up, on account of its relatively great size, three days after the Canal was open for the transit of the other vessels awaiting passage. It was decided in the interest of safety, to hold the *Arizonan* for an enlarged channel. The channel has since been cleared sufficiently to permit the safe passage of vessels as large as any which have yet come to the Canal, and traffic is now being despatched through without delay.

In connection with delay caused by the slide, a steamship company inquired if claims for demurrage would be considered. The Governor replied that The Panama Canal is not to be held responsible for such delay, and added:

"It may be of interest to state that the original date for the completion of the Canal was January 1, 1915, but that the construction work was so far advanced, though not entirely completed, in August of the current year, that it was decided to offer vessels the privilege of using it before the official opening.

"When this slide occurred it was considered advisable, as a matter of precaution, to give

the dredges and other floating equipment the right-of-way for a few days, to engage in construction work, in preference to the vessels that were waiting transit through the Canal."

In the case of the *Arizonan*, on its way from San Francisco to New York, the Canal will save it approximately 19.8 days at sea, on the basis of a speed of 12 knots, even after a delay of a week in passing through the Canal. The *Arizonan* is a relatively large vessel, 470 feet long by 57.2 feet in the beam, of 8,672 gross and 5,621 net tons, Lloyds' register, and carried, on this voyage, a cargo of 11,780 tons. If its cost at sea be reckoned at \$450 per day, the time saved will be worth \$8,910. Deducting from this the amount of tolls, \$7,891.20, the net saving amounts to \$1,018.20 in spite of the week's delay.

The "Urubamba" Returns to Service.

The steamship *Urubamba*, of the Peruvian Steamship Company, which was despatched through the Canal from Cristobal on November 8 and arrived at Balboa on November 10, is on its way to the west coast of South America from France, where it has been undergoing repairs, mainly in the installation of new boilers. It has on board a cargo of coal, taken on at Cardiff, and a number of passengers for the west coast, booked through from England. After it has been inspected and granted a new passenger certificate by the Board of Local Inspectors, the vessel will resume its place in the regular service between Balboa and Mollendo, Peru.

Structural Steel for Cristobal Coaling Plant.

Award has been made to the United States Steel Products Company for approximately 9,000,000 pounds of structural steel required in the construction of the unloader and reloader wharves, and the end wharf, at the Cristobal coaling plant, at the price of \$0.01967 per pound. Deliveries are to be made in two parts; the first part comprises the unloader and reloader wharf structures from bent No. 24 to bent No. 40, including the framing to the south of bent No. 40; and the second part, the remainder of the unloader and reloader wharves, and the end wharf. Delivery of the steel for the first part, exclusive of the slabs, is to be completed on or before January 8, 1915; delivery of the slabs for the first part on or before November 24, 1914; delivery of the steel for the second part, exclusive of slabs, on or before March 19, 1915, and delivery of the slabs for the second part on or before February 2, 1915.

Office Change.

The United Fruit Company announces that beginning November 10 all business will be transacted in its new office building in Cristobal, near the fire station.

A contract has been entered into with W. L. Alley for the removal of the north mast at the Colon radio station at the price of \$1,500. Four bids were received in all.

GRAIN THROUGH THE CANAL.

Consigned to Europe—Has Formed Largest Single Item of Cargo.

Grain for Europe, from north Pacific ports of the United States, has so far formed the largest single item of cargo carried through the Canal. In the two months and a half of Canal operation ending November 1, the Canal was used by 17 eastbound vessels in this traffic, and eight vessels have passed through from the Atlantic to the Pacific in ballast, to return with grain. The laden vessels have carried through an aggregate of 122,258 tons of grain, consisting of 72,932 tons of barley and 49,326 tons of wheat. Counting 37 bushels of wheat and 46 of barley to the long ton, the cargo amounted to 1,825,062 bushels of wheat and 3,354,872 bushels of barley, a total of 5,179,934 bushels of grain. In addition to the shipments from United States ports, the *Ocean Monarch* passed through the Canal on October 25 with 6,200 tons (285,200 bushels) of barley from Valparaiso for Falmouth.

The next largest single item of cargo handled through the Canal during the same period was nitrates, principally from Chile. This was carried in 14 vessels, and amounted to 99,126 tons, an average of 7,080 tons to the vessel. That the grain shipments should have exceeded those of nitrates is contrary to the prediction that the latter would form the largest item, but does not disprove that prediction, as applied to any considerable period of normal world business. It appears that the grain traffic is largely seasonal, and has been stimulated recently by an increased demand in Europe, coupled with a heavy crop in the United States, while the traffic in nitrates, which is perennial, has been, during the period under consideration, considerably depressed by business conditions. It is reported that Atlantic ports of the United States have established new records of grain exportations to Europe during this period.

Of the 17 vessels from the United States Pacific ports, 10 cleared from San Francisco, three from Portland, Oregon, two from Tacoma, and two from Seattle. All the vessels, except the *Transvaal*, which is registered in Copenhagen, were of British registry. Ten cleared for ports in Great Britain, including Avonmouth, Cork, Dublin, Leith, Liverpool, London, Queenstown, and Southampton. Five cleared for island ports on the way to Europe, with their final destination subject to further orders, and two cleared for Antwerp.

The distance saved from the ports of departure to those of destination, by the use of the Canal in place of the Magellan route, may be approximated at 5,550 miles. If the average speed of the vessels be rated at 10 knots, the saving in time at sea per vessel has been 23 days. On the basis of a per diem cost of operation at sea of 10 cents per net registered ton (Lloyds' measurement), the average

saving in cost of operation per vessel has been \$309.40 per day, or \$7,116.20. The average tolls paid were on 4,050 tons at \$1.20 per ton, or \$4,860. The average net saving per vessel by use of the Canal has, accordingly, been \$2,256.20.

Details of the traffic are given in the following tabulation:

Date.	Vessel.	From.	For.	Cargo.		Net Tonnage.	
				Tons.	Nature.	Canal.	Lloyds.
Aug. 22...	Daldorch.....	Tacoma.....	Limerick.....	6,000	Wheat...	3,857	3,031
Aug. 31...	Transvaal.....	San Francisco.	Europe.....	7,082	Barley...	3,473	2,769
Sept. 7...	Lord Lonsdale..	San Francisco.	St. Thomas...	7,243	Barley...	3,642	2,895
Sept. 13...	Dundulha.....	San Francisco.	England.....	5,760	Barley...	3,213	2,552
Sept. 23...	Candidale.....	San Francisco.	Liverpool.....	6,450	Barley...	4,244	3,826
Sept. 29...	Headley.....	San Francisco.	Teneriffe.....	8,230	Barley...	4,573	2,712
Sept. 30...	Volumina.....	San Francisco.	Antwerp.....	7,973	Barley...	4,521	3,546
Oct. 6...	Frankmoun.....	Tacoma.....	Southampton.	7,500	Wheat...	4,087	3,241
Oct. 9...	Frimley.....	San Francisco.	Antwerp.....	7,098	Barley...	3,868	3,141
Oct. 11...	Saxon Monarch..	Portland.....	Great Britain.	8,224	Wheat...	4,922	3,024
Oct. 19...	Spithead.....	San Francisco.	Avonmouth....	7,771	Barley...	3,691	2,993
Oct. 20...	Cloughon.....	Seattle.....	Europe.....	6,490	Wheat...	4,152	2,580
Oct. 23...	English Monarch.	Seattle.....	Dublin.....	7,202	Wheat...	4,089	3,207
Oct. 23...	Doverbury.....	San Francisco.	Madeira.....	5,818	Barley...	3,276	2,482
Oct. 28...	Inveric.....	Portland.....	Cork.....	6,513	Wheat...	3,812	3,113
Oct. 28...	Knight of the Thistle.	San Francisco.	Leith.....	9,507	Barley...	5,415	4,286
Oct. 29...	Queen Adelaide.	Portland.....	Queenstown...	7,397	Wheat...	4,018	3,196
Total, 17 vessels.....				122,258		68,853	52,594
Average 17 vessels.....				7,192		4,050	3,094

IMPROVEMENTS AT LA BOCA.

Monthly Prizes to be Awarded Residents For Cleanest and Best Kept Houses.

The committee, consisting of Maj. P. M. Ashburn, chairman; Dan E. Wright, and Roy R. Watson, appointed to investigate and report on the measures necessary to keep the silver settlement of La Boca in a sanitary condition, has made its report and recommendations, and, in general, the same have been approved. The improvements recommended and approved are, *seriatim*, as follows:

1. Installation of water taps and slop sinks in two large apartment houses, eight in each department, at an approximate total cost of \$800. To cover this expense, the rent will be increased 25 cents a room a month.

2. A shedlike building, with concrete floor, and with benches, tables, and garbage cans installed therein, will be provided near or in the rear of the La Boca silver mess, for the use of the men who pay 27 cents a day for their subsistence. This is estimated to cost \$420, and will be paid for out of the receipts from hotels, messes, and kitchens.

3. Kitchenettes of a neat and uniform pattern will be provided for each house, as well as conveniences for the proper storage of effects. The kitchenettes are urgently needed on account of fire protection, and their manufacture has already been begun. Hearths for the boiling of clothes will be established in each washhouse. It is estimated that 400 kitchenettes and 19 hearths will be required at a probable cost of \$2,095.

4. Rows of wire clotheslines, strung six feet apart on iron piping, will be put up in front and rear of each row of washhouses; more will be added as the necessity becomes apparent. When these lines are up, the stringing of miscellaneous lines will be forbidden, although tenants will be permitted to dry clothes under houses and on the porches in time of rain. The estimated cost of these improvements is \$1,300.

5. Hereafter, the grass will be cut at regular intervals by the Quartermaster's Department, and in order to drive out the growth of Para and other undesirable grasses, Bermuda grass may be introduced. This part of the work will be placed under the supervision of the horticultural expert. The grass cutting

cost has been estimated at \$200 annually.

6. The plaza or park will be planted with grass, shrubs, and trees under the direction of the horticulturist. A general plan will first be submitted for approval.

7. The committee found that lack of civic pride was one of the greatest drawbacks to keeping up the town's appearance, due to

The committee recommended that the residents should be encouraged to keep flowers and plants, either on the porches inside the railings, or in beds outside of the houses. The report states "That the West Indian idea of beauty may be different from ours is here immaterial, the object being to interest the people of La Boca rather than to merely gladden the eyes of persons not living there."

The committee and heads of various departments concerned have been authorized to arrange for carrying the above projects into execution; to formulate all necessary regulations and instructions to make the foregoing recommendations effective, and to advise the inhabitants of La Boca in regard to same, submitting a report from time to time to the Governor for his approval.

Employment of Horticultural Expert.

Mr. Otis W. Barrett, an expert in tropical horticulture, has been employed under a temporary appointment to study local horticultural and agricultural conditions, and to report on same. In addition to supervising the planting and propagation of decorative trees, shrubs, etc., in the permanent towns, he will make a technical study of the best methods and the proper course to pursue in connection with the development work at the Corozal farm, and of the plantations operated by the commissary department at Frijoles and other localities. He will make a special study of the local propagation of citrus fruits.

Collapse of Tower at Colon Radio Station.

While two men, an American named John Thompson, and a West Indian named Oliver Niles, were engaged in removing the north mast at the Colon radio station on Monday afternoon, November 9, the pole broke near the base and fell. The men started to climb down when the pole moved, but both jumped as it gained headway and were killed. They were employees of the contractor who were taking down the mast. The pole fell across a house in the reservation doing some damage.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Ricketts, Edward.....	26544	Jamaica.....	Panama.....	Mech. Div.....	Oct. 28, 1914.
Chase, Larry.....	53024	Barbados.....	Colon.....	Dredging Div...	Nov. 1, 1914.
Cook, Esau Joseph.....	24409	Jamaica.....	Balboa.....	Transportation.	Oct. 29, 1914.
Greaves, Joseph.....	36292	Barbados.....	New Gatun....	Oper. and Main.	Oct. 31, 1914.
Palmer, Geo. J.....	39574	Jamaica.....	Empire.....	Supply Dept....	Oct. 28, 1914.
Williams, Levy.....	2223	Fortune Island.	Panama.....	Panama railroad.	Nov. 1, 1914.
	23538				
	23738				
	24519				

Insane Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of commitment.
Lynch, Hubert.....	63194	Grenada.....	Balboa.....	Balboa Comsy..	Nov. 6, 1914.

The estates of these deceased or insane employees of the Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

EXECUTIVE ORDER

Providing for License Taxes and Fees.

By virtue of the authority vested in me I hereby establish the following Order for the Canal Zone:

Section I. There shall be collected the following taxes for operating, in the streets and roads of the Canal Zone, public vehicles not drawn or propelled by steam, gasoline, electricity, or other motive power:

(a) For each coach, carriage, or other conveyance employed in the transportation of passengers for hire, \$12 per annum.

(b) For each cart, dray, wagon, or other conveyance employed in the transportation of merchandise, \$20 per annum for each 2-wheel vehicle, and \$30 per annum for each 4-wheel vehicle.

The foregoing licenses shall be paid for the fiscal year, provided that the licensee may obtain a license for any period of the fiscal year not less than three months, upon payment of the proportionate tax due for the period for which the license is issued, and, provided further, that if no license taxes are imposed in the Republic of Panama for operating therein the vehicles of the character in this section named, which are duly licensed in the Canal Zone to residents thereof, there shall not be imposed or collected in the Canal Zone any license taxes or charges for operating therein like vehicles when duly licensed in the Republic of Panama to residents thereof.

Section II. The license tax on motor vehicles and motorcycles, required by the ordinance of the Isthmian Canal Commission, dated April 9, 1912, approved by the Secretary of War, May 1, 1912, amendatory of the ordinance of the Isthmian Canal Commission, enacted August 25, 1910, approved by the Secretary of War, October 31, 1910, shall be collected for the fiscal year, provided, however, that the licensee may obtain a license for one or more quarters of a year, upon payment of the proportionate amount of the license tax to cover the period of the license to be issued to him.

The licenses heretofore issued under said ordinances for motor vehicles and motorcycles shall not be affected by this Order, and shall continue to run until the end of the quarter following the expiration of such licenses, and thereafter the owners must obtain licenses for the fiscal year, or fraction thereof, in conformity with this section.

Section III. The following special license taxes shall be collected in the Canal Zone:

(a) For each dance, for which admission is charged, there shall be collected the sum of \$5, provided, however, that this tax shall not apply to any dance given for purposes of charity or benevolence, or the celebration of any public occasion authorized by the Governor.

(b) For operating a hurdy gurdy, street piano, or hand organ, striking machine, view machine, fortune telling device, cane rack, doll rack, or other similar device, of a non-gambling nature, maintained in the open or within an enclosure, where no admission is charged, \$1 per month for each such device.

(c) For the retail sale of soda water, other aerated waters, or ice cream from any fountain or booth, for from any cart or vehicle, there shall be charged and collected a tax of \$2 per month.

(d) For maintaining a merry-go-round for hire, \$10 per month.

(e) For musicians, jugglers, acrobats, trick

riders, fortune tellers, and persons engaged in similar businesses or professions, performing in the public highway, or from house to house, \$1 per month for each person.

(f) For carrying on the business of a peddler, \$2 per month, provided that no license fee shall be required where only articles of food are sold, but the person selling such articles of food may obtain the license upon the condition that he will observe the sanitary regulations of the Canal Zone, and obey the orders of the sanitary officials in the conduct of such business, and a failure to do so shall authorize the Executive Secretary to cancel such license.

(g) For maintaining a shooting gallery, \$5 per quarter of the year.

(h) For the retail sale of tobacco in any form there shall be charged and collected a tax of \$2 per month.

Section IV. Before any person engages in any business or calling, or operates any of the public vehicles mentioned in this Order, he shall obtain a license to do so from the Executive Secretary, or the official acting under his authority, and such license shall not issue until the person applying for the same shall present a receipt from the Collector of The Panama Canal showing that the license tax herein provided for has been duly paid, provided that peddlers of articles of food shall pay no license fee. The license so issued shall authorize the person to conduct the business or calling, or operate the vehicle named therein in the Canal Zone for the period of time mentioned in such license.

The Executive Secretary may refuse to issue a license for any of the purposes hereinbefore mentioned, if the character of the applicant is such as to warrant the belief that the exercise of the privilege granted by the license will not be conducted in an orderly and lawful manner and, provided further, that any license granted pursuant to the foregoing provisions of this Order shall at once become null and void upon conviction of the licensee, in any court of the Canal Zone, of a violation of the law in the exercise of the privilege granted by such license.

Any person who shall engage in any of the occupations above enumerated before obtaining the license provided for in this Order shall be guilty of a misdemeanor, and shall be subject to a fine not exceeding \$25, or imprisonment not exceeding 30 days, or both such fine and imprisonment in the discretion of the court.

Section V. That the ordinance enacted by the Isthmian Canal Commission on June 9, 1908, and approved by the Secretary of War, June 30, 1908, providing for certain taxes and licenses in the Canal Zone, other than for the sale of intoxicating liquors, and the ordinance of the Isthmian Canal Commission of August 5, 1911, approved by the Secretary of War, August 22, 1911, amending Section 7 of the abovementioned ordinance, as well as the ordinance of the Isthmian Canal Commission of October 15, 1912, approved by the Secretary of War, October 26, 1912, further amending said Section 7 of said ordinance of June 9, 1908, are hereby repealed, but licenses heretofore issued under said ordinances shall be effective for the period of time specified in such licenses.

This Order shall take effect from and after this date.

THE WHITE HOUSE,

October 13, 1914.

[No. 2062.]

OFFICIAL CIRCULARS.

Gifts, Presentations, and Solicitations of Contributions.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., October 29, 1914.
CIRCULAR No. 606-1:

1. Section 1784 of the Revised Statutes, published in Paragraph 2 of Circular No. 606, is hereby republished, as follows:

No officer, clerk, or employee in the United States Government employ shall at any time solicit contributions from other officers, clerks, or employees in the Government service for a gift or present to those in a superior official position; nor shall any such officials or clerical superiors receive any gift or present offered or presented to them as a contribution from persons in Government employ receiving a less salary than themselves; nor shall any officer or clerk make any donation as a gift or present to any official superior. Every person who violates this section shall be summarily discharged from the Government employ. (R.S., Act of February 1, 1870.)

2. Contributions must not be solicited from employees for any gift or presentation of any kind for any one in authority over those from whom contributions are solicited, or for the family of such official or employee, or for the purpose of complimenting such official or employee or his family by celebrations, dinners, or other functions.

3. When employees and officials happen to be fellow-members of a club or other organization, there is, of course, no objection whatever to dinners or other functions at any time, but the objection is to the solicitation of subscriptions from employees in subordinate positions for such purposes as named in Paragraph 2.

4. Any official or employee who violates the prohibition contained in Paragraph 2, or who accepts such a gift or complimentary function from his subordinates for himself or permits his family to accept same shall be liable to summary dismissal.

5. This order takes effect November 1, 1914.

GEO. W. GOETHALS,
Governor, The Panama Canal.
President, The Panama Railroad Company.

Work Requests on Mechanical Division.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 2, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

In order to reduce the amount of work to be performed by the Mechanical Division to a minimum, consistent with keeping up current repairs and absolutely necessary work in connection with unfinished construction items, I desire that in the future heads of departments and divisions, in submitting work requests on the Mechanical Division, state specifically the date delivery is actually required.

If the time element will permit and the superintendent of the Mechanical Division is satisfied that the work can be done at as low or lower cost in the United States, including delivery on the Isthmus, the head of the department or division will be so advised and order will be placed in the United States for earliest possible delivery.

If there is any special reason why the work should not be performed in the United States, aside from the element of time, a detailed statement to that effect should appear on the work request and will be given careful consideration by the superintendent of the Mechanical Division.

I desire that you give this matter careful attention and anticipate as much as possible your requirements for mechanical work, so that whenever advisable the order may be placed in the United States.

GEO. W. GOETHALS,
Governor.

Notice to Steamship Lines.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., November 5, 1914.

1. Articles XIII and XIV of the rules for the measurement of vessels for The Panama Canal, set forth what space may be used for carrying coal and other fuel for a vessel's own use without payment of tolls for the space so occupied.

2. The rules are liberal in making ample provision for such space and authorize the owner of the vessel to select either of the two provisions that he may elect as set forth in the rules. Full tolls are levied on loaded vessels and reduced tolls on those in ballast, and in order that there may be no misunderstanding vessels will be considered in ballast only when they carry no passengers and do not carry either coal or merchandise of any description in any quantity whatsoever, except bunker coal or other fuel for their own use. In order that they may be entitled to claim the reduced or ballast rate the amount

of bunker coal or other fuel must not exceed in volume the allowance specified in The Panama Canal certificate as the deduction for bunker space.

3. In any case in which the amount of coal on board exceeds the deductible allowance the vessel will be charged full tolls.

4. In any case in which coal be carried as a deck load, for the vessel's own consumption, or even though it be within the deductible allowance it will be subject to measurement and charge, the rate depending upon whether or not the vessel be considered in ballast or loaded.

5. If when carrying a deck load of coal for her own use she carries no passengers or freight, and the amount of coal on board be within the deductible allowance, she may be considered in ballast.

6. Vessels that wish to benefit by the reduced or ballast rate of tolls should be very careful not to carry more than the deductible allowance under the rules.

7. On arrival, vessels must have ready a statement of their coal account, to which the master may be required to take oath. In case coal be carried outside of the regular bunkers, both it and that carried in the bunkers should be piled or arranged in a fairly uniform way, so that it may be readily measured.

GEO. W. GOETHALS,
Governor.

Shipments to Mount Hope Depot.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 4, 1914.

All concerned—My attention has been called to the fact that the provisions of Paragraphs 14 and 15, Circular No. 632, are in many instances not being complied with, inasmuch as many shipments are being received at Mount Hope depot without any notice whatever of shipment being furnished by the consignor, showing status of the shipment, which not only leads to unnecessary work in handling shipments at Mount Hope, but oftentimes causes confusion in making ultimate disposition. The provisions of Paragraph 13 of the same circular are also not being complied with, inasmuch as many shipments are being forwarded improperly loaded and packed.

It is directed that in future the provisions of this circular be strictly complied with. The three paragraphs are quoted herewith for ready reference:

"13. Shipments shall be packed in a manner sufficient to insure goods arriving at destination in good condition. Articles of a fragile nature must be securely boxed, or crated, and other items boxed, crated, bundled, or sacked (according to the nature of the shipment), and each package properly marked showing shipper, destination, and consignee.

"14. Box cars loaded by consignors shall be properly sealed, and cars so loaded must be carded showing shipper, destination, and consignee.

"15. Consignors shall forward an invoice to the consignee at unloading point in time to arrive at destination with the goods. This invoice shall contain particulars of the shipment and shall be used by the consignee for an unloading check. Agents, however, will check items, such as boxes, barrels, etc., as shown on the waybill. Shipment of bulky materials, such as rails, ties, lumber, piling or other material of large size, should be carded, card being placed on car containing material showing exact amount of material on car."

GEO. W. GOETHALS,
Governor, The Panama Canal.
President, Panama Railroad Company.

Monthly Statements of Lubricants and Waste Consumed.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 6, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:
The monthly statements of lubricants and waste consumed in the various classes of equipment of The Panama Canal, which have been forwarded by the various departments and divisions to the traveling engineer for compilation, in accordance with the last paragraph of Circular No. 314, of March 24, 1910, may be discontinued in future, as regards all equipment, except locomotives.

It is desired to have these statements forwarded for oil and waste consumed on locomotives until further notice.

GEO. W. GOETHALS,
Governor.

Service Ratings for Silver Employees.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 28, 1914.
CIRCULAR No. 604-2:

1. Hereafter, all service slips furnished silver employees upon termination of employment, must show general service as "Excellent," "Very good," "Good," "Mediocre," or "Poor."

2. Whenever it becomes necessary to increase the

silver force, preference will in all cases be given to exemployees holding service slips showing general service as "Excellent," or "Very good."

GEO. W. GOETHALS,
Governor.

Accountable Officials.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 6, 1914.
CIRCULAR No. 74:

Effective November 4, 1914, Mr. Frank Holmes ceased to be an accountable official of the Panama Canal. Any nonexpendable property hereafter transferred to the Building Division will be invoiced to Mr. C. A. McIlvaine, Executive Secretary.

H. A. A. SMITH,
Auditor, Panama Canal.
Approved:
GEO. W. GOETHALS,
Governor.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 6, 1914.
CIRCULAR No. 75:

Effective at once, Mr. F. R. Blunt ceased to be an accountable official of the Panama Canal and Panama railroad. He will effect a transfer of his accountability to Mr. C. H. Motsett, superintendent of the Panama railroad, who is hereby designated an accountable official of the Panama Canal.

Mr. Motsett will account for all Panama Canal equipment in the service of the Panama railroad.

H. A. A. SMITH,
Auditor, Panama Canal
Approved:
GEO. W. GOETHALS,
Governor.

Requisitions and Related Correspondence.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 5, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS IN BALBOA HEIGHTS ADMINISTRATION BUILDING—The following memorandum from the Chief Quartermaster on improvement in method of making requisitions and method of handling correspondence relating to requisitions is approved and you will be required in future to conform to the methods suggested in Paragraphs 4 and 9:

"1. With reference to the Governor's circular of the 19th instant, relative to the 'Organization of the new Executive Office', there are a few points in connection with the correspondence as now handled in this office that I desire to bring to your attention, not only with the view of eliminating, in so far as practicable, such portion of it as it seems can be dispensed with, but with the idea of bringing forth better results.

"2. A great deal of the correspondence received at this office emanates in the office of the General Purchasing Officer, and pertains to supplies which are ordered to protect requisitions of various divisions, the headquarters of which are now located at the Administration Building.

"3. Heretofore, it has been the practice of this office to refer to the division interested copies of the correspondence received from the General Purchasing Officer with a typewritten memorandum. With the exception of the office of the Engineer of Maintenance, replies are made by memorandums addressed to this office. The Engineer of Maintenance, in replying to any correspondence received from this office and which pertains to supplies ordered on his requisitions, does not reply by memorandum to this office, but prepares a letter addressed to the General Purchasing Officer to be signed by the undersigned.

"4. In view of the instructions contained in the circular above referred to, this office will, in the future, discontinue to refer correspondence to the various divisions by typewritten memorandum, but will use form P. C. 490 and note on the margin of the letter the action required. The divisions in making reply, if it be necessary to refer the subject to the General Purchasing Officer, should, instead of preparing a memorandum addressed to this office, prepare a letter addressed to the General Purchasing Officer to be signed by the undersigned. As all papers pertaining to United States requisitions are filed with the requisitions in this office, it will not be necessary that copies be made for the files of the Executive Office. Copies in duplicate are received from the General Purchasing Officer of all correspondence, and should any division so desire, they can retain the copy which is forwarded from this office. No change will be made in the handling of cablegrams.

"5. The scheme as outlined would result in more prompt action, eliminate considerable paper work, and, in my opinion, be for the best interests of all concerned. This office has heretofore kept a suspense file of all letters referred to other divisions for action, but should the above meet with your approval all papers will, as soon as copies are referred to the division interested, be filed with the requisition under which the supplies were ordered.

"6. In view of the above, I request that you issue the necessary instructions, so that all divisions will,

in the future in so far as practicable, discontinue writing a memorandum to this office on any subject that must be referred to the General Purchasing Officer, and, instead, address their replies to the General Purchasing Officer to be signed by me as Chief Quartermaster. All correspondence addressed to the General Purchasing Officer will be carefully checked by this office, and should it be necessary to make any corrections, the office interested will be duly informed.

"7. Furthermore, a great deal of the correspondence now received from the General Purchasing Officer could be eliminated, should the various divisions in preparing their requisitions furnish a complete description of the supplies required.

"8. It must be understood that, owing to the various classes of equipment and supplies that are required for the use of The Panama Canal, it would materially assist the General Purchasing Officer, in making purchases, if he had complete specifications and description of the article required.

"9. I further request in this connection that you issue a circular addressed to all divisions, with the view of having all requisitions prepared show complete information and description in detail of each and every article required. If practicable, requisitions should give complete specifications using standard specifications when applicable, or catalogue reference, or show previous purchase reference either by W. O. number or circular and class number, so that it will not be necessary for the General Purchasing Officer to refer the subject to the Isthmus for further information or description as to just what is required."

GEO. W. GOETHALS,
Governor.

Organization in Auditor's Office, Accounting Department.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 4, 1914.
CIRCULAR No. 53:

Effective as of November 1, 1914, the following organization will be established for the Auditor's office of the Accounting Department:

1. *Accounting Bureau*—Mr. Ad. Faure, chief accountant, in charge.

This bureau is charged with keeping the accounts of The Panama Canal and the commissary branch of the Supply Department.

1. *General accounts section*—Mr. G. K. Rounsevell in charge. This section is charged with keeping the general books of the Canal.

2. *Costkeeping section*—Mr. C. A. Duff in charge. The work of this section is carried on by the following subdivisions:

- A. Supply Department and building construction accounts.
- B. Terminal construction.
- C. Locks operation, electrical, and Canal transportation.
- D. Dredging and general construction.
- E. Municipal engineering.
- F. Fortifications.
- G. Panama railroad cost accounts.
- H. Health Department and civil government.
- J. Subsistence accounts.

3. *Material and property accounts section*—Mr. L. E. Willson, in charge. This section is charged with keeping accounts with storehouses, making the proper charges for material, supplies, and nonexpendable property purchased, issued, or transferred and with auditing the property records. It receives and checks all foremen's orders, invoices for material and supplies issued from storehouses or transferred between storehouses and divisions; receives all bills for material and supplies, purchased in the United States or on the Isthmus, makes the charges therefor against the proper accounts and prepares regular bills against credit customers from invoices sent in from storehouses.

4. *Commissary accounting section*—Mr. Herbert Pearson in charge. This section keeps the accounts for the commissary warehouses, cold storage, manufacturing plants, and for the local commissaries; and prepares monthly bills against credit customers from invoices received from the commissaries.

2. *Auditing Bureau*—Mr. Elwyn Greene, chief examiner, in charge.

This bureau is charged with the duties specified under the various sections of the bureau. In addition to his duties as chief of the auditing bureau, Mr. Greene will act as law clerk and all questions of law relating to the allowance of claims and disbursements of funds will be referred to him. He is also charged with the preparation of contracts on the Isthmus, and with determining that contracts otherwise prepared are in proper form.

1. *Panama Canal cash accounts section*—This section is charged with receiving and registering all bills and with enforcing their collection in due course; with seeing that all amounts received are properly accounted for, both to the office of the Auditor of The Panama Canal and to the accounting officers of the Treasury, and with examining or auditing the accounts of all collecting officers and employees of The Panama Canal

and Canal Zone Government, and with the administrative examination of accounts forwarded to the United States Treasury Department.

2. *Postal accounts section*—This section is charged with auditing the money order, postal savings, and other postal accounts.

3. *Coupon accounts section*—This section is charged with maintaining a stock of commissary and hotel coupon books and meal tickets, auditing the accounts of all employees charged with the receipt, custody, and issue of coupon books and meal tickets, the receipt from hotels and commissaries of all cancelled coupons and tickets, and the counting and proper disposition of same.

4. *Time inspection section*—This section is charged with the duty of checking time of employees, reporting all irregularities therein, and of reporting the misuse of Government material and property.

3. *Claims bureau*—Mr. J. H. Helmer, claim officer, in charge.

This bureau is charged with the detailed handling of claims as indicated under the sections below:

1. *Injury claims section*—This section is charged with investigating all claims arising out of injuries to or deaths of employees of The Panama Canal and the Panama Railroad Company, the conducting of written correspondence in regard thereto, and of all detailed matters connected therewith, including the preparation of pay rolls and other settlements of such claims for action of the Auditor and Governor.

2. *Vouchers section, Panama Canal*.

3. *Accounts payable section, Panama Canal*—The two sections above are charged with the preparation, examination, or audit of all vouchers or accounts payable prior to payment.

4. *Freight claims section, Panama Railroad Company*—This section is charged with handling claims against the Panama Railroad Company, for lost or damaged freight, baggage, or express; also, claims for refunds of tickets. In this section the papers will be prepared in form for final action by the Auditor and the superintendent of the railroad company.

5. *Pay roll section*—This section is charged with the examination, checking, or auditing of all payrolls, including the checking of payments to gold employees against the personnel records and the checking of time books and time rolls against the pay rolls.

4. *Railroad accounts bureau*—Mr. W. H. Kromer, railroad accountant, in charge.

This bureau has general charge of the accounts of the Panama Railroad Company on the Isthmus.

1. *General section*—This section is charged with miscellaneous accounting, auditing, and bookkeeping for the Panama Railroad Company.

2. *Station accounts section*—This section has charge of the accounts of the various station agents and other agents of the Panama Railroad Company.

3. *Ticket accounts section*—This section has charge of the ticket accounts, audits, and reports of the ticket collectors.

5. *General inspection bureau*—Mr. T. H. Chambers, in charge.

This bureau is charged with the inspection of the records and accounts of officers and employees who collect or disburse or have the custody of money or money values, such as hotel and commissary coupon books and meal tickets.

The chief accountant, the chief examiner, the claim officer, and the railroad accountant are each authorized to sign their own names to routine correspondence connected with the work of their respective bureaus. They are authorized to sign the name of the Auditor to routine matters prepared for the Auditor's signature. All correspondence involving matters of policy and all important questions will be prepared for the Auditor's signature. All vouchers, accounts payable, and payrolls, all time vouchers, and settlements made by the injury claims section, and all settlements authorizing payments from Canal Zone funds or from special deposits will be signed by the Auditor.

The chief examiner is authorized to countersign in the name of the Auditor, warrants of the Director of Posts for advances to paymasters, and for payments to the Post-office Department of the United States.

The Auditor may authorize the countersignature of other papers by employees to be designated by him where the volume of such papers makes personal signature impracticable.

Approved: H. A. A. SMITH,
GEO. W. GOETHALS, Auditor, Panama Canal,
Governor, Panama Canal.

Master of Transportation and Terminal Trainmaster, P. R. R.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., November 5, 1914.

CIRCULAR No. 456:

All concerned—Effective November 8, 1914, Mr. S. W. Heald is appointed master of transportation,

Panama railroad and The Panama Canal, vice Mr. F. R. Blunt, resigned.

Mr. W. H. Foster is appointed terminal trainmaster, Panama and Balboa terminals, vice Mr. S. W. Heald, promoted.
C. H. MOTSETT,
Superintendent.

Approved:
GEO. W. GOETHALS,
President.

Commercial Agent, P. R. R. Steamship Lines.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., November 5, 1914.

CIRCULAR No. 455:

All concerned—Effective this date, Mr. E. C. Booth is appointed commercial agent on the Isthmus for the Panama Railroad Steamship Line, with office in the receiving and forwarding agency at Colon, reporting direct to this office.
C. H. MOTSETT,
Superintendent.

Approved:
GEO. W. GOETHALS,
President.

Addresses of Employees when Requesting 120-trip Tickets.

THE PANAMA CANAL,
OFFICE OF EXECUTIVE SECRETARY,

BALBOA HEIGHTS, C. Z., November 2, 1914.

Heads of departments and divisions in Administration Building, Balboa Heights—For the information of the mailing division, when requesting 120-trip tickets for employees outside of the Administration Building, please state the addresses to which they are to be forwarded.

C. A. MCLVAINE,
Executive Secretary.

New Form for Request of Transfer of Employees.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, November 7, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

Form P. C. 493, request for transfer of employee, is being printed at Mount Hope, and, in the future, requests for the transfer of employees from one department or division to another must be made on this form before the transfer can be effected. Heads of departments and divisions outside of the Administration Building, Balboa Heights, will make requisition for a supply at once.

C. A. MCLVAINE,
Executive Secretary.

Tools for Work on New Dry Dock.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., November 7, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The Division of Terminal Construction, Balboa, will require in the near future, in connection with the steel construction work at the new dry dock, a large number of pneumatic and electric tools, such as pneumatic riveting hammers, pneumatic chipping hammers, electric and air drills, electric and air grinding machines, etc.

It is, therefore, requested that all bad order and serviceable tools of this class that can be released by you be transferred to the storekeeper, Balboa. I would thank you to notify the storekeeper at Balboa by letter of the tools available for transfer.

W. R. GROVE,
Chief Quartermaster.

Proposals for Backfill, Naos Island.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER,

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., November 17, 1914, and then opened, for placing 13,000 cubic yards of backfill on Naos Island. The material for the above will be obtained from the Diablo borrow pit. The above quantity to be either increased or decreased at the option of The Panama Canal, within reasonable limits.

Specifications covering this work may be obtained upon application to this office. Plans may be seen in the office of the Assistant Engineer, Fortifications Division, Balboa Heights, C. Z.

Bids must be accompanied by cash, certified check, or post-office money order for five per cent of the amount bid.

Bids should be marked "Proposal for backfill, Naos Island."

The Government reserves the right to reject all bids.

W. R. GROVE,
Chief Quartermaster.

Proposals for Clearing Land Defenses.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER,

Sealed proposals will be received at the office of the

Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., November 25, 1914, and then opened for:

Cutting to within six inches of the ground all growth and burning all material so cut, over an area of 3,075 acres, more or less, situated near Pedro Miguel, Gatun, and Toro Point. One complete trip, occupying two days, viz., November 16 and 17, will be made over the whole area by a representative of the Division of Fortifications for the purpose of showing bidders the country and conditions. All bids should be in a lump sum for the entire job. This work will be done in January and February, 1915.

Bids must be accompanied by cash, certified check, or post-office money order for five per cent of the amount bid. Form of contract and bond, including specifications, may be obtained upon application to this office. The Government reserves the right to reject all bids. Bids should be marked "Proposals for clearing land defenses."

W. R. GROVE,
Chief Quartermaster.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., November 9, 1914.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Allen, George	Lewis, Felicia
Allen, W. L.	Lundie, Billie
Benjumea, Ricardo	Lyman, Mrs. Kathrine W.
Courtney, Clarence	McLoud, O. O.
Da Via, Nachtele	Mallon, Mike
Denford, Ra	Mesiner, Lawrence
Eason, Loraine	Mueller, Fred
Fluty, Lee	Spence, E. O.
Gallagher, J. R.	Surface, Cora M. (paper)
Goddard, Charles	Sweeney, Jack
Harris, Lew	Sykes, Dana
Helfert, Geo. A.	Tennien, Jas. E.
Hoffman, George	Thomas, John

Rainfall from November 1 to 7, 1914, Inclusive.

STATIONS.	Maximum one day.	Date.	Total for period
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa Heights.....	2.07	3	3.70
Balboa.....	2.22	3	4.50
Miraflores.....	2.09	3	3.64
Pedro Miguel.....	1.39	3	2.30
Rio Grande.....	.63	3	1.98
<i>Central Section—</i>			
Culebra.....	.58	2	1.81
*Camacho.....	.81	7	2.27
Empire.....	.45	3	1.29
Gamboa.....	1.28	7	2.07
*Juan Mina.....	2.16	5	3.46
A hajuela.....	.59	6	1.50
*El Vigia.....	1.00	3	2.13
*Frijoles.....	.43	6	.95
*Trinidad.....	.94	2	2.19
*Monte Lirio.....	.78	6	1.79
<i>Atlantic Section—</i>			
Gatun.....	1.18	6	3.06
*Brazos Brook.....	1.25	2	1.89
Colon.....	2.46	2	3.29

*Standard rain gage—readings at 5 p. m. daily.
Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday November 7, 1914. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Nov. 1.....	127.65	93.7083	94.86	02.54	05.54
Mon., Nov. 2.....	127.68	93.4586	08.86	08.54	14.14
Tues., Nov. 3.....	129.60	95.1586	01.86	07.54	16.16
Wed., Nov. 4.....	128.00	94.1085	96.86	04.54	16.16
Thurs., Nov. 5.....	128.05	93.9986	08.86	07.54	14.14
Fri., Nov. 6.....	128.00	93.9486	02.86	07.54	20.20
Sat., Nov. 7.....	132.40	97.1586	00.86	00.54	04.04
Height of low water to nearest foot.....	125.0	91.0			

Died.

CHEATHAM—On October 30, in Panama City, Harry L. Cheatham, American, exemployee, age 45 years.

COMMISSARY DEPARTMENT.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective November 12:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....	10	
Shoulder, trimmed, per pound.....	16	
Leg (8 to 10 pounds), per pound.....	25	
Short cut chops, per pound.....	30	
Shoulder chops, per pound.....	18	
Lamb—Stewing, per pound.....	13	
Shoulder, trimmed, per pound.....	19	
Leg (5 to 8 pounds), per pound.....	30	
Chops, per pound.....	36	
Chops, shoulder, per pound.....	23	
Veal—Stewing, per pound.....	13	
Shoulder, for roasting (not under 4 pounds), per pound.....	17	
Chops, shoulder, per pound.....	23	
Chops, per pound.....	35	
Loin, for roasting, per pound.....	35	
Cutlets, per pound.....	40	
Beef—Suet, per pound.....	03½	
Soup, per pound.....	08	
Soup bones, per pound.....	02½	
Stew, per pound.....	12	
Plate, per pound.....	14	
Corned, No. 1, per pound.....	20	
Corned, No. 2, per pound.....	17	
Chuck roast, 3 lbs., and over, special, per pound.....	13	
Chuck roast, 3 lbs., and over, choice, per pound.....	17	
Rib roast, second cut (not under 3½ pounds), special, per pound.....	18	
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24	
Rib roast, first cut (not under 3 pounds), special, per pound.....	22	
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27	
Pot roast, special, per pound.....	23	
choice, per pound.....	28	
Rump roast, special, per pound.....	23	
choice, per pound.....	28	
Porterhouse roast, special, per pound.....	25	
choice, per pound.....	31	
Steak, chuck, special, per pound.....	15	
choice, per pound.....	18	
Round, bottom, special, per pound.....	15	
choice, per pound.....	19	
Round, top, special, per pound.....	17	
choice, per pound.....	22	
Rib, special, per pound.....	23	
choice, per pound.....	27	
Sirloin, special, per pound.....	23	
Sirloin, choice, per pound.....	28	
Sirloin, choice cut, special, per pound.....	26	
Sirloin, choice cut, choice, per pound.....	32	
Rump, special, per pound.....	23	
choice, per pound.....	28	
Porterhouse (not less than 1½ pounds), special, per pound.....	26	
Porterhouse (not less than 1½ pounds), choice, per pound.....	34	
Porterhouse, short, Delmonico special, per pound.....	23	
Porterhouse, short, Delmonico choice, per pound.....	28	
Tenderloin, Western, special, per pound.....	40	
Tenderloin, Western, choice, per pound.....	46	
Pork—Hams, fresh, per pound.....	26	
Shoulders, fresh, per pound.....	22	
Loin, chop, or roast, per pound.....	24	
Pigs' feet, fresh, each.....	08	
Pigs' head, fresh, whole.....	95	
Pigs' head, fresh, ½ head.....	48	
Sausage, home made, per pound.....	26	

MISCELLANEOUS.

Livers—Beef, per pound.....	13
Calf, each.....	65
Half, each.....	33
Oysters, fresh per pkt.....	33
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	14
Frankfurter, per pound.....	14
Liebowurst, per pound.....	12
Pork, per pound.....	18
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	39
per ½-dozen.....	20
Bluefish, per pound.....	9
Halibut, fresh, per pound.....	5
Salmon per pound.....	8
Yeast, per pound.....	31
Yeast, per cake.....	2

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound.....	5
Chickens—Fancy, roasting, corn fed, per pound.....	24
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	30
Broilers, milk fed, per pound.....	25
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	29
Squabs, each.....	30

Partridges, per pair.....	Price.
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	24
Half, per pound.....	26
Sliced, per pound.....	32
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	35
Half, boiled, per pound.....	36
Sliced, boiled, per pound.....	42
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.42
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	43
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	21
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk (certified), bottle.....	**24
Milk, Sheffield Farms, per quart.....	**15
Fermilac, bottle.....	**25
Ice cream, quart.....	125
½-gallon.....	150
Cream, Sheffield Farms, quart.....	**33
piot.....	**19
½-pint.....	**12

VEGETABLES.

Cauliflower, per pound.....	6
Beets, per pound.....	2½
Brussels sprouts, per pound.....	15
Celery, per head.....	4
Cabbage, per pound.....	2½
Carrots, per pound.....	2½
Cucumbers, per pound.....	*10
Lettuce, per pound.....	†10
Onions, per pound.....	2
Peppers, per pound.....	5
Potatoes, white, per pound.....	2
sweet, American, per pound.....	12
sweet, tropical, per pound.....	2
Yams—Tropical, per pound.....	3
Eggplant, per pound.....	5
Turnips, per pound.....	†2
Tomatoes, per pound.....	3
green, piccalilli, per pound.....	1½
Squash, per pound.....	2½

FRUITS.

Apples, per pound.....	3
Grapes, per pound.....	7
Grape fruit—American, each.....	8
Tropical, each.....	3½
Lemons, per dozen.....	19
Limes, per 100.....	40
Oranges—American, each.....	2½
Jamaican, per dozen.....	12
Pears, per pound.....	4½
Coconuts, each.....	5
Bananas, per bunch.....	35
Bananas, each.....	½
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Pears, alligator, each.....	6

* Indicates advance from preceding list.
 ** Indicates five cents allowed for return of bottle.
 † Indicates reduction from preceding list.
 ‡ Sold only from commissaries; no orders taken for delivery.
 § Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Additions to Stock.

Biscuits, sunshine, assorted, large pkg.....	.09
Biscuits, sunshine, assorted, small pkg.....	.05
Corn on cob, Cresca, 3 ears, tin.....	.26
Corn on cob, Cresca, 6 ears, tin.....	.56
Face powder, rice, pkg.....	.56
Pencils, copying, ea.....	.07
Holders, hand blotter, ea.....	.31
Hats, children's, ea.....	.30
Voile, Roman stripe, yd.....	.28
Voile, No. 200, yd.....	.17

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective November 9, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Cocoa, Van Houten's, tin.....	.65	.80
Beans, red kidney, lb.....	.08	.06
Suiting, union, 36", yd.....	.20	.24
Drill, striped, linen, yd.....	.19	.26
Alpaca, navy blue, 54", yd.....	1.02	.90

SHIPPING INFORMATION.

December Weather Probabilities.

Based on the records at Colon and Ancon for the past seven years, the following weather conditions may be expected to prevail at the Canal entrances during the month of December. Predictions for the month of November were published in THE CANAL RECORD of October 14:

Winds—There will be a considerable increase in the average wind velocity at both Canal entrances with the approach of the dry season. North and northeast winds will prevail on the Atlantic side. The average velocity should be about 12 miles per hour, while the maximum velocity for a 5-minute period may reach 35 or 40 miles per hour.

Northwest winds will prevail over the interior and at the Pacific entrance. The average velocity should be about eight miles per hour, and the maximum velocity may not be expected to exceed 30 miles per hour.

Rain—On the Isthmus the month of December usually marks the transition from rainy season weather to dry season conditions. The dry season occasionally begins as early as the first of December, while in other years rainy season weather continues until the end of the month. The rains tend to linger later in the season along the Atlantic coast than on the Pacific side. The average rainfall for the month is 12 inches at the Atlantic entrance and 4.20 inches on the Pacific side. Twenty-two days with rain may be expected on the Atlantic side, and sixteen on the Pacific. The average number of days with heavy rain (one inch or more), has been four on the Atlantic side and two at the Pacific entrance. About 70 per cent of the total rainfall occurs during the daytime on the Pacific coast and 55 per cent on the Atlantic side.

Fogs—Practically no fogs may be expected at either canal entrance. The average number of days during the month with light or dense fog over the Culebra Cut section of the Canal has been 15. As practically all of these fogs lift or dissipate before 8.30 a. m., they will not affect the navigation of the Canal under present operating conditions.

Temperature—The average air temperature in the shade should be about 80 degrees F. at the Pacific entrance, and 79 degrees F. on the Atlantic side. The extreme maximum may not be expected to rise above 94 degrees F., nor the minimum to fall below 68 degrees F. The mean daily range is approximately eight degrees F. at the Atlantic entrance and 16 degrees F. on the Pacific side.

Barometric pressure—Barometric readings are quite uniform from day to day. Changes in pressure are very slight, except for the regular well marked diurnal fluctuations characteristic of tropical regions. For this reason local barometric readings are of practically no value in forecasting weather conditions. The average sealevel pressure will continue close to 29.85 inches. The maximum reading during the month may not be expected to exceed 30 inches, nor the minimum to fall below 29.65 inches.

Storms—Severe general storms of wide extent seldom visit the Isthmus, although the so-called "Northers" occasionally reach as far south as the Atlantic entrance to the Canal during the period from November to April. These storms are characterized by steady, brisk, northerly winds, ranging in velocity up to 30 or more miles per hour. The winds

alone are of insufficient force materially to affect navigation at the Atlantic entrance, but they are usually accompanied by a heavy sea or swell that may prove troublesome at times outside the breakwater.

Smooth seas and quiet weather may be expected to prevail throughout the month at the Pacific entrance to the Canal.

Tides—Tidal fluctuations need not be considered in navigating the Atlantic entrance to the Canal, as the average tidal range is less than one foot, and the extreme range about two feet.

The average tidal range is about 13 feet at the Pacific entrance, while the maximum range may reach 20 feet.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies, may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits

are made, cable information is sent to The Panama Canal.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.30 per barrel, reduced to 60° Fahrenheit.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Tide Predictions.

Panama tide predictions for the next six weeks are given in the following table:

NOVEMBER.

DATE.	Time and height of high and low water.			
Wed., Nov. 4.....	4:12	10:31	16:38	22:44
Thurs., Nov. 5.....	14:3	1.1	13.7	2.3
Fri., Nov. 6.....	4:41	11:05	17:07	23:1
Sat., Nov. 7.....	14:2	1.2	13.7	2.5
Sun., Nov. 8.....	5:13	11:39	17:38	23:51
Mon., Nov. 9.....	13:9	1.4	13.6	2.8
Tues., Nov. 10.....	5:45	12:15	18:13	.....
Wed., Nov. 11.....	13:6	1.8	13.4	.....
Thurs., Nov. 12.....	0:32	6:21	12:56	18:54
Fri., Nov. 13.....	3:2	13:2	2.4	13.2
Sat., Nov. 14.....	1:14	7:04	13:40	19:41
Sun., Nov. 15.....	3:6	12:7	2.9	12.8
Mon., Nov. 16.....	2:07	7:54	14:54	20:39
Tues., Nov. 17.....	4:0	12:2	3.4	12.5
Wed., Nov. 18.....	3:09	8:58	15:37	21:45
Thurs., Nov. 19.....	4:18	11:1	16:44	22:54
Fri., Nov. 20.....	3:9	11:8	3.5	12.6
Sat., Nov. 21.....	5:24	11:26	17:50	23:57
Sun., Nov. 22.....	3:3	12:2	3.0	13.3
Mon., Nov. 23.....	6:25	12:33	18:49	.....
Tues., Nov. 24.....	2:4	13:0	2.2	.....
Wed., Nov. 25.....	0:56	7:20	13:30	19:42
Thurs., Nov. 26.....	14:2	1.3	14.0	1.4
Fri., Nov. 27.....	1:48	8:10	14:22	20:32
Sat., Nov. 28.....	15:2	0.1	15.0	0.6
Sun., Nov. 29.....	2:38	9:00	15:10	21:22
Mon., Nov. 30.....	16:0	-0.8	15.7	0.0
Tues., Nov. 1.....	3:25	9:47	15:58	22:09
Wed., Nov. 2.....	16:6	-1.4	16.2	-0.2
Thurs., Nov. 3.....	4:11	10:34	16:44	22:56
Fri., Nov. 4.....	16:7	-1.6	16.3	-0.1
Sat., Nov. 5.....	4:57	11:20	17:31	23:45
Sun., Nov. 6.....	16:5	-1.3	16.0	0.4
Mon., Nov. 7.....	5:45	12:10	18:19	.....
Tues., Nov. 8.....	15:8	-0.7	15.4	.....
Wed., Nov. 9.....	0:35	6:34	13:00	19:11
Thurs., Nov. 10.....	1.1	14.9	0.3	14.6
Fri., Nov. 11.....	1:29	7:28	13:55	20:06
Sat., Nov. 12.....	1.9	13.9	1.4	13.8

DECEMBER.

Tues., Dec. 1.....	2:38	8:54	15:14	21:09
Wed., Dec. 2.....	13:3	2.1	12.7	3.1
Thurs., Dec. 3.....	3:12	9:31	15:44	21:46
Fri., Dec. 4.....	13:5	1.7	13.0	2.8
Sat., Dec. 5.....	3:45	10:07	16:14	22:20
Sun., Dec. 6.....	13:7	1.4	13.4	2.6
Mon., Dec. 7.....	4:18	10:43	16:47	22:58
Tues., Dec. 8.....	13:9	1.2	13.7	2.4
Wed., Dec. 9.....	4:54	11:19	17:22	23:35
Thurs., Dec. 10.....	13:9	1.1	14.0	2.5
Fri., Dec. 11.....	5:20	11:57	18:00	.....
Sat., Dec. 12.....	13:9	1.3	14.1	.....
Sun., Dec. 13.....	6:09	12:37	18:42	.....
Mon., Dec. 14.....	2:5	13.7	1.5	14.0
Tues., Dec. 15.....	1:01	6:52	13:22	19:27
Wed., Dec. 16.....	2:6	13.4	1.9	13.8
Thurs., Dec. 17.....	1:50	7:40	14:11	20:18
Fri., Dec. 18.....	2:8	13.1	2.4	13.6
Sat., Dec. 19.....	2:45	8:35	15:06	21:14
Sun., Dec. 20.....	2:9	12.8	2.8	13.4
Mon., Dec. 21.....	3:44	9:38	16:06	22:14
Tues., Dec. 22.....	3:0	12.5	3.0	13.3
Wed., Dec. 23.....	4:47	10:46	17:11	23:18
Thurs., Dec. 24.....	2:8	12.6	3.0	13.4
Fri., Dec. 25.....	5:50	11:56	18:14	.....
Sat., Dec. 26.....	2:3	12.8	2.7	.....
Sun., Dec. 27.....	0:21	6:50	13:01	19:14
Mon., Dec. 28.....	13:9	1.5	13.4	2.1
Tues., Dec. 29.....	1:20	7:46	14:01	20:10
Wed., Dec. 30.....	14:6	0.7	14.2	1.5
Thurs., Dec. 31.....	2:16	8:40	14:55	21:04
Fri., Dec. 1.....	15:2	-0.1	14.9	0.9
Sat., Dec. 2.....	3:09	9:31	15:45	21:55
Sun., Dec. 3.....	15:8	-0.7	15.5	0.5
Mon., Dec. 4.....	3:58	10:20	16:34	22:45
Tues., Dec. 5.....	16:1	-1.0	15.8	0.4
Wed., Dec. 6.....	4:47	11:09	17:21	23:34
Thurs., Dec. 7.....	16:0	-1.0	15.8	0.5
Fri., Dec. 8.....	5:36	11:56	18:08	.....
Sat., Dec. 9.....	15:6	-0.6	15.6	.....
Sun., Dec. 10.....	0:21	6:24	12:44	18:55
Mon., Dec. 11.....	0:9	15.0	0.1	15.0
Tues., Dec. 12.....	1:12	7:14	13:33	19:44
Wed., Dec. 13.....	1:4	14.2	1.0	14.3
Thurs., Dec. 14.....	2:04	8:04	14:23	20:34
Fri., Dec. 15.....	2.1	13.2	2.0	13.5

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3.47.

Sailings of Vessels in Regular Service With the Isthmus.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line vessels sailing about every six days, direct; between Colon and New York by the United Fruit Company and the Royal Mail Company, sailings via Kingston weekly and fortnightly, respectively, between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Mail is despatched both ways by the quickest route. Following are the sailings in the near future:

Sails. Arrives.

NEW YORK TO CRISTOBAL.			
Advance.....	P. R. R.	Nov. 4.....	Nov. 11
Ancon.....	P. R. R.	Nov. 7.....	Nov. 15
Panama.....	P. R. R.	Nov. 10.....	Nov. 16
Allianca.....	P. R. R.	Nov. 16.....	Nov. 22
Colon.....	P. R. R.	Nov. 23.....	Nov. 29
Advance.....	P. R. R.	Nov. 28.....	Dec. 5
Panama.....	P. R. R.	Dec. 5.....	Dec. 11

CRISTOBAL TO NEW YORK.

Advance.....	P. R. R.	Nov. 16.....	Nov. 23
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(Continued on page 120.)

October Rainfall for Three Years.

STATIONS.	1912	1913	1914	Station Av.	Years of record	Rainy days, '14
Pacific Section—						
*Balboa Heights.....	17.89	8.30	6.44	10.53	18	20
Balboa.....	15.75	10.33	6.97	9.44	16	25
Miraflores.....	15.44	16.28	8.18	11.91	7	22
Pedro Miguel.....	10.48	12.07	6.74	11.64	7	21
Rio Grande.....	9.46	7.08	8.19	12.01	10	22
Central Section—						
Culebra.....	10.15	6.08	8.20	11.39	26	23
Camacho.....	11.57	7.78	9.92	12.96	9	23
Empire.....	12.44	7.25	9.07	12.87	10	24
Gamboa.....	13.60	8.71	9.79	12.58	32	22
Juan Mina.....	12.71	7.90	20.19	13.07	5	27
Alhajuela.....	13.52	6.41	22.91	13.66	16	25
El Vigia.....	14.85	8.26	22.46	15.90	7	27
Frijoles.....	19.20	14.52	16.99	17.59	3	26
Trinidad.....	16.80	11.86	16.93	14.95	7	24
Monte Lirio.....	21.17	14.90	18.17	16.58	7	20
Atlantic Section—						
Gatun.....	14.52	15.17	14.14	16.22	10	26
Brazos Brook.....	17.97	17.85	22.30	16.28	9	23
Colon.....	17.05	18.63	22.16	14.56	45	22

*Formerly Ancon.

WEATHER CONDITIONS, CANAL ZONE, OCTOBER, 1914.

Rainfall during the month was above normal over the upper Chagres, Gatun, and Trinidad river basins and along the Atlantic coast, but deficient in the Pacific section. October rainfall was above the station averages at eight stations and deficient at ten stations. The monthly totals ranged from 6.44 inches at Balboa Heights to 26.20 inches at Chilibrillo. The maximum precipitation recorded in one day was 3.99 inches at Colon on the 14th.

The average air temperature, atmospheric pressure and daytime cloudiness were slightly above normal, while the wind movement was generally deficient.

A severe thunderstorm occurred at Colon on the 14th during which the Colon radio station was struck by lightning. On the 19th, during a thundershower, lightning struck the new anemometer and wind vane tower at Balboa Heights.

Night and early morning foginess was of frequent occurrence at the interior stations, but no fogs were observed during the month at either coast station. Of the fogs observed, 57 per cent were dissipated by 6.30 a. m.; 76 per cent by 7.30 a. m., and 98 per cent by 8.30 a. m.

Elevation of Gatun Lake (feet above mean sealevel): Mean for month, 86.01. Maximum, 86.20 on the 2d. Minimum, 85.90 on 5th and 28th. Evaporation from lake surface, 4.233 inches.

The following table summarizes the weather conditions for the month.

STATION.	Press're (reduced to mean of 24 hourly).	Temperature.					Mean r ^{elative} humidity.	Precipitation.			Wind.				
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days of .01 inch or more.	Total movement (miles).	Prevailing direction.	Max. velocity in (miles).	Direction.	Date.
Colon.....	29.854	79.8	91	Oct. 4	73	Oct. 11	89	22.16	14.56	22	5,074	S. E.	26	W.	Oct. 15
*Balboa Heights ...	29.854	79.7	90	Oct. 14	70	Oct. 1	93	6.44	10.53	20	4,357	N.W.	27	S.	Oct. 7

*Formerly Ancon.

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon November 8.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Nov. 2....	Chimu.....	British.....	W. R. Grace & Co.....	New York.....	Valparaiso.....	General mdse.....	5,746	4,920	3,753
Nov. 2....	Tremadoc.....	British.....	Hain S. S. Co.....	Cardiff.....	†Balboa.....	Coal.....	5,150	4,094	2,918
Nov. 2....	Dunraven.....	British.....	Evan Thomas S. S. Co.....	Newport, Wales.....	†Balboa.....	Coal.....	4,200	3,589	2,516
Nov. 3....	Natica.....	British.....	Anglo-Saxon Petroleum Co.....	Port Arthur.....	Hong Kong.....	Refined petroleum.....	6,300	5,953	4,261
Nov. 3....	S. V. Luckenbach.....	American.....	Luckenbach S. S. Co.....	New York.....	San Pedro.....	General mdse.....	2,700	3,859	2,649
Nov. 3....	Allianca.....	American.....	Panama Railroad S. S. Line.....	Balboa.....	Cristobal.....	General.....	1,285	4,120	2,670
Nov. 5....	Jamaica.....	British.....	Royal Mail.....	Trinidad.....	Ballast.....	Ballast.....	.....	1,170	620
Nov. 5....	Strathlorne.....	British.....	Strathlorne S. S. Co.....	Newport News.....	Tacoma.....	Ballast.....	.....	4,794	3,610
Nov. 6....	Cardigan.....	British.....	Jenkins Brothers.....	Barry Dock.....	Portland, Ore.....	Ballast.....	.....	4,404	2,985
Nov. 6....	Camino.....	American.....	Arrow Line.....	Baltimore.....	San Pedro.....	Coal and general.....	2,500	3,325	2,170
Nov. 6....	Mars.....	American.....	U. S. Navy collier.....	Norfolk.....	San Francisco.....	Coal and stores.....	6,600	5,831	3,197
Nov. 7....	Hector.....	American.....	U. S. Navy collier.....	Norfolk.....	Honolulu.....	Coal and stores.....	Unk.	5,831	3,197
Nov. 7....	Mexican.....	American.....	American-Hawaiian S. S. Co.....	New York.....	San Pedro.....	General mdse.....	3,877	8,173	6,482
Nov. 7....	Isthmian.....	American.....	American-Hawaiian S. S. Co.....	New York.....	San Francisco.....	General mdse.....	5,000	5,677	4,068
Nov. 8....	Urubamba.....	Peruvian.....	Peruvian S. S. Co.....	Cardiff.....	Mollendo.....	Coal.....	2,000	4,957	3,168
Nov. 8....	Mollisfont.....	British.....	American-Australian Line.....	New York.....	Melbourne.....	General cargo.....	7,500	6,057	4,540
Nov. 8....	Muncaster Castle.....	British.....	Jas. Chambers & Co.....	Galveston.....	Yokohama.....	Cotton.....	4,087	5,682	4,352

†For orders.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Nov. 2....	Bogota.....	British.....	Pacific Steam Nav. Co.....	Arica.....	Liverpool.....	General produce.....	5,278	5,941	4,491
Nov. 2....	Bellgrano.....	British.....	West Coast Line.....	Valparaiso.....	Baltimore.....	General produce.....	6,900	5,102	3,554
Nov. 2....	Natal.....	Danish.....	East Asiatic S. S. Co.....	San Francisco.....	Liverpool.....	General produce.....	6,700	4,613	3,308
Nov. 7....	Amer. Transport.....	British.....	Transport Line.....	Cruz Grande, Chile.....	Philadelphia.....	Iron ore.....	7,800	5,280	3,918
Nov. 7....	Crickel.....	American.....	Cricket S. S. Co.....	San Francisco.....	New York.....	General, lumber.....	1,801	1,330	801
Nov. 7....	Lewis Luckenbach.....	American.....	Luckenbach S. S. Co.....	San Francisco.....	New York.....	General produce.....	4,987	4,599	3,492
Nov. 7....	Columbian.....	American.....	American-Hawaiian S. S. Co.....	San Pedro.....	Charleston, S. C.....	General produce.....	12,000	8,662	6,409

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessels	Line	From
Nov. 8....	San'a Cruz.....	W. R. Grace & Co.....	New York.
.....	Brodmount.....	Blue Star Line.....	Unknown.
.....	Arlington Court.....	Court Line.....	Gulfport.
.....	Westward Ho.....	Lewis Maritime Co.....	Baltimore.
Nov. 10....	Discoverer.....	Harrison Line.....	Liverpool.
Nov. 14....	J. L. Luckenbach.....	Luckenbach S. S. Co.....	New York.
Nov. 20....	Esmeraldas.....	Pacific Steam Nav. Co.....	Spain.
.....	Milwaukee.....	Canadian Pacific Ry.....	Unknown.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessels	Line	For
Nov. 7....	St. Kentigern.....	A. Mackay & Co.....	Mejillones.
Nov. 8....	K'prin Gus. Adolf.....	Johnson Line.....	San Francisco.
Nov. 8....	Montoso.....	N. Y. & Porto Rico S. S. Co.....	San Francisco.
Nov. 8....	W'ndber.....	Pacific-American Fisheries.....	Bellingham, Wash.
Nov. 13....	Georgian.....	American-Hawaiian S. S. Co.....	San Pedro.
Nov. 14....	Virginian.....	American-Hawaiian S. S. Co.....	San Francisco.
Nov. 15....	Damara.....	Luckenbach S. S. Co.....	San Francisco.
.....	George Fenwick.....	W. R. Grace & Co.....	San Francisco.
.....	Nakar.....	East Asiatic S. S. Co.....	San Francisco.

*Vessels which will pass through the Canal.

PORT OF CRISTOBAL.

*ARRIVALS.

Nov. 2....	Puerto Rico.....	Cie Gen Transatlantiq.....	Bordeaux.
Nov. 2....	Wegadesk.....	Earn Line.....	Norfolk.
Nov. 7....	Chagres.....	Elders & Fyffes.....	Port Limon.
Nov. 7....	Freda.....	Seeberg S. S. Co.....	Gulfport.
Nov. 8....	Trent.....	Royal Mail.....	Southampton.

*DEPARTURES.

Nov. 3....	Dambe.....	Royal Mail.....	Southampton.
Nov. 3....	Savala.....	La Veloce.....	Genoa.
Nov. 6....	Puerto Rico.....	Cie Gen. Transatlantique.....	Bordeaux.
Nov. 6....	Evanger.....	West Indian S. S. Co.....	Havana.
Nov. 7....	Wegadesk.....	Earn Line.....	Falton.
Nov. 7....	Chagres.....	Elders & Fyffes.....	Bristol.

*EXPECTED ARRIVALS.

Nov. 9....	Legazpi.....	Cia Trasatlantica.....	Barcelona.
Nov. 10....	Jupiter.....	Seeberg S. S. Co.....	Gulfport.
Nov. 10....	Westlands.....	Wilson Line.....	New York.
Nov. 12....	Nubian.....	Leyland Line.....	Liverpool.
Nov. 27....	Merchant.....	Harrison Line.....	Liverpool.

*EXPECTED DEPARTURES.

Nov. 12....	Legazpi.....	Cia Trasatlantica.....	Barcelona.
.....	Dronning Olga.....	Seeberg S. S. Co.....	Unknown.
.....	Nubian.....	Leyland Line.....	Unknown.
.....	Jupiter.....	Seeberg S. S. Co.....	Unknown.
.....	Freda.....	Seeberg S. S. Co.....	Unknown.

*Other than vessels using the Canal, United Fruit Company's regular vessels, and vessels in regular service with the United States.

PORT OF BALBOA.

*ARRIVALS.

Nov. 3....	Oberon.....	Union Oil Co.....	Port San Luis.
Nov. 4....	Huasco.....	South American S. S. Co.....	Valparaiso.
Nov. 5....	Ecuador.....	Pacific Steam Nav. Co.....	Guayaquil.

*DEPARTURES.

Oct. 31....	Hercules.....	Tug.....	San Francisco.
Nov. 2....	Chile.....	Pacific Steam Nav. Co.....	South Pacific.
Nov. 3....	Pennsylvania.....	Pacific Mail S. S. Co.....	San Francisco.
Nov. 5....	Manavi.....	Pacific Steam Nav. Co.....	Buenaventura.
Nov. 6....	Quilpue.....	Pacific Steam Nav. Co.....	Guayaquil.
Nov. 7....	Oberon.....	Union Oil Co.....	Port San Luis.
Nov. 7....	Tricolor.....	W. R. Grace & Co.....	Salavery.
Nov. 8....	Huasco.....	South American S. S. Co.....	Valparaiso.

*EXPECTED ARRIVALS.

Nov. 9....	San José.....	Pacific Mail S. S. Co.....	San Francisco.
Nov. 8....	Guatemala.....	Pacific Steam Nav. Co.....	Callao.
Nov. 17....	Newport.....	Pacific Mail S. S. Co.....	San Francisco.
Nov. 18....	Palena.....	South American S. S. Co.....	Valparaiso.

*EXPECTED DEPARTURES.

Nov. 9....	Pachitea.....	Peruvian S. S. Co.....	Callao.
Nov. 9....	Huasco.....	South American S. S. Co.....	Valparaiso.
Nov. 11....	Trinculo.....	Union Oil Co.....	Port San Luis.
Nov. 14....	San José.....	Pacific Mail S. S. Co.....	San Francisco.

*Other than vessels using the Canal.

(Continued from page 118.)

Panama.....	P. R. R. Nov. 22.....	Nov. 28
Allianca.....	P. R. R. Nov. 28.....	Dec. 4
Colon.....	P. R. R. Dec. 5.....	Dec. 11
Advance.....	P. R. R. Dec. 10.....	Dec. 17

NEW YORK TO COLON.

Steamer.....	U. F. C. Nov. 4.....	Nov. 11
Tagus.....	R. M. Nov. 7.....	Nov. 15
Zacapa.....	U. F. C. Nov. 11.....	Nov. 18
Steamer.....	U. F. C. Nov. 18.....	Nov. 25
Magdalena.....	R. M. Nov. 21.....	Nov. 29

Santa Marta.....	U. F. C. Nov. 25.....	Dec. 2
COLON TO NEW YORK		
Santa Marta.....	U. F. C. Nov. 12.....	Nov. 19
Steamer.....	U. F. C. Nov. 19.....	Nov. 26
Oruba.....	R. M. Nov. 24.....	Dec. 2
Zacapa.....	U. F. C. Nov. 26.....	Dec. 3
Almirante.....	U. F. C. Dec. 3.....	Dec. 10

NEW ORLEANS TO COLON

Heredia.....	U. F. C. Nov. 4.....	Nov. 11
Abangarez.....	U. F. C. Nov. 7.....	Nov. 12
Parismina.....	U. F. C. Nov. 11.....	Nov. 18
Atenas.....	U. F. C. Nov. 14.....	Nov. 19

Cartago.....	U. F. C. Nov. 18.....	Nov. 25
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COLON TO NEW ORLEANS.

Turrialba.....	U. F. C. Nov. 12.....	Nov. 17
Heredia.....	U. F. C. Nov. 12.....	Nov. 19
Abangarez.....	U. F. C. Nov. 19.....	Nov. 24
Heredia.....	U. F. C. Nov. 19.....	Nov. 26

Irregular services between Cristobal and Gulf ports of the United States, with way calls at Central America and Mexican ports, are maintained by the Leyland and Harrison Lines, sailings about every fortnight, and the Seeberg Line, sailings about every 18 days.

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, NOVEMBER 18, 1914.

No. 13.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of The Panama Railroad Company for five cents each.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

NOTES OF PROGRESS.

President's Proclamation of Neutrality.

The President has issued, under date of November 6, a Proclamation of the neutrality of the United States during the present hostilities between Great Britain and Turkey. It contains the same injunctions as the Proclamation of neutrality between Belgium and Germany, issued under date of August 18, and published in THE CANAL RECORD of September 6, 1914.

Decisions as to Measurements and Charges on Vessels Using the Canal.

At a meeting of the Board of Admeasurers held on November 11, the following questions were adjusted:

Question. Shall freight steamers having no special accommodations for passengers, and which do not carry passengers, but have one or two spare staterooms be charged for such space?

Decision. The spare staterooms unless specifically designated for one of the officers of the ship shall be charged for and not deducted from the gross tonnage.

Question. Should regular refrigerators or ice chests secured on deck be entered in the certificates as a part of the regular gross tonnage, or should they be considered as a deck load? Also, should boxes, chests, crates, or pens secured or built on top of deckhouse for ships' stores, or livestock, such as chickens be considered as a deckload the same as if carried on the upper deck, where a cargo load could and would ordinarily be carried?

Decision. In the case of small enclosures, which are evidently for the use of the crew, carrying small livestock, fowls, vegetables, etc., where the volume is insignificant, they should not be measured.

Post-Office Change at Corozal.

The post-office building formerly at Bas Obispo has been moved to Corozal and re-erected on a piece of ground in the rear of the railroad station. It is of one story, 27 by 30 feet in plan, and in rebuilding, no change was made in its exterior appearance. The inside arrangement is slightly different, separate enclosures having been provided for the gold and silver employees. The new office was opened for business on Wednesday, November

11. The old post-office building, situated on the west side of the railroad track, will probably turned over to the Division of Municipal Engineering, for use as an office.

Free Examinations to Determine Existence of Disease.

The Panama Government authorities have been advised that, in order to render all assistance possible to the physicians of the cities of Panama and Colon, in determining and reporting of communicable diseases, arrangements have been made to have the Board of Health laboratory at Ancon Hospital make all examinations for the above purpose free of charge.

Underground Cable for Light and Power Distribution.

A contract has been entered into with the Standard Underground Cable Company of Pittsburgh for the following quantities of underground cable for use in the installation of the light and power distribution system in the permanent Canal villages:

No. 6, single conductor, varnished cambric insulation, lead covered, for 2300 volts, 23,000 feet at \$8.90 per 100 feet.

No. 4, single conductor, arnished cambric insulation, lead covered and armored, for 2300 volts, 15,000 feet at \$14.70 per 100 feet.

No. 6, 3-conductor, varnished cambric insulation, lead covered, for 2300 volts, 7,000 feet at \$23.30 per 100 feet.

No. 4, single conductor, varnished cambric insulation, lead covered, for 2300 volts, 26,500 feet at \$10.10 per 100 feet.

No. 00, 3-conductor, varnished cambric insulation, lead covered, for 2300 volts, 10,670 feet at \$47.50 per 100 feet.

The underground light and power system will comprise a conduit line, together with manholes, which are of two types, a cable pulling manhole, and a subway transformer manhole. The cable pull manholes will contain cables and their splices and taps only. The transformer manholes, in addition to being provided with a subway transformer, will contain cable end bells, a 3-wire primary bus, bus wire supports, subway type cutouts, and cables. The cable end bells and bus wire supports are for use in supporting the 3-wire primary bus, which lies in a horizontal plane. Single phase connections will be made to the bus, and from the bus connections, through subway type cutouts, to the transformer terminals. The system of primary distribution will be 3-phase, delta-connected, 2200 volts, at a frequency of 25 cycles.

Filling and Grading around Gatun Substation.

A pick and shovel crew, using Decauville equipment as a means of transportation, has been engaged in grading around the substation at Gatun. In this work, the hill, upon which the office of the Division Engineer of the old Atlantic Division formerly stood, is supplying the material, which is all earth.

THREE MONTHS' OPERATION.

Over a Million Tons of Cargo Through Canal in First Quarter Year.

During the first three months of commercial operation of the Canal, from August 15 to November 15, the cargo transported through the Canal has amounted to 1,079,521 tons.

During the fiscal year ending June 30, 1914, the Panama railroad carried 643,178 tons of through freight between the two seaboard, and in the preceding fiscal year, 594,040 tons. From this it is seen that between six and seven times as much cargo is passing over the Isthmus now as passed over this route when goods were transhipped by rail. The traffic through the Canal in the first quarter year of its operation has been equal to about 88 per cent of the through traffic over the Isthmus during the preceding two years.

The toll charge on loaded vessels of \$1.20 per net ton, Canal measurement, has been found in this period to be equivalent to a charge of approximately 75 cents on each ton of cargo. The revenue of the Panama railroad from each ton of through freight during the fiscal years 1913 and 1914 was \$3.06. Each through freight train carried an average of 353.21 tons of cargo in the fiscal year 1913, and an average of 302.77 tons in the following year. The average amount of cargo carried on the laden vessels passing through the Canal (in which the 27 vessels which have made the transit in ballast, or are, by nature, not cargo-carriers, are not counted) has been 5,835 tons.

The traffic eastbound through the Canal, or from the Pacific to the Atlantic, and that westbound, or from the Atlantic to the Pacific, are summarized below:

Month	Eastbound		Northbound		Total	
	Ves-sels	Cargo	Ves-sels	Cargo	Ves-sels	Cargo
Aug.	12	57,182	12	49,106	24	106,288
Sept.	30	186,776	27	135,262	57	322,038
Oct.	41	252,288	43	168,069	84	420,357
Nov. 1-15	19	124,834	28	106,004	47	230,838
Total..	102	621,080	110	457,991	212	1,079,521

Over 95 per cent of the traffic may be grouped under these four routes: The United States coastwise trade, the traffic between the Pacific coast of the United States and Europe, the trade of the west coast of South America with the Atlantic seaboard of the United States and with Europe; and traffic from the Atlantic coast of the United States with the Far East.

COASTWISE TRADE.

Eastbound United States coastwise traffic carrying general produce of the Pacific coast to the Atlantic seaboard, has employed the transit of 42 vessels, carrying 250,888 tons of cargo; to this may be added three vessels laden with 14,500 tons of lumber, making an aggregate of 45 vessels with 265,388 tons.

The traffic from the east coast of the United States to the Pacific coast has engaged 43 vessels, carrying 206,482 tons of general

merchandise and manufactures, and seven vessels laden with 34,487 tons of coal, an aggregate of 50 vessels, with 240,969 tons.

The coastwise trade has, accordingly, employed 95 vessels, transporting 506,357 tons of cargo. This is 44.8 per cent of all transits, and 46.9 per cent of all cargo.

UNITED STATES WEST COAST AND EUROPE.

Traffic to Europe from the west coast of the United States has consisted of 19 vessels carrying 136,488 tons of grain, and seven vessels carrying 57,600 tons of general produce, and one vessel with 7,760 tons of gasoline, a total of 27 vessels with 201,848 tons. Traffic from Europe to the west coast of the

more. The aggregate of this outward traffic has been 22 vessels with 150,444 tons of cargo.

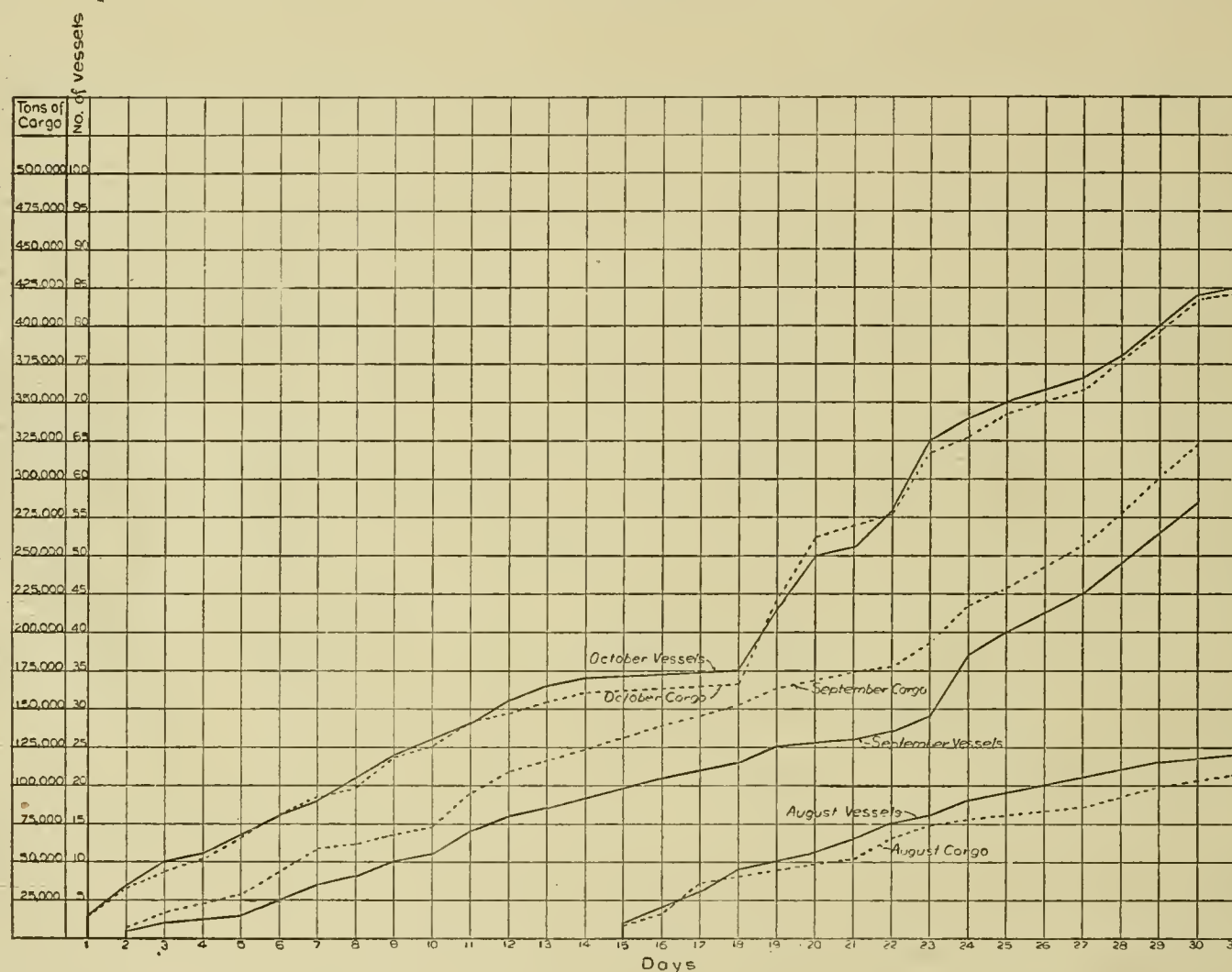
Traffic to the west coast of South America from the United States has consisted of one vessel with 6,010 tons of coal, from Norfolk to Valparaiso; and seven vessels, with 40,746 tons of general manufactures, from New York for distribution between Callao and Valparaiso, an aggregate of eight vessels with 46,756 tons. Traffic to this coast from Europe has consisted of three vessels with 11,350 tons of coal, and two vessels with 5,532 tons of general manufactures, all from Great Britain. The traffic to the west coast of South America has been 13 vessels, with 63,638 tons.

TRANSIT OF VESSELS AND CARGO.

vessels have returned to the Canal, and no cargo has been shipped through direct from the Far East to the United States or to Europe.

MISCELLANEOUS.

Only five loaded vessels have passed through the Canal on routes other than those described above. They have been the *Capella*, carrying 3,400 tons of whale oil from Magdalena Bay to Norway; the *Kingsway* and the *Burcombe*, carrying, respectively, 4,659 and 4,550 tons of coal from Great Britain to Esquimaux; the *Bankdale*, with 5,943 tons of coal from Norfolk for Guaymas, Mexico; and the *Vilhelmina*, with six tons of general cargo for the Government of Nicaragua. The



United States has employed three vessels, carrying 14,603 tons of general merchandise and manufactures.

SOUTH AMERICAN WEST COAST.

The traffic from the west coast of South America to the United States and Europe has included 16 vessels carrying 111,846 tons of nitrates, of which the ultimate destination has frequently been determined after the vessels left the Canal; one vessel with 6,200 tons of barley, from Valparaiso for Falmouth; one vessel with 5,278 tons of general produce, from Arica to Liverpool; two vessels with 14,900 tons of iron ore from Cruz Grande to Philadelphia; and two vessels with 12,220 tons of general produce, from Valparaiso to Balti-

TRAFFIC TO THE FAR EAST.

The trade from the Atlantic seaboard of the United States through the Canal to the Far East has been comprised, as follows: To Japan, three vessels with 17,570 tons of refined petroleum and petroleum products, and seven vessels with 25,258 tons of general cargo and 14,817 tons of raw cotton; to China, four vessels with 24,730 tons of refined petroleum; to Australia and New Zealand, three vessels with 22,493 tons of general merchandise, and two vessels with 12,701 tons of refined petroleum.

The total exportation to the Far East through the Canal has amounted to 117,574 tons, carried in 19 vessels. None of these

five vessels carried an aggregate of 18,558 tons of cargo.

SUMMARY.

The traffic over the several routes may be summarized, as follows:

	Ves-	Tons of
	sels.	Cargo.
Coastwise, eastbound.....	45	265,388
Coastwise, westbound.....	50	240,969
U. S. Pacific coast to Europe.....	27	201,848
Europe to U. S. Pacific coast.....	4	21,102
S. America to U. S. and Europe.....	12	150,444
U. S. and Europe to S. America.....	13	63,638
U. S. Atlantic coast to Far East.....	19	117,574
Miscellaneous traffic.....	5	18,558
Vessels without cargo.....	27	
Total.....	212	1,079,521

The progress of traffic through the Canal during the three months period is shown

graphically in the accompanying chart. The abscissæ are in all instances the days of the month. The ordinates are the number of vessels, in solid lines, and their aggregate tonnage, in dotted lines.

Increased Emigration in October.

The report of quarantine operations for the month of October show an increased emigration from the Isthmus. The actual number of persons embarking at the terminal ports was 4,287, and the number landing 2,297, an excess of embarkations over debarkations of 1,990, as compared with a net emigration during September of 1,155. The total net emigration since July 1913, when the outward flow first began, is 19,867, an average of over 1,241 a month. These figures include both first and second-class passengers, but the outward travel was for the greater part made up of Canal laborers returning to their native countries on account of the closing down of the Canal work.

The total number of persons embarking at the ports of Colon and Cristobal for foreign ports during October was 3,625, consisting of 1,296 cabin and 2,329 steerage passengers. The number of persons landing from foreign ports was 1,863, consisting of 1,338 cabin and 525 steerage passengers. The excess of those who embarked over those who landed was 1,762. The number of steerage passengers who landed is less than half the total for September, and is considerably less than the total of any previous month for several years. Deck passengers represent the labor class, and the falling off noted above would appear to indicate that the publicity given the fact that opportunity for labor on the Canal is growing less and less, is beginning to have its effect. The inbound first-class passenger traffic on the other hand shows some increase.

Of the classes comprising the October immigration, 27 persons arrived in steerage from Europe, 255 from the West India islands, 103 from Colombia, 42 from Costa Rica, 34 from the United States, and 30 from Cuba. The immigration from the West Indies in the steerage class constitutes a new low record. Of the countries at present furnishing Isthmian immigration, Colombia appears to be the only one that is showing a tendency to increase. A total of 196 persons entered the Atlantic terminal ports from Bocas, and 244 from other coast towns of the Republic. The entries from Bocas show a falling off from September. Of the arrivals at Colon and Cristobal in the steerage class, 1,134 were men, 496 were women, and 220 were children. The number of persons arriving "In transit" was 607, which is less than any previous month for a considerable period.

The number of persons arriving at the ports of Balboa and Panama during October from foreign ports was 434, consisting of 274 cabin and 160 steerage passengers. The number of persons departing for foreign ports was 662, consisting of 559 cabin and 103 steerage passengers. The number of those who embarked over those who landed was 228.

One hundred and fourteen vessels entered the ports of Colon and Cristobal in October, and 62 at Balboa, a total of 176, as compared with a total of 140 for September. No disease of a quarantinable nature arrived at the terminal ports during the month.

The first of the three masts at the Darien radio station was erected to the full height of 600 feet on Wednesday, November 11.

PERMANENT MEDICAL STORE.

Work Begun on a Reinforced Concrete Structure at Ancon.

Work has been begun by forces of the Building Division on a permanent fireproof and dampproof structure, in the vicinity of the laundry plant and commissary at Ancon, for use by the Health Department as a medical storehouse. The building will be of reinforced concrete throughout, with an annex constructed of the same material for the storing of inflammables. The main store will be 49 by 142 feet, and the annex, 12 by 27 feet in plan. An unloading platform, 49 feet long and 10 feet wide, will extend along the east side of the building, paralleling the present railroad track which ends at the commissary. There will also be a wagon platform on the north end, seven by 20 feet in plan.

The foundation will be 16 inches thick, and the main walls, 11 inches thick with 8-inch panels, will rise to a height of 13 feet in the clear. The floor will be 11 inches thick, capable of supporting a weight of 300 pounds to the square foot. To make it damp-proof, the floor will consist of two layers of concrete, a bottom layer, four inches in thick-

opening six feet seven inches wide. The openings in the office will all be screened.

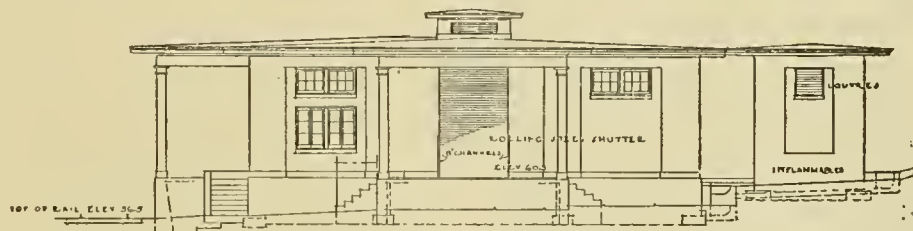
The interior of the building will be divided by wooden partitions into a main storeroom, occupying about two-thirds of the total space, a survey room, a dry room, refrigerator, office, and toilet. The main storeroom will be fitted with two rows of detached double shelving, with adequate aisle space all around. In the survey and dry rooms, the shelving will be against the walls, and will extend from floor to ceiling on all four sides.

The annex for the storage of inflammable materials, situated at the northeast end, will be connected to the main supply room by a covered passageway, slightly depressed.

The platforms will be covered, and the roofs will be supported by concrete columns, 12 inches square, spaced on 16-foot centers, on unloading platform, and 19 feet three inches on wagon platform, all with caps of seven members.

Examination for Levelmen and Transitmen.

An examination for levelmen and transitmen will be held in the drafting room of the new Administration Building on Sunday



NORTH ELEVATION OF MEDICAL STOREHOUSE.

ness, laid over the earth fill, and a top layer seven inches thick, separated from the first by a 5-ply thickness of pitch and felt.

The roof will be constructed of concrete, four inches thick, overlaid first, by a 5-ply thickness of pitch and felt, and second, by a 1½-inch coating of finished cement, making it entirely waterproof. There will be two monitors in the roof, fitted with louveres for ventilation, located, one each about 30 feet from each end of the building. The roof will be entirely surrounded by a 3-foot cornice of a design tending to relieve the otherwise severely plain aspect of the structure. Its construction involves the pouring of concrete for a part of the main walls and the cornice in one operation. The concrete for the walls and cornice will be poured in three sections; the last section will extend from the tops of the windows, and the forms will include both the part of the wall remaining and the cornice.

The windows will be distributed, as follows: Six, three feet high and nine feet 10 inches long, and one, three feet high and six feet seven inches long on the west side; five of the larger and two of the smaller of the sizes above mentioned on the east side; one, 13 feet one inch by three feet, and two of the smaller size on the south end; and two of the smaller size on the north end. There will also be windows, one on either side of the outside entrance to the office part of the building; and one on the east side located directly below the upper windows at this point. All of the windows, except those mentioned in the preceding sentence, are located well up to the roof. There will be three roller doors, one on the east side, one on the north end, with opening 12 by seven feet six inches, and one opposite the inflammable section, with

opening six feet seven inches wide. Send all applications to Office Engineer, Room 343, Administration Building, Balboa Heights, C.Z.

C. J. EMBREE,
O. E. MALSBUY,
A. WILSON, *Committee.*

EXECUTIVE ORDER

Amending Paragraph 49 of the "Rules and Regulations for the Operation and Navigation of the Panama Canal and Approaches Thereto, Including All Waters Under Its Jurisdiction."

By virtue of the authority vested in me under The Panama Canal Act, Paragraph 49 of the "Rules and regulations for the operation and navigation of the Panama Canal and approaches thereto, including all waters under its jurisdiction," promulgated by Executive Order No. 1990, dated July 9, 1914, is hereby amended to read, as follows:

49. No radio tolls, either coast station or forwarding, will be imposed against ships on radiograms transmitted by ships on Canal business. There will be no charge made against The Panama Canal, by Canal Zone land lines or radio stations, for the transmission of radiograms to ships on Canal business.

WOODROW WILSON.

THE WHITE HOUSE,
November 4, 1914.

[No. 2073.]

Ancon Pay Office Closed.

The Ancon pay office will be closed and removed to the new Administration Building, Balboa Heights, at noon on Saturday, November 21, 1914.

BALBOA HEIGHTS, C. Z. JOHN H. MCLEAN,
November 17, 1914. *Paymaster.*

HYDRAULICS OF THE LOCKS.

Observations of Flow of Water during Lockages and of Current Effects.

The phenomena of water pressures and currents in the locks of the Canal have been the subject of special study by Mr. Richard H. Whitehead, formerly testing engineer in connection with the installation of machinery in Pedro Miguel and Miraflores Locks, and now assistant superintendent of the Pacific locks. His observations on the more noteworthy effects were contained in a paper entitled, "Hydraulics of the locks," which he presented before a meeting of the Panama Section of the American Institute of Electrical Engineers. The following is an excerpt from his paper:

Each set of miter gates was built to withstand full hydrostatic pressure, and at the time the locks were watered, this pressure was successively applied to each set. The main operating gates at Pedro Miguel are 79 feet high, their sill is at elevation +13. The maximum elevation of Gatun Lake is +87 feet. If a lock chamber were unwatered, the upper operating gates would be required to withstand a 74-foot head of water. As each miter gate leaf is 65 feet in length the full hydrostatic pressure per leaf would be then 5,550 tons.

In normal operation, the maximum pressure on any set of gates occurs on the lower operating gates of Miraflores upper lock. The sill of these gates is at elevation -18.3. When the water in the lower lock is at low tide, or -10, and the upper lock at Miraflores Lake level, elevation +55, the net pressure per leaf is 5,380 tons, practically equivalent to the maximum as calculated above.

The mechanism for the remote control of the lock gates is not equipped with an interlock to prevent the opening of a set of leaves before equalization of water levels. None is necessary, as the miter gate moving machines are just strong enough to operate the gate after equalization. For example, in the case of a difference of two feet in levels on the two sides of the upper operating gates at Pedro Miguel, there would be 74 feet of water against the upstream side, and 72 feet against the downstream side. This difference would result in a net downstream pressure of 600,000 pounds. With reference to the miter gate moving machine, this pressure may be considered as applied perpendicularly at the center of the leaf or a distance of $32\frac{1}{2}$ feet from the pintle. The perpendicular distance from the pintle to the center line of the strut of the moving machine is 11.5 feet, approximately, when the gate is closed. To open the leaf against a water pressure of 600,000 pounds, the strut would have to exert a pull of about 1,700,000 pounds. The maximum pull the strut can exert on opening a leaf is approximately 1,000,000 pounds, and an attempt to open a leaf under these conditions would stall the motor after compressing the springs in the strut.

On filling or emptying a chamber, the water surges after equalization and back pressure on the gates results. This back pressure varies from six to 12 inches, and causes the gate to open eight inches between miter points, or to the full limit of strut spring compression. It requires 185,000 pounds to compress the springs solid, and a back pressure of a few inches is sufficient to do this. This helps to open the gates, and also gives a positive

signal that equalization has occurred.

In most cases there is a difference in density of the water on the two sides of the operating gates, as with every lockage some salt water is locked up into the fresh water supply, as testified by the increasing salinity of Miraflores Lake. When conditions of equilibrium are established after opening the culvert connecting the chambers on the two sides of the gates the water levels are not the same.

For instance, at the 82-foot gates at the lower end of Miraflores Locks, which are generally kept closed while the culvert to the sea is kept open, the fresh water on the upstream side is from six to eight inches higher than the sea water on the downstream side. This difference depends on the difference of densities and also on the position of the culvert outlet.

Assume the outlet at elevation of bottom of lock, and suppose the relative densities to be as 1.02 : 1.00. The sill of the gate is -50. High tide is +10. With 60 feet of water on the downstream side of the gate there would be $\frac{1.02}{1.00} \times 60$ or 61.2 feet on the upstream side, or a difference in level of 1.2 feet. The total pressure on the gate depends on the density and the square of the head. Consequently, the total pressure per leaf would be 150,000 pounds more on the upstream side than on the downstream side. To avoid this large difference in pressure, a specially constructed culvert outlet was placed at elevation -25, or 25 feet above the sill. This makes the resultant levels for the above condition, 60 feet on the downstream side and $(60-25) 1.02$ plus 25, or 60.7 feet on the upstream side, and reduces the net pressure to about 24,000 pounds per leaf.

In making lockages at Miraflores, the levels on the two sides of the lower operating gates in the upper chamber differ by one foot when equilibrium is reached between the lower and upper chambers. The net pressure per leaf tending to resist the opening of the leaf for this condition is approximately 100,000 pounds. The gates are always opened when they "Crack" from backpressure before such a condition of equilibrium is reached; otherwise, it would put a severe duty on the miter gate moving machinery and a heavy current would flow from the upper to the lower lock that would be undesirable, as soon as the gates were opened.

The main resistive force to the movement of a miter gate leaf is the difference in water levels on the two sides of the gate caused by movement of the leaf. For instance, the area of the space between the upper guard gate and the upper operating gate is 11,000 square feet. If the upper guard gate is opened two feet, the area is enlarged by about 137 feet. As the minimum immersion of the guard gate is about 40 feet, the volume displaced by this movement amounts to 5,480 cubic feet. This lowers the water on the downstream side about six inches and creates a large resisting force to further outward, upstream movement of the guard gate until the difference in level is relieved by the influx of water through the opening between the leaves and through the auxiliary culvert. Similarly for opening the upper operating gates and using the 900-foot lock. For a 4-foot movement, assuming no influx, the water in the chamber would be lowered two inches and the resistive force would be 50,700 pounds per leaf. It has been found from the duty cycle of the moving ma-

chine that the maximum torque occurs on opening the gate, about 20 seconds after the gate is opened, and on closing about 20 seconds before gate is closed.

On account of the conditions just described, it has been found to be most satisfactory to open one of the leaves from 15 to 20 seconds before the other. This gives about the same opening between leaves as a simultaneous opening, as they join at an angle of 120 degrees, and gives a comparatively light duty to the motors, as only half the water is displaced. In opening four leaves, such as the upper guard and upper operating gates, one of the guard leaves is opened first; five seconds later, the operating leaf on the same side; 15 seconds after this, the other guard leaf; and five seconds after this, the second operating leaf. This method increases the normal time for opening the two gates by 25 seconds, but is much less severe on the operating machinery. For operating the gates in the dry, scarcely any power is required. The effect of eddy currents and backing-up of the water against the gate recess also tend to prevent movement of the gates, but these factors are small compared to those given.

In filling a chamber having an area "A" from an unlimited supply the time till equalization of surfaces is attained is formulated:

$$T = \frac{2A}{C\sqrt{h}} \sqrt{\frac{h}{2g}} \text{ where } h \text{ is the initial head,}$$

This formula applies to either filling or emptying the chambers. The time till equalization occurs is from the commencement of valve opening to the cracking of the gates from back pressure.

The area of each lock culvert, F , is 255 square feet; $\sqrt{2g}$ is 8.04; the area of the chamber, A , is 123,000 square feet. Substituting these values in the above formula, T equals $\frac{\sqrt{h}}{C} \times 120$ seconds; if expressed in minutes, T equals $\frac{2\sqrt{h}}{C}$; if two culverts are used, T equals $\frac{\sqrt{h}}{C}$.

For filling the 900-foot chamber, using the center wall culvert, it takes 20 minutes to fill from elevation 53.8 to elevation 84.9.

For filling the chamber using the side wall culvert, it takes 12.6 minutes to fill from elevation 54.1 to elevation 84.9.

For filling the chamber, using both culverts, it takes 7.9 minutes to fill from elevation 53.9 to elevation 84.8.

Substituting in the formula, the coefficient of discharge, C , is found to be 56 per cent for the center wall culvert; for the side wall culvert, 88 per cent, and for both culverts, together, 70 per cent.

In emptying the chamber, it takes 16.5 minutes to empty from elevation 84.6 to 53.6 using the center wall culvert, and the coefficient of discharge is found to be 67.5 per cent; for the side wall culvert, 15 minutes to empty from 84.8 to 50.8, gives a coefficient of 78; and using both culverts, eight minutes to empty from 84.8 to 53.4, gives a coefficient of 70 per cent.

Using both culverts to fill or empty, the coefficient is 70 per cent, and eight minutes are required to handle nearly four million cubic feet of water. The maximum rate of rise or fall of water in the locks is a little over five feet per minute; the maximum rate of flow is 615,000 cubic feet per minute. Higher rates of rise and fall can be obtained by using intermediate lock sections, but the above is con-

sidered the maximum safe rate at this time for handling vessels.

It was expected that the rate of filling or emptying would decrease with the decrease in difference of levels, or head, faster than has been found to be the actual case. The rate for a long period is almost constant. This is due to the momentum of the water, which retards the flow at the beginning and accelerates it toward the end of the operation. This momentum is the cause of the overrun of levels and the resulting back pressure on the gates, previously referred to.

FRICION LOSSES.

In order to determine friction losses in the valves and culverts, the valves in the east culvert of Pedro Miguel Lock were opened wide, allowing full discharge through the culvert from Culebra Cut, with the surface of water at 84.8 feet, to Miraflores Lake, then at elevation 52 feet. The rate of discharge through the culvert was found to be 7,660 cubic feet per second.

The elevations of the water after equilibrium was reached as obtained at several points were, as follows:

	Feet.
Point (1) Elevation Gatun Lake at Gamboa.....	84.8
Point (2) Elevation Gatun Lake at lock forebay.....	83.9
Point (3) In guard valve shaft.....	76.6
Point (4) In culvert shaft under dam.....	72.1
Point (5) In 350-foot lock.....	63.5
Point (6) In 550-foot lock.....	57.6
Point (7) In Miraflores Lake.....	52.0

The potential heads, or heads above datum 52 are, as follows:

	Feet.
Point (1) Gatun Lake at Gamboa.....	32.8
Point (2) Gatun Lake at lock.....	31.9
Point (3) In guard valve shaft.....	24.6
Point (4) In culvert shaft under dam.....	20.1
Point (5) In 350-foot lock.....	11.5
Point (6) In 550-foot lock.....	5.6

Neglecting currents in the lock sections, the velocities through the culvert at different points obtained by dividing the full discharge by the various cross-sectional areas were, as follows:

	Feet per second.
Through guard valves and screens.....	17.6
Through upper culvert.....	23.0
Through rising stem valves.....	26.6
Through main culvert.....	30.0

The corresponding velocity heads, found from the formula $\frac{V^2}{2g}$ are, as follows:

	Feet.
Through guard gates.....	4.8
Through upper culvert.....	8.2
Through rising stem valves.....	11.0
Through main culvert.....	14.0

The total heads or potential plus velocity heads as obtained by addition are:

	Feet.
Point (1) Gatun initial lake level head at Gamboa.....	32.8
Point (2) Gatun Lake at locks.....	31.9
Point (3) Through guard valves and screens.....	24.6
Point (4) Through upper culvert, 20.1 + 8.2.....	28.3
Point (5) Through culvert for 350-foot lock, 11.5 + 14.....	25.5
Point (6) Through culvert for 550-foot lock, 5.6 + 14.....	19.6
Point (7) Outlet.....	14.0

The friction losses for the various culvert sections are obtained by subtraction between above and are, as follows:

	Loss head, Feet.	Per-cent total
Between (1) and (2) Through channel in Culebra Cut.....	0.9	2.7
Between (2) and (3) Through screens intake, and guard valves.....	2.5	7.6
Between (3) and (4) Through 200-foot of upper culvert.....	1.1	3.3
Between (4) and (5) Through rising stem valves Nos. 314 and 315 and connecting culvert.....	2.8	8.6
Between (5) and (6) Through rising stem valve Nos. 320 and 321 and connecting culvert.....	5.9	18.0
Between (6) and (7) Through rising stem valves Nos. 326 and 327, 332, and 333 and connecting culvert.....	5.6	17.0

These values are plotted and it was found

that the total head curve was practically a straight line which changed its slope only with change of culvert cross-sectional area, excepting a sudden drop due to friction of the intake screens. The presence or number of valves had no effect on the friction losses, showing that the friction in the valves is a negligible amount.

The slope of the total head curve for the various culvert cross-sections showed that the friction losses were nearly proportional to the square of the velocity, which approximates the usual assumption.

CURRENTS IN THE LOCKS.

Knowledge of the currents set up during lockage is necessary for the intelligent handling of a vessel in the locks. The locks are filled through openings in the bottom of the chamber. All these openings are of the same size and several are connected to each of the lateral culverts, which lead from the main culverts. It was expected that about the same flow would take place through each opening, but experience shows that the flow through the opening at the end of the lateral culvert is much greater than that through the openings nearer the main culvert. When the side-wall culvert is used for filling, the water rises from the bottom of the lock next to the center wall at a greater rate than along the side wall. This tends to carry a vessel towards the side wall. If there is a quantity of salt water in the chamber when filling begins, the tendency to force the vessel toward the wall, the culvert of which is being used for the filling, is especially great. This reason is that, in addition to the normally more rapid rise along the opposite wall, the fresh water is forced to the top with augmented velocity by the pressure of the denser salt water.

This tendency was distinctly demonstrated during the up-lockage of the *Santa Clara* through the Pacific Locks on June 18. In the lower chamber at Miraflores, when the side wall culvert was being used, the towing locomotives could not hold the vessel away from the side wall. In the upper chamber where the water was comparatively fresh, this trouble was not experienced. At Pedro Miguel, both culverts were used and the vessel remained in the center of the chamber with hardly any effort on the part of the locomotives. All merchant vessels are required to have their sides clear before passage through the Canal, so that they can rub against the lock walls without injury.

In filling a chamber, the surface disturbance of the water is considerable. Several small rowboats have been swamped by it. In emptying, the surface is placid and there is scarcely any tendency to move a vessel. No tendency toward movement of vessels along the axis of the locks has been noted in either filling or emptying.

It has been observed that in all cases where a gate is opened after equalization between water of differing salinity on its two sides, there is a heavy surface current from the fresh to the relatively salty water.

An investigation was made at Miraflores Locks to determine the maximum average current velocity at various depths; in other words, to determine the current velocity for ships of various drafts. Seven telephone poles, of lengths from four to 35 feet, were assembled in Miraflores Lake and weighted, so that they would float in a vertical position, with only a foot or so protruding above the surface. These floats were locked through the

west flight of Miraflores Locks, from Miraflores Lake to the sea, and the effects of the currents noted by plotting the positions of the floats against time.

In all cases, the gates were opened immediately after they cracked from back pressure, and the floats were released at the center of the chamber, on the north side of the opening gates, in a position as near the gates as a vessel would be allowed. The lockage was made when the Pacific was at low tide; the depth of water over the sill of the upper lock and over the sill of the lower lock was 41 feet, on equalization for the respective openings of gates.

Observations were made of the currents set up on opening the upper gates, between Miraflores Lake and the upper level; on opening the operating gates between the upper and lower levels; and on opening the lower gates, between the lower level and the Pacific channel.

On the opening of the upper gates, there was plainly discernible a surface current toward the lower end of the chamber. This current ran to the end of the chamber, when a reverse current was set up; the shorter floats traveled at the rate of this current and reversed with it at the lower end of the chamber. The shorter floats remained in a vertical position, but the longer floats leaned as much as 30 degrees from the vertical, and rose and fell a distance of about three feet. This indicated that the longer floats were affected by a current below in a reverse direction from that of the top current. The shorter floats remained in the center of the chamber until they reached its end, but the floats immersed to a depth greater than 20 feet drifted toward one side or the other during the observations. The maximum velocity was attained by the surface floats, and amounted to 1.2 miles per hour. The 30-foot float had a maximum velocity of only 0.2 mile per hour.

On opening the operating gate between the upper and the lower level of the locks, with the water in the two chambers equalized, the effect on the floats of respective lengths was practically the same as when the gate was opened between the lake and the upper level, except that the floats traveled at a faster rate. The maximum velocity was 2.3 miles for the surface float, and 0.4 for the 30-foot float. This is ascribed to a greater difference in density of water on the two sides of the gate than was the case in locking the floats from the lake to the upper level.

The strongest currents were obtained on opening the lower gates, between the lower level and the sea. Since there was no obstruction to the outward flow of the relatively fresh water, there was, no reverse surge on the surface. There was, however, a steady decrease of speed as the forebay widened. The maximum velocity was 2.80 miles per hour for the surface float and 0.3 mile for the 30-foot float.

In the test at the lower end of the locks, the shorter floats floated down the center of the locks, turning to the west on leaving the forebay. The tendency to float to the west on leaving Miraflores Locks had been observed before in barges and other vessels of light draft, and the path taken by such vessels when allowed to drift free was the same as that of these floats. The two shorter floats remained in a vertical position throughout the operation, but the others had at times an inclination as great as 30 degrees.

No trouble has been experienced due to those fresh salt water currents while the loco-

motives have control. The current from the lower locks to sea makes it somewhat difficult for a vessel to leave the locks in it, as there is a very strong tendency to carry the ship over toward the bank of the canal as soon as the ship is outside the locks.

The vessel can be held until the current subsides in the lock chamber, but this means a delay of 30 minutes. Accordingly, the plan adopted is to bring the vessel up to speed with the locomotives and cast off the lines in the chamber before the ship leaves the locks. The vessel can then pick up sufficient steerage way before leaving the locks to care for itself.

New Publications—Bureau of Mines.

The following new publications have been issued by the Bureau of Mines, Department of the Interior:

BULLETIN.

Bulletin 83—The humidity of mine air, with especial reference to coal mines in Illinois, by R. Y. Williams, 1914. 69 pp., 7 figs.

TECHNICAL PAPERS.

Technical paper 65—A study of the oxidation of coal, by H. C. Porter and O. C. Kilsten, 1914. 30 pp., 12 figs.

Technical paper 84—Production of explosives in the United States during the calendar year 1913, by A. H. Fay, 1914. 12 pp.

Technical paper 93—Quarry accidents in the United States during the calendar year 1913, compiled by A. H. Fay, 1914. 66 pp.

MINERS' CIRCULARS.

Miners' circular 16—Hints on coal mine ventilation, by J. J. Rutledge, 1914. 22 pp.

Miners' circular 19—The prevention of accidents from explosives in metal mines, by Edwin Higgins, 1914. 16 pp., 11 figs.

NOTE—Only a limited supply of these publications is available for free distribution, and applicants are asked to cooperate in insuring an equitable distribution by selecting publications that are of especial interest. Requests for all papers cannot be granted without satisfactory reason. Publications should be ordered by number and title. Applications should be addressed to the Director of the Bureau of Mines, Washington, D. C.

Visit of House Committee on Appropriations.

The following members of the House Committee on Appropriations arrived on the Isthmus on the *Ancon* on Saturday, November 14: Representatives John P. Fitzgerald of New York, chairman; Swagar Sherley of Kentucky, William M. Calder of New York, Bryan F.

Mahan of Connecticut, and George White of Ohio. Accompanying the committee were the following: Representatives John J. Casey and A. J. Barchfeld of Pennsylvania, Daniel J. Griffin of New York, Edward W. Saunders of Virginia, and James R. Mann of Illinois.

The members of the committee and their guests were taken through the Canal on Sunday, November 15, on the Panama railroad steamship *Advance*, and on Monday, visits of inspection to various parts of the work were begun. The hearings are being held in the board room at the new Administration Building on Balboa Heights, and began on Wednesday, November 18, at 8 a. m.

Canal Excavation in October.

The following is a detailed statement of Canal excavation during the month of October.

ATLANTIC SECTION.

LOCALITY.	"Work" excavation.	"Plant" excavation.	Total.
Dry excavation—	Cu. Yds.	Cu. Yds.	Cu. Yds.
Terminals	1,136	.....	1,136
Wet excavation—			
Terminals	42,083	.....	42,083
Total Atlantic Section.	43,219	.....	43,219

CENTRAL SECTION.

Hydraulic excavation...	18,818	.....	18,818
Dredging.....	543,694	.....	543,694
Total Central Section.	562,512	.....	562,512

PACIFIC SECTION.

Dry excavation—			
Pacific Terminals.....	109,707	.....	109,707
Wet excavation—			
Pacific entrance.....	15,218	.....	15,218
Pacific terminals.....	277,772	.....	277,772
Total wet excavation.	292,990	.....	292,990
Total Pacific Section.	402,697	.....	402,697

TOTAL CANAL EXCAVATION.

Dry excavation	129,661
Wet excavation	878,767
Total	1,008,428

CANAL EXCAVATION TO NOVEMBER 1, 1914.

By French companies	78,146,960
French excavation useful to present Canal.....	29,908,000
By Americans—	
Dry excavation.....	130,429,897
Dredges.....	96,840,095
Total.....	227,269,692
May 4 to December 31, 1904.....	243,472
January 1 to December 31, 1905.....	1,799,227
January 1 to December 31, 1906.....	4,948,497
January 1 to December 31, 1907.....	15,765,290
January 1 to December 31, 1908.....	37,116,735
January 1 to December 31, 1909.....	35,096,166
January 1 to December 31, 1910.....	31,437,677
January 1 to December 31, 1911.....	31,603,899
January 1 to December 31, 1912.....	30,269,349
January 1 to December 31, 1913.....	27,177,960
January 1 to October 31, 1914.....	11,811,420

TOTALS BY SECTIONS AND AMOUNT TO BE EXCAVATED.

SECTIONS.	Amount excavated.	Remaining to be excavated.
<i>Atlantic—</i>	Cu. yds.	Cu. yds.
Dry excavation.....	8,862,560	24,417
Wet excavation.....	41,719,769	2,798,141
Total	50,582,329	2,822,558
<i>Central—</i>		
Chagres section.....	12,945,824	251,000
Culebra section.....	104,734,101	3,099,719
Total.....	117,679,925	3,350,719
<i>Pacific—</i>		
Dry excavation.....	11,458,775	.....
Wet excavation.....	47,548,663	5,402,618
Total.....	59,007,438	5,402,618
Grand total.....	227,269,692	11,575,895

THANKSGIVING.

The President's Proclamation.

By the President of the United States of America. A proclamation:

It has long been the honored custom of our people to turn in the fruitful autumn of the year in praise and thanksgiving to Almighty God for his many blessings and mercies to us as a nation. The year that is now drawing to a close since we last observed our day of national thanksgiving has been, while a year of discipline, because of the mighty forces of war and of change which has disturbed the world, also a year of special blessing for us.

It has been vouchsafed to us to remain at peace, with honor, and in some part to succor the suffering and supply the needs of those who are in want. We have been privileged by our own peace and selfcontrol in some degree to steady the counsels and shape the hopes and purposes of a day of fear and distress. Our people have looked upon their own life as a nation with a deeper comprehension, a fuller realization of their responsibilities, as well as of their blessings, and a keener sense of the moral and practical significance of what their part among the nations of the world may come to be.

The hurtful effects of foreign war in their own industrial and commercial affairs have made them feel the more fully and see the more clearly their mutual interdependence upon one another and has stirred them to a helpful cooperation such as they have seldom practiced before. They have been quickened by a great moral stimulation. Their unmistakable ardor for peace, their earnest pity and disinterested sympathy for those who are suffering, their readiness to help and to think of the needs of others, has revealed them to themselves as well as to the world.

Our crops will feed all who need food; the selfpossession of our people amidst the most serious anxieties and difficulties and the steadiness and resourcefulness of our business men will serve other nations as well as our own.

The business of the country has been supplied with new instrumentalities and the commerce of the world with new channels of trade and intercourse. The Panama Canal has been opened to the commerce of the nations. The two continents of America have been bound in closer ties of friendship. New instrumentalities of international trade have been created which will be also new instrumentalities of acquaintance, intercourse, and mutual service. Never before have the people of the United States been so situated for their own advantage or the advantage of their neighbors, or so equipped to serve themselves and mankind.

Now, therefore, I, Woodrow Wilson, President of the United States of America, do hereby designate Thursday the 26th of November next as a day of thanksgiving and prayer, and invite the people throughout the land to cease from their wonted occupations, and in their several homes and places of worship render thanks to Almighty God.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington this 28th day of October in the year of our Lord one thousand nine hundred and fourteen and of the independence of the United States of America the one hundred and thirty-ninth.

By the President: WOODROW WILSON.
ROBERT LANSING, Acting Secretary of State.

JOINT LAND COMMISSION.

Awards.

Award No. 64, docket Nos. 425, 426, and 1357, October 29, 1914, in the matter of the claims of James Heath, for property located near Frijoles and Tabernilla—An award is hereby made against the United States, in favor of the person hereinafter named, in the sum of \$100, United States currency.

This award shall be paid to the claimant hereinafter named, in the amount specified, on or before the 29th day of November, 1914, and if payment or the tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

James Heath, docket Nos. 425, 426, and 1357, for all rights, claims and other interests in growing crops, fruit trees and other improvements which the said Heath may possess or may have possessed on the lands of "Barro Colorado" near the town of old Frijoles, and for all rights, claims, and other interests in growing crops, fruit trees, house tax No. 1199, and any other improvements which the said Heath may possess or may have possessed in or near the town of Tabernilla, the sum of \$100, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Award No. 65, docket numbers as noted, October 30, 1914, in the matter of sundry claims—An award is hereby made against the United States, in favor of the persons hereinafter named, in the sum of \$1,950, United States currency.

This award shall be paid to the claimants hereinafter named, in the amounts hereinafter specified, on or before the 30th day of November, 1914, and if payment or tender of payment of any of the items of this award is not made on or before that date, such items shall thereafter bear interest at the rate of six per centum per annum until paid.

Marlin Rizo, docket No. 748—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which the said Rizo may possess or may have possessed at a place called "Buringa," near the town of Frijoles, the sum of \$600, United States currency.

Eugenie Theophile, docket No. 487—For all rights, claims, and other interests which the said Theophile may possess or may have possessed in houses tax Nos. 495, 498, 500, and 530, located on the "Bosque estate," the sum of \$1,350, United States currency.

Total, \$1,950, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Award No. 66, docket numbers as noted, October 31, 1914, in the matter of sundry claims—An award is hereby made against the United States, in favor of the persons hereinafter named, in the sum of \$1,060, United States currency.

This award shall be paid to the claimants hereinafter named, in the amounts hereinafter specified, on or before the first day of December, 1914, and if payment or tender of payment of any of the items of this award is not made on or before that date, such items shall hereafter bear interest at the rate of six per centum per annum until paid.

Aurora Berneth, docket No. 523—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which the said Berneth may possess or may have possessed near the quebrado El Macho and near Caimito, not covered by payment of the Disbursing Officer in February, 1912, voucher 18972, covering improvements near Caimito and Barbacoas, the sum of \$1,000, United States currency.

Henry Doffees, docket No. 742—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which the said Doffees may possess or may have possessed near Frijoles and in or near Tabernilla, the sum of \$60, United States currency.

Total, \$1,060, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Award No. 67, docket No. 443, November 4, 1914, in the matter of the claim of William Kerr for property located near Frijoles—An award is hereby made against the United States, in favor of the person hereinafter named, in the sum of \$265, United States currency.

This award shall be paid to the claimant hereinafter named in the amount specified, on or before the fourth day of December, 1914, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

William Kerr, docket No. 443—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which the said Kerr

may possess or may have possessed near Frijoles, the sum of \$265, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rules of Dismissal.

Rule of dismissal No. 151, docket numbers as shown, November 5, 1914. In the matter of sundry claims—

The following claims for improvements said to have been located at "Aguardiente" are hereby dismissed for the reason that the evidence submitted to the commission does not justify an award being made:

	Docket No.
Brantlio and Cresencia Quesada, et al.	1888
Victoria de los Rios de Jimenez	1889
Hortensio de Leon	1890
Tibursio Carmona	1891

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Opinion.

Opinion No. 149, docket numbers as shown, October 24, 1914, in the matter of the motion of Augustin Bigett, et al, for rehearing by this commission of certain claims certified to a disagreement by the commission of 1913—On September 30, 1914, Messrs. Hinckley, Ganson, and Teran, as counsel for the claimants, filed with the commission a motion for a rehearing by this commission of the claims, as follows:

	Docket No.
Augustin Bigett	912
George Bailey	586 and 1507
Wing Lee Ching	1111
Edward Gordon	1505
I. L. Maduro	1417
Leander Lindor	910
D. W. Ogilvie	36 and 1379
Kam Ling Tai	1658
Francisco de Tomo and A. Fasano	1324
José L. Yu	1256
Marcial Zuleta	502
Juan Maldonado	678
Cayetano Prado	1326

which claims have heretofore been heard by the Joint Land Commission of 1913, and said commission having disagreed in their opinions in said claims; and said claims now, under Article XV of the Treaty between the United States of America and the Republic of Panama, ratified February 26, 1904, being subject to adjudication by an umpire provided for in cases of disagreement.

The commission set this motion for oral argument and discussion in a public session held for that purpose on October 13, 1914, and after giving full consideration to the argument and authorities submitted by the attorneys for both sides, the commission is of the opinion that,

In view of the fact that the claims in question were heard by the commission of 1913 and passed for the decision of an umpire especially provided for in the Treaty, in cases of this kind, this tribunal is without jurisdiction to reopen the same, except by the consent of all the parties in interest. The motion is therefore denied.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Examinations by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 308, on Wednesday, December 2, 1914, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

By direction of the chairman of the board.

F. M. NIXON,

Recorder, Board of Local Inspectors.

OFFICIAL CIRCULARS.

Accountable Officials.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,

BALBOA HEIGHTS, C. Z., November 6, 1914.
CIRCULAR No. 76:

Effective as of November 1, 1914, the accountability for all nonexpendable property in the new Administration Building at Balboa Heights will be transferred to Mr. C. A. McIlvaine, Executive Secretary. Mr. J. F. Warner will be accountable only for stationery stock carried at Balboa Heights store.

H. A. A. SMITH,
Auditor, Panama Canal.

Approved:
GEO. W. GOETHALS,
Governor.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 9, 1914.

CIRCULAR No. 77:

Effective at once, Mr. V. C. Dillon is designated an accountable official of The Panama Canal, and as such will account for stock charged to dry dock store.

H. A. A. SMITH,
Auditor, Panama Canal.

Approved:
GEO. W. GOETHALS,
Governor.

BALBOA HEIGHTS, C. Z., November 11, 1914.

CIRCULAR No. 79:

Effective at once, Mr. Harry Dundas will cease to be an accountable official of The Panama Canal.

He will effect a transfer of his accountability to Mr. H. F. Sedwick.

H. A. A. SMITH,
Auditor, Panama Canal.
Approved:
GEO. W. GOETHALS,
Governor.

Commissary Coupons Good at all Panama Canal Hotels.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,

BALBOA HEIGHTS, C. Z., November 10, 1914.
CIRCULAR No. 78:

To all concerned—Effective at once, commissary coupons will be honored at all Panama Canal hotels. Stewards of line hotels will prepare daily reports in duplicate on form A-209, the original copy to accompany remittance of coupons and the duplicate copy to be attached to form S. D. 5. Com. form No. 7 will be used in connection with form A-209, setting up remittance of coupons according to denominations.

Hotels Tivoli and Aspinwall will continue the use of the present forms, showing remittance of commissary book coupons separate from the hotel book coupons.

H. A. A. SMITH,
Auditor, Panama Canal.

Approved:
GEO. W. GOETHALS,
Governor.

Payment for Sick Leave.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 9, 1914.
CIRCULAR No. 602-10:

In case payment of any sick leave has been deferred until the employee has completed 10 months' service (as provided in Circular No. 602, Paragraph 1, Rule 26), and the employee's service is terminated prior to completing the 10 months, the employee may be granted such annual leave as he would have been entitled to had no payment been deferred. In other words, the deferred payment will be cancelled, the time it covers will be considered as leave without pay, and any annual leave allowable under the regulations will be granted to the employee.

GEO. W. GOETHALS,
Governor.

Disposition of Surplus and Unserviceable Electric and Pneumatic Hand Tools.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., October 31, 1914.
CIRCULAR No. 631-2:

Surplus and unserviceable electric and pneumatic hand tools will hereafter be shipped to the storekeeper, Supply Department, Balboa, without survey, same to be handled in accordance with Paragraph 16, Circular No. 656-1.

GEO. W. GOETHALS,
Governor, The Panama Canal,
President, The Panama Railroad Company.

Operations at Cement Block Plant.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 13, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS:

I am in receipt of the following memorandum from

the Constructing Quartermaster:

"The cement block plant at Corozal was closed down on October 17, 1914. The final cost report shows that a total of 1,053,289 blocks have been made at the plant at an average cost of \$0.112 per block. This includes plant charge. Of the plant charge of \$40,000, there remain \$13,000 to be absorbed.

"There are about 250,000 blocks on hand, of which the work on the officers' quarters at Balboa dump will take 70,000."

Department or departments that may find it advantageous to use any or all of the surplus blocks above-mentioned should communicate with the Constructing Quartermaster.

GEO. W. GOETHALS,
Governor.

Termination of Service Forms.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., November 10, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

Letter form P. C.-494, termination of service on account of reduction of force, is in stock and, in the future, employees whose services are to be terminated in this manner, should be notified on this form.

Heads of departments and divisions outside of the Administration Building, Balboa Heights, C. Z., are herewith forwarded sheet of the form, and those residing within the building will advise the personnel bureau of any contemplated reduction of force, giving names and addresses, and notification will be mailed to them accordingly.

C. A. McILVAINE,
Executive Secretary.

Standard Tools for Equipment.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., September 19, 1914.

CIRCULAR NO. 639:

The lists of standard tools for different classes of equipment stated below, are published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

STEAMSHOVELS.

- 1 Axe, chopping, 4½"
- 1 Bar, buggy, 3-foot
- 1 Bar, claw
- 6 Bars, lining
- 1 Bar, slice, fire, 5-foot
- 2 Blocks, snatch, 6"
- 1 Brush, chain, long handle
- 2 Buckets, G. I., 2-gallon
- 1 Cable, ½", 60 feet long
- 1 Can, oil supply, 1-gallon (kerosene)
- 3 Carriers, timber
- 6 Chisels (two flat, two round, two cape)
- 2 Containers, oil, 5-gallon
- 1 Cooler, water, 8-gallon
- 2 Cups, drinking, enamel
- 1 Cutter, gage glass
- 1 Pair frogs, rerailing
- 1 Hacksaw, adjustable, 8" to 12"
- 2 Hammers, B. P., 1½ and 2 pounds
- 6 Hammers, sledge, double face, 8-pound
- 1 Hammer, sledge, double face, 16-pound
- 1 Hoe, fire, 5-foot.
- 50 Feet hose, canvas, 1½"
- 1 Lantern, hand, Dietz
- 2 Oilers, long spout
- 3 Padlocks
- 3 Picks, clay
- 1 Pot, tallow
- 1 Rake, fire, 5-foot.
- 1 Saw, crosscut (two-man), 5-foot
- 1 Saw, hand, crosscut, 26"
- 1 Screwdriver, 12"
- 6 Shovels, round point, short handle, No. 2
- 1 Shovel, scoop, No. 3
- 1 Pair tongs, pickup, rivet.
- 1 Pair tongs, blacksmith's, flat
- 1 Vise, combination, pipe and bench
- 4 Wrenches, monkey, 6", 8", 12", and 18"
- 4 Wrenches, Stillson, 6", 18", 24", and 36"
- 1 Set wrenches, single end, ½" to 2½"

LOCOMOTIVE CRANES, 30-TON AND UNDER.

- 1 Axe, chopping, 4½"
- 1 Bar, pinch, 4-foot
- 1 Bar, slice, fire, 5-foot
- 1 Bucket, G. I., 2-gallon
- 1 Can, oil supply, 1-gallon (kerosene)
- 2 Cans, oil supply, 2-gallon (valve and engine)
- 3 Chisels, (one flat, one round, and one cape)
- 1 Cooler, water, 8-gallon
- 1 Cup, drinking, enamel
- 1 Hammer, B. P., 1½-pound
- 1 Hammer, sledge, double face, 8-pound
- 1 Hoe, fire, 5-foot
- 2 Oilers, long spout

3 Padlocks

- 1 Pot, tallow
- 1 Rake, fire, 5-foot
- 1 Shovel, scoop, No. 3
- 2 Wrenches, monkey, 8" and 15"
- 6 Wrenches, open end (to suit crane)
- 2 Wrenches, Stillson, 6" and 18"

75 AND 100 TON CRANES.

- 1 Bar, slice, fire, 5-foot
- 1 Bar, pinch, 4-foot
- 1 Can, oil supply, 1-gallon (kerosene)
- 3 Cans, oil supply, 2-gallon (valve, engine, and car)
- 3 Chisels, (one flat, one round, and one cape)
- 1 Cooler, water, 8-gallon
- 1 Cup, drinking enamel
- 1 Hammer, B. P., 1½-pound
- 1 Hammer, sledge, double-face, 8-pound
- 1 Hoe, fire, 5-foot
- 2 Oilers, long spout
- 3 Padlocks
- 1 Pot, tallow
- 1 Rake, fire, 5-foot
- 1 Shovel, scoop, No. 3.
- 2 Wrenches, gland, ½" and 1"
- 2 Wrenches, monkey, 8" and 15"
- 2 Wrenches, Stillson, 6" and 18"

UNLOADERS.

- 1 Bar, buggy, 3-foot
- 1 Can, oil supply, 1-gallon (kerosene)
- 2 Cans, oil supply, 2-gallon (engine and valve)
- 3 Chisels, (one flat, one round, and one cape)
- 1 Hammer, B. P., 1½-pound
- 1 Hammer, sledge, double face, 8-pound
- 1 Oiler, long spout
- 2 Padlocks
- 1 Pot, tallow
- 2 Wrenches, monkey, 8" and 15"
- 1 Wrench, Universal, steam connection
- 2 Wrenches, "S" car, ¾" x ¾" and 1" x 1½"
- 3 Wrenches, Stillson, 14", 24", and 36"

TRACK SHIFTERS.

- 1 Bar, buggy, 3-foot
- 2 Bars, claw
- 1 Can, oil supply, 1-gallon (kerosene)
- 2 Cans, oil supply, 2-gallon (valve and engine)
- 3 Chisels, (one flat, one round, and one cape)
- 1 Hammer, B. P., 1½-pound
- 1 Hammer, sledge, double face, 8-pound
- 1 Oiler, long spout
- 2 Padlocks
- 1 Pot, tallow
- 1 Wrench, Universal, steam connection
- 3 Wrenches, monkey, 6", 12", and 18"
- 2 Wrenches, "S" car, ¾" x ¾" and 1" x 1"
- 3 Wrenches, Stillson, 14", 24", and 36"

SPREADERS.

- 1 Bar, buggy, 3-foot
- 1 Bar, claw
- 1 Can, oil supply, 2-gallon (car)
- 1 Chain, diamond hook, 6-foot
- 1 Chisel, flat
- 1 Chisel, bar, 4-foot
- 1 Hammer, B. P., 1½-pound
- 1 Hammer, sledge, double face, 8-pound
- 1 Oiler, long spout
- 2 Padlocks
- 1 Wrench, monkey, 15"
- 2 Wrenches, "S" car, ¾" x ¾" and 1" x 1"
- 2 Wrenches, Stillson, 10" and 18"

PILEDRIVERS.

- 2 Axes, chopping, 4½"
- 2 Adzes, carpenter, 3½" and 5"
- 2 Bars, claw
- 1 Bar, slice, fire, 5-foot
- 6 Bars, lining
- 4 Bars, timber
- 12 Bits, ship auger: Four each, ½-inch and ¾-inch; two each, 1-inch and 1½-inch
- 2 Boring machines, Thor No. 5, air, with four ¾-inch and four 1-inch bits
- 1 Bucket, G. I., 3-gallon
- 1 Can, oil supply, 2-gallon (kerosene)
- 2 Carriers, timber
- 3 Chisels, (one flat, one round, and one cape)
- 1 Cooler, water, 8-gallon
- 2 Containers, oil, 5-gallon
- 1 Cup, drinking, enamel
- 1 Cutter, gage glass
- 1 Gage, track
- 1 Hacksaw, adjustable, 8" to 12"
- 2 Hammers, B. P., 1½-pound
- 1 Hammer, claw
- 8 Hammers, sledge, double face, 8-pound
- 2 Hammers, sledge, double face, 14-pound
- 1 Hatchet, broad
- 1 Hoe, fire, 5-foot
- 4 Hooks, cant
- 4 Jacks, track
- 4 Lanterns, hand, Dietz

- 1 Level, spirit, carpenters', 30"
- 1 Oiler, long spout
- 6 Padlocks
- 1 Plane, jack, 15"
- 1 Pot, tallow
- 1 Rake, fire, 5-foot.
- 6 Saws, crosscut (two-man), 5-foot
- 1 Saw, hand, crosscut, 26"
- 1 Screwdriver, 14"
- 4 Shovels, round point, short handle, No. 2
- 1 Shovel, scoop, No. 3
- 1 Tape, metallic, 100-foot
- 1 Tape, metallic, 100-foot
- 1 Vise, combination, pipe and bench
- 3 Wrenches, monkey, 10", 12", and 18"
- 1 Set wrenches, single end, ½" to 2"
- 3 Wrenches, Stillson, 10", 18", and 24"
- 1 Wrench, spanner (air pump)

WRECKING OUTFIT.

- 3 Axes, chopping, 4½"
- 3 Bits, ship auger, one each, ¾", 1", and 1½"
- 3 Bits, spur auger, one each, ¾", 1", and 1½"
- 6 Blocks, two snatch, 6", one snatch, 10", one snatch, 12", two tackle, double, 6"
- 1 Bucket, dope, 5-gallon
- 2 Buckets, G. I., 3-gallon
- 7 Cans, oil supply: Five 2-gallon, with spout; two 5-gallon, without spout
- 4 Chisels, (two flat, one round, and one cape)
- 1 Cooler, water, 10-gallon
- 5 Containers, oil, 5-gallon
- 1 Cup, drinking, enamel
- 1 Cutter, pipe, hand, Barnes No. 1
- 6 Pair frogs, rerailing
- 1 Funnel, 2-quart
- 3 Gages, track
- 6 Hammers, B. P., 1½-pound
- 3 Hammers, plow, 2-pound
- 18 Hammers, sledge, double face: Six each, 8-pound and 12-pound; four 14-pound; one each, 18-pound and 20-pound
- 2 Hooks, boat, G. I., 2½", with pole
- 4 Jacks, ball-bearing, 35-ton
- 2 Jacks, screw: One 3½" x 12"; one 3½" x 18"
- 4 Jacks, track
- 2 Lamps, locomotive marker
- 2 Lamps, locomotive, classification
- 24 Lanterns, hand, railroad
- 1 Level, spirit, carpenter's, 30"
- 6 Machetes
- 1 Mover, car, standard
- 6 Oilers, hand, No. 43
- 1 Pair pliers, 8", side-cutting
- 4 Pots, tallow
- 1 Saw, hand, cross-cut, 26"
- 1 Screwdriver, 12"
- 2 Shovels, scoop, No. 3
- 1 Square, carpenter's, 18" x 24"
- 6 Torches, boiler-maker's standard, G. I.
- 2 Wrenches, alligator, No. 2 special and No. 3
- 6 Wrenches, monkey; two each, 12", 15", and 18"
- 2 Wrenches, Stillson, 36"
- 8 Wrenches, single, open end; one each, ½", ¾", 1", 1½", 1½", 1½", and 1½"

New Series of Requisitions, Work Requests, and Requests for Transfer of Equipment..

THE PANAMA CANAL,
OFFICE OF EXECUTIVE SECRETARY.

BALBOA HEIGHTS, C. Z., October 28, 1914.

Heads of departments and divisions in the Administration building—Effective November 1, 1914, the various series of requisitions, work requests, and requests for transfer of equipment now being prepared by the offices of The Panama Canal in the Administration Building will be discontinued.

No change will be made for the present in the preparation of these forms for the different departments of the Panama Railroad Company.

A new series for each of the above forms will be started by the property and requisition bureau for all departments and divisions of The Panama Canal located in the Administration Building.

Each serial number will carry one of the following prefixes to indicate the division to which that particular request pertains.

- A.....Accounting Department.
- B.....Building Division.
- E A.....Executive Office, Administration Building.
- E C.....Executive Office, Division of Civil Affairs.
- E F.....Executive Office, Division of Police and Fire
- E P.....Executive Office, Division of Posts.
- E S.....Executive Office, Division of Schools.
- F.....Division of Fortifications.
- H.....Health Department.
- M E.....Division of Municipal Engineering.
- M and H.....Section of Meteorology and Hydrography.
- O E.....Section of Office Engineer.
- O M.....Department of Operation and Maintenance.

O M E.... Department of Operation and Maintenance, Electrical Division.
 O M G.... Department of Operation and Maintenance, Gatun Locks.
 O M P.... Department of Operation and Maintenance, Pacific Locks.
 O M T.... Department of Operation and Maintenance, Canal Transportation.
 S..... Supply Department.
 T C..... Division of Terminal Construction.
 T C A.... Division of Terminal Construction, Atlantic breakwater.
 T C B.... Division of Terminal Construction, Balboa terminals.
 T C C.... Division of Terminal Construction, Cristobal coaling plant.
 Z..... Requests from individuals and companies.

On all requisitions covering articles to be purchased in the United States, the serial numbers will be followed by letters "U. S."

All requests for the preparation of these forms should be made to the head of the property and requisition bureau, and the following information must be shown on all requests:

REQUISITIONS.

Items required, alphabetically arranged.
 Storehouse or division from which items are to be secured.

Point at which delivery is to be made.
 Person to whom delivery is to be made.
 Division account number to be charged.

Items shall be separated by classes as far as possible, in accordance with classification of material revised to October 8, 1914.

WORK REQUESTS.

Division which will perform the work.
 Division for which work is to be performed.
 Division account number to be charged.
 Place at which delivery is to be made.
 Person to whom delivery is to be made.
 Whom to address for additional information.
 Estimated cost of work.
 Description of work to be performed.
 Date delivery is desired.
 If overtime is authorized, so state.

Any necessary drawings or sketches should accompany request for preparation of form.

Requests for preparation of work requests which do not show estimated cost, will be returned for this information.

REQUESTS FOR TRANSFER OF EQUIPMENT.

Division from which equipment is to be secured.
 Division desiring equipment.
 Purpose for which additional equipment is desired.

Point at which delivery is to be made.
 Person to whom delivery is to be made.
 List of equipment desired, giving as complete description as possible.

In the case of the Department of Operation and Maintenance, Division of Terminal Construction, etc., when the work is more or less of a technical nature, and instructions are taken in shorthand, which would require rewriting before sending to property bureau, serial numbers may be secured by telephone from the property bureau, Telephone 171, and the requisite number of copies prepared, as heretofore. In such case one copy must be sent immediately to the property bureau for file.

It is requested that all other employees who have occasion to request any of the above, supply themselves with a quantity of each of the following forms and fill one out in pencil for each request, taking care to give all necessary information: Requisitions, form P.C. 907; work requests, form P.C. 159; requests for transfer of equipment, form P.C. 299.

If the requests are made on the forms provided, and proper care is exercised in making the original request, the work will be greatly expedited.

A supply of these forms may be secured from either the property and requisition bureau, Room 310, or the stationery storeroom in basement.

The following number of copies of these forms will be prepared in each case, which will be distributed as shown below:

REQUISITIONS.

Eleven copies of requisitions to be prepared covering items to be supplied on Isthmus.

Distribution after signature by head of division—Eight copies to storehouse supplying material; one copy to head of division making request; one copy to property bureau file.

Five copies of requisitions to be prepared covering items to be purchased in United States.

Distribution after signature by head of Division—Two copies to United States requisition clerk; one copy to head of division making request; one copy to property bureau file.

In case specifications are attached, two extra copies of the specifications must be furnished for United States requisition clerk. In case blueprints are required, three copies of blueprint and one vandyke must be furnished for United States requisition clerk.

WORK REQUESTS.

Original and 11 copies to be prepared when the

Panama railroad is to perform the work.

Original and six copies to be prepared when any other division is to perform the work.

Distribution after signature by head of Division and approval by the Governor—Original and six copies to the Panama railroad when that department performs the work; original and one copy to any other division performing the work; one copy to head of division making request; one copy to Accounting Department; one copy to property bureau file; one copy to record bureau file.

REQUESTS FOR TRANSFER OF EQUIPMENT.

Eight copies to be prepared.

Disposition after investigation by surveying officer and approval by the Governor—One copy to division supplying equipment; one copy to head of division making request; one copy to surveying officer; one copy to Accounting Department; one copy to Chief Quartermaster; one copy to Superintendent, Mechanical Division; one copy to property bureau file.

One copy of all forms will be placed in property bureau file when first prepared.

In all cases where copies are sent to the heads of departments and divisions and it is not desired to keep a desk file for reference, the copy will be returned to the property bureau for file.

It is not intended that the property bureau keep any file in connection with United States requisitions other than a copy of the original requisition.

A complete file on all matters pertaining to United States requisitions is maintained by the United States requisition clerk, Room 272, Telephone 177, and all inquiries regarding United States purchases should be made there.

Copies of inspection calls, notices of awards, etc., ordinarily sent to heads of divisions which they do not desire to retain may be sent to the property bureau, however, and will be filed there.

Copies of all correspondence relative to requisitions (other than United States purchases), work requests and requests for transfer of equipment should be sent to property bureau for file, with the respective requests, in order that the files may be kept up to date and any information required can be given at any time.

By direction of the Governor.

C. A. McILVAINE,
Executive Secretary.

Hearings of House Committee on Appropriations.

THE PANAMA CANAL
OFFICE OF EXECUTIVE SECRETARY.

BALBOA HEIGHTS, C. Z., November 16, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The Committee on Appropriations will hold hearings in the board room, Administration Building, Balboa Heights, Wednesday, November 18, 1914, beginning at 8 o'clock a. m.

By direction of the Governor.

C. A. McILVAINE,
Executive Secretary.

Proposals for Carpentry Work in Concrete Quarters, Balboa.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the Office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., November 24, 1914, and then opened, for furnishing the necessary labor to complete the interior carpentry work in houses Nos. 739 and 740, Balboa. This work must be finished in accordance with detail drawings which will be furnished the contractor, which drawings will be the same as have been used in finishing the houses previously completed on Balboa Flat. These plans may be seen on application to the architect, Balboa Heights. This work must be equal to that done in the other houses of similar type on Balboa Flat, and must be done to the satisfaction of the Constructing Quartermaster, or his representative.

Bidders should state the time in which they propose to complete the work.

Bids must be in a lump sum for the complete work on each of these two houses.

Bids must be accompanied by certified check, post-office money order, or cash, for five per cent of the amount bid.

The Government reserves the right to reject all bids. Bids should be marked "Proposal for carpentry work, concrete quarters, Balboa." WM. R. GROVE,
Chief Quartermaster.

Proposals for Clearing Trails.

THE PANAMA CANAL,

OFFICE OF THE CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, until November 25, 1914, at 3 p. m., and then opened for:

Completely cutting to within three inches of the ground all growth and burning all material so cut, over an area of 68 miles of trail 20 feet wide, situated in various parts of the Canal Zone. The general location of this work will be shown on maps in the office of the

Assistant Engineer, Division of Fortifications, between 2 and 5 p. m., November 14. This work will be done in January and February, 1915. All bids should be for a lump sum for the entire job.

Bids must be accompanied by cash certified check, or post-office money order for five per cent of the amount bid.

Form of contract and bond, including specifications may be obtained on application to this office.

The Government reserves the right to reject all bids. Bids should be marked "Proposal for clearing trails."

W. R. GROVE,
Chief Quartermaster.

Rainfall from November 1 to 14, 1914, Inclusive.

STATIONS.	In Maximum one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>In</i>		<i>In</i>
Balboa Heights.....	2 22	3	5.24
Balboa.....	2 07	3	4.78
Miraflores.....	2 09	3	4.28
Pedro Miguel.....	1 39	3	4.51
Rio Grande.....	1 26	11	3.72
<i>Central Section—</i>			
Culebra.....	66	9	3.18
*Camacho.....	1 00	10	3.79
Emoire.....	69	8	2.80
Gamboa.....	1.34	11	5.58
*Juan Mina.....	2.16	5	5.58
Alhajuela.....	1.07	11	4.90
*El Vigia.....	1.65	9	6.43
Frijoles.....	1.08	11	3.60
*Monte Lirio.....	2.40	9	8.34
<i>Atlantic Section—</i>			
Gatun.....	1 50	13	6.00
*Brazos Brook.....	2 51	9	7.04
Colon.....	3 77	13	11.59

*Standard rain gage—readings at 5 p. m. daily.
 Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Nov. 8.....	135 10	99 0586	1586 11	54.26	
Mon., Nov. 9.....	132.25	97.1486	0586 11	54.27	
Tues., Nov. 10.....	131.15	96.9685	0686 02	54.20	
Wed., Nov. 11.....	130 20	95.4286	0386 02	54.15	
Thurs., Nov. 12.....	130 00	95.5086	0386 03	54.10	
Fri., Nov. 13.....	129 80	95.1985	9786 02	54.10	
Sat., Nov. 14.....	130.90	95.9885	9986 02	54.12	
Height of low water to nearest foot.....	125.0	91.0			

Misdirected Letters.

BALBOA HEIGHTS, C. Z., November 16, 1914.

The following insufficiently addressed letters, originating in the United States or its possessions, have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Baker, Philip	Larsen, Mrs. J.*
Blair, Joseph	McCourt, J. S.*
Brown, Michael F.	McGovern J. F.*
Cohen, Miss Gabby	Mara, Thomas*
Curry, Thomas	Mullen, Mrs. Nicholas*
Denis, George(3)	Rose, Charles*
Doran, Rev. M.	Slinn, Richard
Dorsey, W. A.*	Surratt, Price
Exc, J.*	Swann, B. E.
Ewen, Edward	Swann, Linden
Gille, Bernard	Thomas, Luther
Griffith, Mrs. M. A.	Thompson, Wm.
Holmes, W. K.	Turpin, D. C.
Kay, John	Vandenberg, H.*
Kelly, Wm. Edward	

(*) Indicates paper.

Family Quarters.

Applications for married quarters on file an October 31 were, as follows:

DISTRICT.	List No. 1.	List No. 2.
Ancon.....	59 (35)	383 (123)
Ancon Hospital.....	3 (3)	6
Corozal.....	9 (5)	163 (45)
Paraiso.....	1	184 (29)
Gatun.....		108 (2)
Cristobal.....	1 (1)	161 (36)
Total.....	73 (44)	1,004 (229)

COMMISSARY DEPARTMENT.

Christmas Toys.

Christmas candies, toys, trees and decorations have been requisitioned by the commissary branch and will be placed on sale on a date to be announced later.

The New York agent has been requested to purchase, if possible, an assortment of toys and novelties to include the following:

Shoo flies, Humpty Dumpty toys, dolls, express wagons, coasters, doll carriages, drums, wagons, baseballs, bats, gloves, tenpins, hobby horses, games, rubber rattles, toy wagons and wheelbarrows, animals, building blocks, structural blocks and iron toys, paint boxes, sand boxes and shovels, musical instruments, mechanical toys, dolls china sets, doll go-carts, picture books, rubber balls, etc.

The exact list of toys to be received will be published at a later date.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective November 19:

FRESH MEATS.	Price.
Mutton—Stewing, per pound.....	10
Shoulder, trimmed, per pound.....	16
Leg (8 to 10 pounds), per pound.....	25
Short cut chops, per pound.....	30
Shoulder, chops, per pound.....	18
Lamb—Stewing, per pound.....	13
Shoulder, trimmed, per pound.....	19
Leg (5 to 8 pounds), per pound.....	30
Chops, per pound.....	36
Chops, shoulder, per pound.....	23
Veal—Stewing, per pound.....	13
Shoulder, for roasting (not under 4 pounds), per pound.....	17
Chops, shoulder, per pound.....	23
Chops, per pound.....	35
Loin, for roasting, per pound.....	35
Cutlets, per pound.....	40
Beef—Suet, per pound.....	03½
Soup, per pound.....	08
Soup bones, per pound.....	02½
Stew, per pound.....	12
Plate, per pound.....	14
Corned, No. 1, per pound.....	20
Corned, No. 2, per pound.....	17
Chuck roast, 3 lbs., and over, special, per pound.....	13
Chuck roast, 3 lbs., and over, choice, per pound.....	17
Rib roast, second cut (not under 3½ pounds), special, per pound.....	18
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
Rib roast, first cut (not under 3 pounds), special, per pound.....	22
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27
Pot roast, special, per pound.....	23
choice, per pound.....	28
Rump roast, special, per pound.....	23
choice, per pound.....	28
Porterhouse roast, special, per pound.....	25
choice, per pound.....	31
Steak, chuck, special, per pound.....	15
choice, per pound.....	18
Round, bottom, special, per pound.....	15
choice, per pound.....	19
Round, top, special, per pound.....	17
choice, per pound.....	22
Rib, special, per pound.....	23
choice, per pound.....	27
Sirloin, special, per pound.....	23
Sirloin, choice, per pound.....	28
Sirloin, choice cut, special, per pound.....	26
Sirloin, choice cut, choice, per pound.....	32
Rump, special, per pound.....	23
choice, per pound.....	28
Porterhouse (not less than 1½ pounds), special, per pound.....	26
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse, short, Delmonico special, per pound.....	23
Porterhouse, short, Delmonico choice, per pound.....	28
Tenderloin, Western, special, per pound.....	40
Tenderloin, Western, choice, per pound.....	46
Pork—Hams, fresh, per pound.....	26
Shoulders, fresh, per pound.....	22
Loin, chop or roast, per pound.....	24
Pigs' feet, fresh, each.....	8
Pigs' head, fresh, whole.....	95
½ head.....	48
Sausage, home made, per pound.....	26

MISCELLANEOUS.

Livers—Beef, per pound.....	13
Calf, each.....	65
half, each.....	33
Oysters, fresh, per pkt.....	130
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	14
Frankfurter, per pound.....	14

	Price.
Lieberwurst, per pound.....	12
Pork, per pound.....	18
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	*42
per ½-dozen.....	*22
Bluefish, per pound.....	9
Halibut, fresh, per pound.....	5
Salmon, per pound.....	8
Yeast, per pound.....	31
per cake.....	2
POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound.....	25
Chickens—Fancy, roasting, corn fed, per pound.....	24
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	30
Broilers, milk fed, per pound.....	25
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	29
Squabs, each.....	30
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	24
Half, per pound.....	26
Sliced, per pound.....	32
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	35
Half boiled, per pound.....	36
Sliced, boiled, per pound.....	42
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.42
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	43
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	31
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk (certified), bottle.....	*24
Milk, Sheffield Farms, per quart.....	*15
Fermillac, bottle.....	*25
Ice cream, quart.....	125
½-gallon.....	150
Cream, Sheffield Farms, quart.....	*33
pint.....	*19
½ pint.....	*12

VEGETABLES.

Cauliflower, per pound.....	6
Beets, per pound.....	2½
Brussels sprouts, per quart.....	15
Celery, per head.....	4
Cabbage, per pound.....	2½
Carrots, per pound.....	2½
Cucumbers, per pound.....	18
Lettuce, per pound.....	*11
Onions, per pound.....	2
Parsnips, per pound.....	3
Peppers, per pound.....	5
Potatoes, white, per pound.....	2
sweet, American, per pound.....	*2½
sweet, tropical, per pound.....	2
Yams, tropical, per pound.....	3
Eggplant, per pound.....	5
Turnips, per pound.....	2
Tomatoes, per pound.....	*6
Squash, per pound.....	2½

FRUITS.

Apples, per pound.....	3
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Cranberries, per pound.....	6
Grapes, per pound.....	*12
Grape fruit—American, each.....	8
Tropical, each.....	3½
Lemons, per dozen.....	19
Limes, per 100.....	40
Oranges—American, each.....	2½
Jamaican, per dozen.....	12
Pears, per pound.....	*6
Coconuts, each.....	5
Bananas, per bunch.....	38
Bananas, each.....	½
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Pears, alligator, each.....	6

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Additions to Stock.

Coffee and chicory (roasted and ground), pkg.....	.13
Extract of beef, Rex, jar.....	1.63
Wax, floor, tin.....	.38
Cloth, Hudson, yd.....	.10

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective November 9, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Knives and forks, set.....	2.00	2.52
Penknives, ea.....	.63	.72
Toweling, luck, yd.....	.35	.39
Cups and saucers, ea.....	.10	.12
Plates, soup, 9½", ea.....	1.75	1.85
Plates, dinner, 10", ea.....	1.75	1.85
Plates, 8", ea.....	1.30	1.65
Plates, 6", ea.....	1.05	1.15
Dishes, bakers', 10", ea.....	1.20	1.45
Boats, sauce, ea.....	1.70	1.80
Platters, meat, oval, ea.....	.12	.15
Strawberries, tin.....	.14	.26
Rugs, Crex, 8x10", ea.....	5.05	4.75
Lawn, Persian, 32", yd.....	.14	.19
Trousers, white duck, pr.....	1.95	1.70
Suits, bathing, men's, ea.....	2.90	3.20
Pajamas, ea.....	1.05	.90
Kimono, crepe, ea.....	1.10	.95
Measures, tape, ea.....	.04	.03
Shoes, men's, tan blu., pr.....	4.10	4.25
EFFECTIVE NOVEMBER 16.		
Sugar, granulated, sack.....	.33	.30
Sugar, yellow, lb.....	.07	.05
Bedspreads, ea.....	1.50	1.40
Ribbon, No. 60, yd.....	.18	.15
Ribbon, No. 80, yd.....	.21	.16
Plates, 8", ea.....	1.55	1.65
Clocks, Prompter, ea.....	1.35	1.30
Split peas, lb.....	.04	.06
Crab, deviled, tins.....	.21	.24
Corned beef, tin.....	.41	.48
Shoes, children's, pr.....	1.00	1.10
Brushes, shaving, ea.....	.96	1.05
Swiss, dotted, yd.....	.16	.20
Union suits, ea.....	.68	.77
Rules, Zig Zag, 6-foot, ea.....	.17	.25

Died.

JAMIESON, D. H.—American, employe, age 38 years, November 12, 1914.

THOMPSON, EWING—Naturalized American, employe of contractor, from injuries received as result of a fall, November 9, 1914, aged 28 years. Interment, Mount Hope cemetery.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Alberto, Vitelio.....	47004	Spain.....	El Vigia.....	Hydrographic.....	Nov. 8, 1914.
Clarke, Fitz.....	22269	Barbados.....	Golden Green.....	Dredging.....	Nov. 12, 1914.
Dolton, Fitz (alias Dalton).....	50141	Barbados.....	Chorrollo.....	Term. Cons.....	Nov. 5, 1914.
Jamieson, D. H.....	4970	U. S. A.....	Balboa Heights.....	Term. Cons.....	Nov. 12, 1914.
Williams, Thomas.....	24821	Jamaica.....	Mount Hope.....	Transportation.....	Nov. 6, 1914.

The estates of these deceased employes of the Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next six weeks are given in the following table:

NOVEMBER.

DATE.	Time and height of high and low water.			
Wed., Nov. 4.....	4:12	10:31	16:38	22:44
Thurs., Nov. 5.....	4:41	11:05	17:07	23:1
Fri., Nov. 6.....	5:13	11:39	17:38	23:51
Sat., Nov. 7.....	5:45	12:15	18:13	24:28
Sun., Nov. 8.....	6:21	12:56	18:54	25:1
Mon., Nov. 9.....	7:04	13:40	19:41	25:58
Tues., Nov. 10.....	7:54	14:34	20:39	26:44
Wed., Nov. 11.....	8:58	15:37	21:45	27:28
Thurs., Nov. 12.....	10:11	16:44	22:54	28:1
Fri., Nov. 13.....	11:26	17:50	23:57	28:44
Sat., Nov. 14.....	12:33	18:49	24:53	29:1
Sun., Nov. 15.....	13:0	19:42	25:58	29:44
Mon., Nov. 16.....	13:40	20:32	26:58	30:1
Tues., Nov. 17.....	14:22	21:22	27:53	30:44
Wed., Nov. 18.....	15:07	22:09	28:44	31:1
Thurs., Nov. 19.....	15:54	22:56	29:31	31:44
Fri., Nov. 20.....	16:43	23:45	30:14	32:1
Sat., Nov. 21.....	17:34	24:35	30:53	32:44
Sun., Nov. 22.....	18:26	25:26	31:28	33:1
Mon., Nov. 23.....	19:20	26:18	32:0	33:44
Tues., Nov. 24.....	20:15	27:11	32:38	34:1
Wed., Nov. 25.....	21:12	28:05	33:11	34:44
Thurs., Nov. 26.....	22:11	29:00	33:39	35:1
Fri., Nov. 27.....	23:11	30:00	34:0	35:44
Sat., Nov. 28.....	24:12	31:05	34:28	36:1
Sun., Nov. 29.....	25:14	32:15	34:53	36:44
Mon., Nov. 30.....	26:17	33:30	35:14	37:1

DECEMBER.

Tues., Dec. 1.....	2:38	8:54	15:14	21:09
Wed., Dec. 2.....	3:12	9:31	15:44	21:46
Thurs., Dec. 3.....	3:45	10:07	16:14	22:20
Fri., Dec. 4.....	4:18	10:43	16:47	22:58
Sat., Dec. 5.....	4:54	11:19	17:22	23:35
Sun., Dec. 6.....	5:29	11:57	18:00	24:1
Mon., Dec. 7.....	6:07	12:37	18:42	24:44
Tues., Dec. 8.....	6:48	13:22	19:27	25:1
Wed., Dec. 9.....	7:30	14:11	20:18	25:44
Thurs., Dec. 10.....	8:15	15:06	21:14	26:1
Fri., Dec. 11.....	9:02	16:06	22:14	26:44
Sat., Dec. 12.....	9:50	17:11	23:18	27:1
Sun., Dec. 13.....	10:40	18:14	24:26	27:44
Mon., Dec. 14.....	11:30	19:14	25:38	28:1
Tues., Dec. 15.....	12:22	20:10	26:53	28:44
Wed., Dec. 16.....	13:15	21:05	27:11	29:1
Thurs., Dec. 17.....	14:10	22:00	28:32	29:44
Fri., Dec. 18.....	15:06	23:00	29:56	30:1
Sat., Dec. 19.....	16:04	24:05	31:23	30:44
Sun., Dec. 20.....	17:03	25:15	32:53	31:1
Mon., Dec. 21.....	18:04	26:30	34:26	31:44
Tues., Dec. 22.....	19:06	27:50	35:6	32:1
Wed., Dec. 23.....	20:10	29:15	36:44	32:44
Thurs., Dec. 24.....	21:15	30:45	38:16	33:1
Fri., Dec. 25.....	22:22	32:20	39:53	33:44

DATE.

Time and height of high and low water.

Sat., Dec. 26.....	4:54	11:09	17:11	23:25
Sun., Dec. 27.....	5:55	12:18	18:12	24:1
Mon., Dec. 28.....	6:58	13:19	19:09	24:44
Tues., Dec. 29.....	8:04	14:17	20:00	25:1
Wed., Dec. 30.....	9:12	15:11	20:42	25:44
Thurs., Dec. 31.....	10:22	16:01	21:24	26:1

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.30 per barrel, reduced to 60° Fahrenheit.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Subsistence supplies, including a large stock of fresh meats, vegetables, canned groceries, fruits, bakery products, etc., are available for quick delivery at either terminal. Prices are generally lower than the retail prices in the United States, and compare favorably with prices in any port of the world.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and on advance notice is required. The following are representative charges; for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the turning of the largest crank shafts or longest line shafts.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge

for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment in ward is \$1 per day.

Application for supplies, or for services, should be made to the captain of the port, Cristobal or Balboa.

Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired; or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case the vessel has a known representative on the Isthmus in care of such representative.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS WITH PACIFIC PORTS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acapulco, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central America line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports above-named between Balboa and Ocos.

The Luckenbach Steamship Company is operating a 10-day service between New York and San Francisco, calling at East San Pedro both ways. Its vessels handle cargo at Balboa when sufficient business offers.

The American-Hawaiian lines between New York and San Francisco, and New York and Honolulu, discharge and take on cargo at Balboa when sufficient business offers. At present, a vessel of this company passes through the Canal about every third day.

Grace and Company maintain an irregular service between New York and San Francisco, calling at way ports. Sailings are made about every 12 days. A vessel plying between San Francisco and Valparaiso, calling at way ports, makes a round voyage about every 10 weeks.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Paipa, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa for Valparaiso calling at Paipa, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service each way between New York and Southampton, making the following way ports: Antilla, Jamaica, Colon, Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores, and Cherbourg. Its vessels all arrive at Colon on Sundays and sail on Tuesdays.

The Compagnie Générale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Venezia," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curaçao, Puerto Cabello, and Barcelona.

The Compania Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curaçao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every six days direct; between Colon and New York by the United Fruit Company and the Royal Mail Company, sailings via Kingston weekly and fortnightly, respectively; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

(Continued on page 132.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon November 15.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Nov. 9...	<i>Santa Cruz</i>	American.....	W. R. Grace & Co.....	New York.....	Puget Sound.....	General mdse.....	4,000	5,436	4,065
Nov. 12...	<i>Advance</i>	American.....	Panama Railroad S. S. Line.....	New York.....	Balboa.....	General mdse.....	692	2,965	2,101
Nov. 12...	<i>Pennsylvanian</i>	American.....	American-Hawaiian S. S. Co.....	New York.....	San Francisco.....	General mdse.....	7,000	6,817	4,654
Nov. 13...	<i>Discoverer</i>	British.....	Harrison Line.....	Liverpool.....	San Pedro.....	General mdse.....	3,103	6,192	4,370
Nov. 13...	<i>Lord Erne</i>	British.....	American-Australian S. S. Co.....	New York.....	Australia.....	General mdse.....	6,300	4,671	3,362
Nov. 13...	<i>Wilhelmina</i>	Nicaraguan.....	Caribbean Transport Co.....	Los Perlas.....	San Juan del Sur.....	General mdse.....	6	66	46
Nov. 14...	<i>Luz Blanca</i>	British.....	London & Pacific Petroleum Co.....	Hull.....	Talra, Peru.....	Ballast.....		5,147	3,087
Nov. 14...	<i>Bloemfontein</i>	British.....	Bucknell Line.....	Galveston.....	Yokohama.....	Cotton, steel (a).....	5,974	5,627	4,134
Nov. 15...	<i>Carolyn</i>	American.....	Luckenbach S. S. Co.....	New York.....	San Francisco.....	General mdse.....	3,200	3,393	2,319

(a) 2,558 tons of steel.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Nov. 8...	<i>St. Kentigern</i>	British.....	Mackay & Co.....	Chile.....	New York.....	Nitrates.....	6,620	4,835	3,646
Nov. 8...	<i>Montosa</i>	American.....	Sudden & Christiansen.....	San Francisco.....	New York.....	General cargo.....	4,000	3,224	2,198
Nov. 9...	<i>Krprin, Gus. Adolf</i>	Swedish.....	Johnson Line.....	San Francisco.....	Copenhagen.....	General produce.....	5,800	5,272	3,901
Nov. 9...	<i>F. S. Windber</i>	American.....	Pacific-American Fisheries.....	Bellingham, Wash.....	New York.....	Salmon and oil.....	5,013	3,011	2,100
Nov. 11...	<i>José de Larrinaga</i>	British.....	Larrinaga S. S. Co.....	San Francisco.....	Norfolk.....	Barley.....	8,100	6,376	4,913
Nov. 12...	<i>Milwaukee</i>	British.....	Canadian Pacific Railroad.....	San Francisco.....	London.....	General produce.....	11,000	8,860	6,915
Nov. 12...	<i>Volga</i>	British.....	Volga S. S. Co.....	Tacoma.....	Norfolk (orders).....	Wheat.....	6,130	4,585	3,538
Nov. 12...	<i>Dorothy</i>	British.....	West Coast Line.....	Talcahuano.....	New York.....	Nitrate, silver ore.....	4,200	4,746	3,693
Nov. 13...	<i>Historian</i>	British.....	Harrison Line.....	San Francisco.....	London.....	General produce.....	12,000	7,267	5,378
Nov. 14...	<i>Charlton Hall</i>	American.....	N. Y. & So. America Line.....	Calita Buena.....	Norfolk-London.....	Nitrate, copper (b).....	7,220	5,593	4,217
Nov. 14...	<i>Georgian</i>	American.....	American-Hawaiian Line.....	San Francisco.....	New York.....	General produce.....	8,000	6,885	4,825
Nov. 15...	<i>Advance</i>	American.....	Panama Railroad S. S. Line.....	Balboa.....	New York.....	General cargo.....	700	2,965	2,161

(b) 320 tons copper bars.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessels	Line	From
Nov. 15...	<i>Chinese Prince</i>	Prince Line.....	New York.
Nov. 16...	<i>Broadmount</i>	Blue Star Line.....	Unknown.
Nov. 16...	<i>Arlington Court</i>	Court Line.....	Gulfport.
Nov. 16...	<i>Westward Ho</i>	Lewis Maritime Co.....	Baltimore.
Nov. 16...	<i>Dakota</i>	American-Hawaiian S. S. Co.....	New York.
Nov. 16...	<i>J. L. Luckenbach</i>	Luckenbach S. S. Co.....	New York.
Nov. 16...	<i>Evelyn</i>	Luckenbach S. S. Co.....	Philadelphia.
Nov. 19...	<i>Ohioan</i>	American-Hawaiian S. S. Co.....	New York.
Nov. 20...	<i>Esmeraldas</i>	Pacific Steam Nav. Co.....	Spain.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessels	Line	For
Nov. 14...	<i>Virginian</i>	American-Hawaiian S. S. Co.....	San Francisco.
Nov. 14...	<i>Neches</i>	Sudden & Christiansen.....	San Francisco.
Nov. 17...	<i>George Fenwick</i>	W. R. Grace & Co.....	San Francisco.
Nov. 20...	<i>Montanan</i>	American-Hawaiian S. S. Co.....	San Pedro.
Nov. 22...	<i>Nebraskan</i>	American-Hawaiian S. S. Co.....	San Pedro.
Nov. 25...	<i>Crozier Hall</i>	N. Y. & So. America Line.....	Chile.
Nov. 25...	<i>Nakar</i>	East Asiatic S. S. Co.....	San Francisco.

*Vessels which will pass through the Canal.

PORT OF CRISTOBAL.

ARRIVALS.				DEPARTURES.			
Nov. 9...	<i>Legazpi</i>	Cia Trasatlantica.....	Barcelona.	Nov. 11...	<i>Dronning Olgo</i>	Seeberg S. S. Co.....	Puerto Colombia.
Nov. 11...	<i>Jupiter</i>	Seeberg S. S. Co.....	Gulfport.	Nov. 12...	<i>Legazpi</i>	Cia Trasatlantica.....	Barcelona.
Nov. 12...	<i>Westlands</i>	Munson Line.....	Baltimore.	Nov. 14...	<i>Freda</i>	Seeberg S. S. Co.....	Cartagena.
Nov. 14...	<i>Nubian</i>	Leyland Line.....	Liverpool.				
EXPECTED ARRIVALS.				EXPECTED DEPARTURES.			
Nov. 16...	<i>Tug Samuel</i>	S. Pearson & Son.....	Liverpool.	Nov. 17...	<i>Tagus</i>	Royal Mail.....	Southampton.
Nov. 16...	<i>Venezuela</i>	Cie. Gen. Transatlantique.....	St. Nazaire.	Nov. 20...	<i>Venezuela</i>	Cie Gen. Transatlantique.....	St. Nazaire.
Nov. 22...	<i>Magdalena</i>	Royal Mail.....	Southampton.		<i>Jupiter</i>	Seeberg S. S. Co.....	
Nov. 27...	<i>Merchant</i>	Harrison Line.....	Liverpool.		<i>Westlands</i>	Munson Line.....	
Nov. 29...	<i>Siena</i>	La Velce.....	Genoa.		<i>Nubian</i>	Leyland Line.....	
					<i>Merchant</i>	Harrison Line.....	

PORT OF BALBOA.

ARRIVALS.				DEPARTURES.			
Nov. 9...	<i>San José</i>	Pacific Mail S. S. Co.....	San Francisco.	Nov. 9...	<i>Pachilea</i>	Peruvian S. S. Co.....	Callao.
Nov. 9...	<i>Trinculo</i>	Union Oil Co.....	Port San Luis.	Nov. 9...	<i>Huasco</i>	South Amer. S. S. Co.....	Valparaiso.
Nov. 10...	<i>Guatemala</i>	Pacific Steam Nav. Co.....	Callao.	Nov. 11...	<i>Trinculo</i>	Union Oil Co.....	Port San Luis.
				Nov. 12...	<i>Barraqueta</i>	Pacific Mail S. S. Co.....	San Francisco.
				Nov. 13...	<i>Ecuador</i>	Pacific Steam Nav. Co.....	Guayaquil.
*EXPECTED ARRIVALS.				*EXPECTED DEPARTURES.			
Nov. 17...	<i>Newport</i>	Pacific Mail S. S. Co.....	San Francisco.	Nov. 16...	<i>San José</i>	Pacific Mail S. S. Co.....	San Francisco.
Nov. 17...	<i>Palena</i>	South Amer. S. S. Co.....	Valparaiso.	Nov. 16...	<i>Guatemala</i>	Pacific Steam Nav. Co.....	Callao.
Nov. 28...	<i>San Juan</i>	Pacific Mail S. S. Co.....	San Francisco.				

*Other than vessels using the Canal.

(Continued from page 131.)

Sails.		Arrives.		NEW YORK TO COLON.				COLON TO NEW ORLEANS.			
NEW YORK TO CRISTOBAL.				Zacapa	U. F. C..Nov.	11.....Nov.	18	Cartago.....	U. F. C..Nov.	18.....Nov.	25
Allianca.....	P. R. R..Nov.	16.....Nov.	22	Steamer.....	U. F. C..Nov.	18.....Nov.	25	COLON TO NEW ORLEANS.			
Colon.....	P. R. R..Nov.	23.....Nov.	29	Essequibo.....	R. M.....Nov.	21.....Nov.	29	Abangarez.....	U. F. C..Nov.	19.....Nov.	24
Advance.....	P. R. R..Nov.	28.....Dec.	5	Santa Marta.....	U. F. C..Nov.	25.....Dec.	2	Heredia.....	U. F. C..Nov.	19.....Nov.	26
Panama.....	P. R. R..Dec.	5.....Dec.	11	Steamer.....	U. F. C..Dec.	2.....Dec.	9	Atenas.....	U. F. C..Nov.	26.....Dec.	1
Allianca.....	P. R. R..Dec.	11.....Dec.	17	Oruba.....	R. M.....Dec.	5.....Dec.	13	Parismina.....	U. F. C..Nov.	26.....Dec.	3
Colon.....	P. R. R..Dec.	17.....Dec.	23	COLON TO NEW YORK.				*Will carry mail from the United States.			
CRISTOBAL TO NEW YORK.				Steamer	U. F. C..Nov.	19.....Nov.	26	†Will carry mail to the United States.			
Panama.....	P. R. R..Nov.	22.....Nov.	28	Oruba.....	R. M.....Nov.	24.....Dec.	2	‡Will carry mail for Alabama, Arkansas, Louisiana,			
Allianca.....	P. R. R..Nov.	28.....Dec.	4	Zacapa.....	U. F. C..Nov.	26.....Dec.	3	Mississippi, and Texas.			
Colon.....	P. R. R..Dec.	5.....Dec.	11	Almirante.....	U. F. C..Dec.	3.....Dec.	10	Irregular services between Cristobal and Gulf ports			
Advance.....	P. R. R..Dec.	10.....Dec.	17	Trent.....	R. M.....Dec.	8.....Dec.	16	of the United States, with way calls at Central Ameri-			
Panama.....	P. R. R..Dec.	17.....Dec.	23	Santa Marta.....	U. F. C..Dec.	10.....Dec.	17	can and Mexican ports, are maintained by the Leyland			
Allianca.....	P. R. R..Dec.	23.....Dec.	29	NEW ORLEANS TO COLON.				and Harrison Lines, sailings about every fortnight,			
				Parismina.....	U. F. C..Nov.	11.....Nov.	18	and the Seaberg Line, sailings about every 18 days.			

*Will carry mail from the United States.

†Will carry mail to the United States.

‡Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.

Irregular services between Cristobal and Gulf ports of the United States, with way calls at Central American and Mexican ports, are maintained by the Leyland and Harrison Lines, sailings about every fortnight, and the Seeberg Line, sailings about every 18 days.

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, NOVEMBER 25, 1914.

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The Canal Record

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Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Floating Cranes Practically Completed.

The 250-ton floating crane *Ajax*, one of the powerful pair of cranes ordered from Germany as part of the permanent Canal equipment, was placed in service last week, when it removed the remainder of the hull of the steel drill barge *Teredo* from the Canal channel in Culebra Cut, near Gold Hill. The *Teredo* was sunk at the base of Cucaracha slide by a premature explosion of dynamite on July 20. The hulk was later cut in pieces and the smaller pieces were taken out of the channel, but two pieces, weighing about 50 tons each, were too large to be swung out of the water by the floating cranes then in service. They were handled by the *Ajax* without difficulty. One of the pieces had become, by reason of a shift in the channel resulting from recent slide movements, a menace to navigation, and its removal has simplified the handling of vessels through this section.

Both the *Ajax* and its twin, the *Hercules*, were docked in the upper chamber of the east flight at Gatun Locks on November 13, for the purpose of applying one coat of anticorrosive and one coat of antifouling paint to the underwater portions of the hulls. In order to expedite the completion of the *Ajax* for the removal of the *Teredo*, the cast iron counterweights, weighing 80 tons, were placed on the spindle carriage while the crane was in dry dock, by means of a locomotive crane operating from the lock wall. This work was completed on Saturday night, November 14, and the *Ajax* was then towed to Culebra Cut. After removing the *Teredo*, it was tied up at Paraiso for several days, since which it has been transferred to Dock 14, Cristobal, to assist in placing the counterweights on the *Hercules*. On Sunday, November 22, a demonstration of its operation was given at the lower end of Gatun Locks before the Panama section of the American Institute of Electrical Engineers by Mr. Henry Schoellhorn, assistant engineer, who has been in supervision of the construction of the cranes, both in the yards of the contractors in Germany and on the Isthmus.

The contract for furnishing the cranes was awarded to the Deutsche Maschinenfabrik Actiengesellschaft of Duisburg, Ger-

many, on April 29, 1913, and called for delivery within 580 days. The pontoons, with the internal machinery complete and a considerable part of the superstructures in place, were towed over from Emden; that of the *Ajax* left on April 26, 1914, and was 74 days at sea, arriving at Cristobal on July 9, and that of the *Hercules* left on May 30 and arrived on July 23, having been 56 days on the way. Taking everything into consideration, it appears that the contractor will complete both cranes within the specified period. A complete description of the cranes was published in THE CANAL RECORD of May 28, 1913.

Smallest Vessel Through the Canal.

The smallest vessel which has made use of the Canal in commercial service is the Nicaraguan motor schooner *Wilhelmina*, which completed on November 21 a double transit of the Canal. It is 69 feet long, 22 feet in the beam, and has a draft of four feet six inches, and its Canal tonnage is 66 tons gross and 46 net. The *Wilhelmina* arrived at Cristobal from Las Perlas on November 12, entered the Canal on the 13th, and arrived at Balboa on the 15th, carrying six tons of stores for the Nicaraguan government, which were transferred to a vessel of the Pacific Mail line, for delivery at San Juan del Sur. The *Wilhelmina* then loaded with 45 tons of sugar, with which it departed through the Canal for Bluefields on November 20. Three through passengers were aboard.

Branch Hydrographic Offices.

Arrangements have been made to establish branch hydrographic offices in the offices of the captains of the port at Cristobal and Balboa. These will be fitted with a set of drawers to contain the portfolios for the proper arrangement of charts, and a bookcase for bound volumes of nautical literature. A shipment of charts, about 4,200 in all, together with about 60 volumes of navigational books has been forwarded to the Isthmus by the Hydrographic Office at Washington. It comprises all of the publications of that office, except a few that are out of stock and are being reprinted. The list also includes some British Admiralty and Coast Survey charts.

The principal object of the hydrographic offices is to supply nautical information, such as shipping, including sailing routes, sailing directions, currents, weather, charts, aids to navigation, and changes which are constantly taking place. They also keep standard chronometers and barometers for comparisons, and are prepared to offer advice in regard to nautical matters in general. They will also keep a supply of charts on hand for sale.

Purchase of French Scrap.

Contract has been entered into with M. Rovetta of Genoa, Italy, for the purchase of the remaining French scrap left by the Chicago House Wrecking Company, at the price of \$5.25 a ton.

LINES THROUGH THE CANAL.

Regular Services of Vessels Established Between Important Trade Areas.

A considerable part of the traffic through the Canal has been carried by vessels operating in regular services, or lines, between important trade areas, and new lines are being instituted from time to time. Lines between the Pacific coast of the two continents and the Atlantic coast of the United States and Europe, have been developed into district services since the opening of the Canal; the growing traffic from the Atlantic to the Far East has not, so far, developed lines with as distinctly arranged itineraries, presumably on account of the distance of the voyage and the varied extent of the areas served.

In the United States coastwise traffic, six important lines, with approximately regular sailings between the Atlantic and Pacific coasts, have developed, as follows:

The American-Hawaiian Steamship Company has, so far, sent 20 of its vessels for 41 transits of the Canal, in a service from New York, Boston, and Philadelphia to San Pedro, San Francisco, Portland, Puget Sound, and Hawaii. It despatches a vessel each way about every five days. The following of its vessels had used the Canal to November 23: *Pennsylvanian*, four times; *Mexican* and *Montanan*, three times each; *Arizonan*, *Columbian*, *Dakotan*, *Georgian*, *Honolulan*, *Iowan*, *Isthmian*, *Kentuckian*, *Missourian*, *Nebraskan*, *Nevadan*, *Ohioan*, *Texan*, and *Virginian*, twice each; *Alaskan*, *Panaman*, and *Washingtonian*, once each.

The Luckenbach Steamship Company despatches a vessel each way about every 10 days in a service between New York, with Philadelphia recently included, and San Pedro and San Francisco. The company has, so far, sent 13 vessels through the Canal, in a total of 25 transits, as follows: *Carolyn*, *Damara*, *Isabelo*, *Lewis Luckenbach* and *Pleides*, three times each; *J. L. Luckenbach* and *Lyra*, twice each; *Evelyn*, *Harry Luckenbach*, *S. V. Luckenbach* and *Stanley Dollar*, once each.

Sudden and Chrisenson of San Francisco are operating a service with approximately fortnightly sailings between New York and Philadelphia, and San Francisco and Puget Sound. They have employed six vessels so far, the *Henry T. Scott*, *John A. Hooper*, *Lewis K. Thurlow*, *Montoso*, *Neches* and *Peter H. Crowell*, of which the *Montoso* and the *Peter H. Crowell* have been through the Canal twice.

The Atlantic and Pacific Steamship Company, W. R. Grace and Company, general agents, operate the *Santa Cecelia*, *Santa Clara* and *Santa Cruz*, with formerly the *Santa Catalina*, from New York to San Pedro, San Francisco, Portland, and Puget Sound, with sailings about every three weeks. The three first named have passed through the Canal twice in this service; the *Santa Catalina* came

through from Valparaiso to New York and transferred to the coast service, but was burned at the mouth of the Columbia River, after the first voyage out. The first voyage of the *Santa Catalina* was northward from Chile, after which the vessel was assigned to the coastwise routes.

The Boston and Pacific Line has been instituted by the Emery Steamship Company, for service between Boston and Pacific coast ports. The *Atlantic* and *Pacific* of this line have passed through the Canal, westbound, but neither has returned to date. The *Corozal* is expected to arrive from Boston shortly in this service.

The Arrow Line from New York direct to the west coast and return, is being operated by Swain and Hoyt, Incorporated, with the *Camino* and the *Edgar H. Vance*. The *Camino* has been through the Canal both ways; the *Edgar H. Vance* has gone through once, east-bound.

Of the 104 passages through the Canal in the coastwise United States trade made to November 23, vessels employed in the above lines have made an aggregate of 86 transits.

WEST COAST TO EUROPE.

The Harrison-Direct Line maintains approximately a monthly service between the west coast of North America and Great Britain. Vessels of this combination which have used the Canal have been the *Crown of Seville* and *Crown of Toledo* of the Direct Line, Prentice, Serviss, and Henderson, general managers; and the *Candidate*, *Historian*, and *Discoverer* of the Harrison fleet.

The Maple Leaf Line, Houlder, Weir, and Boyd, general managers, operates a service with sailings about every six weeks over a course from England to New York, thence through the Canal to the west coast, up as far as Vancouver, thence down the coast and back to England. The vessels which have passed through the Canal so far in this service have been the *Arna*, *Buenaventura* and *Santa Rosalia*, all of which are registered in the United States.

The East Asiatic Company has established approximately a monthly service between the west coast of the United States and Liverpool, Gothenburg, Copenhagen, and ports of the Scandinavian peninsula. The *Jutlandia*, *Malakka*, *Natal*, and *Transvaal* have been sent through the Canal.

The Johnston Line is developing a service of Diesel engine vessels through the Canal between San Francisco and San Pedro, and Stockholm, Malmo, Gothenburg, and adjacent ports. The *Kronprinzessin Margareta* and the *Kronprinz Gustaf Adolf* have passed through the Canal eastbound, and the former is now on its way back to the Canal.

The Pacific Steam Navigation Company has established a line, with approximately monthly sailings at present, from Liverpool around South America, by way of the Canal. The *Potosi*, *Kenuta*, and *Esmeraldas* have passed through the Canal, southbound, in this service, and the *Bogota* has made the transit northward, on the way from Arica to Liverpool.

UNITED STATES AND SOUTH AMERICA.

The Merchants' Line of the New York and Pacific Steamship Company, W. R. Grace and Company, general agents, operates a fortnightly service between New York and ports of Ecuador, Peru, and Chile. The *Celia*, *Coya*, *Charcas*, and *Chimu* have used the Canal in this service, and the *Santa Catalina* made

a trip north on the route, before being assigned to the coastwise line of the Atlantic and Pacific Steamship Company.

The New York and South America Line operates a service over the same course, with vessels of American registry. The *Foxton Hall*, the *Howick Hall*, and the *Charlton Hall* have made use of the Canal; the *Foxton Hall*

burned at sea, near Watlings Island, several days after clearing from Cristobal. The *Craster Hall* is due at the Canal this week.

The West Coast Line, Wessel, Duval and Company, managers, maintains approximately a monthly service over this route. The *Lord Antrim*, *Copenhagen*, *Bellgrano*, and *Dorothy* have been through the Canal.

DISTRIBUTION OF POWER FOR THE CANAL.

Description of Substations that Transform Energy Generated at the Hydroelectric Station at Gatun Spillway.

In any extended electric power project, there are always four distinct yet interrelated divisions, namely: (1) generating stations; (2) transmission lines; (3) substations; and (4) distributing network.

In connection with the Panama Canal, the main generating station is a hydraulic plant of 6,000-kilowatt capacity, recently completed and now carrying load. The hydroelectric station is located adjacent to the Gatun spillway and receives its energy from water taken from Gatun Lake and discharged

station, located on the east side of Gatun Locks, at the upper level.

The function of the Gatun substation is to transform the electrical energy received at 2,200 volts to energy at 44,000 volts, at which potential it is transmitted by a 47-mile duplicate transmission line to three other large substations and to two small substations. The transmission line parallels the right-of-way of the Panama railroad, and was described in THE CANAL RECORD of July 9, 1913.

One of the large substations is located at

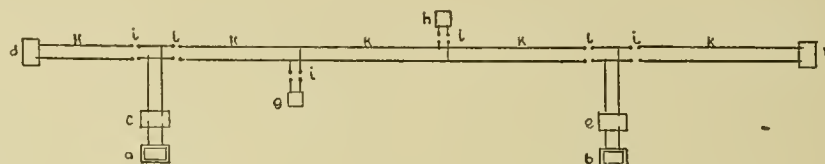


Figure 1.

DIAGRAM OF TRANSMISSION SYSTEM.

a—Gatun hydroelectric station. b—Miraflores steam station. c—Gatun substation. d—Cristobal substation. e—Miraflores substation. f—Bilboa substation. g—Darien radio substation. h—Gamboa substation. i—Disconnecting switches. k—Transmission line.

into the lower spillway channel. The electrical energy is 3-phase, generated at 25-cycles and 2,200 volts (delta). This station was described in THE CANAL RECORD of July 3, 1912, and May 6, 1914.

The hydroelectric station lies three-fourths of a mile west of Gatun Locks, in about the center of Gatun Dam. The permanent towns, plants, operating points, and administrative headquarters are all on the east side

Miraflores, 37 miles distant from Gatun. Miraflores substation possesses a double function; first, to step-down the electrical energy from 44,000 volts to a usable pressure of 2,200 volts for local distribution to the Miraflores and Pedro Miguel locks; and second, to serve as the interconnecting link between the entire transmission system and a 6,000-kilowatt reserve steam generating station at Miraflores.



Figure 2.

FRONT ELEVATION, SUBSTATION.

a—Ground floor level. b—Second floor level. c—Eaves. d—Hip. e—Wires.

of the Canal, which is the logical location of the transmission line. It is quite undesirable to cross the Canal with a high voltage overhead transmission line; hence, the first link in the transmission system consists of a duplicate set of 2,200-volt feeders which are run in duplicate duct lines from the hydroelectric station, across Gatun Dam, and under Gatun Locks in tunnels, to the first step-up sub-

The Miraflores steam station is separated from the substation by less than 100 feet, and will be used in event either of failure of the hydroelectric station, or of a heavy draft of water from Gatun Lake in an extraordinary dry season. At such times the normal step-down transformation at Miraflores substation is reversed, and the substation becomes a step-up plant. During the period

of Panama Canal construction, the Miraflores steam station has been operated to furnish power to the Pacific locks, and to the plant at Balboa, Ancon, and Panama.

A similar, though less permanent station, was constructed at Gatun to supply power for the construction activities of the old Atlantic Division. Each station was of 4,500-kilowatt capacity, generating 3-phase energy at 25 cycles and 2,200 volts (delta). Temporarily, the steam station at Gatun is tied into the transmission system by taps into the abovementioned underground feeders which connect the hydroelectric station with the Gatun substation. One 1,500-kilowatt steam unit has recently been moved from the Gatun steam station to the Miraflores steam station, making the latter's total capacity 6,000 kilowatts. Very probably, the steam station at Gatun will be abandoned as an active operating plant within a year or two. Each of the steam generating stations has carried a monthly load ranging from 1,000,000 to 1,600,000 kilowatt-hours.

The 44,000-volt duplicate transmission line extends southward of Miraflores to Balboa and northward of Gatun to Cristobal. At each of the two extremities, there is located a substation to transform the energy received at 44,000 volts to energy at 2,200 volts, which latter voltage is used to distribute the current through underground feeders, to the various permanent plants of the Panama Canal—dry docks, coal handling plants, shops, pumping stations, etc.

There are at present two small substations, one of 1,000-kilowatt capacity at Gamboa to carry the pumping station load, and a second of 400-kilowatt capacity at Darien to supply the load of the radio station. Both of the smaller substations are provided with duplicate transformers, switches, and lightning arresters, tapping into the duplicate transmission lines. At Gamboa, the substation equipment will be installed inside the pumping station itself, while at Darien, a small concrete building has been erected to house the electrical equipment.

An idea of the relative position of the stations and substations, together with the interconnecting transmission line, may be had from the diagram shown in Figure 1. It is to be noted that the transmission line is a simple straight connection between Cristobal and Balboa substations. Gatun and Miraflores substations, although sources of power, are merely taps on the transmission line. These taps on a straightaway line minimize intricate connections at the substations. The greatest of operating facilities is afforded by disconnecting switches placed in the transmission lines on either side of the Gatun and Miraflores substations.

Each of the four large substations are identical in all principal features, except the Cristobal substation, which is of 4,000-kilowatts capacity, whereas the other three are of 6,000-kilowatts capacity, each substation containing three 2,000-kilowatt transformer units, with space for an additional unit without building extension. The Cristobal substation building is identical with the other substations, providing there for two future units. Each substation differs from the others in minor respects only.

In appearance, the substation buildings are rectangular in floor plan, approximately 128 feet long by 74 feet wide. A 20-foot granolithic sidewalk, checkered in squares,

surrounds the entire building. In elevation, there are two main floors with intermediate mezzanines in different parts of the building between the first and second floors. The roof is of the hip type, with overhanging eaves, extending 11 feet outside the wall line. The total height from the ground to the eaves is 45 feet and to hip is 69 feet. The 44,000-volt duplicate lines are brought into the building through porcelain roof bushings. The wires are anchored to braced channel cross pieces, supported upon four center building columns. The building columns pierce the hip of the roof, extending eight feet above the ridge line. The resulting dead-end anchor is of extremely simple construction. In plan, the building, particularly the steel structure, is laid out in simple bays, 18 feet on center, four bays wide by seven bays long. The exterior architecture of the building is of slightly modernized Tuscan style, the general features being indicated in a front elevation (Figure 2.) A first floor plan is shown in Figure 4, a second floor plan in Figure 5, and a transverse section in Figure 3. The interior finish of the building is neat, attractive and sanitary. In general, the interior

opening into the main switchboard room, which latter contains a slate control board. The switchboard room is five bays in length, or 90 feet, by one bay in width, or 18 feet; it contains little beside the main control board and the operator's desk. At either extremity of the main switchboard room, in the two front building corners, are the entrances into the stairways to the second floor. The stairways are of ornamental steel with polished brass railing, divided vertically by a mezzanine floor of reinforced concrete construction and red tile finish. From the right hand stairway, doors at the main floor and at the mezzanine floor, lead to small rooms, which will serve as offices if needed. From the left hand stairway, a door on the mezzanine floor leads to the toilet for gold employees. The toilet for silver employees is directly under that for the gold employees, but has its entrance from a work shop area. Each toilet room is well equipped, containing a shower bath, a wash bowl, a closet, a urinal, and a slop sink, all partitioned with marble slabs.

From the rear, on the center line of building, a large entrance, 11 feet wide by 17 feet high, having sliding doors, admits a perma-

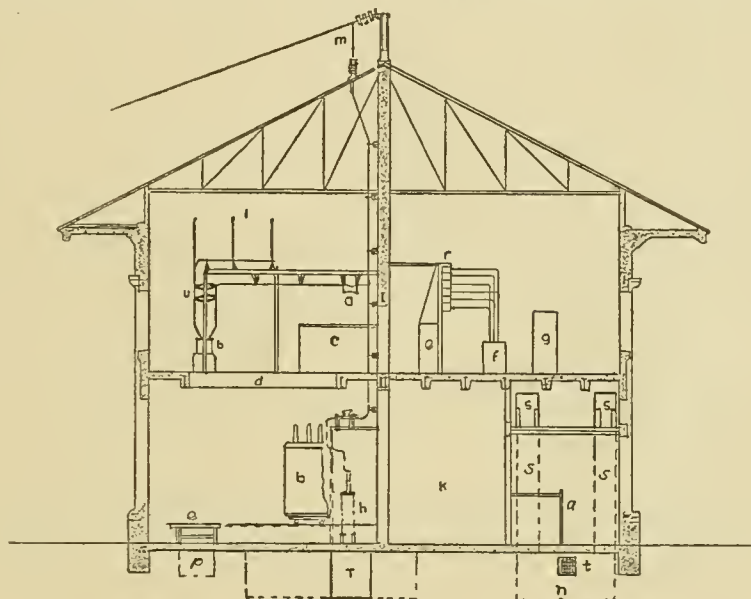


Figure 3.

TRANSVERSE SECTION OF SUBSTATION.

a—Switchboard. b—44,000-volt transformers. c—Lightning arrester well. d—Hoist well. e—2,200-volt K-12 oil switches. f—2,200-volt K-5 feeder oil switches. g—2,200-volt feeder instrument compartment. h—Lightning arresters. k—Workroom. l—44,000-volt buses. m—44,000-volt incoming line. n—Manhole. o—Like coil. p—Manhole. r—2,200-volt bus compartments. s—Cable shafts. t—Duct line. u—Disconnects.

ceilings and walls are finished in smooth plaster, a sanitary cover at the baseboard rounding off into a hard finished cement floor. The floors are checkered in 20-inch squares, and the corners of columns and walls are rounded. Architectural pretense is to be found in a few important rooms, such as the main switchboard room, the staircases, the offices, and the toilets. In such rooms, the floor is finished in 2-inch hexagon tile (red, except in toilet rooms, which are of white tile.) The walls are wainscoted with enamel brick, coved at the base. The floor design is simple, yet artistic, a buff border trailing around the room with the field containing buff spots on 12-inch centers. All windows and doors are of mahogany, carefully designed to exclude water, and screened to bar mosquitoes and other insects. From the front there are two entrances, provided with five feet 10-inch by eight feet 2-inch doors,

opening into the main switchboard room, which latter contains a slate control board. The switchboard room is five bays in length, or 90 feet, by one bay in width, or 18 feet; it contains little beside the main control board and the operator's desk. At either extremity of the main switchboard room, in the two front building corners, are the entrances into the stairways to the second floor. The stairways are of ornamental steel with polished brass railing, divided vertically by a mezzanine floor of reinforced concrete construction and red tile finish. From the right hand stairway, doors at the main floor and at the mezzanine floor, lead to small rooms, which will serve as offices if needed. From the left hand stairway, a door on the mezzanine floor leads to the toilet for gold employees. The toilet for silver employees is directly under that for the gold employees, but has its entrance from a work shop area. Each toilet room is well equipped, containing a shower bath, a wash bowl, a closet, a urinal, and a slop sink, all partitioned with marble slabs.

Electrically, the equipment is designed on the unit plan. There are seven transverse bays to the building. The two outside bays at either end of the building are devoted to transformer units. The adjacent bays are utilized as incoming line units, while the center bay fulfils the combined purpose of a workshop, hoist well, passageway, and track space.

The power units are the three 2,000-kilowatt transformers (2,667 k.v.a. rating). Each transformer is housed in a fireproof compartment, having a rolling steel door in front. The transformer is mounted on trucks, with

a 5-foot gage track set in the concrete foundation underneath. A 6-foot gage transfer track runs in front of the sliding doors and adjacent to the rear wall, the entire length of the building. By means of this transfer track, a transformer unit may be easily taken out of its individual compartment and tracked to the central working space for repairs.

The 2,000-kilowatt transformer is of the oil insulated, selfcooled, radiator type. A transformer of large capacity, although a very efficient machine, liberates considerable heat. For example, assume a 98 per cent efficiency, or a two per cent loss. Two per cent of 2,000 kilowatts is 40 kilowatts, a steady loss which appears as heat in the transformer compartment. Forty kilowatts represents the heat liberated by 1,600 ordinary 25-watt tungsten lamps. The losses in all three 2,000-kilowatt transformers at full load would be sufficient to light all the operating tunnels and machine rooms of the Gatun Locks. It is obvious, therefore, that a circulatory air system must be provided to take care of the heat released.

In the basement, under the rear end of the transformers, adjacent to the longitudinal center line of the building, is an operating tunnel, which extends the entire length of the substation and through the end walls, where inlets are provided for the air. The operating tunnel is approximately six feet wide by eight feet high, and, in addition to serving as an air duct, is used as a passageway for oil pipes and drains. It also connects three basement rooms, which contain the overflow oil tanks and the sump pump. An air outlet from each transformer compartment is obtained through an enclosed duct of approximately 25 square feet in cross-section, running from the transformer compartment to the outside of the

(2) In each transformer compartment, over the five by 6-foot opening into the tunnel. Monel metal wire screens are installed at the tunnel inlets and at the air discharge from each transformer compartment, preventing the ingress of mosquitoes and other tropical insects. At the two ends of the operating tunnel, where the exposed inlet admits rainwater, the floor is not concreted, as elsewhere. At these open places, the station groundplates, three feet four inches in diameter by $\frac{1}{2}$ -inch thick, are buried in charcoal. A faucet, conveniently located, serves further to moisten the ground and charcoal at fixed intervals.

The transformers are furnished, under contract for all the substation electrical equipment, by the General Electric Company of Schenectady, N. Y. The transformers supplied are the largest yet developed of the radiator type, weighing 24 tons when completely assembled. In outline, the transformer is a huge tank, eight feet one-half-inch in diameter and 11 feet seven and one-half inches high, with eight radiators hung from the four sides, two radiators per side. The core and coils are assembled in a single compact unit, weighing approximately 15½ tons. The core is placed inside the tank, immersed in transil oil. The leads are brought out above, through bushings placed in the cover, which latter contains a manhole to give access to the inside of the tank. The radiators, which appear very much like steam heating radiators, are made of pressed steel, riveted, stayed, and through bolted. There are two tiers of radiators, assembled in plan in a square 12 feet six and three-fourths inches over all. The upper radiator is made up of 66 sections, having a total length of nine feet seven and one-half inches, whereas the lower radiator is composed of 54 sections having a total

essential that the transil oil be free of dirt and moisture, either of which destroy its dielectric qualities. The piping arrangement is such that the oil supply can be pumped, by means of a motor-driven centrifugal pump, directly from either of two duplicate storage tanks, located in the basement, to any one of the transformers. The oil is passed through a filter of the blotter type, which removes moisture and dirt from the oil before the latter is discharged into the transformers. Oil drain pipes are also provided, so that by a hurried operation of a quick-acting valve in case of fire or other accident, the oil in any transformer can be drained either to the storage tanks or to the sewer. Each of the storage tanks has a capacity equal to the oil contained in one transformer, namely, 4,040 gallons.

The second floor of the substations is divided by a partition wall, on the longitudinal center line of the building, into two large rooms, a 44,000-volt room and a 2,200-volt room. The 44,000-volt room is over the transformers, and the 2,200-volt room is over the main switchboard room. The stairways terminate at either end of the 2,200-volt room, and small doors at both ends of the center wall give access to the 44,000-volt room. Directly under the 2,200-volt room is a cable space, eight feet in height. The floor of the cable space is also the ceiling to the switchboard room. This cable gallery serves as a runway (1) For all conduits in which are run the control and instrument wiring and (2) For all feeder cables.

The feeder disconnecting switches are on the second floor, directly over the cable space. The cables, which are 3-conductor, No. 0000, varnished cambric insulated and lead-sheathed, drop from cable bells at the disconnecting switch into the cable space, and are carried along the floor to either end of the area. At each end of the cable space, in the stairway bay, there are two vertical cable shafts, which connect the cable space with large 16 by 16 by seven feet high manholes in the front corners of the buildings. The two manholes are virtually basement rooms under the stairway. The feeder cables are run down the cable shafts into the manhole, and thence out into the underground duct lines. Provision is also made for armored feeders to emerge from the substations from smaller manholes at the rear corners. Each of the smaller manholes is connected to the large manholes by six ducts laid under the first floor, and the larger manholes are interconnected by 16 ducts, four wide by four deep. The manholes are large and roomy, as are the cable shafts, which latter are provided with permanent ladder rungs to render access easy throughout the entire height. The cable space has ample head room, and, although closed from view at the stairways, is, nevertheless, readily accessible for changes in feeder cables.

The path of electrical energy at a step-down substation (reversed at Gatun) is from the incoming lines, which are anchored on the roof through roof insulators, down the center wall to the second floor, where the leads are carried through oil switches (type K-21) to the 44,000-volt bus. This bus consists of three No. 000 bare copper solid wires supported from insulators near the lower chords of the roof trusses in the 44,000-volt room. The bus is sectionalized by means of disconnecting switches located at the roof trusses on the

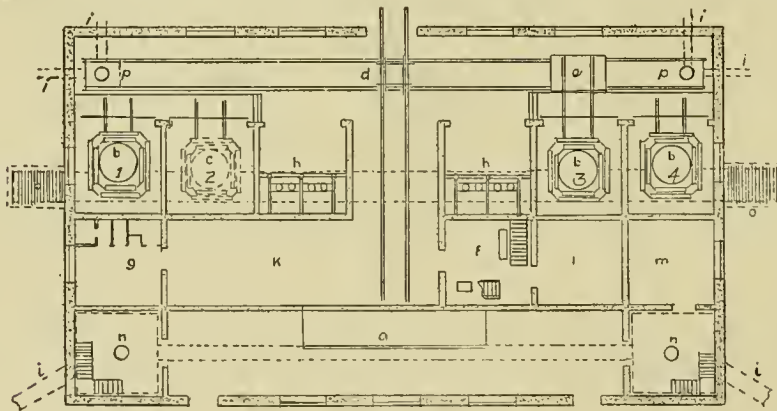


Figure 4.
FIRST FLOOR PLAN.

a—Switchboard. b—44,000-volt transformers. c—Future transformers. d—Transfer tracks. e—Truck. f—Pump room. g—Toilet room. h—Lighting arresters. i—Ducts. k—Workroom. l—Storeroom. m—Office. n—Stair hall, with manhole underneath. o—Grating at tunnel inlet. p—Small manholes.

building, over the transfer track. It is to be noted that the air circulation is perfectly natural in every respect, depending upon the elementary law of physics that heated air rises. In the event of a strong head wind directed against the air discharge from the transformer compartments, the natural circulation may be insufficient to overcome the wind pressure, in which event, it will be a comparatively easy matter to install a forced air system by placing the blowers in the basement tunnel.

Bar iron gratings are installed at several openings, namely: (1) At the tunnel inlet, where the six by 9-foot opening pierces the sidewalk and is protected by the grating, and

length of seven feet 10½ inches. Each radiator section is approximately 12 inches wide by two feet eight inches long. Connections to the tank are made at either end of the radiators by 2-inch galvanized pipe. One end of the radiators connect to the upper level of the tank, where the hot oil is received by the radiators, and the opposite end of the radiator connects to a lower level of the tank, where the cooled oil is discharged into the tank. The transformers are star-connected on the primary side, and the neutral is grounded. The secondary side is delta-connected.

An oiling system is provided to facilitate the handling of the special transil oil in which the transformer coils are immersed. It is

transverse center line of the building. One incoming line and two 2,000-kilowatt transformers are connected to each of the bus sections. The busses are spaced five feet apart, and the tops and interconnections are spaced from three to five feet on center.

Tapped to each incoming line are a bank of aluminum type electrolytic lightning arresters. These arresters are located on the main floor, between the transformer compartments and the central work space. The function of the lightning arresters is to pass lightning or static discharge to ground without harm to the electrical equipment, particularly the large transformers. The arresters are equipped with auxiliary horn gaps mounted on the pipe framework above the arresters. These horn gaps, when discharging lightning, are enveloped in flame and charged gases. Large clearances, above and around the horn gaps, to prevent arcing between phases and to ground, are obtained by an open well, size 11 by 17 feet, through the second floor, where the opening is protected by means of a concrete guard wall, eight feet high, surrounding the well. In the electrical connection used on the 44,000-volt side of the 2,000-kilowatt transformers, three phase arresters and one neutral arrester are used.

Between the lightning arrester taps and the line oil switch, choke coils are placed in each of the three phases. The choke coils are merely air insulated helices, which tend to prevent lightning and static disturbances from penetrating to the equipment, diverting such discharge to the arresters.

From the 44,000-volt busses to the ceiling, primary taps are taken to the transformer oil switches; thence the leads are carried through porcelain floor bushings to the transformers below. Disconnecting switches are installed between the oil switch and the bus, and between the oil switch and the transformer, so as to isolate the switch completely whenever repairs, or renewals of oil, are necessary. The secondary, or 2,200-volt leads, are taken from the rear of the transformer cover to the secondary transformer switches in the 2,200-volt room on the second floor front.

The 2,200-volt busses are in duplicate, and are sectionalized by disconnecting switches into halves. Each feeder and each transformer is provided with a double switch electrically interlocked, for throwing into either of the duplicate busses. All switches, as well as the instrument transformers, are enclosed in individual concrete cells having impregnated asbestos lumber doors to give access to the individual switches. In plan, the 2,200-volt room contains three rows of concrete compartments. The row adjacent to the center wall contains the cells for (1) the K-12 oil switches for the 2,000-kilowatt transformers; (2) duplicate bus-tie switches near either extremity, and (3) duplicate set of bus instrument transformers toward the middle of the structure. The six busses (duplicate 3-phase busses) are set above the K-12 cells, in individual longitudinal compartments, formed in monolithic concrete slabs, shelf fashion, integral with the new wall which comprises the back of the K-12 oil switch cells. The intermediate row of compartments contains the cells for the circuit or feeder switches (K-5 type.) The outside (front) row of compartments contain the cells for potential transformers, current transformers, feeder disconnects, and terminal boards. There are ample passage-

ways between the rows of compartments and between the compartments and the building walls. It is to be noted that the entire substation is sectionalized on the transverse center line of the building, and that the layout is symmetrical and in duplicate, respecting this center line. From the disconnecting switches in the outside compartment, the feeder cables drop below the floor into the cable space described above.

Lightning and static disturbance may be carried into the station through the underground feeders. Such a condition will be relieved by static dischargers, which are connected directly to each of the duplicate 2,200-volt busses. The static dischargers are of the aluminum cell type, very similar in theory and construction to the lightning arresters, and are located in compartments at either extremity of the K-5 oil switches.

All the oil switches (K-5, K-12, and K-21) are remotely controlled from the central control board in the main switchboard room. The potential and current transformers furnish reduced potential and current to energize the instruments, which, also, are all mounted on the control board. In addition to the usual complement of ammeters, wattmeters, voltmeters, and integrating and recording meters, the control board has mounted

transil oil system, and an electric oven to dry the blotters of the oil filter.

For lights and small power purposes around the substation, duplicate 35-kilowatt station transformers (ratio 2,200 to 220/110) are installed. These transformers are star-connected, and are provided with half taps, so that a 220-volt supply for power can be obtained from the outside transformer connections, and a 110-volt supply can be obtained on the middle taps for lighting. The station transformers are located in individual concrete cells, which form a part of the instrument transformer compartments on the second floor.

The cost of the four substations will be approximately \$480,000 for building construction, \$130,000 for contract structural steel erected, \$380,000 for electrical equipment, and \$100,000 for installation of equipment, a total of about \$1,100,000, including all labor and material.

The construction of the buildings was performed by the Supply Department. The installation of the equipment was in charge of the Division of Erection prior to July 15, 1914, when the division was abolished and the work of completing the installation of equipment was transferred to the Electrical Division. The engineering design of the entire transmission system, including the details

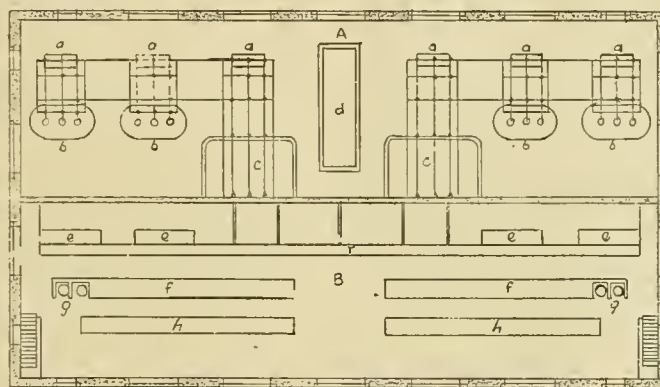


Figure 5.
SECOND FLOOR PLAN.

a—44,000-volt room. b—2,200-volt room. a—Oil switches, (44,000-volt—Type K-21.) b—Floor bushings. c—Lightning arrester wells. d—Hoist well. e—2,200-volt K-12 transformer oil switches. f—2,200-volt K-5 feeder oil switches. g—Static dischargers. h—2,200-volt feeder instrument compartments. i—Bus compartments (2,200 volts.)

upon it duplicate synchronizers and a clock of excellent movement and accuracy. The control board is likewise symmetrical respecting the center line of the building. In the center of the board are two station panels, containing instruments and devices for manipulating a mercury arc rectifier located immediately behind the station panels. The rectifier is used to convert alternating current into unidirectional current, which latter is used to charge a 160-ampere-hour storage battery.

The storage battery consists of 64 lead-plate cells made by the Electric Storage Battery Company, of Philadelphia, placed in a 4-shelfed concrete compartment built on the mezzanine floor of a small 17 by 17-foot room, between the main switchboard room and the right hand lightning arresters. The battery supplies the direct current for operating the remote controlled oil switch mechanisms and also for emergency reserve for lighting, in case of failure of the normal alternating current source. Under the battery mezzanine is located the room containing all auxiliary equipment, including a small air compressor to supply air for cleaning and blowing out the equipment, an oil filter press and pump for the

of the substations, is the work of the former Electrical and Mechanical Engineer, Edward Schildhauer, and his assistants. The architectural details of the substation buildings were prepared by the former Canal architect, Mr. Mario Schiavoni.

Inspections, Etc. of Floating Equipment.

The representative of the Board of Local Inspectors, Mr. W. I. Pender, will be at Gamboa from 8 a. m. to 4 p. m. of every day during the week commencing December 7, 1914, for the purpose of receiving applications, making inspections, and issuing licenses and badges, for floating equipment as required by the terms of the Governor's circular No. 683, dated August 11, 1914.

C. W. BARBER,
Chief, Police and Fire Division.

Seismic Disturbance.

A seismic disturbance was recorded at Ancon from 4.40 to 5.02 a. m., on November 18. The maximum amplitude of the record was five millimeters. The epicenter of the disturbance was approximately 600 miles distant from Balboa Heights. Direction unknown.

CANAL WORK IN OCTOBER.

Monthly Report of the Governor to the Secretary of War.

BALBOA HEIGHTS, C. Z.,
November 19, 1914.

The Honorable the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of operations on the Isthmus for the month of October, 1914:

Department of Operation and Maintenance.

Lock operation and maintenance.—Signal arrows were installed at all locks. Three towing locomotives were received, making a total of 38 to the end of the month. Installation of chain fender machines was nearly completed. Twenty-four fender chains have been ordered, of which seven have been installed at Gatun, five at Pedro Miguel, and one at Miraflores. The floating caisson which left San Francisco under tow on September 16 arrived at Balboa on October 29, and preparation for its final acceptance test was made. Work was started on grading the dams and backfill at Pedro Miguel and Miraflores. Ninety-one lockages were made at Gatun, 98 at Pedro Miguel, and 99 at Miraflores.

Municipal engineering.—In addition to the maintenance work in both the north and south districts, the Division of Municipal Engineering continued the construction work started during September and initiated work on the permanent water supply for Toro Point, and on preparation of site and the construction of a water and sewer system and roads for the Coast Artillery post at Balboa dump.

Meteorology and hydrography.—Rainfall was above normal over the upper Chagres, Gatun and Trinidad river basins and along the Atlantic coast, but deficient in the Pacific section, the monthly totals ranging from 6.44 inches at Balboa Heights to 26.20 inches at Chillibrillo. The maximum precipitation recorded in any one day was 3.99 inches at Colon on the 14th. The estimated average rainfall over the Chagres River basin figures 33 per cent above normal—19.08 inches against a 14-year average of 14.34 inches.

Electrical.—The net output of the hydro-electric station was 674,700 kilowatt hours, of Miraflores steam station 2,035,360 kilowatt hours, and of Balboa power plant 4,007 kilowatt hours. The four substations were practically completed. This division performed work in Balboa shops, on new and reconstructed quarters, and on the construction of the transmission line and underground conduit systems.

Division of Terminal Construction.

PACIFIC TERMINALS.

Shops.—Award was made for the exhaustor system for the laboratory in building No. 28; that for building No. 8 arrived on the Isthmus, with the exception of the motors.

Dry dock.—Design for the dock was advanced. Structural steel reinforcement at the caisson seats was ordered. Concrete work consisted of the usual routine of raising and filling forms; 18,084 cubic yards were placed by locomotive cranes and by hand.

Coal pockets.—Backfill was made at the west end. Three hundred and fifty cubic yards of concrete were placed. Erection of the first crane progressed as far as placing a portion of the north cantilever arm.

Quay wall and pier.—Difficulty was experienced in keeping the water pumped out of the cylinders for the quay wall, Section d-e-f, and it was necessary to seal one of the

cylinders by placing an earth fill around it. Excavation from the cylinders amounted to 408 cubic yards, the greater portion of which was rock. Concrete filler in the caissons was increased by 1,373 cubic yards. The cost of mixing and placing concrete was about 41 cents per cubic yard. The brick paving on pier No. 1 was finished, 178,435 square feet being laid during October.

Fuel oil plants.—Owing to tides and wave action, great difficulty was experienced in keeping water out of the cylinders. Well drills were set up for service as hoisting engines and pumps were installed for the removal of water from the cylinders. Penetration amounted to 23 feet, one cylinder being sunk to boulder foundation.

Quarries.—At Sosa Hill, 85,508 cubic yards were excavated; of this amount, 83,356 cubic yards were rock. At Ancon quarry, 49,200 cubic yards of rock were crushed. At the end of the month the crushers were closed down, but the plant is not being dismantled, for it may be found necessary to reopen it.

ATLANTIC TERMINALS.

East breakwater.—In the construction of the trestle for the fill 220 untreated piles were driven. The total fill in place at the close of the month measured 149,363 cubic yards.

Coaling plant.—The dredge *Marmot* excavated approximately 42,083 cubic yards of material from the area to be occupied by sub-aqueous coal storage. Caisson work progressed satisfactorily; 1,806 feet of penetration were accomplished. The filling of caissons under the reloader wharf was continued, and 25 caissons were filled up to the base of the bearing plate. Task work for hand excavation at the bottom of the caissons, assembling of spiral reinforcement, and assembling and riveting of caisson sections, begun on October 1, proved quite satisfactory.

FLOATING CRANES.

Ajax.—This crane was brought into the middle chamber of Gatun Locks on October 2, where the jib was successfully pinned in place and raised for connection with the spindle carriage. On October 16, the crane was towed back to Dock 13. At the close of the month, the driving mechanism for the storage drums was completed; all wire rope for main blocks, auxiliary hoist and trolley were in place; the first coat of graphite was about completed, and the finishing coat approximately 95 per cent completed; the work of painting the deck was begun, and the final coat was being applied to the outside of the pontoon.

Heracles.—At the close of the month, the jib was completed and had been lowered on rollers and painted preparatory to skidding it over the lock chamber; all inside compartments of the pontoon were painted and the first coat on the crane structure was 95 per cent completed. The heavy and more important parts of the machinery were installed. On October 28, steam was raised in the boilers and the engines were turned over. On October 31, the spindle carriage was tried out and found to work satisfactorily.

LANDSCAPE ARCHITECT.

At the Administration Building, grading work was in progress throughout the month; asphaltting of the carriage turns was completed, together with the closing in of the gap in the approach drive, and plans were prepared for the grading of the hill along the front and on the west side of the building.

All data remaining in the field books were

plotted and put into graphic record form preparatory to disbanding the organization and turning the work over to the Division of Municipal Engineering on November 1.

The following dredging was done:

	Cu. yds.
Miraflores Locks to Pacific.....	15,218
Miraflores Lake.....	543,694
Culebra Cut.....	543,694
Gatun Lake.....	
Gatun Locks to Atlantic.....	
Total Canal prism.....	558,912
Pacific Terminals.....	277,772
Atlantic Terminals.....	442,508
Gravel.....	40,350
Sand.....	14,700
Total.....	775,330

A new slide developed on the east bank of the Canal, opposite Culebra. On October 14, about 727,000 cubic yards of material were carried into the prism and the movement continued throughout the remainder of the month. Excavation from this slide amounted to 65,217 cubic yards of earth and 281,151 cubic yards of rock, and the dredges were worked under a continuous strain to keep the channel open.

The hydraulic grader was engaged in surfacing the banks, cutting a ditch to drain the pond on Cucaracha slide and in sluicing.

The destruction of water hyacinths continued; 37,277 square yards of plants were poisoned and 377 square yards were pulled and piled on the bank. The entire month's work was confined to the Obispo River, with a cruise once a week into Gatun Lake.

Mechanical Division.

The general character of the work in this division was about the same as that for the previous month, with a further reduction in volume resulting in a decrease in force of 74 gold roll and 176 silver roll employees. Night shifts were taken off in all shops, except at Paraiso, where the continuance of night work is necessary on account of urgent repairs to dredging equipment. Work on the caissons for pier No. 7 at Cristobal, the largest job at present in the shops, is within approximately two months of completion.

Shop orders authorized during the month numbered 908; those left over from previous months, 460; those completed during October, 936; carried forward into November, 432. The output of the foundry was 166,057 pounds of iron, 40,915 pounds of steel, and 15,251 pounds of brass. Hostling was done on 5,134 pieces of equipment. Shop repairs were made on 1,499 cars, and field repairs on 6,301.

Division of Canal Transportation.

Eighty-five ships, including one launch, passed through the Canal in October, 45 (one launch) southbound, and 40 northbound. Collections for tolls amounted to \$349,986.48; for pilotage \$3,077, launch service \$81.25, for service of deck hands \$408, service of deputy collector \$10, or a total of \$353,562.73.

Twenty-three vessels were admeasured, 42 inspected to see that their certificates conformed to the rules, and 13 remeasured.

Owing to an increase in traffic over that which was expected, it was found necessary to increase the complement of pilots. Vessels are being started through the Canal with less delay than formerly, due to a reduction in the paper work of the terminal offices, while improvements in communication and the recently established signal station at Empire effect a material saving in the time of transit.

Supply Department.

The force report for the last Wednesday in

October showed a total of 26,759 employees of The Panama Canal and Panama Railroad Company, of whom 4,148 were white Americans and 22,611 were laborers. Of the latter, approximately 711 were Europeans and the remainder West Indian negroes. The total force was reduced 1,440; Americans, 140; laborers, 1,300.

The occupants of Government quarters numbered 7,108 white Americans, of whom 4,087 were men, 1,507 women, and 1,514 children; 8,092 West Indians, of whom 5,258 were men, 1,201 women, and 1,633 children.

Although at the close of the month 21 of the new concrete 4-family houses at Balboa were finished and occupied, a marked congestion in family quarters at Balboa and Ancon continued, and this was increased by the removal of the Panama railroad offices from Colon to Balboa Heights and the consequent desire of the company's employees to procure quarters at the Pacific end.

On October 1, building operations were placed under the direction of Capt. R. E. Wood, who was designated Constructing Quartermaster.

A large stock of supplies was transferred from Mount Hope depot to the Balboa storehouse and on October 20, the main depot was established at the latter point. From this depot all material, except stationery, is now issued, and the storekeeper in charge is held responsible for the upkeep of the stock on the Isthmus. The certification of United States bills and the compilation of stock requisitions were transferred from the Mount Hope depot to the United States Requisition Division at Balboa Heights. The value of material received during the month was \$689,675.71. It came forward in 30 steamers, the total weight of cargo, exclusive of lumber and piling, being 15,075 tons.

Accounting Department.

The cash balance in Canal construction appropriations on October 31 was \$17,829,459.23; in the fortifications appropriations \$4,693,890.47. The pay rolls for October, exclusive of Army quarters, storehouses, fortifications, etc., amounted to \$1,078,800.99, and the fortifications roll amounted to \$56,608.40. Payments by the disbursing clerk in Washington amounted to \$1,163,650.09; by the Paymaster on the Isthmus \$1,553,057.91. Collections on the Isthmus amounted to \$1,053,456.34, of which \$434,001.64 were repaid to appropriations, \$230,622.73 were trust funds, and \$388,831.97 were covered into the Treasury as miscellaneous receipts. Of the miscellaneous receipts, \$349,986.48 were collected on account of tolls, as compared with \$263,220 in September. Deposits in the amount of \$135,173.49 were made with the Assistant Treasurer, to be applied in payment of tolls and other charges. Canal Zone revenue collections and miscellaneous funds received amounted to \$242,832.17, and disbursements under the same heading to \$294,521.77.

Health Department.

No case of yellow fever, smallpox, or plague originated on or was brought to the Isthmus during the month. The health of employees continued good. The number of names on the rolls for the preceding month was 38,416. On this basis, the admissions to hospitals and quarters on account of illness, 1,102, gave a rate of 344.25 per thousand, as compared with 365.70 for the preceding month and 492.80 for the corresponding month of last year. The admission rates to hospitals for all diseases

were: Whites 355.03, blacks 135.40, Europeans 626.79, Americans 293.41. The admission rates for malaria were: Whites 164.43, blacks 58.51, Europeans 343.71, Americans 123.78. Next to malaria, and in the order of their numerical importance, admissions to hospitals were on account of venereal diseases, diseases of the digestive, nervous, and respiratory systems. There were 15 deportations for disease.

The total number of deaths from all causes was 23; 15 from disease, or 4.68 per thousand, as compared with 5.31 per thousand for the preceding month and 5.14 for the corresponding month of last year. The death rates from disease were: Whites 1.87, blacks 5.24, Euro-

peans 10.11, Americans 2.29.

In the cities of Panama and Colon ordinances providing for posting notices for the removal of nuisances or unsafe structures, more effective ratproofing of stables, and forbidding the establishment or maintenance of private hospitals, became effective.

The outbreak of beriberi, reported last month, is subsiding; only two new cases were reported in October. Careful investigation has revealed nothing of special interest. The factors common to all cases were improper diet and bad sanitary surroundings.

Executive Department.

Customs—The volume of business handled at either port exceeded that done in any pre-

LABOR FORCE AND QUARTERS IN OCTOBER.

The force report for October 28 shows the actual working force of The Panama Canal on that date to have been 23,445 of the Panama railroad, 3,274, and of contractors, 40, a total effective working force of 26,759. This is a decrease of 1,440, as compared with the statement of September 23. The gold force on the Canal work, composed almost exclusively of white Americans, was 4,148, divided, as follows: The Panama Canal, 3,694; Panama railroad, 428; contractors, 26, a decrease in the total gold force of 140, as compared with the preceding month. Detailed figures of the total force employed on the Isthmus, by departments or divisions, are given below:

SILVER EMPLOYEES*															
DEPARTMENT OR DIVISION.	Artisans.						European labor.		Laborers.				Total silver.	Total gold.	Grand total.
	Monthly.	Special.	22 cents.	18 cents.	15 cents.	12 cents.	Special.	16 cents.	13 cents.	10 cents.	7 cents.	5 cents.			
Operation and Maintenance; office & locks	168		27	143	208	66	1	1	60	142	2	758	144	902	
Terminal Construction	667	43	44	235	545	229		390	632	779	6	29	3,599	393	3,992
Erection	164	5	303	548	887	140		2	594	309	2	23	2,917	479	3,396
Electrical	73	11	20	57	133	104		1	25	93			517	189	706
Municipal Eng.	279		99	289	519	240		43	62	518	3	29	2,081	112	2,193
Dredging	1,734	2	6	19	35	12		33	148	29		1	2,019	301	2,320
Mechanical	146	11	87	117	558	644		12	54	145	12	4	1,790	838	2,628
Canal Transportation	125						47						172	39	211
Fortifications	85	5	57	137	285	100	43	4	195	206	1	16	1,134	107	1,241
General Construction	22	5	2	8	6	2	62	137	40	71		6	361	11	372
Total	3,343	82	645	1,553	3,176	1,537	153	623	1,810	2,292	24	110	15,348	2,613	17,961
Supply: main office	4												4	9	13
Commissary	624		4	30	9	12	236		2	103	10		1,030	165	1,195
Subsistence	528				1		1						530	31	561
Quartermaster	786	25	93	85	70	4	11	13	64	740		6	1,897	84	1,981
Accounting	13												13	174	187
Health	392		3	4	6				4	299	2	49	759	183	942
Executive	166		2	2									170	435	605
Panama railroad	370	91	75	160	257	327		75	475	979	8	29	2,846	428	3,274
Contractors	1		3	4	2				3	1			14	26	40
Grand total	6,227	198	825	1,838	3,521	1,880	401	711	2,358	4,414	44	194	22,611	4,148	26,759
Month previous	6,207	514	650	1,597	3,594	2,104	220	1,102	2,864	4,811	32	216	23,911	4,288	28,199
Changes	+20	-316	+175	+241	-73	-224	+181	-391	-506	-397	+12	-22	-1,300	-140	-1,440

*The wages are stated in United States currency.

QUARTERS.

A report of Canal and Panama railroad quarters occupied on October 31, follows:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Children	Men	Women	Children	Men	Women	Children
Balboa	719	123	123	423	12	16	1,476	461	573
Ancon	812	344	300				596	54	6
Corozal	698	206	237	98			584	48	47
Pedro Miguel	190	101	118	36			230	18	28
Paraiso	261	72	84	116	5	16	312	117	185
Culebra	169	148	136	7	8	15	446	260	338
Gamboa	23	7	9				106	25	24
Gatun	288	179	183	169	5	14	307	48	52
Cristobal	925	327	324	33			1,026	170	380
Toronto Point	2						175		
Total	4,087	1,507	1,514	882	30	61	5,258	1,201	1,633

(1) Includes nine American negroes, and two Panamanians on the gold roll. (2) Includes Sabanas police station, Taboga Island, Naos Island, Culebra Island, and Palo Seco. (3) Includes Miraflores. (4) Includes one Asiatic. (5) Includes 41 Panamanians. (6) Includes Empire. (7) Includes Colon Beach and Colon Hospital. (8) Includes 26 East Indians, 13 American citizens, and 78 Panamanians. Gold force of contractors (included above), 72 bachelors.

vious month. A new office for the customs inspectors at Cristobal was erected at the entrance to Docks 8 and 9. This brings the inspectors nearer to their work and should increase the efficiency of the service.

Administration of estates—Thirty-six estates were settled during the month, with a total value of \$1,323.49, and 26 estates were in course of settlement at the close of the month.

Postal service—Postmasters remitted, on account of stamp sales, second-class mail collections and postage due collections, \$6,027.87. The money order business aggregated \$393,883.69, and fees on the business amounted to \$143,660, and the withdrawals to \$158,475. The balance of postal savings funds on hand at the close of the month was \$756,913.

Police and fire—Arrests numbered 502, of which 479 were males. Seventy-one convicts were confined in the penitentiary during the month. The cost of subsisting and guarding them was \$1,912.25, and the value of the labor performed by them was \$1,246. Five fires were reported.

Courts—In the District Court, six civil, 37 criminal and 58 probate cases were settled; seven civil, 30 criminal and 42 probate cases were filed; and 94 cases of all kinds were pending on October 31. In the Magistrates' Courts, 17 civil and 506 criminal cases were tried.

Schools—The Canal Zone schools opened on October 1 with a total enrollment of 1,111 in the white schools, and 1,028 in the colored schools. In the white schools, the net enrollment was 1,062, the average number belonging 1,011.4, and the average daily attendance 991.7; in the colored schools, the net enrollment was 980, the average number belonging 851.4, and the average daily attendance 779.1.

Panama Railroad.

Cargo handled amounted to 66,043 tons, which includes 4,262 tons rehandled, due principally to car shortage. This decrease in tonnage resulted from the monetary situation in Peru, and from a curtailment of the service of English connections due to the presence of German men-of-war off the South American coast. At Balboa agency, 11,436 tons of cargo were handled from 14 ships arriving, and 10,709 tons were handled to 10 ships departing. Twenty-three hundred and eleven tons of coal were bunkered into 14 steamers, in addition to 754 tons sold to the *U. S. S. Denver*. Through service from New York to Balboa was inaugurated by the steamship *Allianca*, which arrived at Cristobal on October 28, and at Balboa on October 30; from this ship 495 tons of transfer cargo were discharged.

The preparation of contract drawings for pier No. 7 was continued. About 71 per cent of the total trestle required was in place at the end of the month. Twenty-nine per cent of the wash drill soundings required were made, making this feature of the work 73 per cent completed.

The erection of the bridge across the French canal was started on October 5 and at the close of the month the bridge was 95 per cent assembled and 70 per cent riveted.

All authorized duct line work was completed.

The main office force, heretofore located at Colon, was transferred to the Balboa Heights Administration Building on October 16. While practically every feature of the

office work retains its identity, administrative charges were considerably reduced and some reduction in force was effected.

Respectfully submitted,
GEO. W. GOETHALS,
Governor.

French Concrete Blocks.

Upon request, a section of one of the old French concrete blocks, in use for many years in protecting the shore line in front of Cristobal from encroachment by the sea, has been cut out and forwarded to the publicity bureau of the Universal Portland Cement Company at Chicago.

The French records show that two separate contracts were entered into covering the manufacture of these blocks, one dated in May, 1884, and the other in April, 1886. The first mentioned contract called for 200 blocks in three different sizes, but it does not appear that any blocks were ever manufactured under it, nor have any blocks been found corresponding to the specified dimensions. The contract of 1886, under which the blocks which exist today were made, contained the following specifications:

Stone to pass through a ring 0.06 of a meter in diameter, and to be washed and screened to eliminate all particles smaller than 0.02 of a meter in diameter; cement mortar to be composed of 800 kilograms of cement to one cubic yard of sand, these materials to be mixed dry upon a wooden platform under a roof. Water is to be added by means of a sprinkling hose, taking care to use only as much as may be necessary to produce a homogeneous mortar, which will stick to the shovel. The concrete shall be composed of two parts of mortar and three of stone. After the mortar is mixed, as specified above, the stone is to be added and mixed with an iron hoe until all of it shall have been completely covered with the mortar. The mixing is to be accomplished without further addition of water, the stone to be carefully watered in the pile at least one hour before using. The resulting concrete is to be dumped into forms and compressed into a compact mass. Repeated ramming is to be carefully avoided.

The material used in the manufacture of these blocks consisted of a French cement, Bohio rock, and Panama Beach sand. Bohio rock is a volcanic agglomerate of rather low specific gravity and of medium hardness, but it is very resistant to weathering. The same stone was used in the construction of Christ Church on Colon Beach. The corner stone of this church was laid in 1865, and the walls are practically as good as when they were first built.

The blocks placed by the French along the Cristobal water front subsequently became badly honeycombed by wave action, and in 1909, it was found necessary to take steps to protect the shore line, either by building a sea wall, or by adding new blocks. The latter method was decided on as the least expensive, and accordingly, about 400 concrete blocks, each containing a cubic yard of material and costing \$4, were made. They were placed in a row along the beach from Cristobal Point to the dividing line between Cristobal and Colon, and were separated by a space of six inches, half filled with concrete; the sea face of each block was slightly higher than on the land side to prevent an inrush of water. When the construction of Dock 9 was determined on, it became necessary to remove some of these blocks, and a quantity of them was afterward utilized to break the force of the waves on the seaward side of the Cristobal mole and in front of the new Hotel Washington.

Contract for Drilling Holes.

J. E. Albrecht has been awarded the contract for drilling holes at Sosa Hill quarry at the rate of 11 cents for each foot of hole drilled. Seven bids, in all, were received.

OFFICIAL CIRCULARS.

Physical Examination for Entry into Service.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 16, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

Hereafter, applicants for physical examination at the Ancon dispensary for entry into the service of The Panama Canal or Panama Railroad Company should present themselves at the dispensary during the following office hours: 8 a. m. to 10 a. m., and 12 m to 1 p. m.

GEO. W. GOETHALS,
Governor.

Seniority of Dipper Dredge Men.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 9, 1914.

CIRCULAR No. 605-1:

1. The seniority of masters, operators, cranesmen, and engineers of dipper dredges will be determined from the date they enter the service as such for each position, respectively. Separate seniority lists will be maintained in the Executive Office for

- (a) Masters and operators
- (b) Cranesmen
- (c) Engineers

Revisions of the lists will be published from time to time, as necessary.

2. Dipper dredge engineers will not be promoted to the position of cranesman before having served one year, unless they are experienced cranesmen or unless experienced cranesmen are not available.

3. The senior cranesman or engineer up for promotion to operator or cranesman, respectively, shall be allowed seven days to be tried out in the new position. If, in the opinion of the resident engineer, he is qualified for the position, he shall be promoted immediately after the tryout.

4. The senior man shall in all instances be given preference for promotion to vacancies in the next grade above, if he is qualified for the position or can qualify as provided in the preceding paragraph. In filling the position of chief engineer, the preference will be given to the senior operator (original seniority.)

5. When the force is reduced, the junior man may take the place of the senior man in the grade below, if he is senior and has served in that grade. The rule is subject to the stipulation regarding chief engineer in Paragraph 4.

6. In case of compulsory transfer to some other position temporarily, dipper dredge men will not lose their seniority as such.

7. No operator, cranesman, or engineer shall be promoted under this circular until he shall have first secured from the Board of Local Inspectors the necessary license covering the position proposed.

GEO. W. GOETHALS,
Governor.

Major Wildman Relieved from Duty on the Canal Zone.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 18, 1914.

SPECIAL ORDER:

Maj. L. D. Wildman, U. S. A., is hereby relieved from duty on the Canal Zone, effective November 22.

GEO. W. GOETHALS,
Governor.

Form for Request of Transfer of Employee.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 19, 1914.

Heads of departments and divisions—Please discontinue the use of form PC. 277, transfer slip, and destroy any supply you may have in stock. In the future, if the records of an employee is desired, it will be furnished by this office upon request.

Form PC. 493, request for transfer of employee, is now in stock, and future requests for the transfer of an employee should be submitted to the Executive Secretary on this form.

C. A. MCVLAINE,
Executive Secretary.

New Form of Cash Sale Slip.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 16, 1914.

To all concerned.—A new form of cash sale slip (Form A-219), printed in triplicate and numbered serially, has been provided.

Storekeepers and district quartermasters making sales will complete the form and deliver the original (yellow) to the purchaser, and forward the duplicate (blue) and the triplicate (pink) copies to the Auditor.

Completed copies of this form must show the account which is to receive credit, and, if items are from stock, the class number. When items of non-expendable property are sold, the accountable official will give this form a voucher number, which must be shown on all copies.

Reference to appraisal number must be shown in proper column for all sales made from obsolete storehouse, and in cases where the appraisal value is \$100, or greater, a reference to survey request must also be shown in the proper column.

Extra memorandum forms have been provided, and officials making sales will be required to make a sufficient number of these extra memorandum copies for their own files and to answer the needs of the purchasers.

H. A. A. SMITH,
Auditor, The Panama Canal.

Trip Tickets to be Filled Out Before Boarding Train.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 23, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS:

The practice of employees riding the passenger trains between Balboa and Corozal (and to a less degree between Balboa and Pedro Miguel) neglecting to fill out and sign their 120-trip coupons before boarding the train causes unnecessary and annoying delays on the part of conductors and collectors and results in a loss to the Panama railroad of considerable transportation.

You will please bring forcibly to the attention of all employees the following requirements stated in my circular letters of May 11, 1910, and April 24, 1913, respectively.

"In the future 24-trip ticket coupons must be completely filled out, signed, and ready for presentation to the collector when he makes his rounds.

"The holders of 120-trip tickets will, hereafter, be required to fill in on coupons stations between which it is desired to travel and sign their names before entering the train."

The above quoted requirements apply with equal force to 60-trip tickets.

GEO. W. GOETHALS,
Governor.

Books for The Panama Canal Library.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 21, 1914.
Heads of departments and divisions—Please forward to the library, Balboa Heights, a list of all books belonging to The Panama Canal or Panama Railroad Company which have not been yet sent to the library, or which you are keeping in your office for ready reference.

It is desired to include in the library index a list and description of all these books, so that if information contained in them is needed, the librarian will know where such books may be found. The list should contain titles, brief description, and brief table of contents of each volume, with building, room number and book case where kept, as follows:

Title.	Class.	Contents.	Building.	Room.	Book Case

GEO. W. GOETHALS,
Governor.

Messengers for Errands Outside of Administration Building.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 21, 1914.
HEADS OF DEPARTMENTS AND DIVISIONS IN THE ADMINISTRATION BUILDING:

Officials in the Administration Building are requested not to use station messengers for errands outside of the building requiring more than 10 minutes to perform. If special service of this nature is desired, a messenger will be furnished upon application to the Chief Clerk.

C. A. McILVAINE,
Executive Secretary.

Transmission Line Energized between Miraflores and Balboa.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., November 20, 1914.

Heads of departments and divisions—Both sides of the transisthmian transmission line between Miraflores and Balboa substations will be put in service at 44,000 volts on Sunday, November 22, 1914. The remaining sections will be energized in the near future and further notice will be given you of the exact dates.

To date there have been several instances of locomotive cranes interfering with these wires. All employees should be notified of the fact that almost certain

loss of life will result from contact with these wires after they are put in service, and that even close approach to them with the boom of a crane or other structure is dangerous in the extreme. Cranes and other equipment or tools should be handled so that a clearance of at least six feet from the wires is maintained.

W. H. ROSE,
Electrical Engineer.

Transmission Line Tests.

THE PANAMA CANAL,
DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., November 24, 1914.

All concerned.—The permanent transmission line on the track-span bridges between Miraflores and Balboa substations, will be undergoing high potential tests on Friday, November 27, and Saturday, November 28. This in advance of putting the line into regular service on Sunday, November 29, in accordance with previous notifications.

During the testing period abovementioned, the line should be considered in all respects as if it were in service at 44,000 volts.

W. H. ROSE,
Electrical Engineer.

Weighmaster's Reports.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 18, 1914.

CIRCULAR No. 203:
All concerned—Effective at once, signed copies of weighmaster's reports should be returned to the storekeeper, Balboa, instead of to the Depot Quartermaster, as formerly.

W. R. GROVE,
Chief Quartermaster.

Issuance of Material from Balboa Storehouse.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 16, 1914.

CIRCULAR No. 202-1:
To all concerned—My circular of October 19, making Balboa storehouse the main depot of supplies on the Isthmus, is amended so that requisitions for oils, greases, and coal will also be placed on Balboa storehouse.

Only stationery requisitions will be sent to Mount Hope in the future.

W. R. GROVE,
Chief Quartermaster.

Small Concrete Mixers.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 20, 1914.

CIRCULAR No. 204:
Heads of departments and divisions—Will you kindly advise if you have any small concrete mixers that can be released within the next 10 days.

W. R. GROVE,
Chief Quartermaster.

Proposals for Plastering Houses Nos. 753 and 756, and Balboa Commissary.

THE PANAMA CANAL,
OFFICE OF THE CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., December 1, 1914, and then opened, for furnishing the necessary labor to do all plastering required to finish houses Nos. 753 and 756, Balboa, and the commissary at Balboa.

Specifications for this work may be obtained upon application to the Constructing Quartermaster, room No. 266, Balboa Heights.

Bids may be submitted for each job or a total for the three jobs.

Bids must be accompanied by \$100.

Bids should be marked "Proposals for plastering Houses 753 and 756, and Balboa commissary."

W. R. GROVE,
Chief Quartermaster.

Proposals for Mixing Concrete for North Entrance Pier at Balboa.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER,
BALBOA HEIGHTS, C. Z., November 18, 1914.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until November 27, at 3 p. m., and then opened for furnishing the necessary labor for mixing concrete for the north entrance pier at Balboa.

Specifications and form of contract may be obtained upon application to this office.

Bids must be at a price per batch for this work.

Bids must be accompanied by \$100, U. S. currency. The Government reserves the right to reject all bids.

Proposals should be marked: "Proposals for mixing concrete for north entrance pier, Balboa."

W. R. GROVE,
Chief Quartermaster.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, November 21, 1914. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gatun Lake.	Miraflores Lake.	
Sun., Nov. 15.....	128.90	95.10	85.95	85.98	54.10
Mon., Nov. 16.....	127.50	93.64	86.02	86.05	54.40
Tues., Nov. 17.....	130.35	95.58	86.14	86.16	54.22
Wed., Nov. 18.....	131.65	96.49	86.35	86.44	54.08
Thurs., Nov. 19.....	128.80	94.75	86.55	86.62	54.12
Fri., Nov. 20.....	128.10	94.08	86.61	86.65	54.05
Sat., Nov. 21.....	127.55	93.70	86.63	86.63	54.08
Height of low water to nearest foot.....	125.0	91.0			

Misdirected Letters.

BALBOA HEIGHTS, C. Z., November 23, 1914

The following insufficiently addressed letters, originating in the United States or its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Barrantes, Maximo	Mitten, Charles
Baylis, Lt. James L.	Myers, Robert F.
Brown, Raymond	Nielsen, Mrs. George
Carlson, George	Nugent, Wm.
Christ, M. F.	Patrick, Mrs. Larizina
Janniere, M. E. A.	Right, J. (Supt.)
Keough, J. M.	Shoecraft, Mr.
Larkins, Roy	Stowell, Frank
McFadden, A. H.	Van Cienlen, Mrs. Mamie
Martin, Gerald	Warren, Mrs. Rudolph G
	Wiese, Richard

Commissary Additions to Stock.

Figs, dried, lb.....	.15
Plates, wooden, pie, doz.....	.05
Boxes, sugar, round, ea.....	.67
Fish, Tuna, tin.....	.09
Knickerbockers, boys, pr.....	1.20
Shoes, infants, white, canvas, pumps, pr.....	.90
Shoes, child's, white, canvas, pumps, pr.....	1.20
Shoes, child's, white, canvas, pumps, pr.....	1.45
Shoes, infants, black, kid, button, pr.....	1.20
Shoes, infants, tan, kid, button, pr.....	1.20
Shoes, Little Gents, gun metal, blu., oxfords, pr	2.20
Shoes, Little Gents, tan, blu., oxfords, pr.....	2.20

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Draggan, James N.....	21215	Jamaica.....	Camp Biedr.....	Police Div.....	Nov. 20, 1914.
Providence, Denton.....	181989	St. Vincent.....	Panama.....	Supply Dept.....	Nov. 4, 1914.

The estates of these deceased employees of the Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12:30 p. m., and 3 to 6:30 p. m. The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective November 26:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....	10	
Shoulder, trimmed, per pound.....	16	
Leg (8 to 10 pounds), per pound.....	25	
Short cut chops, per pound.....	30	
Shoulder, chops, per pound.....	18	
Lamb—Stewing, per p. und.....	13	
Shoulder, trimmed, per pound.....	19	
Leg (5 to 8 pounds), per pound.....	30	
Chops, per pound.....	36	
Chops, shoulder, per pound.....	25	
Veal—Stewing, per pound.....	13	
Shoulder, for roasting (not under 4 pounds), per pound.....	17	
Chops, shoulder, per pound.....	23	
Chops, per pound.....	35	
Loin, for roasting, per pound.....	35	
Cutlets, per pound.....	40	
Beef—Suet, per pound.....	03}	
Soup, per pound.....	08}	
Soup bones, per pound.....	02}	
Stew, per pound.....	12}	
Plate, per pound.....	14}	
Corned, No. 1, per pound.....	20	
Corned, No. 2, per pound.....	17	
Chuck roast, 3 lbs. and over, special, per pound.....	13	
Rib roast, second cut (not under 3½ pounds), special, per pound.....	18	
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24	
Rib roast, first cut (not under 3 pounds), special, per pound.....	22	
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27	
Pot roast, special, per pound.....	23	
choice, per pound.....	28	
Rump roast, special, per pound.....	23	
choice, per pound.....	28	
Porterhouse roast, special, per pound.....	25	
choice, per pound.....	31	
Steak, chuck, special, per pound.....	15	
Round, bottom, special, per pound.....	15	
choice, per pound.....	19	
Round, top, special, per pound.....	17	
choice, per pound.....	22	
Sirloin, special, per pound.....	23	
Sirloin, choice cut, special, per pound.....	28	
Sirloin, choice cut, choice, per pound.....	32	
Rump, special, per pound.....	23	
choice, per pound.....	28	
Porterhouse (not less than 1½ pounds), special, per pound.....	26	
Porterhouse (not less than 1½ pounds), choice, per pound.....	34	
Porterhouse, short, Delmonico special, per pound.....	23	
Porterhouse, short, Delmonico choice, per pound.....	28	
Tenderloin, Western, special, per pound.....	40	
Tenderloin, Western, choice, per pound.....	46	
Pork—Hams, fresh, per pound.....	26	
Shoulders, fresh, per pound.....	22	
Loin, chop or roast, per pound.....	24	
Pigs' feet, fresh, each.....	8	
Pigs' head, fresh, whole.....	95	
Sausage, home made, per pound.....	48	
26		
MISCELLANEOUS.		
Livers—Beef, per pound.....	13	
Calf, each.....	65	
half, each.....	33	
Oysters, fresh, per pkt.....	30	
Steak—Hamburger, package.....	17	
Hamburger, 20-pound containers, per pound.....	14	
Sausage—Bologna, per pound.....	14	
Frankfurter, per pound.....	14	
Lieberwurst, per pound.....	12	
Pork, per pound.....	18	
Sweetbread, beef, per pound.....	23	
Eggs, fresh, per dozen.....	45	
per ½-dozen.....	23	
Bluefish, per pound.....	9	
Halibut, fresh, per pound.....	5	
Salmon, per pound.....	8	
Yeast, per pound.....	31	
per cake.....	2	
POULTRY AND GAME.		
Chickens—Fancy, roasting, milk fed, per pound	25	
Chickens—Fancy, roasting, corn fed, per pound	24	
Fowls, per pound.....	24	
Fowls, light, per pound.....	21	
Ducks, Western, per pound.....	25	
Capons, per pound.....	30	
Broilers, milk fed, per pound.....	25	
Broilers, corn fed, per pound.....	21	
Turkeys, per pound.....	†26	

Squabs, each.....	30
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound..	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	24
Half, per pound.....	26
Sliced, per pound.....	32
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	130
Half boiled, per pound.....	132
Sliced, boiled, per pound.....	138
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.42
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	43
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	21
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Swiss, per cake.....	9
Milk (certified), bottle.....	**24
Milk, Sheffield Farms, per quart.....	**15
Fermentac, bottle.....	**25
Ice cream, quart.....	125
½-gallon.....	150
Cream, Sheffield Farms, quart.....	**33
½-pint.....	**19
½-pint.....	**12

VEGETABLES.

Cauliflower, per pound.....	6
Beets, per pound.....	2}
Brussels sprouts, per quart.....	15
Celery, per head.....	4
Cabbage, per pound.....	2}
Carrots, per pound.....	2}
Cucumbers, per pound.....	8
Lettuce, per pound.....	11
Onions, per pound.....	2
Parsnips, per pound.....	3
Peppers, per pound.....	2
Potatoes, white, per pound.....	2
sweet, American, per pound.....	2}
sweet, tropical, per pound.....	2
Yams, tropical, per pound.....	3
Eggplant, per pound.....	5
Turnips, per pound.....	*3
Tomatoes, per pound.....	6
Squash, per pound.....	2}

FRUITS.

Apples, per pound.....	3
Cranberries, per pound.....	6
Grapes, per pound.....	12
Grape fruit—American, each.....	8
Tropical, each.....	3}
Lemons, per dozen.....	19
Limes, per 100.....	40
Oranges—American, each.....	2}
Tropical, per dozen.....	†9
Pears, per pound.....	6
Coconuts, each.....	5
Bananas, per bunch.....	38
Bananas, each.....	½
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective November 18, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Cream wafers, N. B. Co., tin.....	.60	.54
Cream wafers, N. B. Co., lb.....	.21	.21
Gentil wafers, N. B. Co., tin.....	.92	.86
Gentil wafers, N. B. Co., lb.....	.26	.26
EFFECTIVE NOVEMBER 21.		
Herrings, fresh, tin.....	.10	.08
Hats, mens, rainproof, ea.....	.56	.50
Chimneys, sweet lamp, ea.....	.10	.13
Gherkins, stout, bot.....	.32	.22
Gherkins, sour, bot.....	.24	.21
Cigarettes, Three Castles, tin.....	.25	.32
Cigarettes, La Rose, tin.....	.81	.84
Jams, assorted, tin.....	.09	.10
Sulphur, Nancy Hanks, ea.....	1.40	1.30
Cases, letter, pigskin, ea.....	.33	.38
Brushes in leather cases, ea.....	1.65	1.95

Boxes, collar, leather, ea.....	1.00	1.15
Caviar, tin.....	1.00	1.30
Serge, blue, yd.....	2.50	2.60
Serge, gray, yd.....	2.50	2.70
Serge, cream, yd.....	1.95	2.00
Serge, blue, yd.....	1.85	1.95
Coating, black, yd.....	2.55	2.70
Mirrors, traveling, ea.....	1.05	1.10
Mirrors, traveling, ea.....	1.55	1.70
Trunks, ea.....	16.50	16.70
Mattresses, single, ea.....	4.75	3.75

Supplies for the Canal.

The following steamers, with supplies for The Panama Canal and Panama Railroad Company, arrived at the ports of Colon and Cristobal during the week ending November 7:

Danube, November 1, from New York, with 25 bars steel, 24 reels cable, for stock; one box brass fittings, for permanent buildings; one box splicing sleeves, for Electrical Division; one box structural material, for Division of Terminal Construction.

Pastores, November 4, from New York, with 22 packages stationery, eight bundles hoes, two cases sheet copper, 12 barrels washers, one keg washers, two cases brushes, three cases stocks and dies, for stock; 75 bundles anchor bolts, 140 snubbing posts, 125 washers, eight pieces molding, one barrel cable terminals, one case copper rods, 43 cases electrical material, two boxes electrical material, for Division of Lock Erection; 15 packages cast iron fittings, for municipal engineering division; four cases electrical material, for Fortifications Division; nine cases electrical material, for Electrical Division; six pieces cable jacks and extras, two cases parts, for Panama Railroad Company.

Carlago, November 4, from New Orleans, with one bale black moss, 46 pieces rough oak, for stock; 1,845 pieces 3 by 9 oak, for Mechanical Division.

Colon, November 4, from New York, with four boxes tool parts, six cases butts, 15 bales burlap, 33 boxes wire cloth, 10 cases valves, three barrels valves, 10 legs nuts, five boxes nuts, six cases bronze rods, one case bronze tubes, 25 boxes lye, 125 cases soap polish, 21 crates ash can covers, 20 coils lead pipe, 10 cases paper towels, two cases chain blocks, four boxes chain hoists, four boxes car seals, two cases willow baskets, for stock; three boxes stationery, for Accounting Division; 14 boxes electrical material, one box charts, 12 packages transformers and parts, six drums transil oil, five cases soldering paste, 12 cases electrical material, one case soapstone, for Electrical Division; one box blueprint paper, three packages stationery, one package seals, 16 cases boxes, tables and lock boxes, one case bulletins, for Executive Secretary; four pieces steel pipe, one package nozzles, two crates pins, eight steel hinges, one plate, five reels cable, for Dredging Division; one box diaphragms, for Canal transportation 31 cases machinery, 15 boxes insulating tape, six cases electrical material, 13 reels copper wire, for Division of Lock Erection; 13 packages medical supplies, e. c., one stock pot, three boxes photo plates, one package books, for Health Department; one magnet, one box blueprint paper, five packages ladder parts, one box valves, one box typewriter parts, 35 cases linoleum, 65 brake beams, five boxes brake shoes, 53 castings, two stencil cutting machines, four barrels Franklin, for Mechanical Division; one box butts, 121 barrels lime, 64 cases elevator material, 20 coils cable, six pieces l-beams, for permanent buildings; 65 bundles lath, 88 steel plates, 44 steel angles, seven bundles steel bars, for Division of Terminal Construction; one box rubber balls, for municipal engineering division; 24 cases electric lamps and globes, for Fortifications Division; two crates signal material, two pieces signal material, 61 pieces steel channels, for Panama Railroad Company; and a miscellaneous cargo, the whole consisting of 1,242 packages weighing approximately 169 tons.

Turrialba, November 5, from New Orleans, with 120 bags of feed, for stock; two velocipedes, for municipal engineering division; 3,667 pieces oak lumber, 279 pieces oak flooring, 190 packages metal louveres, for Mechanical Division; 50 pieces castings, two barrels castings, one box castings, for Dredging Division.

The total value of material received during the month of October was \$639,675.71 distributed, as follows:

Stock.....	\$276,807.23
Lock erection.....	74,868.41
Division of terminal construction.....	72,318.29
Dredging Division.....	54,230.43
Mechanical Division.....	44,100.63
Electrical Division.....	22,746.10
Canal Transportation.....	13,476.78
Municipal Engineering.....	46,698.10
Permanent Buildings.....	11,327.19
Panama Railroad Company.....	21,750.52
Fortifications.....	39,820.13
Executive Secretary.....	3,884.70
Accounting Department.....	4,633.97

Total, Operation and Maintenance....	\$686,662.48
Health Department.....	3,013.23

Grand total..... \$698,675.71

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next six weeks are given in the following table:

NOVEMBER.

DATE.	Time and height of high and low water.			
Wed., Nov. 25.....	3:32	9:38	15:56	22:16
	3.4	12.0	3.2	12.5
Thurs., Nov. 26....	4:39	10:55	17:01	23:23
	3.7	11.6	3.7	12.3
Fri., Nov. 27.....	5:45	12:09	18:04	.....
	3.8	11.6	3.9	.....
Sat., Nov. 28.....	0:25	6:44	13:10	19:00
	12.4	3.5	11.8	3.8
Sun., Nov. 29.....	1:16	7:34	13:59	19:48
	12.6	3.1	12.1	3.6
Mon., Nov. 30.....	2:00	8:15	14:39	20:30
	13.0	2.6	12.4	3.4

DECEMBER.

Tues., Dec. 1.....	2:38	8:54	15:14	21:09
	13.3	2.1	12.7	3.1
Wed., Dec. 2.....	3:12	9:31	15:44	21:46
	13.5	1.7	13.0	2.8
Thurs., Dec. 3.....	3:45	10:07	16:14	22:20
	13.7	1.4	13.4	2.6
Fri., Dec. 4.....	4:18	10:43	16:47	22:58
	13.9	1.2	13.7	2.4
Sat., Dec. 5.....	4:54	11:19	17:22	23:35
	13.9	1.1	14.0	2.5
Sun., Dec. 6.....	5:29	11:57	18:00	.....
	13.9	1.3	14.1	.....
Mon., Dec. 7.....	0:17	6:09	12:37	18:42
	2.5	13.7	1.5	14.0
Tues., Dec. 8.....	1:01	6:52	13:22	19:27
	2.6	13.4	1.9	13.8
Wed., Dec. 9.....	1:50	7:40	14:11	20:18
	2.8	13.1	2.4	13.6
Thurs., Dec. 10.....	2:45	8:35	15:06	21:14
	2.9	12.8	2.8	13.4
Fri., Dec. 11.....	3:44	9:38	16:06	22:14
	3.0	12.5	3.0	13.3
Sat., Dec. 12.....	4:47	10:46	17:11	23:18
	2.8	12.5	3.0	13.4
Sun., Dec. 13.....	5:50	11:56	18:14	.....
	2.3	12.8	2.7	.....
Mon., Dec. 14.....	0:21	5:50	13:01	19:14
	13.9	1.5	13.4	2.1
Tues., Dec. 15.....	1:20	7:46	14:01	20:10
	14.6	0.7	14.2	1.5
Wed., Dec. 16.....	2:10	8:40	14:55	21:04
	15.0	0.1	14.9	0.9
Thurs., Dec. 17.....	3:09	9:31	15:45	21:55
	15.8	0.7	15.5	0.5
Fri., Dec. 18.....	3:58	10:20	16:34	22:45
	16.1	1.0	15.8	0.4
Sat., Dec. 19.....	4:47	11:09	17:21	23:34
	16.0	1.0	15.8	0.5
Sun., Dec. 20.....	5:36	11:56	18:08	.....
	15.6	0.6	15.6	.....
Mon., Dec. 21.....	0:21	6:24	12:44	18:55
	0.9	15.0	0.1	15.0
Tues., Dec. 22.....	1:12	7:14	13:33	19:44
	1.4	14.2	1.0	14.3
Wed., Dec. 23.....	2:04	8:04	14:23	20:34
	2.1	13.2	2.0	13.5
Thurs., Dec. 24.....	2:58	8:59	15:16	21:28
	2.8	12.3	3.0	12.8
Fri., Dec. 25.....	3:25	10:00	16:12	22:25
	3.5	11.5	3.9	12.1
Sat., Dec. 26.....	4:54	11:09	17:11	23:25
	3.9	10.9	4.5	11.7
Sun., Dec. 27.....	5:55	12:18	18:12	.....
	4.1	10.8	4.8	.....
Mon., Dec. 28.....	0:25	6:50	13:19	19:09
	11.7	4.0	10.9	4.7
Tues., Dec. 29.....	1:17	7:40	14:07	19:58
	11.9	3.5	11.3	4.4
Wed., Dec. 30.....	2:03	8:24	14:46	20:42
	12.3	3.0	11.9	3.9
Thurs., Dec. 31.....	2:44	9:06	15:21	21:24
	12.8	2.3	12.6	3.3

JANUARY.

DATE.	Time and height of high and low water.			
Fri., Jan. 1.....	3:22	9:46	16:01	22:05
	13.4	1.5	13.3	2.6
Sat., Jan. 2.....	4:00	10:25	16:40	22:43
	14.0	0.8	14.0	1.9
Sun., Jan. 3.....	4:40	11:04	17:16	23:23
	14.5	0.4	14.5	1.5
Mon., Jan. 4.....	5:20	11:43	17:51	.....
	14.7	0.3	14.8	.....
Tues., Jan. 5.....	0:03	5:58	12:21	18:28
	1.3	14.7	0.3	15.0
Wed., Jan. 6.....	0:44	6:38	13:01	19:05
	1.3	14.5	0.6	15.0

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the

soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.) and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Rainfall from November 1 to 21, 1914, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
Pacific Section—	Ins.		Ins.
Balboa.....	2 22	3	8 03
Balboa Heights.....	2 07	3	7 44
Pedro Miguel.....	1 67	16	7 30
Rio Grande.....	1 94	16	6 52
Central Section—			
Culebra.....	1 37	16	5 30
*Camacho.....	1 45	17	6 02
Empire.....	76	16	4 54
Gambo.....	1 34	11	6 31
*Juan Mina.....	2 16	5	7 60
Alhajuela.....	1 12	18	7 17
*El Vigia.....	2 29	18	10 22
Frijoles.....	1 12	16	5 56
*Monte Lirio.....	2 40	9	10 23
Atlantic Section—			
Gatun.....	1 50	13	8 72
*Brazos Brook.....	2 51	9	11 22
Colon.....	3 77	13	14 10

*Standard rain gage—readings at 5 p. m. daily. Automatic rain gage at unstarred stations—values midnight to midnight.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per ton, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.30 per barrel, reduced to 60° Fahrenheit.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Subsistence supplies, including a large stock of fresh meats, vegetables, canned groceries, fruits, bakery products, etc., are available for quick delivery at either terminal. Prices are generally lower than the retail prices in the United States, and compare favorably with prices in any part of the world.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is hauled quickly, and no advance notice is required. The following are representative charges; for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the

turning of the largest crank shafts or longest line shafts.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment in ward is \$1 per day.

Application for supplies, or for services, should be made to the captain of the port, Cristobal or Balboa.

Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired; or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case the vessel has a known representative on the Isthmus in care of such representative.

Sailings of Vessels In Regular Service With the Isthmus.

REGULAR CONNECTIONS WITH PACIFIC PORTS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acapulco, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central America line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports abovenamed between Balboa and Ocos.

The Luckenbach Steamship Company is operating a 10-day service between New York and San Francisco, calling at East San Pedro both ways. Its vessels handle cargo at Balboa when sufficient business offers.

The American-Hawaiian lines between New York and San Francisco, and New York and Honolulu, discharge and take on cargo at Balboa when sufficient business offers. At present, a vessel of this company passes through the Canal about every third day.

Grace and Company maintain an irregular service between New York and San Francisco, calling at way ports. Sailings are made about every 12 days. A vessel plying between San Francisco and Valparaiso, calling at way ports, makes a round voyage about every 10 weeks.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Paíta, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa for Valparaiso calling at Paíta, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service each way between New York and Southampton, making the following way ports: Antilla, Jamaica, Colon, Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores, and Cherbourg. Its vessels all arrive at Colon on Sundays and sail on Tuesdays.

The Compagnie Générale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santaader; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compania Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every six days direct; between Colon and New York by the United Fruit Company and the Royal Mail Company, sailings via Kingston weekly and fortnightly, respectively; between Cristobal and

(Continued on page 144.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon November 22.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Nov. 16....	Dakota	American	American-Hawaiian S. S. Co.	New York	San Pedro	General mdse.	1,700	6,891	4,735
Nov. 17....	Westward Ho	British	Tom Lewis & Co.	New York	Auckland	General mdse.	5,300	4,391	3,312
Nov. 17....	Chinese Prince	British	Prince Line	New York	Vladivostok	General mdse.	6,545	6,269	4,540
Nov. 18....	Evelyn	American	Luckenbach S. S. Co.	New York	San Pedro	General mdse.	4,500	3,393	2,319
Nov. 18....	Copenhagen	British	West Coast Line	New York	Ecuador-Chile	General mdse.	7,000	5,029	3,761
Nov. 19....	Achibster	British	A. H. & E. Gunn & Co.	Glasgow	San Francisco	Coal	6,117	4,871	3,588
Nov. 20....	Ohion	American	American-Hawaiian S. S. Co.	New York	San Francisco	General mdse.	7,000	6,844	4,699
Nov. 20....	Usher	British	H. Cunn & Co.	Norfolk	Portland, Ore.	Ballast		3,797	2,846
Nov. 20....	Kish	British	Clyde Shipping Co.	Philadelphia	Korea	Oil in cases	6,500	5,403	3,865
Nov. 21....	Jullandia	Danish	East Asiatic S. S. Co.	Copenhagen	San Pedro	General mdse.	2,000	5,371	4,510
Nov. 21....	Esmeraldas	British	Pacific Steam Nav. Co.	Spain	Valparaiso	Coal, general (a)	4,006	6,004	2,906

(a) 3,000 tons of coal.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Nov. 16....	Neches	American	Sudden & Christenson	San Francisco	Philadelphia	Barley, general (a)	6,000	5,620	4,124
Nov. 16....	Farley	British	Houlder & Middleton	Seattle	Liverpool	Wheat, c'd g'ds (b)	5,908	4,603	3,660
Nov. 17....	Virginian	American	American-Hawaiian S. S. Co.	San Francisco	Philadelphia	General produce	10,500	10,100	7,472
Nov. 17....	De Sabla	British	Bank Line	San Pedro	Portugal	Fuel oil	8,500	6,385	4,268
Nov. 17....	Damara	American	Luckenbach S. S. Co.	San Francisco	New York	General produce	8,000	5,835	4,506
Nov. 17....	Brodmount	British	Blue Star Line	San Francisco	New York	Meat, general (c)	6,700	7,026	5,487
Nov. 19....	Wilhelmina	Nicaraguan	Caribbean Transport Co.	Balboa	Bluefields	Sugar	45	66	46
Nov. 21....	Montanan	American	American-Hawaiian S. S. Co.	San Pedro	New York	General produce	6,322	6,557	4,696

(a) 4,000 tons barley, 1,000 tons canned goods, 500 tons lumber, 500 tons general. (b) Wheat, 4,869 tons; flour, 511 tons; salmon, 515 tons; ore, 13 tons.

(c) Frozen meat, 3,200 tons.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessels	Line	From
Nov. 22....	Allianco	Panama Railroad S. S. Co.	New York
Nov. 22....	Stanley Dollar	Luckenbach S. S. Co.	Philadelphia
Nov. 23....	Arlington Court	Court Line	Gulfport
Nov. 23....	J. L. Luckenbach	Luckenbach S. S. Co.	New York
Nov. 23....	Samuel (tug)	S. Pearson & Son	Liverpool
Nov. 24....	Washingtonian	American-Hawaiian S. S. Co.	New York

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessels	Line	For
Nov. 21....	Lodanor	Munro Line	San Francisco
Nov. 21....	Gowonburn	Macly and McIntyre	Portland
Nov. 22....	Nebraska	American-Hawaiian S. S. Co.	San Francisco
Nov. 22....	Ventura de Larrinaga	Larrinaga S. S. Co.	Portland
Nov. 25....	Croster Hall	N. Y. & S. America Line	Peru
Nov. 28....	Alaskan	American-Hawaiian S. S. Co.	San Pedro

*Vessels which will pass through the Canal.

PORT OF CRISTOBAL.

*ARRIVALS.

Nov. 16....	Venezuela	Cie. Gen. Transatlantique	St. Nazaire
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*DEPARTURES.

Nov. 17....	Tagus	Royal Mail	Southampton
Nov. 17....	Severn, submarines	United States Navy	Porto Bello
Nov. 17....	Nubian	Leyland Line	Galveston
Nov. 19....	Jupiter	Seeberg S. S. Co.	Belize
Nov. 20....	Venezuela	Cie. Gen. Transatlantique	St. Nazaire

*EXPECTED ARRIVALS.

Nov. 23....	Hilding	Seeberg S. S. Co.	Gulfport
Nov. 23....	Tordenskjold	Earn Line	Norfolk
Nov. 27....	Merchant	Harrison Line	Liverpool
Nov. 29....	Siena	La Veloce	Genoa
Dec. 2....	Median	Leyland Line	Liverpool

*EXPECTED DEPARTURES.

Nov. 23....	Median	Leyland Line	Southampton
Dec. 1....	Trent	Royal Mail	Genoa
Dec. 2....	Siena	La Veloce	Genoa
Dec. 2....	Hilding	Seeberg S. S. Co.	Genoa

*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Nov. 16....	Geo. W. Fenwick	W. R. Grace & Co.	Portland
Nov. 17....	Newport	Pacific Mail S. S. Co.	San Pedro
Nov. 18....	Montano	Peruvian S. S. Co.	Peru
Nov. 19....	Ecuador	Pacific Steam Nav. Co.	Taboga
Nov. 19....	Jamaica	Pacific Steam Nav. Co.	Taboga

*DEPARTURES.

Nov. 17....	San José	Pacific Mail S. S. Co.	San Pedro
Nov. 18....	Jamaica	Pacific Steam Nav. Co.	Taboga
Nov. 18....	Guatemala	Pacific Steam Nav. Co.	Callao
Nov. 22....	Geo. W. Fenwick	W. R. Grace & Co.	Corinto
Nov. 22....	Montano	Peruvian S. S. Co.	Peru

*EXPECTED ARRIVALS.

Nov. 23....	Huallaga	Peruvian S. S. Co.	Callao
Nov. 24....	Acajulo	Salvador S. S. Co.	Salina Cruz
Nov. 28....	San Juan	Pacific Mail S. S. Co.	San Francisco
Dec. 2....	Limari	South American S. S. Co.	Valparaiso

*EXPECTED DEPARTURES.

Nov. 23....	Palena	South American S. S. Co.	Valparaiso
Nov. 26....	Newport	Pacific Mail S. S. Co.	San Francisco
Nov. 26....	Jamaica	Pacific Steam Nav. Co.	Colombian ports

*Other than vessels using the Canal.

(Continued from page 143.)

New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

	Soils.	Arrives.
NEW YORK TO CRISTOBAL.		
Colon	P. R. R.	Nov. 23 Nov. 29
Advance	P. R. R.	Nov. 28 Dec. 5
Panama	P. R. R.	Dec. 5 Dec. 11
Alliance	P. R. R.	Dec. 11 Dec. 17
Colon	P. R. R.	Dec. 17 Dec. 23
Advance	P. R. R.	Dec. 23 Dec. 30
Panama	P. R. R.	Dec. 30 Jan. 5
CRISTOBAL TO NEW YORK.		
Alliance	P. R. R.	Nov. 28 Dec. 4
Colon	P. R. R.	Dec. 5 Dec. 11
Advance	P. R. R.	Dec. 10 Dec. 17

Panama	P. R. R.	Dec. 17 Dec. 23
Alliance	P. R. R.	Dec. 23 Dec. 29
Colon	P. R. R.	Dec. 30 Jan. 5
Advance	P. R. R.	Jan. 5 Jan. 12
NEW YORK TO COLON.		
Steamer	U. F. C.	Nov. 18 Nov. 25
Essequibo	R. M.	Nov. 21 Nov. 29
Santa Marta	U. F. C.	Nov. 25 Dec. 2
Steamer	U. F. C.	Dec. 2 Dec. 9
Oruba	R. M.	Dec. 5 Dec. 13
COLON TO NEW YORK.		
Zacapa	U. F. C.	Nov. 26 Dec. 3
Almirante	U. F. C.	Dec. 3 Dec. 10
Trent	R. M.	Dec. 8 Dec. 16
Santa Marta	U. F. C.	Dec. 10 Dec. 17
NEW ORLEANS TO COLON.		
Cartago	U. F. C.	Nov. 18 Nov. 25

Turrialba	U. F. C.	Nov. 21 Nov. 26
Heredia	U. F. C.	Nov. 25 Dec. 2
Abangarez	U. F. C.	Nov. 28 Dec. 3

COLON TO NEW ORLEANS.

Atenas	U. F. C.	Nov. 26 Dec. 1
Parismina	U. F. C.	Nov. 26 Dec. 3
Turrialba	U. F. C.	Dec. 3 Dec. 8
Cartago	U. F. C.	Dec. 3 Dec. 10

*Will carry mail from the United States.
†Will carry mail to the United States.
‡Will carry mail for Alabama, Arkansas, Louisiana, Mississippi, and Texas.

Irregular services between Cristobal and Gulf ports of the United States, with way calls at Central American and Mexican ports, are maintained by the Leyland and Harrison Lines, sailings about every fortnight, and the Seeberg Line, sailings about every 18 days.

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, DECEMBER 2, 1914.

No. 15.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Steamship "Ancon" Out of the Canal Service.

The steamship *Ancon*, operated by the Panama Railroad Steamship Line, has been taken out of the Canal service, and there will be no further sailings of this vessel from New York to Cristobal. Its sister ship, the *Cristobal*, was taken off several months ago, and is now in the United States transport service. These ships were purchased by the Government in 1909 for the express purpose of transporting cement to the Isthmus, but since the lessening of the demand for cement the *Ancon* has been used as a cargo carrier for all classes of supplies.

First Transit of Sailing Vessels Through the Canal.

The Canal was used by sailing vessels for the first time during the past week, when the British schooner *Zeta* and the American yacht *Athene* were put through together, in tow of a tug. The *Athene* is a pleasure boat, 104 feet long by 19 feet six inches in the beam, owned by C. E. Miller of New London, Conn. The *Zeta*, which is 132 feet long by 32 feet in the beam, is owned by Robert Wilcox of Colon, who has employed it during the past two years in trade between Colon and gulf ports of the United States. The *Zeta* was loaded with 600 tons, or 433,600 feet, board measure, of yellow pine lumber, shipped from Gulfport to Balboa, for local sale in the city of Panama. The vessels entered the Canal on November 28, and arrived at Balboa in the afternoon of November 30.

From Portland, Maine, to Portland, Oregon.

The steamship *St. Helens*, which passed through the Canal on November 27-28, is en route from Portland, Maine, to Portland, Ore., by the way of San Francisco, carrying a cargo of 1,517 tons of general manufactured goods. This is the second passage of the *St. Helens* through the Canal, the first having been made on October 23, with 5,200 tons of general produce, including a large quantity of canned fruits, from San Francisco for the North Atlantic seaboard.

The distance from Portland to Portland by rail across the continent is approximately 3,500 statute miles. The distance by water,

through the Canal, is 6,121 nautical miles; by the Strait of Magellan, 13,787 miles.

The captain of the *St. Helens* reported on his arrival at Cristobal, that his vessel had been held up and searched by a foreign warship, about 90 miles out from port. The warship had signaled the *St. Helens* to stop, but the signal was not understood, and two shots were fired across its course, upon which the *St. Helens* hove to and submitted to examination, after which it was allowed to proceed.

Removal of Obsolete Floating Equipment from Balboa Harbor.

The time for removing the old hulk *Arica*, belonging to the Pacific Steam Navigation Company, and all other stationary craft of this nature from Balboa harbor, has been extended from January 15 to February 1, 1915. The *Arica* was formerly operated in the west coast service of the company, but became unseaworthy, and has since been used as a machine shop, storehouse, etc., as well as quarters for some of the company's employees. It is now moored near the new oil berth. The use of floating equipment other than the above in Balboa harbor will be permitted under a revocable license, which may be cancelled upon 60 days' notice. The above is in accordance with the general plan of moving all obstructions to navigation from Balboa harbor, owing to the increase in width and demand for space, etc.

Balance of Deposit to be Refunded Immediately.

It has been arranged that when a deposit has been made with The Panama Canal, either direct or through an Assistant Treasurer of the United States, to cover the tolls or other bills of a vessel making the transit of the Canal, the Collector shall forward to the depositor, immediately after the vessel clears, a copy of its bill, a statement of the account, and a draft for the balance due to the depositor.

Should the depositor request, however, that any balance be left to his account, to be applied on future charges, the Collector will be governed accordingly. In such a case he will forward immediately a copy of the vessel's bill and a statement of the account, specifying, of course, the balance to the credit of the depositor.

This arrangement has been made to put the steamship operator's dealings with the Canal on the simplest basis. Except that the Government requires payment in advance, which not all commercial firms do, the transaction is exactly analogous to a purchase in a store; with the delivery of the goods, the patron receives his change, or, if he prefers, may have it credited to his account.

"Colon" to Sail Monday, December 7.

The sailing of the steamer *Colon* from Cristobal, scheduled for Saturday, December 5, has been postponed to 5 p. m., Monday, December 7.

OVER \$1,000,000 IN TOLLS.

Million Dollar Mark Reached on November 18—Cargo to December 1st, 1,297,484 Tons.

The receipts of tolls on vessels making use of the Canal reached and passed the \$1,000,000 mark on November 18, and at the close of business on November 30 the total collections amounted to \$1,135,205.01.

Collection of tolls began in May, 1914, with the starting of a traffic in barges, towed by Canal tugs, which lasted until the opening of the Canal to ocean going vessels on August 15. The following is a summary of the receipt of tolls, by months, to December 1:

Prior to August 15.....	\$11,610.69
August 15 to 31.....	88,401.80
September 1 to 30.....	269,863.00
October 1 to 31.....	378,087.12
November 1 to 30.....	387,242.40
Total.....	\$1,135,205.01

The transits of vessels during this period, with the totals of cargo carried, were, with reference to direction, from Pacific to Atlantic, or eastbound, and from Atlantic to Pacific, or westbound, as follows:

Month.	Eastbound.		Westbound.		Total.	
	Ves-sels.	Cargo.	Ves-sels.	Cargo.	Ves-sels.	Cargo.
Aug.....	12	57,182	12	49,106	24	106,288
Sept.....	30	186,776	27	135,262	57	322,038
O. t.....	40	252,288	41	168,062	84	420,357
Nov.....	33	242,291	54	206,510	92	448,801
Total.....	120	738,537	137	558,937	257	1,297,474

Of the total of 257 vessels, 227 were laden and 30 were in ballast, or by nature not cargo-carrying vessels.

As distributed over the principal routes on which the traffic through the Canal is moving, the transits to December 1 may be summarized, as follows:

	No. vessels.	Canal tonnage.
Coastwise, eastbound.....	54	320,155
Coastwise, westbound.....	61	282,020
U. S. Pacific coast to Europe.....	34	248,020
Europe to U. S. Pacific coast.....	8	38,318
South America to U. S. and Europe.....	24	166,917
U. S. and Europe to South America.....	15	74,644
U. S. Atlantic coast to Far East.....	24	148,207
Miscellaneous routings.....	7	19,203
Vessels without cargo.....	30	.....
Total.....	257	1,297,484

New Large Vessel for Union Oil Company.

The fleet of the Union Oil Company of California will be increased shortly by the addition of the *Lyman Stewart*, an oil tanker under construction for the company by the Union Iron Works of San Francisco. The vessel, which was launched on October 31, is 426 feet nine inches long by 55 feet four inches in the beam, 31 feet eight inches deep, with draft of 27 feet, and is to be equipped with 16 tanks having an aggregate capacity of 62,000 barrels. It is expected that its engines will develop 3,000 horsepower and propel the vessel at a speed of 11 knots.

The fleet of the company consists at present of 18 steamships and seven sailing ships,

barges, and tugs, a total of 25 oil carriers. Practically all American-owned vessels are equipped with wireless apparatus. Oil is delivered at more than 30 different ports between Alaska, Chile, and the Hawaiian Islands. The names of the ships, ports of call, and carrying capacity of each ship are, as follows:

Name of ship.	Ports of call.	Capacity. (Bbls.)
<i>Pectan</i>	Chile.....	72,000
<i>La Habra</i>	Chile.....	72,000
<i>San Joaquin</i>	Chile.....	72,000
<i>Cordelia</i>	Balboa & British Columbia.....	66,000
<i>Elsinore</i>	Balboa & British Columbia.....	66,000
<i>Oberon</i>	Balboa & British Columbia.....	52,000
<i>Trinculo</i>	Balboa & British Columbia.....	52,000
<i>Santa Maria</i>	Hawaii.....	50,000
<i>Santa Rita</i>	Hawaii.....	50,000
<i>Lansing</i>	Oleum, Portland & Seattle.....	48,000
<i>Oleum</i>	Oleum, Portland & Seattle.....	36,000
<i>Argyll</i>	California ports.....	23,000
<i>Washienaw</i>	California ports.....	27,000
<i>Roma</i>	California ports.....	26,000
<i>Caletania</i>	California ports.....	21,000
<i>Fullerton</i>	California ports.....	16,000
<i>Whittier</i>	California ports.....	10,000
<i>Barge Santa Paula</i>	California ports.....	8,000
<i>Barge King & Win</i>	San Francisco Bay.....	1,050
<i>Barge No. 9</i>	San Francisco Bay.....	1,250
<i>Barge No. 42</i>	San Francisco Bay.....	1,005
<i>Barge No. 3</i>	San Francisco Bay.....	
<i>Sailing ship, Erskin</i>	Hawaii, Portland, Seattle.....	35,000
<i>M. Phelps</i>	California coast.....	
<i>Tug, Transit</i>		

Practically all the crude oil is loaded at Port San Luis, California. Due to increased facilities some of the largest ships are being loaded in nine hours. The time required to unload at Balboa is about 36 hours. This time of delivery will probably change when unloading is done at the new berth of The Panama Canal.

Improved Taboga Service.

Beginning December 1, a daily launch service was inaugurated between the Balboa dredge landing and Taboga Island for the purpose of affording employees an opportunity of making more frequent trips to that locality. The schedule is such as will permit employees leaving after the close of the day's work, and returning in the morning in time to resume their duties. The launch *Q*, which was recently converted from a steam launch into a motor boat, has been assigned to this service under the direction of the captain of the port at Balboa; it contains accommodations for 25 passengers and can cover the distance in very fair time. The approved schedule is, as follows:

Week days—Leave Balboa dredge landing every afternoon at 5.30; returning, leave Taboga every morning at 6 o'clock.

Sundays and holidays—Leave Taboga at 6 a. m.; leave Balboa dredge landing for Taboga at 9.30 a. m., and leave Taboga again in the evening at 8 o'clock.

The fares are: For employees, 25 cents gold each way; for nonemployees, 50 cents gold each way; for all children under 12 years of age, 15 cents gold each way.

Flour in Cotton Bags.

A letter has been received from Senator Hoke Smith of Georgia requesting, if practicable, that orders for flour placed for the commissaries stipulate that shipments be made in cotton bags, in order to aid the Southern cotton industry. Heretofore, the flour has been coming largely in bags made of foreign grown jute. The Supply Department has arranged to give this manner of shipment a trial, and if satisfactory, the practice will probably be continued.

CEASES TO BE A COCARRIER.

Panama Railroad Traffic Arrangements with Steamship Companies Annulled.

On Tuesday, November 17, in accordance with a notice issued on August 15, 1914, the Panama Railroad Company ceased to act as a cocarrier in connection with steamship lines operating to the Isthmus. In order, however, to take care of the through freight brought to the Isthmus in vessels that do not use the Canal, the Panama Railroad Steamship Line, beginning with the passage of the *Allianca* on October 30, established a fortnightly service between New York and Balboa. It is expected that this service will take care of all freight of this nature arriving at Balboa bound north, or at Cristobal, bound south, but in case the volume of business warrants, other vessels of the Panama Railroad Steamship Line will be placed in the service.

At the time the United States Government took charge of the work on the Isthmus in May, 1904, the method of operation of through freight business, including the making of rates and their division, was based on a contract between the Panama Railroad Company, and the Pacific Mail Steamship Line, dated June 11, 1902. This contract was for an initial period of three years, and was subject to change only by mutual consent, except that a supplemental contract of the same date provided that if the United States should acquire a majority of the stock of the railroad company, then the traffic agreement could be terminated by either party on six months' notice. The contract was exclusive for all traffic north of Panama on the Pacific coast; it established divisions of the through rates on coastwise traffic of 50 per cent to the Pacific carrier, and 50 per cent to the Panama railroad for the haul from New York to and across the Isthmus, and provided that either party could call on the other to reduce the through rate under the above divisions to a minimum of 40 cents per hundred pounds (or \$8 per net ton), but below this minimum the party calling for a further reduction would have to bear the loss of same.

On January 12, 1905, after the United States Government had acquired both the Canal and railroad properties, notice was given to those concerned that all existing traffic agreements would be terminated at the end of six months, but under later working agreements, also terminable on six months' notice, existing practices were continued, except that all exclusive features that had been in force were annulled, and all regularly established lines were given equal opportunities and privileges to engage in through traffic via the Isthmus. This open door policy was later extended to all lines whether regular or tramp, the only restriction placed on through billing arrangements by the Panama Railroad Company being that all tramp steamships, or lines which had no regular itinerary, were required to prepay at the terminal of the railroad the proportion of the established through rate due the railroad and cocarrier. This policy remained in effect over six years. Under the above arrangement the cocarriers on the Pacific Ocean were allowed 70 per cent of the through rate on coastwise traffic between United States ports on both oceans via the Isthmus.

Effective June 1, 1911, the Secretary of War authorized a new arrangement, providing that where the water haul on the Atlantic

side was performed by ships of the Panama railroad, the division of rates would be 40 per cent to the railroad for the joint rail and steamship service, and 60 per cent to the connecting line. Upon traffic where no part of the water haul was performed by ships of the Panama Railroad Company, the rate for rail transportation across the Isthmus would be 25 per cent of the through rate. This arrangement had the effect of giving the railroad a direct as well as an indirect control over rates across and beyond the Isthmus. It assured equal treatment to all, and required as an imperative condition that such a parity of rates to and via the Isthmus in both directions be established that would effectively prevent discrimination for all classes of traffic by foreign markets and shippers against American markets and shippers. This arrangement continued in effect up to November 17, when the railroad ceased entirely to be a cocarrier.

EXECUTIVE ORDER

Providing for Passage of Vessels through the Canal Prior to Issuance of Tonnage Certificate.

By direction of the President, and by virtue of the authority vested in him under the Panama Canal Act, it is hereby ordered:

1. In any case, prior to October 1, 1915, where it has been impracticable for a vessel to be measured for a Panama Canal tonnage certificate before arrival at the Isthmus, and where to hold such vessel for measurement by the Canal authorities before transit through the Canal would cause undue delay, the Governor of The Panama Canal may, in his discretion, permit such vessel to go through the Canal upon the payment of a sufficient amount to cover tolls on the estimated tonnage of the vessel, with 20 per centum added, such payment to be made, or fully secured, in accordance with the provisions of the Executive Order of April 16, 1914.

2. The tonnage of a vessel desiring to go through the Canal under the circumstances herein indicated shall be estimated by the Governor of The Panama Canal, or by his authority, as closely as practicable and may be based on approximate measurements. The Governor's decision as to the estimated tonnage of a vessel shall be final.

3. A refundment of any excess amount in tolls paid for any vessel under the terms of this Order shall only be made after the vessel has been measured under the rules prescribed for the measurement of vessels for the Panama Canal by the Proclamation of the President, dated November 21, 1913. Such vessel should be measured at the first opportunity practicable after going through the Canal, and a certified copy of its Panama Canal tonnage certificate shall be furnished the Governor, who shall have the right to satisfy himself that the certificate conforms to the measurement rules before authorizing refundment of excess tolls, which refundment may then be made in the manner prescribed by Paragraph 7 of the Executive Order of April 16, 1914.

4. The Governor of The Panama Canal may prescribe such additional regulations as may be necessary and proper to carry out the intent of this Order.

LINDLEY M. GARRISON,
Secretary of War.

WAR DEPARTMENT,
November 16, 1914.

NEW QUARANTINE SITES.

Part of Colon Hospital Grounds Utilized—Balboa Dump Selected on Pacific Side.

Plans for the temporary housing of the quarantine service provide for two reservations as at present, one at Colon and the other on Balboa dump, near the Pacific entrance to the Canal. Existing buildings have been utilized at both places.

At Colon, the new reservation includes the eastern part of the hospital grounds and buildings Nos. 6, 7, 8, 9, 10, 11, 14, 27, 28, and 29, formerly pertaining to the hospital group, have been taken over for quarantine use. The detention ward for cabin passengers is in the old nurses' quarters, building No. 6. This contains 40 rooms, capable of housing 80 people, or a larger number if necessary, and the large reception room formerly used by the nurses has been converted into a dining room. Building No. 7 is occupied by the custodian, and is connected to the detention ward for cabin passengers by a covered passageway. Building No. 8 is the residence of the quarantine officer, No. 9 of the quarantine physician, No. 10 of the health officer of Colon and Cristobal, and No. 11 of the hospital physician. Buildings Nos. 28 and 29 are quarters for the attendants, and the largest house in the group, No. 14, is used as a detention ward for steerage passengers. The ell part of this building has been partitioned off for the use of the women passengers, and a toilet and bathroom installed. The dormitory sections are equipped with standee bunks, and sleeping accommodations have been provided for 350 people. The dining room in this building occupies one end of the main part.

The entire reservation is enclosed by a galvanized iron fence. Another fence extends from building No. 7 to the seawall separating the outdoor space allotted to the cabin passengers from the remainder of the grounds. A third fence, of wire, extends along the beach to prevent the passengers from going in bathing. The beach at this point is particularly dangerous to bathers owing to the hollowing out of the reefs by wave action, and on account of a drowning accident in this locality a short time ago, the authorities considered it best to adopt preventive measures.

All of the buildings in the quarantine group are being thoroughly overhauled, and repaired, repainted and newly screened where necessary.

The permanent site for the quarantine station on the Pacific side will be in front of the wireless station on Balboa dump. The buildings, formerly on Culebra Island, 10 in number, consisting of an office building, a Type 10 residence, detention ward for women steerage passengers, plague laboratory, laundry, two isolation wards, and attendants' quarters have been moved to the new location, and the entire transfer was practically effected by December 1. Grading for the site of the new station, which was begun in September, the installation of water and sewer connections, and the building of a roadway, have all been completed. Water is taken from the main extending from Balboa to Fort Amador. The roadway is about 1,500 feet in length, by 18 feet wide, and connects with the road to the wireless reservation from Balboa.

The present building for cabin passengers accommodates only 72 people. Recommendation

has been made for an increase in its size to take care of approximately 136 people, by adding two rooms length at each end. For quarters for the medical officers, the erection of two 2-family concrete houses, similar to the permanent quarters at Balboa, has been recommended, but neither of the above projects can be undertaken until an appropriation has been made therefor.

In order to make the new station easily accessible to launches and tugs, a boat landing will be provided. This will probably consist of a wooden approach walk, 10 feet wide and about 530 feet long, supported on concrete piles 14 feet above water at mean low tide, a bridge connecting the walk with the landing, and a pontoon of suitable size for the landing. The old landing stage at Balboa, maintained by the Dredging Division, will probably be used for this purpose, as it is to be replaced shortly by a pontoon constructed out of the hull of the old ladder dredge *Badger*.

Automobile Hose Car for Canal Zone Fire Department.

Bids were opened in Washington recently for furnishing an automobile hose car for the Canal Zone Fire Department. There were five bidders in all. The contract was awarded to Geo. C. Hale of Kansas City, at the price of \$4,800, delivery to be made within 90 days from the date of its signature. The specifications for the new machine require its parts to be interchangeable with those on the automobile fire engines now in use on the Zone, and its chassis is included in this stipulation. The motor will be of the 4-cycle, 6-cylinder type. The wheels will be of the special artillery fire department type, made of second growth hickory. The body is to be of steel, reinforced with 1-inch angle iron, with panel not less than 24 inches high, hood to be of the ventilated type, and machine to be provided with hand and seat rails. The car is to be equipped with fire extinguishers, locomotive bell, one 24-foot extension and one 12-foot roof ladder. The words "Canal Zone" are to be lettered on the body of the machine.

Lettering for Designation of Ship's Spaces.

Berthing accommodations for officers and crews on vessels measured for Panama Canal certificates must be designated by lettering, on a plate or otherwise, to show which officer uses each room. Article XI of the "Rules for the measurement of vessels for the Panama Canal" specifies that no space shall be deducted from the gross tonnage unless the use to which it is exclusively devoted has been appropriately designated by official marking. The navigation laws of the United States specify the designations and marking of spaces on vessels, and these have been followed in the rules for Canal measurement. Each room should be designated with the terms appearing on the third page of the certificate, under the heading, "Deductions from gross tonnage," so that the certificate may be readily checked.

Small lettering on plates is all that is necessary, and most vessels have men on board who are capable of doing the marking. Several vessels which have been measured before coming to the Canal have had these designations carved in the woodwork, an elaborate and expensive method, and attention is called to the fact that this method is unnecessarily expensive and may very well be avoided.

ZONE CULTIVATED AREAS.

Horticulturist Barrett Submits Recommendations for Future Improvement.

The report of the horticulturist employed by The Panama Canal on his preliminary investigations at different places in the Canal Zone where special cultivation is in progress carries with it a number of recommendations and suggestions for improvement, in part, as follows:

Balboa.—Planting operations are progressing very well considering the poor quality of the soil and the meagre assortment of plant material. In sodding the lawn areas, either Bermuda or crab grass, and for the beds, more small bulbs for borders, and larger ones for the centers, are recommended. A better selection of crotons, cannas, coleus, caladium, etc., for decorative work is suggested.

Ancon.—The collection of plants is good, but a little more care and color is required.

Corozal.—The visits made to Corozal farm show it to be worthy of a detailed study. The collection of fruits should be increased, especially of the citrus variety, and several more vegetables should be tried. The bananas on the low ground should be transplanted, and Para grass, oto, and aelga planted in their place. The crop conditions on the higher ground is fair, with the exception of the Guinea grass. More varieties of maize and kaffir-corn could be tried to advantage. The construction of a concrete silo at the new dairy, and a compost pit for manure, are recommended.

Empire.—The shipment of the plants at the nursery, of which there are two or three carloads, to Balboa, is recommended.

Juan Mina.—Inspection of the citrus grove in this locality, comprising over 200 orange, and a number of lime trees, showed that the orange trees are in good condition and carry a valuable crop of excellent fruit. Considerable attention in the way of pruning, cleaning, etc., is required. The lime trees are overgrown with jungle to some extent.

Las Guacas.—The upper and lower banana plantations at this point were inspected. The soil of the lower plantation is wet and heavy, but the plants were found to be in excellent condition, and no disease was noted. The upper plantation is more sandy, and should produce high yields if given attention. The revenue at present is about \$300 a month, half from bananas and the rest from plantains. The planting of other varieties of bananas, especially those kinds which are preferred for eating raw, is recommended.

Frijoles.—More space between rows in the pineapple patch is recommended. The avocado nursery was found to be in rather poor condition, and some of the banana plants are diseased. Discontinuance of further planting of these two articles for the present was recommended.

Colon.—The grounds about the Hotel Washington require attention. The weeds should be removed from the lawn on the sea side, and on the south side, the arrangement should be entirely reorganized.

Balboa-Taboga Service.

Launch *Q* makes trips on the following schedule: *Week days*.—Leave Balboa dredge landing at 5.30 p. m., and Taboga at 6 a. m. *Sundays and holidays*.—Leave Taboga at 6 a. m., Balboa dredge landing at 9.30 a. m., and Taboga at 8 p. m. *Fares*.—Employees, 25 cents gold each way; nonemployees, 50 cents gold each way; children under 12 years, 15 cents gold each way.

FIFTH INFANTRY ARRIVES.

Former Employee Quarters at Empire Used to House the Regiment and Its Activities.

The United States transport *Buford* carrying the Fifth Infantry, U. S. A., Col. C. G. Morton, in command, arrived at Cristobal on Wednesday, November 25. The regiment left Plattsburg Barracks, N. Y., in the morning of November 14, and embarked on the *Buford* at Weehawken, N. J., on the evening of the same day. The numerical strength of the regiment at time of embarking was 41 officers and 739 enlisted men; two officers and 16 men of the Medical Corps, and three men of the Quartermaster Corps. Twenty-six ladies and twenty-six children accompanied the regiment. The work of removing the personal effects of the soldiers and the camp equipment and animals from the vessel and loading them into cars was begun at once, and by Saturday November 28, practically all of it had arrived at Empire.

In order to provide for the occupation of Empire by the Army, a large number of alterations in existing buildings was necessary, and this work was performed by the Building Division of The Panama Canal. Regimental headquarters will be in the large building, formerly occupied jointly by the Auditor and the Disbursing Officer of The Panama Canal. The quarters for the commanding officer will be in the house formerly occupied by the Auditor. The married commissioned officers will be housed in the old gold employes quarters in the vicinity of headquarters building. The married noncommissioned officers have been assigned to the French cottages on the hill on the east side of the railroad track. The barracks for the soldiers will be in the bachelor quarters located along the street leading to headquarters building, as well as in buildings in other parts of the settlement, including the old machine shop and storehouse, which have been converted for this purpose. There will be 12 mess halls, one for each company, three on the east side of the railroad track, and the others on the west side. The old district courthouse, a French building, but still in good condition, and the former public market, will be used as guard houses, while the schoolhouse for colored children will be headquarters for the regimental band, with a mess hall and kitchen in connection.

Five of the 4-family Type 14 houses have been converted into quarters for two families, giving each family seven rooms, a bathroom, and kitchen. Seven other houses of this type will be continued to be used for four families, and required only slight alterations. Thirteen of the 2-family Type 7 quarters have been made into 1-family houses, with seven rooms, one bathroom, a kitchen, and dry room in each. The Type 18 bachelor quarters have been divided into four large rooms, two on each floor, the whole accommodating a total of 32 men.

Of the three churches in Empire, St. Mary's Episcopal church and rectory, which is owned by the denomination, will be loaned to the post for religious services; the church of St. Ferdinand is Government property and may be used for services by the Roman Catholics of the post. The parish house adjoining is the property of the congregation, and will probably be acquired by the Army, as it is proposed to use it for the post exchange. The Union church held its meetings in the Government lodge hall, and the building may con-

tinue to be used for the holding of church services and other gatherings. The old Kangaroo lodge building has been converted into a mess hall.

The commissary was reopened on Tuesday, November 24. The space formerly allotted to the display and sale of goods has been reduced, and the room thus gained is used for storage purposes.

The officers of the regiment are:

Col. Charles G. Morton, commanding regiment.

Lieut.-Col. Samson L. Faison, duty with regiment.

Majors—Marcus B. Stokes, commanding First Battalion; Richard C. Croxton, commanding Second Battalion; William A. Phillips, commanding Third Battalion.

Captains—William D. Davis, commanding Company D; Oliver Edwards, commanding Company L; James P. Harbeson, commanding Company K; Milton L. McGrew, commanding Company E; Merch B. Stewart, commanding Co. G; Robert Field, commanding Company M; Robert E. Frith, commanding Company I; James Justice, commanding Company C; Joseph K. Partello, commanding Company B; Benjamin R. Wade, absent on D. S., Fort Leavenworth, Kans.; Fred W. Bugbee, on leave in United States; Herman Glade, absent on D. S. at West Point, N. Y.; Auswell E. Deitsch, commanding Company H; J. Alfred Moss, commanding Company F.

First Lieutenants—Sydney H. Hopson, commanding Company A; John B. Barnes, acting regimental quartermaster; Wilford Twyman, commanding machine gun company; Will D. Wills, duty with company E; Daniel A. Nolan, acting regimental adjutant; Noble J. Wiley, duty with headquarters company; Joseph F. Ware, duty with Company G; Robert E. Boyers, duty with Company K; Ellery Farmer, on leave in United States; Walton Goodwin, duty with Company D; George W. Ederly, duty with Company F; Allan Rutherford, duty with Company M; Alfred H. Erek, duty with Company H; John F. Curry, duty with Company L; Robert E. O'Brien, absent in United States; under orders to join.

Second Lieutenants—Thompson Lawrence, on leave in United States; William E. Larned, duty with Company G; Charles L. Byrne, duty with Company H; William R. Van Sant, duty with Company M; Sumner Waite, assistant to quartermaster; d'Alary Fecht,

duty with Company L; George LeR. Brown, jr., absent in United States; Paul Murray, duty with Company E; John C. P. Bartholf, duty with Company F; Raymond Morris, duty with Company C; Francis H. Forbes, duty with Company A; Thomas G. Lauphler, duty with Company I; Cedric W. Lewis, duty with Company K; Frank W. Milburn, duty with Company B; John W. Hyatt, duty with Company D.

The officers of the medical corps with the regiment are: Maj. Samuel M. Waterhouse and First Lieut. James E. Baylis.

JOINT LAND COMMISSION.

Period of Limitation for Filing of Claims.

On December 27, 1914, there will expire the period during which claims for damages may be filed against the United States in accordance with Articles VI and XV of the Treaty between the United States of America and the Republic of Panama, ratified February 26, 1904, and the subsequent arrangement entered into between the two governments by which the following rule was adopted: "Claims not presented to the commission within six calendar months after it resumes its sessions at Panama, shall be barred unless the commission shall, for exceptional reasons, extend the time three months in a particular case." Subsequent to the adoption of this rule, the effective date of the commencement of the six months period above referred to was changed to June 27, 1914.

By direction of the commission.

WILLIAM TAYLOR, *Secretary*.

PANAMA, R. P., November 30, 1914.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, November 28, 1914. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gambao.	Gatun Lake.	Miraflores Lake.
Sun., Nov. 22.....	127.25	93.50	86.60	86.60	54.07
Mon., Nov. 23.....	127.64	93.50	86.72	86.67	53.92
Tues., Nov. 24.....	128.35	93.72	86.74	86.71	54.11
Wed., Nov. 25.....	130.71	95.81	86.64	86.65	54.15
Thurs., Nov. 26.....	130.25	95.55	86.66	86.66	54.13
Fri., Nov. 27.....	127.75	93.85	86.71	86.66	53.91
Sat., Nov. 28.....	127.20	93.38	86.67	86.68	54.06
Height of low water to nearest foot....	125.0	91 0			

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Edwards, Samuel.....	23109	Jamaica.....	Panama.....	P. R. R.....	1914 Nov. 23.
Forde, Allis.....	82318	Barbados.....	Gatun.....	P. R. R.....	Nov. 23.
Morgan, Phoenix.....	22287	Barbados.....	Paraiso.....	Dredging.....	Nov. 24.
Olton, Henry B.....	39655	Barbados.....	La Boca.....	Term. Cons.....	Nov. 20.
Ramon, Alexander.....	10	Panama.....	Panama.....	P. R. R.....	Nov. 22.
Oliver, Niles.....		Grenada.....	Colon.....		Nov. 9.

The estates of these deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

OFFICIAL CIRCULARS.

Observance of Office Hours.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 27, 1914.

To employes in Administration Building:

Complaint is made that certain employes leave their offices before 12 at noon and before 5 in the afternoon, in order to secure an advantage in being served in the lunch room or securing seats on the motor busses. This practice must be discontinued.

Attention is again directed to the necessity for punctuality. The office hours are from 8 to 12 and from 2 to 5, and employes are expected to be at their work between those hours.

I desire that every possible consideration be shown to the large number of employes in the building who voluntarily, cheerfully, and habitually work extra hours, but even in such cases permission must be obtained where absence during working hours is necessary or desired.

GEO. W. GOETHALS,
Governor.

Installation of Electric Fans Discontinued.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 24, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The last installation of electric fans has been discontinued, and hereafter no fans will be installed unless they are an absolute necessity, and in each case where they are a necessity, full explanation must be given on the work request, which will be approved by me if the facts so warrant.

GEO. W. GOETHALS,
Governor.

Use of Intoxicants by Marine Employes.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 13, 1914.

CIRCULAR No. 606-2:

1. Panama Canal pilots, masters, mates, engineers, and all other employes serving under a marine license, must abstain from using or indulging in intoxicating liquors or other stimulants; nor shall any pilot, while in uniform, enter any public bar or place in which liquor is sold, for any purpose whatever.

2. Any violation of this rule will be sufficient cause for dismissal.

GEO. W. GOETHALS,
Governor.

New Pay Car Schedule.

THE PANAMA CANAL,
OFFICE OF THE PAYMASTER.

BALBOA HEIGHTS, C. Z., November 28, 1914.

The following approximate schedule for pay cars for all Panama Canal and Panama railroad employes will be followed beginning with the December payment:

FROM COLON.

7h—Commissary silver employes, 1 p. m.

9h—Forenoon, Colon docks and coal hoist; afternoon, Cristobal docks.

10h—Forenoon, Margarita, Coco Solo, scrap yards; afternoon, Mount Hope depot, dry dock shops, and coaling station.

12h—Forenoon, engineering and maintenance-of-way, and duct line gangs in Colon and Mount Hope yards and main line to Gatun.

FROM BALBOA HEIGHTS.

7h—Afternoon, Balboa docks and Panama yard for Panama railroad employes.

10h—Leave 6.30 a. m.—Naos Island, 7 to 7.30; Fort Amador to La Boca road, 7.30 to 8.20; east side dry dock, 8.20 to 8.50; foundry, 8.50 to 9; machine, blacksmith, boiler, and other shops, 9.15 to 11; Ancon, back of Hotel Tivoli, 11.15 to 12. Lunch. Balboa flats, 1.30 to 2; Balboa material yard, 2.15 to 2.30; cement shed, 2.35 to 2.40; Corozal, 2.50 to 3.20; Miraflores locks, south end, field office, and north end, 3.30 to 4.30; arrive Balboa Heights, 5.

11h—Leave 6.30 a. m.—Pedro Miguel, 7 to 7.30; Paraiso shops, 7.35 to 8; pontoon bridge to Las Cascaidas, 8 to 9; Gamboa, 9.40 to 10; Darien, 10.15 to 10.25; Gatun, 11 to 12.30; main line gangs to Darien, 1 to 2; Miraflores hill, 3 to 3.30; Miraflores sub-station, 4 to 4.20; arrive Balboa Heights, 5.

Hereafter, no silver employes will be paid at either pay office between the first and the twelfth of each month, except those having time vouchers on termination of service, and except those employed inside the Administration Building. It is desired that all silver employes with regular pay tickets be paid only from the pay cars between the first and twelfth. Any employee who misses the pay car will be paid at either office after the twelfth.

All foremen, field clerks, and timekeepers are requested to advise silver employes of this notice and tell them

to wait for the pay car, as they will not be paid at the offices during this period.

All outside payments not scheduled above will be made on such dates as best suit all concerned, which dates are agreed upon as soon as possible each month.

Approved: JOHN H. MCLEAN,
Paymaster.
GEO. W. GOETHALS,
Governor.

Change in Labor Train Schedule.

THE PANAMA RAILROAD COMPANY.

OFFICE OF CHIEF DISPATCHER.

BALBOA HEIGHTS, C. Z., December 1, 1914.

All concerned.—Effective December 2, 1914, the labor train which at present leaves from the foot of the Administration Building hill at 12.10 p. m., will start from Balboa docks and stop at Balboa Heights station platform instead. Leave Balboa docks at 12.05 p. m., due Balboa Heights station at 12.10 p. m.

F. S. HIRSCH,
Chief Dispatcher.

Examinations by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 308, on Wednesday, December 16, 1914, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability

to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

By direction of the chairman of the board.

F. M. NIXON,
Recorder, Board of Local Inspectors.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., December 1, 1914.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Baylis, Lt. J. B.	Knibb, Enos
Benson, Oscar B.	Montenegro, Miguel
Carp, Clarence W.	Myers, Robert F.
Dobson, W. E.	Paul, C. B.
Donnelly, E. A.	Pentz, A. W. (paper)
Farrell, Fred	Pentz, Mrs. Ella (paper)
Gambrill, Mrs. W. S. (2)	Pincock, Miss Rebecca
Gambrill, Miss Ruth	Smith, Mrs. J. Theodore
Hawley, Albert	Soegren, John
Hedrick, Guy	Thorpe, Mrs. Anella
Kerr, Mrs. T. F.	Williams, Owen...
King, J. E.	Knight, Bradley G. (Spl. Gen.)

Additions to Stock in Commissary.

Shoes, youths, gun metal, blu., oxfords, pr....	\$2.20
Shoes, youths, tan calf, blu., oxfords, pr....	2.40
Shoes, child's, tan, vici, blu., oxfords, pr....	1.80
Shoes, misses, white canvas, pumps, pr....	1.80
Shoes, misses, tan, vici, blu., oxfords, pr....	2.20
Shoes, misses, black, vici, blu., oxfords, pr....	2.10
Shoes, girls, black, vici, blu., oxfords, pr....	2.50
Shoes, women's, patent, pumps, pr....	2.40
Spoons, wooden, ea.....	.10
Hoops, embroidery, r. and, ea.....	.04
Hoops, embroidery, oval, ea.....	.06
Ribbon, satin, 8", yd.....	.29
Overalls, boys, ea.....	.24
Cloths, table, 72" by 72" with 12 napkins, 22" by 22", set.....	4.15

PANAMA CANAL AND RAILROAD LABOR TRAIN SCHEDULE.

(SOUTH END) EFFECTIVE NOVEMBER 1, 1914.

Stations.	NORTHWARD.													
	500	502	504	506	508	510	512	514	516	518	520	522	524	526
	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.
Gamboa... Arr	6.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Culebra.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.05	.....	5.55	.....
Paraiso.....	.....	.....	6.45	.....	.....	.....	.....	.....	.....	.....	4.49	.....	5.39	.....
Pedro Miguel...	6.08	.....	6.42	.....	.....	.....	.....	.....	.....	.....	4.45	.....	5.35	.....
Miraflores Locks	5.59	.....	6.36	.....	6.56	6.50	.....	.....	.....	.....	4.39	.....	.....	.....
Corozal.....	5.55	.....	6.31	.....	6.46	6.45	.....	.....	.....	.....	4.34	.....	.....	.....
Balboa docks...	.....	6.15	.....	6.40	.....	8.00	9.40	.....	1.55	.....	4.45	.....	5.55	.....
Machine shops...	.....	6.12	.....	6.37	.....	7.57	9.37	.....	1.52	4.25	4.42	.....	5.52	.....
Balboa Heights...	5.48	6.08	6.25	6.33	6.41	7.52	9.33	12.03	1.49	.....	4.38	.....	5.48	.....
Bishop's Hollow	.....	6.04	.....	6.29	6.38	7.49	9.29	.....	1.44	.....	4.34	.....	5.44	.....
Panama... Lv...	5.45	6.00	.....	6.25	6.35	7.45	9.25	11.55	1.40	.....	4.30	.....	5.40	.....
	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.
	500	502	504	506	508	510	512	514	516	518	520	522	524	526
Stations.	SOUTHWARD.													
	501	503	505	507	509	511	513	515	517	519	521	523	525	527
	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.
Gamboa... Lv...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.50	.....	.....	.....
Culebra.....	.....	5.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paraiso.....	.....	6.03	.....	.....	.....	.....	.....	.....	.....	.....	5.20	.....	.....	.....
Pedro Miguel...	.....	6.07	.....	.....	.....	.....	.....	.....	.....	.....	5.26	.....	5.12	.....
Miraflores Locks	.....	6.11	6.30	.....	.....	.....	.....	.....	.....	.....	5.30	.....	5.18	.....
Corozal.....	.....	6.14	6.35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Balboa docks...	5.10	.....	.....	7.15	8.10	10.00	.....	2.20	.....	.....	.....	5.10	.....	6.10
Machine shops...	5.13	6.25	.....	7.18	8.13	10.03	.....	2.23	.....	4.26	.....	5.13	.....	6.14
Balboa Heights...	5.15	.....	.....	7.23	8.18	10.07	12.10	2.27	3.10	4.25	5.36	5.17	5.23	6.17
Bishop's Hollow	5.18	.....	.....	7.27	8.22	10.11	12.14	2.31	3.14	4.28	5.40	5.21	5.27	6.21
Panama... Arr	5.20	.....	.....	7.30	8.25	10.15	12.18	2.35	3.18	4.31	5.45	5.25	5.30	6.25
	A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.
	501	503	505	507	509	511	513	515	517	519	521	523	525	527

In addition to the above schedules, a labor train will leave Panama at 6.25 a. m. for Naos Island; returning, leave Naos Island at 5 p. m.

All trains daily, except Nos. 500, 503, 504, 505, 506, 509, 510, 512, 513, 516, 517, 519, 520, 521, 524, and 525, and the Naos Island trains which are discontinued Sundays.

Labor train will leave Panama at 7.30 p. m.; returning leave Balboa docks at 8 p. m., on nights Balboa docks work.

All labor trains terminating at Panama, excepting those handling passenger coaches for pay passengers, will terminate and leave north of Calidonia bridge; other trains terminating at Panama will terminate and leave from the station proper.

Baggage for Balboa steamship connections will be handled by Nos. 512, 514 and 518.

COMMISSARY DEPARTMENT.

Sale of Christmas Toys at Commissaries.

Christmas trees, ornaments, and toys will be put on sale in the commissaries at Cristobal, Gatun, Culebra, Pedro Miguel, Corozal, Ancon and Balboa, as follows: Christmas toys beginning Thursday, December 10, 1914.

Christmas tree ornaments beginning Monday, December 14, 1914.

Christmas trees and holly beginning Monday, December 21, 1914.

The following assortment of toys has been ordered: Musical instruments, donkey engines, magic lanterns, rocking horses, roly polys, animals, dolls' tea sets, musical tops, character dolls, bisque dolls, drums, wood blocks, building blocks, mechanical erectors, parlor games, humpty dumpty circus, all wood perfection art dolls, shoe flies, express wagons, doll carriages, blackboards, printing presses, tool chests, doll beds and bedding, cook stoves, aluminum tea and kitchen sets, mechanical trains, motor cars, fire engines, iron trains, iron stoves, iron wagons, iron trucks, iron fire engines, baseballs, bats, mitts, gloves, guns, boats, horse reins, Perote soldiers, Indians, paint and crayon books, a large assortment toy books, consisting of the following: First Story Series, Bright Picture Series, Bunny Series, Puss-in-Boots Series, A. B. C's-Santa Claus, Mother Goose, color books of animals, object lessons, Hans Brinker Picture Book, Book of Indians, etc. Large panel books of the following series: Peter Rabbit, Black Beauty, Uncle Tom's Cabin, Helen's Babies, Robinson Crusoe, Mother Goose, Picture Book of Horses, Puzzle Picture Building, etc., also a large assortment of junior classic series.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12:30 p. m., and 3 to 6:30 p. m.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective December 3:

FRESH MEATS.	Price.
Mutton—Stewing, per pound.....	10
Shoulder, trimmed, per pound.....	16
Leg (8 to 10 pounds), per pound.....	25
Short cut chops, per pound.....	30
Shoulder, chops, per pound.....	18
Lamb—Stewing, per pound.....	13
Shoulder, trimmed, per pound.....	19
Leg (5 to 8 pounds), per pound.....	30
Chops, per pound.....	36
Chops, shoulder, per pound.....	23
Veal—Stewing, per pound.....	13
Shoulder, for roasting (not under 4 pounds), per pound.....	17
Chops, shoulder, per pound.....	23
Chops, per pound.....	35
Loin, for roasting, per pound.....	35
Cutlets, per pound.....	40
Beef—Suet, per pound.....	03½
Soup, per pound.....	08
Soup bones, per pound.....	02½
Stew, per pound.....	12
Plate, per pound.....	14
Corned, No. 1, per pound.....	20
Corned, No. 2, per pound.....	17
Chuck roast, 3 lbs. and over, special, per pound.....	13
Rib roast, second cut (not under 3½ pounds), special, per pound.....	18
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
Rib roast, first cut (not under 3 pounds), special, per pound.....	22
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27
Pot roast, special, per pound.....	28
choice, per pound.....	23
Rump roast, choice, per pound.....	28
Porterhouse roast, choice, per pound.....	25
choice, per pound.....	31
Steak, chuck, special, per pound.....	15
Round, bottom, special, per pound.....	15
choice, per pound.....	19
Round, top, special, per pound.....	17
choice, per pound.....	22
Sirloin, special, per pound.....	23
Sirloin, choice, per pound.....	28
Sirloin, choice cut, special, per pound.....	26
Sirloin, choice cut, choice, per pound.....	32
Rump, special, per pound.....	23
choice, per pound.....	28
Porterhouse (not less than 1½ pounds), special, per pound.....	26
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse, short, Delmonico special, per pound.....	23
Porterhouse, short, Delmonico choice, per pound.....	28
Tenderloin, Western, special, per pound.....	40

Tenderloin, Western, choice, per pound.....	46
Pork—Hams, fresh, per pound.....	26
Shoulders, fresh, per pound.....	22
Loin, chop or roast, per pound.....	24
Pigs' feet, fresh, each.....	8
Pigs' head, fresh, whole.....	95
Sausage, home made, per pound.....	48
MISCELLANEOUS.	26
Livers—Beef, per pound.....	13
Calif, each.....	65
half, each.....	33
Oysters, fresh, per pkt.....	30
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	14
Frankfurter, per pound.....	14
Lieberwurst, per pound.....	12
Pork, per pound.....	18
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	*47
Bluefish, per pound.....	*10
Halibut, fresh, per pound.....	*7
Salmon, per pound.....	8
Yeast, per pound.....	31
per cake.....	2
POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound.....	25
Chickens—Fancy, roasting, corn fed, per pound.....	24
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	30
Broilers, milk fed, per pound.....	25
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	26
Squabs, each.....	30
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30
CURED AND PICKLED MEATS	
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	24
Half, per pound.....	26
Sliced, per pound.....	32
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	30
Half boiled, per pound.....	32
Sliced, boiled, per pound.....	38
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.42
Pigs' feet, per pound.....	7
Tongues, per pound.....	22
DAIRY PRODUCTS.	
Butter—Creamery, special, per pound.....	43
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	9
Young America, per pound.....	21
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	20
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk (certified), bottle.....	**24
Milk, Sheffield Farms, per quart.....	**15
Fermilac, bottle.....	**25
Ice cream, quart.....	125
1 gallon.....	150
Cream, Sheffield Farms, quart.....	**33
plnt. per pound.....	**19
1 pint.....	**12
VEGETABLES.	
Cauliflower, per pound.....	*10
Beets, per pound.....	2½
Brussels sprouts, per quart.....	15
Celery, per head.....	4
Cabbage, per pound.....	2½
Carrots, per pound.....	12
Cucumbers, per pound.....	8
Lettuce, per pound.....	17
Onions, per pound.....	2
Parsnips, per pound.....	3
Peppers, per pound.....	5
Potatoes, white, per pound.....	2
sweet, American, per pound.....	2½
sweet, tropical, per pound.....	2
Yams, tropical, per pound.....	3
Eggplant, per pound.....	*9
Turnips, per pound.....	12
Tomatoes, per pound.....	6
Squash, per pound.....	12
FRUITS.	
Apples, per pound.....	3
Apples, fancy, per pound.....	5
Cranberries, fresh, per pound.....	6
Grapes, per pound.....	*14
Grape fruit—American, each.....	8
Tropical, each.....	3½
Lemons, per dozen.....	14
Limes, per 100.....	40
Oranges—American, each.....	2½
Tropical, per dozen.....	9
Pears, per pound.....	14½
Coconuts, each.....	5

Bananas, per bunch.....	38
Bananas, each.....	16
Apples, evaporated, per pound.....	23
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
* Indicates advance from preceding list.	
**Indicates five cents allowed for return of bottle.	
† Indicates reduction from preceding list.	
‡ Sold only from commissaries, no orders taken for delivery.	
§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.	

Additions to Stock.

Cloths, table, 72" by 90" with 12 napkins 22" by 22", set.....	\$4.60
Cloths, table, 72" by 108" with 12 napkins 26" by 26", set.....	5.75
Burlap, 35", yd.....	.18
Gloves, ladies, silk, pr.....	.59
Garters and arm bands, set.....	.32
Arm bands, pr.....	.17
Dress shields, No. 2, pr.....	.10
Dress shields, No. 3, pr.....	.11
Dress shields, No. 4, pr.....	.12
Needles, embroidery, assorted, pk.....	.02
Hooks, crochet, ea.....	.02
Coconut, shredded, pkg.....	.26
Wrenches, bicycle, ea.....	.16
Fillers, vacuum, bottle, pt. ea.....	.71
Fillers, vacuum, bottle, qt. ea.....	1.15
Pins, mourning, box.....	.11
Pins, lat. ea.....	.14
Ribbon, moire, No. 80, yd.....	.38
Ties, four-in-hand, ea.....	.43
Hose, ladies, white, pr.....	.34
Hose, ladies, black, pr.....	.34
Hose, ladies, tan, pr.....	.34
Tape, bias, No. 3, pc.....	.08
Tape, bias, No. 4, pc.....	.09
Tape, bias, No. 5, pc.....	.10
Tape, bias, No. 6, pc.....	.11
Tape, bias, No. 7, pc.....	.12
Tape, bias, No. 8, pc.....	.13
Pumpkin, loaf.....	.10
Serge, striped herringbone, yd.....	2.55

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective November 28, 1914:

ARTICLE.	Old.	New.
Drill, cotton, drab, yd.....	\$.25	\$.28
Drill, brown, linen, yd.....	.45	.40
Drill, striped, linen, yd.....	.26	.22
Towels, H. S. embroidered, ea.....	.29	.32
Duck, white, linen, yd.....	.55	.60
Hose, mens, lisle, black, pr.....	.15	.17
Hose, Mens, lisle, tan, pr.....	.15	.17
Hose, mens, lisle, white, pr.....	.15	.17
Stoves, N. P., 2-burner, ea.....	7.35	6.90
Drums for N. P. stoves, ea.....	.95	.75
Pickles, mixed, keg.....	2.50	2.35
Chow Chow, Williams, keg.....	2.70	2.35
Olives, stuffed, K. S. bot.....	.24	.21
Cinnamon, ground, tin.....	.06	.04
Scissors, 6", pr.....	.39	.27
Scissors, 4½", pr.....	.26	.23
Napkins, damask, 22" by 22", ea.....	.23	.17
Cloths, tea, embroidered, ea.....	1.50	1.59
Cloths, tea, embroidered, ea.....	2.10	2.18
Cloths, sideboard, ea.....	1.20	1.27
Dishes, Fern, 8", ea.....	2.60	2.40
Dishes, Fern, 4", ea.....	1.50	1.25
Plates, Wedgewood, 8", ea.....	1.20	.91
Jugs, Simon, ea.....	.70	.74
Jugs, rocket, ea.....	.56	.62
Bowls, sugar, Doulton, ea.....	.33	.37
Beakers, small, ea.....	.30	.23
Dollers, H. S., damask, ea.....	.34	.33
Towels, embroidered, 15" by 24", ea.....	.41	.33
Dishes, ment, ea.....	.08	.15
Carriages, baby, ea.....	7.80	6.15
Carriages, baby, ea.....	8.75	7.40
Ribbon, taffeta, No. 80, yd.....	.28	.25
Trousers, Palm Beach, pr.....	2.80	2.30
Sugar, powdered, tin.....	.20	.17
Sugar, domino, pk.....	.23	.19
Pepper, cayenne, bot.....	.08	.12
Pulish, metal, Radna, tin.....	.10	.12
EFFECTIVE DECEMBER 2.		
Perknives, ea.....	\$.44	\$0.32
Sheeting, linen, yd.....	.71	.78
Pins, mourning, box.....	.11	.01
Hooks, hammock, doz.....	.44	.28
Cups and saucers, ea.....	.38	.41
Plates, 8", ea.....	.29	.38
Plates, 7", ea.....	.28	.31
Plates, 4", ea.....	.41	.44
Plates, 6", ea.....	.35	.38
Dishes, 12", ea.....	.90	1.00
Dishes, 14", ea.....	1.30	1.40
Dishes, 12", ea.....	1.10	1.15
Bowls, salad, 9", ea.....	1.55	1.70
Jugs, 24s, ea.....	.63	.70
Jugs, 12s, ea.....	.63	.68
Jugs, 12s, ea.....	.44	.47
Jugs, 24s, ea.....	.35	.38
Umbrellas, ea.....	.89	1.07

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next six weeks are given in the following table:

DECEMBER.

DATE.	Time and height of high and low water.			
Wed., Dec. 2.....	3:12	9:31	15:44	21:46
	13:5	1:7	13:0	2:8
Thurs., Dec. 3.....	3:48	10:07	16:14	22:20
	13:7	1:4	13:4	2:6
Fri., Dec. 4.....	4:18	10:43	16:47	22:58
	13:9	1:2	13:7	2:4
Sat., Dec. 5.....	4:54	11:19	17:22	23:35
	13:9	1:1	14:0	2:5
Sun., Dec. 6.....	5:29	11:57	18:00	.....
	13:9	1:3	14:1	.....
Mon., Dec. 7.....	0:17	6:09	12:37	18:42
	2:5	13:7	1:5	14:0
Tues., Dec. 8.....	1:01	6:52	13:22	19:27
	2:6	13:4	1:9	13:8
Wed., Dec. 9.....	1:50	7:40	14:11	20:18
	2:8	13:1	2:4	13:6
Thurs., Dec. 10.....	2:45	8:35	15:06	21:14
	2:9	12:8	2:8	13:4
Fri., Dec. 11.....	3:44	9:38	16:06	22:14
	3:0	12:5	3:0	23:3
Sat., Dec. 12.....	4:47	10:46	17:11	23:18
	2:8	12:5	3:0	13:4
Sun., Dec. 13.....	5:50	11:56	18:14	.....
	2:3	12:8	2:7	.....
Mon., Dec. 14.....	0:21	5:50	13:01	19:14
	13:9	1:5	13:4	2:1
Tues., Dec. 15.....	1:20	7:46	14:01	20:10
	14:6	0:7	14:2	1:5
Wed., Dec. 16.....	2:10	8:40	14:55	21:04
	15:..	-0:1	14:9	0:9
Thurs., Dec. 17.....	3:09	9:31	15:45	21:55
	15:8	-0:7	15:5	0:5
Fri., Dec. 18.....	3:58	10:20	16:34	22:45
	16:1	-1:0	15:8	0:4
Sat., Dec. 19.....	4:47	11:09	17:21	23:34
	16:0	-1:0	15:8	0:5
Sun., Dec. 20.....	5:36	11:56	18:08	.....
	15:6	-0:6	15:6	.....
Mon., Dec. 21.....	0:21	6:24	12:44	18:55
	0:9	15:0	0:1	15:0
Tues., Dec. 22.....	1:12	7:14	13:33	19:44
	1:4	14:2	1:0	14:3
Wed., Dec. 23.....	2:04	8:04	14:23	20:34
	2:1	13:2	2:0	13:5
Thurs., Dec. 24.....	2:58	8:59	15:16	21:28
	2:8	12:3	3:0	12:8
Fri., Dec. 25.....	3:25	10:00	16:12	22:25
	3:5	11:5	3:9	12:1
Sat., Dec. 26.....	4:54	11:09	17:11	23:25
	3:9	10:9	4:5	11:7
Sun., Dec. 27.....	5:55	12:18	18:12	.....
	4:1	10:8	4:8	.....
Mon., Dec. 28.....	0:25	6:50	13:19	19:09
	11:7	4:0	10:9	4:7
Tues., Dec. 29.....	1:17	7:40	14:07	19:58
	11:9	3:5	11:3	4:4
Wed., Dec. 30.....	2:03	8:24	14:46	20:42
	12:3	3:0	11:9	3:9
Thurs., Dec. 31.....	2:44	9:06	15:21	21:24
	12:8	2:3	12:6	3:3

JANUARY.

DATE.	Time and height of high and low water.			
Fri., Jan. 1.....	3:22	9:46	16:01	22:05
	13:4	1:5	13:3	2:6
Sat., Jan. 2.....	4:00	10:25	16:40	22:43
	14:0	0:8	14:0	1:9
Sun., Jan. 3.....	4:40	11:04	17:16	23:23
	14:5	0:4	14:5	1:5
Mon., Jan. 4.....	5:20	11:43	17:51	.....
	14:7	0:3	14:8	.....
Tues., Jan. 5.....	0:03	5:58	12:21	18:28
	1:3	14:7	0:3	15:0
Wed., Jan. 6.....	0:44	6:38	13:01	19:05
	1:3	14:5	0:6	15:0
Thurs., Jan. 7.....	1:29	7:21	13:44	19:48
	1:3	14:2	1:0	14:8
Fri., Jan. 8.....	2:16	8:08	14:32	20:36
	1:5	13:7	1:6	14:5
Sat., Jan. 9.....	3:10	9:03	15:26	21:31
	1:8	13:1	2:2	14:1
Sun., Jan. 10.....	4:09	10:07	16:28	22:36
	2:0	12:7	2:7	13:8
Mon., Jan. 11.....	5:14	11:22	17:36	23:48
	2:1	12:5	2:9	13:7
Tues., Jan. 12.....	6:23	12:38	18:45	.....
	1:8	12:7	2:7	.....
Wed., Jan. 13.....	1:00	7:28	13:49	19:51
	14:0	1:3	13:4	2:2

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Goedetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the

meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Rainfall from November 1 to 28, 1914, Inclusive.

STATIONS.	Maximum in one day.		Date.	Total for period.
	Ins.			
Pacific Section—				
Balboa.....	2.22	3	11	60
Balboa Heights.....	2.07	3	9	82
*Miraflores.....	2.69	3	8	04
Pedro Miguel.....	1.67	16	9	93
Rio Grande.....	1.94	16	7	88
Central Section—				
Culebra.....	1.37	16	6	56
*Camacho.....	1.45	17	6	87
Empire.....	.76	16	5	53
Gambou.....	1.34	11	7	08
*Juan Mina.....	2.16	5	7	91
Alhajuela.....	1.12	18	7	27
*El Vigia.....	2.29	18	10	45
Frijoles.....	1.12	16	6	71
*Monte Lirio.....	2.40	9	13	75
Atlantic Section—				
Gotun.....	1.50	13	11	30
*Brazos Brook.....	2.51	9	14	49
Colon.....	3.77	13	16	17

*Standard rain gage—readings at 5 p. m., daily. Automatic rain gage at unstarred stations—values midnight to midnight.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.30 per barrel, reduced to 60° Fahrenheit.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Subsistence supplies, including a large stock of fresh meats, vegetables, canned groceries, fruits, bakery products, etc., are available for quick delivery at either terminal. Prices are generally lower than the retail prices in the United States, and compare favorably with prices in any port of the world.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges; for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the turning of the largest crank shafts or longest line shafts.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment in ward is \$1 per day.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS WITH PACIFIC PORTS.

Approximately regular services between the Atlantic

and the Pacific seaboard from Boston, New York, Philadelphia, and Baltimore, occasionally Charleston and New Orleans, to San Pedro, San Francisco, Portland, and Puget Sound, and return, are maintained by the American-Hawaiian Steamship Company, with a sailing each way about every five days; the Luckenbach Steamship Company, with a sailing each way about every 10 days; Sudden and Christenson, approximately fortnightly; the Atlantic and Pacific Steamship Company, about every three weeks; and the Boston and Pacific Line, and the Arrow Line, each sending a vessel each way about once a month.

Between the east coast of the United States and the west coast of South America, fortnightly services are maintained by the Merchants' Line and by the New York and South America Line; the West Coast Line has sailings each way about every four weeks.

Between the west coast of the United States, with connections to lower British Columbia and Europe the following lines are in service: The Harrison-Direct Line, monthly; the Maple Leaf Line, about every six weeks; the East Asiatic Company, monthly, and the Johnson Line, every six or seven weeks.

The Pacific Steam Navigation Company is operating approximately a monthly service around South America from Liverpool, by way of the Canal.

The American-Australian Line has been sending vessels through the Canal about fortnightly from New York to ports in Australia and New Zealand.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acapulco, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central America line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports abovenamed between Balboa and Ocos.

The Luckenbach Steamship Company is operating a 10-day service between New York and San Francisco, calling at East San Pedro both ways. Its vessels handle cargo at Balboa when sufficient business offers.

The American-Hawaiian lines between New York and San Francisco, and New York and Honolulu, discharge and take on cargo at Balboa when sufficient business offers. At present, a vessel of this company passes through the Canal about every third day.

Grace and Company maintain an irregular service between New York and San Francisco, calling at way ports. Sailings are made about every 12 days. A vessel plying between San Francisco and Valparaiso, calling at way ports, makes a round voyage about every 10 weeks.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Paipa, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa for Valparaiso calling at Paipa, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service each way between New York and Southampton, making the following way ports: Antilla, Jamaica, Colon, Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores, and Cherbourg. Its vessels all arrive at Colon on Sundays and sail on Tuesdays.

The Compagnie Générale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and St. Pierre; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compagnia Transatlantica de Barcellona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadix, Barcelona, and Marseilles; on the

(Continued on Page 152.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon November 29.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Nov. 23....	Stanley Dollar.....	American.....	Luckenbach S. S. Co.....	Philadelphia.....	San Francisco.....	General mdse.....	1,700	1,840	925
Nov. 24....	Alliance.....	American.....	Panama Railroad S. S. Co.....	New York.....	Balboa.....	General mdse.....	655	4,120	2,670
Nov. 24....	Washingtonian.....	American.....	American-Hawaiian S.S. Co.....	New York.....	San Pedro.....	General mdse.....	5,979	6,844	4,699
Nov. 25....	Cape Corso.....	British.....	N. Y. & Australia S.S. Co.....	New York.....	New Zealand.....	General mdse.....	7,600	4,765	3,543
Nov. 27....	St. Helens.....	American.....	E. J. Dodge Company.....	Portland, Me.....	Portland, Ore.....	General mdse.....	1,517	1,642	769
Nov. 28....	Peter H. Crowell.....	American.....	Sudden & Christenson.....	New Orleans.....	San Pedro.....	General mdse.....	4,200	3,345	2,345
Nov. 28....	Zeta (schooner).....	British.....	Robert Wilcox.....	Gulfport.....	Balboa.....	Lumber.....	600	372	313
Nov. 28....	J. L. Luckenbach.....	American.....	Luckenbach S.S. Co.....	New York.....	San Pedro.....	General mdse.....	5,200	5,114	3,241
Nov. 29....	Athene (yacht).....	American.....	C. E. Miller.....	New London.....	San Francisco.....	No cargo.....			68

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Nov. 23....	Nebraskan.....	American.....	American-Hawaiian S.S. Co.....	San Francisco.....	Boston.....	General produce.....	5,790	4,513	3,087
Nov. 23....	Ladner.....	British.....	Watson Munro.....	San Francisco.....	St. Thomas.....	Burley.....	5,094	3,763	2,845
Nov. 23....	Gowanburn.....	British.....	Macley & McIntyre.....	Portland.....	St. Thomas.....	Wheat, flour (a).....	6,570	4,811	3,587
Nov. 23....	Ventura de Larrinaga.....	British.....	Larrinaga S. S. Co.....	Portland.....	Norfolk, (orders).....	Wheat.....	7,400	5,920	4,550
Nov. 27....	Alliance.....	American.....	Panama Railroad S.S. Co.....	Balboa.....	New York.....	General produce.....	655	4,120	2,670
Nov. 27....	Atlantic.....	American.....	Boston & Pacific Line.....	San Francisco.....	Boston.....	General produce.....	7,500	5,421	3,797
Nov. 27....	Chincha.....	British.....	Merchants' Line.....	Valparaiso.....	Philadelphia.....	Nitrates & general.....	8,103	6,429	4,630
Nov. 29....	Alaskan.....	American.....	American-Hawaiian S.S. Co.....	San Pedro.....	Charleston.....	General pro lue.....	9,000	8,746	6,388

(a) 2,500 tons flour.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessels	Line	From
Nov. 25....	Buford.....	U. S. Army transport.....	Weehawken.
Nov. 28....	Kirmwood.....	Constantine-Middlesboro.....	Cardiff.
Nov. 28....	Roddam.....	Stephen Sutton.....	Newport.
Nov. 29....	Swazi.....	Ellerman & Bucknell Co.....	Galveston.
Nov. 30....	San Mateo.....	Luckenbach S. S. Co.....	New York.
Nov. 30....	Santa Clara.....	Atlantic & Pacific S.S. Co.....	New York.
Dec. 2....	Celia.....	Merchants' Line.....	Philadelphia.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessels	Line	For
Nov. 29....	Cacique.....	N. Y. & Pacific S.S. Co.....	Iquique.
Nov. 29....	Lyra.....	Luckenbach S. S. Co.....	San Pedro.
Dec. 2....	Harry Luckenbach.....	Luckenbach S. S. Co.....	San Pedro.
Dec. 7....	Honolulu.....	American-Hawaiian S. S. Co	San Pedro.
Dec. 7....	Isabels.....	Luckenbach S. S. Co.....	San Francisco.
.....	Craster Hall.....	N. Y. & South America Line	Peru.
.....	Nakar.....	East Asiatic S. S. Co.....	San Francisco.
.....	Crosshill.....	Macbeth & Co.....	Tacoma.

*Vessels which will pass through the Canal.

PORT OF CRISTOBAL.

*ARRIVALS.

Nov. 24....	Magdalena.....	Royal Mail.....	Southampton.
Nov. 24....	Tordenskjold.....	Earn Line.....	Norfolk.
Nov. 26....	Hilding.....	Seeberg S. S. Co.....	Gulfport.
Nov. 26....	P. Willem I.....	Dutch Royal Mail.....	Amsterdam
Nov. 28....	Wegadesk.....	Earn Line.....	Norfolk.
Nov. 29....	Merchant.....	Harrison Line.....	Liverpool.
Nov. 29....	Falk.....	Seeberg S.S. Co.....	Mobile.

*DEPARTURES.

Nov. 22....	Weslands.....	Munson Line.....	Pensacola.
Nov. 27....	P. Willem I.....	Dutch Royal Mail.....	Haiti.

*EXPECTED ARRIVALS.

Nov. 30....	Siena.....	La Veloce.....	Genoa.
Nov. 30....	Haiti.....	Cie. Gen. Transatlantique.....	Bordeaux.
Dec. 2....	Median.....	Leyland Line.....	Liverpool.
Dec. 6....	Ocland.....	Earn Line.....	Norfolk.

*EXPECTED DEPARTURES.

Nov. 30....	Tordenskjold.....	Earn Line.....	Nima.
Dec. 1....	Trent.....	Royal Mail.....	Southampton.
Dec. 2....	Siena.....	La Veloce.....	Genoa.
.....	Merchant.....	Harrison Line.....	.....

*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Nov. 25....	Acajulla.....	Salvador S. S. Co.....	Salina Cruz.
Nov. 28....	San Juan.....	Pacific Mail S. S. Co.....	San Pedro.
Nov. 28....	Chitre.....	National Navigation Co.....	Panama.
Nov. 29....	Chile.....	Pacific Steam Nav. Co.....	Callao.

*DEPARTURES.

Nov. 23....	Palena.....	South American S. S. Co...	Colombian ports.
Nov. 26....	Newport.....	Pacific Mail S. S. Co.....	San Francisco.
Nov. 28....	Chitre.....	National Navigation Co.....	Panama.

*EXPECTED ARRIVALS.

Nov. 30....	Quilpue.....	Pacific Steam Nav. Co.....	Guayaquil.
Dec. 2....	Huallaga.....	Peruvian S. S. Co.....	Callao.
Dec. 2....	Limari.....	South American S. S. Co...	Valparaiso.

*EXPECTED DEPARTURES.

Dec. 3....	Jamaica.....	Pacific Steam Nav. Co.....	Colombian ports.
Dec. 4....	Chile.....	Pacific Steam Nav. Co.....	Callao.
Dec. 5....	Acajulla.....	Salvador S. S. Co.....	Central America.
Dec. 7....	San Juan.....	Pacific Mail S. S. Co.....	San Francisco.

*Other than vessels using the Canal.

(Continued from Page 151.)

return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every six days direct; between Colon and New York by the United Fruit Company and the Royal Mail Company, sailings via Kingston weekly and fortnightly, respectively; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

NEW YORK TO CRISTOBAL.		Sails.	Arrives.
Advance.....	P. R. R.	Nov. 28....	Dec. 5
Panama.....	P. R. R.	Dec. 6....	Dec. 11
Alliance.....	P. R. R.	Dec. 11....	Dec. 17
Colon.....	P. R. R.	Dec. 17....	Dec. 23
Advance.....	P. R. R.	Dec. 23....	Dec. 30

Panama.....P. R. R. Dec. 30....Jan. 5

CRISTOBAL TO NEW YORK.

Colon.....	P. R. R.	Dec. 5....	Dec. 11
Advance.....	P. R. R.	Dec. 10....	Dec. 17
Panama.....	P. R. R.	Dec. 17....	Dec. 23
Alliance.....	P. R. R.	Dec. 23....	Dec. 29
Colon.....	P. R. R.	Dec. 30....	Jan. 5
Advance.....	P. R. R.	Jan. 5....	Jan. 12

NEW YORK TO COLON.

Santa Marta.....	U. F. C.	Nov. 25....	Dec. 2
Steamer.....	U. F. C.	Dec. 2....	Dec. 9
Oruba.....	R. M.	Dec. 5....	Dec. 13
Steamer.....	U. F. C.	Dec. 9....	Dec. 16
Steamer.....	U. F. C.	Dec. 16....	Dec. 23
Trent.....	R. M.	Dec. 10....	Dec. 27

COLON TO NEW YORK.

Almfrante.....	U. F. C.	Dec. 3....	Dec. 10
Trent.....	R. M.	Dec. 8....	Dec. 16
Santa Marta.....	U. F. C.	Dec. 10....	Dec. 17

Steamer.....	U. F. C.	Dec. 17....	Dec. 24
Ebro.....	R. M.	Dec. 22....	Dec. 30
Steamer.....	U. F. C.	Dec. 24....	Dec. 31

NEW ORLEANS TO COLON.

Heredia.....	U. F. C.	Nov. 25....	Dec. 2
Abangarez.....	U. F. C.	Nov. 28....	Dec. 3
Parismina.....	U. F. C.	Dec. 2....	Dec. 9
Atenas.....	U. F. C.	Dec. 5....	Dec. 10

COLON TO NEW ORLEANS.

Turrialba.....	U. F. C.	Dec. 3....	Dec. 8
Cartago.....	U. F. C.	Dec. 3....	Dec. 10
Abangarez.....	U. F. C.	Dec. 10....	Dec. 15
Heredia.....	U. F. C.	Dec. 10....	Dec. 17

Irregular services between Cristobal and Gulf ports of the United States, with way calls at Central American and Mexican ports, are maintained by the Leyland and Harrison Lines, sailings about every fortnight, and the Seeberg Line, sailings about every 18 days.

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, DECEMBER 9, 1914.

No. 16.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,

THE CANAL RECORD,

Balboa, Heights, Canal Zone,

Isthmus of Panama.

NOTES OF PROGRESS.

Change in Panama Railroad Steamship Schedule.

Following the removal of the steamships *Cristobal* and *Ancon* from the service of the Panama Railroad Steamship Line, and the institution of a service through the Canal by vessels of this line, the present sailing list is to be entirely revised. Beginning with the sailing of the *Allianca* from New York on Thursday, December 10, a weekly service will be maintained under these general rules:

A vessel will sail from New York for Cristobal every Thursday at 3 p. m., arriving at Cristobal on the following Wednesday. (Except the *Advance*, which, requiring seven days for the voyage, will sail on Thursday and arrive on Thursday.)

A vessel will sail from Cristobal for New York every Saturday at 3 p. m., and arrive at New York every Friday. (The *Advance* will arrive on Saturday.)

All the vessels of the regular line, the *Advance*, *Allianca*, *Colon*, and *Panama*, will be sent through the Canal to Balboa. Each will spend approximately 10 days at the Isthmus, sailing from Cristobal for New York on the Saturday of the week following arrival at Cristobal from New York.

A list of sailings in the near future, revised in accordance with this program, appears at the bottom of the last page of this issue of THE CANAL RECORD. It should be noted that the sailing date of the *Panama*, from Cristobal on Thursday, December 17, has not been changed and this vessel will leave on the date originally set for it. The regular Saturday sailings from Cristobal will begin with the departure of the *Allianca* on December 26.

Service to Siberia.

The steamships *Chinese Prince* and *Royal Prince*, which entered the Canal on November 17 and December 7, respectively, for south-bound transit, are vessels of the Prince Line, and were dispatched from New York for Vladivostok, the eastern terminus of the Trans-Siberian Railway, with cargoes of general manufactured goods and merchandise.

The *Chinese Prince* carried 6,545 tons of cargo and the *Royal Prince* 7,500 tons.

The distance from New York to Vladivostok, by way of the Panama Canal, San

Francisco, and the Great Circle is 10,100 miles, by way of the Hawaiian and Midway Islands, about 10,450 miles, and by way of the Suez Canal and Hongkong the distance is approximately 13,450 miles. The saving in distance by way of Panama may, accordingly, be placed at 3,000 miles, which means, for 10-knot vessels, a saving of 12½ days at sea.

Chilean Line Operating through the Canal.

The steamship *Limari* of the South American Steamship Company (Compañia Sud Americana de Vapores), the Chilean line, was despatched through the Canal to Cristobal on December 2, following its arrival at Balboa from Valparaiso, and was despatched back to Balboa, on the way to Valparaiso, on December 7. It is stated by the office of the company at Balboa that this is the beginning of a regular fortnightly service between Cristobal and Valparaiso, in which the passenger vessels *Limari*, *Huasco*, *Aysen*, and *Palena* will be employed. The line will connect at Cristobal with Atlantic carriers which do not despatch vessels through the Canal.

Cable Addresses of The Panama Canal.

The cable address of The Panama Canal on the Isthmus is "Isthmian, Balboa Heights." Cable messages concerning the business of steamships with the Canal need no more specific address than the above; upon their receipt in the Executive Office they are immediately transmitted to the department or departments concerned.

The cable address of The Panama Canal in the United States is "Isthmian, Washington," and is sufficient to assure the proper transmission of messages.

The use of "Isthmian" in the cable address of The Panama Canal is a heritage from its corporate predecessor, the Isthmian Canal Commission.

First Whole Cargoes of Sugar from Peru.

The steamships *Atlantic City* and *Nyanza*, which entered the Canal on December 5 for transit to the Atlantic, were both laden with raw sugar, shipped from Eten, Peru, to Great Britain. These are the first shipments through the Canal of whole cargoes of sugar from Peru, where sugar is the principal agricultural product, second only to ores in export value. The *Atlantic City* carried 7,610 tons and the *Nyanza* 5,750 tons.

Abandonment of Cucaracha.

The camp for silver employes at Cucaracha, situated on the east bank of the Canal a little north of Paraiso, will be completely abandoned about January 1, but such buildings as are in an insanitary and unstable condition will be vacated at once. Cucaracha labor camp was established by the French, and the buildings there are mostly all of French construction.

MANIFESTS OF SHIPS' CARGO.

Copies Will Not be Required of Vessels Using Canal Engaged in Through Traffic.

It was originally intended to require vessels in transit through the Canal to furnish complete copies of their manifests, and this was provided for in the customs regulations published in Circular 679. It was found advisable, however, to modify this requirement, and while the matter was under consideration, the local agents of the various steamship companies were invited to submit their recommendations. Mr. D. L. Webster, agent of the Royal Mail Steam Packet Company, Colon, was authorized to present the views of various companies interested, as determined in conference, and, under date of October 22, he addressed a letter to the Governor, from which the following excerpts are taken:

"It is thought by the agents that the rules in force at the Suez Canal should be taken as a guide in dealing with international traffic that will pass through the Panama Canal, quite apart from rules that the authorities may see fit to establish for United States coastwise traffic, which is altogether different. The data furnished on the form C. A. Dept. 175, (subject to the amendments suggested) should be sufficient. The remarks of Messrs. Thos. and Jas. Harrison, Liverpool, addressed to their Colon agents, Messrs. W. Andrews and Company, under date of August 24, 1914, follow, and are very pertinent:

"We understand that the Canal regulations (Circular 679-Customs regulations) require every ship to deposit a detailed manifest of her cargo. Is this the case, and if so, why? No other ship canal in the world requires such a formality, which will involve much extra work in the clearance of a ship. At the Suez Canal, the captain is only questioned as to the general nature of the cargo and the port of discharge."

"By reference to the Executive Order, signed at the White House, Washington, on July 9, 1914, Paragraph 8, it will be seen that the idea was to follow Suez practice, since in respect of cargo the ship is only expected to declare the 'Character of cargo.' This is the broad minded way to regard international traffic, and is the view which prevails in regard to it the world over. Contrary to this, the article under discussion not only calls for a detailed manifest, but imposes a very onerous task on the master or agent by requiring a translation into English if the manifest happens to be written in a foreign language. It must be observed here that the vast majority of steamers using the Canal will not carry pursers or freight clerks. The least possible detail, therefore, should be required from ships using the Canal, and in this connection it should be borne in mind that the Canal tolls are not assessed on the cargo a vessel carries, but on its Canal tonnage."

Because of the objections advanced by the

steamship companies, and for the further reason that the compilation of detailed statistics from manifests would require a large clerical force and involve considerable expense, it has been decided that vessels in transit through the Canal will not be required to furnish copies of their manifests, but that, instead, the practice of the Suez Canal, where the vessel is required to submit only a summary of its cargo, segregating only the most important items, will be followed, which plan is to be incorporated in the revised customs regulations.

Duplicate manifests will still be required for cargo landed in the Canal Zone, excepting cargo discharged for transshipment.

JOINT LAND COMMISSION.

Rule of Dismissal.

In the matter of the claim of the Panama Lottery Company, for cancellation of lottery concession in the Canal Zone, rule of dismissal No. 152, docket No. 1656, December 5, 1914.—The Panama Lottery Company, under date of September 3, 1913, filed with the commission a claim for damages in the sum of seven and one-half millions (\$7,500,000) of dollars, United States currency, which, upon its motion of November 16, 1914, for leave to amend in the amount claimed, was reduced to one million dollars (\$1,000,000), United States currency. The basis of this claim is contained in the following statement submitted by claimant:

"The Panama Lottery Company has a concession embracing the whole Republic of Panama and said concession expires December 31, 1918.

"Notwithstanding, in September, 1904, the Canal Zone authorities deprived this company of doing any business on the Zone, thus taking away from the company the most valuable territory, the business therein being three times as large as Panama and Colon together, and this was done over fourteen (14) years before the expiration, and hence our claim for profits and interest amounting to seven and a half millions of dollars, United States gold."

The status of this claim is governed by the provisions of Article XXI of the Treaty between the United States of America and the Republic of Panama, ratified February 26, 1904. This provision reads, as follows:

"The rights and privileges granted by the Republic of Panama to the United States in the preceding Articles are understood to be free of all anterior debt, liens, trusts, or liabilities, or concessions or privileges to other Governments, corporations, syndicates or individuals, and consequently, if there should arise any claims on account of the present concessions and privileges or otherwise, the claimant shall resort to the Government of the Republic of Panama and not to the United States for any indemnity or compromise which may be required."

In view of the provisions of the Article cited, the commission has reached the conclusion that there is no valid claim against the United States, and the claim is therefore dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Award.

In the matter of the claim of The Las Cascadas Estates Company, Limited, for the property known as Las Cascadas plantation, award No. 63, December 5, 1914, docket No. 1433—An award is hereby made against the United States, in favor of the claimant hereinafter named, in the sum of \$75,000, United States currency.

This award shall be paid to the claimant hereinafter named, in the amount specified, on or before the 5th day of January, 1915, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

The Las Cascadas Estates Company Limited, docket No. 1433—For all rights, title, claims and other interests in lands, growing crops, trees of whatever nature, machinery, houses and other buildings, and any and all other improvements which the said The Las Cascadas Estates Company, Limited, or its predecessors in interest, may possess or may have possessed on the lands known as the Las Cascadas plantation situate on the east side of the Panama Canal about three and one-half miles north of Empire, Canal Zone, the sum of \$75,000, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Calendar of Claims.

The following is the calendar of claims set for hearing during the week ending December 19.

Tuesday, December 15.—Docket 8, Píoquinto Olivares, et al; Dockets 10 and 11, Camillo Lepel.

Wednesday, December 16.—Docket 13, Mrs. O. B. Grout.

Thursday, December 17.—Enrique Rodríguez Fernández, Docket 30.

WILLIAM TAYLOR, Secretary.

Accident to Jib of Floating Crane "Ajax."

The jib of the new floating crane *Ajax* collapsed at about 2.30 p. m. on Monday, December 7, while undergoing tests at Dock 13. The operating house was wrecked by the jib in falling, but no damage was done to the pontoon or to lower part of the superstructure. The only man injured was a West Indian laborer who was at the top of the jib, and jumped on its descent; his hurts were not serious.

Physical Disabilities of Schoolchildren.

The district physicians have been instructed to follow up the cases of all children found defective in the physical examination recently given the pupils in the Canal Zone public schools, by notifying the parents of the defects found and the necessity for treatment. After the expiration of 30 days, the physicians are to advise the Chief Health Officer of the percentage of those previously found defective who reported for treatment, together with the results obtained. With a view of detecting unreported cases of contagious disease in schools, teachers have been requested to inform the district physicians when pupils have been absent two or three days without known cause. In these cases, the physicians will visit the homes of the scholars and take such measures as the circumstances require.

"Advance" To Sail Saturday, December 12.

The sailing of the steamship *Advance* from Cristobal, scheduled for Thursday, December 10, has been postponed to Saturday, December 12, at 3 p. m.

A PROCLAMATION

By the President of the United States of America.
[NEUTRALITY—PANAMA CANAL ZONE.]

Whereas, the United States is neutral in the present war and Whereas the United States exercises sovereignty in the land and waters of the Canal Zone and is authorized by its treaty with Panama of February 26, 1904, to maintain neutrality in the cities of Panama and Colon, and the harbors adjacent to the said cities:

NOW, THEREFORE, I, WOODROW WILSON, President of the United States of America, do hereby declare and proclaim the following rules and regulations governing the use of the Panama Canal by vessels of belligerents and the maintenance of neutrality by the United States in the Canal Zone, which are in addition to the general "Rules and regulations for the operation and navigation of the Panama Canal and approaches thereto, including all waters under its jurisdiction," put into force by Executive Order of July 9, 1914, and I do bring to the attention of all concerned the Protocol of an Agreement between the United States and the Republic of Panama, signed at Washington, October 10, 1914, which protocol is hereunto annexed.

Rule 1. A vessel of war, for the purposes of these rules, is defined, as follows: A public armed vessel, under the command of an officer duly commissioned by the government, whose name appears on the list of officers of the military fleet, and the crew of which are under regular naval discipline, which vessel is qualified by its armament and the character of its personnel to take offensive action against the public or private ships of the enemy.

Rule 2. In order to maintain both the neutrality of the Canal and that of the United States owning and operating it as a government enterprise, the same treatment, except as hereinafter noted, as that given to vessels of war of the belligerents shall be given to every vessel, belligerent or neutral, whether armed or not, that does not fall under the definition of Rule 1, which vessel is employed by a belligerent Power as a transport or fleet auxiliary or in any other way for the direct purpose of prosecuting or aiding hostilities, whether by land or sea; but such treatment shall not be given to a vessel fitted up and used exclusively as a hospital ship.

Rule 3. A vessel of war of a belligerent, or a vessel falling under Rule 2, which is commanded by an officer of the military fleet, shall only be permitted to pass through the Canal after her commanding officer has given written assurance to the authorities of The Panama Canal that the rules and regulations will be faithfully observed.

The authorities of the Panama Canal shall take such steps as may be requisite to insure the observance of the rules and regulations by vessels falling under Rule 2, which are not commanded by an officer of the military fleet.

Rule 4. Vessels of war of a belligerent and vessels falling under Rule 2 shall not revictual nor take any stores in the Canal, except so far as may be strictly necessary; and the transit of such vessels through the Canal shall be effected with the least possible delay in accordance with the Canal regulations in force, and with only such intermission as may result from the necessities of the service.

Prizes shall be in all respects subject to the same rules as vessels of war of the belligerents.

Rule 5. No vessel of war of a belligerent or

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Jones, Thomas.....	57492	Barbados.....	La Boca.....	Perm. Buildings.	1914 Dec. 2

The estates of these deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

vessel falling under Rule 2 shall receive fuel or lubricants while within the territorial waters of the Canal Zone, except on the written authorization of the Canal authorities, specifying the amount of fuel and lubricants which may be received.

Rule 6. Before issuing any authorization for the receipt of fuel and lubricants by any vessel of war of a belligerent or vessel falling under Rule 2, the Canal authorities shall obtain a written declaration, duly signed by the officer commanding such vessel, stating the amount of fuel and lubricants already on board.

Rule 7. Supplies will not be furnished by the Government of the United States, either directly, or indirectly through the intervention of a corporation, or otherwise, to vessels of war of a belligerent or vessels falling under Rule 2. If furnished by private contractors, or if taken from vessels under the control of a belligerent, fuel and lubricants may be taken on board vessels of war of a belligerent, or vessels falling under Rule 2, only upon permission of the Canal authorities, and then only in such amounts as will enable them, with the fuel and lubricants already on board, to reach the nearest accessible port, not an enemy port, at which they can obtain supplies necessary for the continuation of the voyage. The amounts of fuel and lubricants so received will be deducted from the amounts otherwise allowed in the ports under the jurisdiction of the United States during any time within a period of three months thereafter. Provisions furnished by contractors may be supplied only upon permission of the Canal authorities, and then only in amount sufficient to bring up their supplies to the peace standard.

Rule 8. No belligerent shall embark or disembark troops, munitions of war, or warlike materials in the Canal, except in case of necessity due to accidental hindrance of the transit. In such cases, the Canal authorities shall be the judge of the necessity, and the transit shall be resumed with all possible dispatch.

Rule 9. Vessels of war of a belligerent and vessels falling under Rule 2 shall not remain in the territorial waters of the Canal Zone under the jurisdiction of the United States longer than 24 hours at any one time, except in case of distress; and in such case, shall depart as soon as possible; but a vessel of war of one belligerent shall not depart within 24 hours from the departure of a vessel of an opposing belligerent.

The 24 hours of this rule shall be construed to be 24 hours in addition to the time necessarily occupied in passing through the Canal.

Rule 10. In the exercise of the exclusive right of the United States to provide for the regulation and management of the Canal, and in order to ensure that the Canal shall be kept free and open on terms of entire equality to vessels of commerce and of war, there shall not be, except by special arrangement, at any one time a greater number of vessels of war of any one nation, including those of the allies of a belligerent nation, than three in either terminal port and its adjacent terminal waters, or than three in transit through the Canal; nor shall the total number of such vessels, at any one time, exceed six in all the territorial waters of the Canal Zone under the jurisdiction of the United States.

Rule 11. When vessels of war or vessels

falling under Rule 2, belonging to or employed by opposing belligerents, are present simultaneously in the waters of the Canal Zone, a period of not less than 24 hours must elapse between the departure of the vessel belonging to or employed by one belligerent and the departure of the vessel belonging to or employed by his adversary.

The order of departure is determined by order of arrival, unless the vessel which arrived first is so circumstanced that an extension of her stay is permissible.

A vessel of war of a belligerent or vessel falling under Rule 2 may not leave the waters of the Canal Zone until 24 hours after the departure of a private vessel flying the flag of the adversary.

Rule 12. A vessel of war of a belligerent or vessel falling under Rule 2 which has left the waters of the Canal Zone, whether she has passed through the Canal or not, shall, if she returns within a period of one week after her departure, lose all privileges of precedence in departure from the Canal Zone, or in passage through the Canal, over vessels flying the flag of her adversaries which may enter those waters after her return and before the expiration of one week subsequent to her previous departure. In any such case, the time of departure of a vessel which has so returned shall be fixed by the Canal authorities, who may in so doing consider the wishes of the commander of a public vessel or of the master of a private vessel of the adversary of the returned vessel, which adversary's vessel is then present within the waters of the Canal Zone.

Rule 13. The repair facilities and docks belonging to the United States and administered by the Canal authorities shall not be used by a vessel of war of a belligerent, or vessels falling under Rule 2, except when necessary in case of actual distress, and then only upon the order of the Canal authorities, and only to the degree necessary to render the vessel seaworthy. Any work authorized shall be done with the least possible delay.

Rule 14. The radio installation of any vessel of a belligerent Power, public or private, or of any vessel falling under Rule 2, shall be used only in connection with Canal business to the exclusion of other business while within the waters of the Canal Zone, including the waters of Colon and Panama harbors.

Rule 15. Air craft of a belligerent Power, public or private, are forbidden to descend or arise within the jurisdiction of the United States at the Canal Zone, or to pass through the air spaces above the lands and waters within said jurisdiction.

Rule 16. For the purpose of these rules the Canal Zone includes the cities of Panama and Colon and the harbors adjacent to the said cities.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this 13th day of November in the year [SEAL] of our Lord one thousand nine hundred and fourteen and of the independence of the United States the one hundred and thirty-ninth.

WOODROW WILSON.

By the President:

W. J. BRYAN, *Secretary of State.*

[No. 1287.]

Protocol of an agreement concluded between Honorable Robert Lansing, Acting

Secretary of State of the United States, and Don Eusebio A. Morales, Envoy Extraordinary and Minister Plenipotentiary of the Republic of Panama, signed the tenth day of October, 1914.

The undersigned, the Acting Secretary of State of the United States of America and the Envoy Extraordinary and Minister Plenipotentiary of the Republic of Panama, in view of the close association of the interests of their respective Governments on the Isthmus of Panama, and to the end that these interests may be conserved and that, when a state of war exists, the neutral obligations of both Governments as neutrals may be maintained, after having conferred on the subject and being duly empowered by their respective Governments, have agreed:

That hospitality extended in the waters of the Republic of Panama to a belligerent vessel of war or a vessel belligerent or neutral, whether armed or not, which is employed by a belligerent power as a transport or fleet auxiliary or in any other way for the direct purpose of prosecuting or aiding hostilities, whether by land or sea, shall serve to deprive such vessel of like hospitality in the Panama Canal Zone for a period of three months, and *vice versa*.

In testimony whereof, the undersigned have signed and sealed the present Protocol in the city of Washington, this 10th day of October, 1914.

ROBERT LANSING [L. S.]

EUSEBIO A. MORALES [L. S.]

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, December 5, 1914. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gatun.	Gatun Lake.	Miraflores Lake.
Sun., Nov. 29.....	135.95	99.70	86.82	86.74	54.13
Mon., Nov. 30.....	131.50	96.94	86.72	86.74	54.19
Tues., Dec. 1.....	135.75	99.45	86.75	86.73	53.99
Wed., Dec. 2.....	130.25	95.80	86.72	86.69	54.00
Thurs., Dec. 3.....	128.30	94.16	86.66	86.63	54.20
Fri., Dec. 4.....	127.65	93.70	86.63	86.66	54.06
Sat., Dec. 5.....	127.60	93.48	86.69	86.69	54.03
Height of low water to nearest foot...	125.0	91.0			

Proposals for Plumbing, Barracks "I" and "K", Balboa Dump.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., December 23, 1914, and then opened for furnishing the necessary labor for installing plumbing in Army Barracks "I" and "K," Balboa Dump, in accordance with drawings of these buildings which may be seen upon application to the Architect, Balboa Heights, C. Z. This work must be done to the satisfaction of the Constructing Quartermaster or his representative. Any further information relative to specifications, etc., may be obtained upon application to the office of the Constructing Quartermaster, Room 266, Balboa Heights.

Separate bid should be submitted for each house, but one bidder may bid on both buildings.

Bidders should state in their proposal the time in which they propose to complete this work.

The Government reserves the right to reject all bids. Bids must be accompanied by \$75.

Bids should be marked "Proposal for plumbing, Barracks "I" and "K," Balboa Dump."

WM. R. GROVE,
Chief Quartermaster.

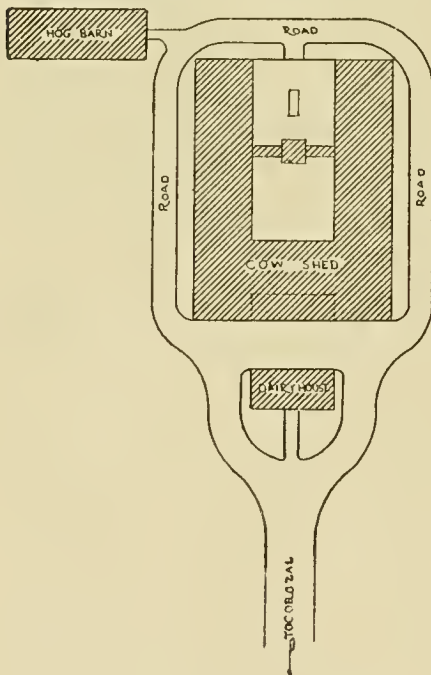
NEW COROZAL FARM DAIRY.

Model Buildings Now Under Construction to House Hospital Livestock.

The new cow barn, dairy house, and piggery of the Health Department at Corozal farm are under construction by forces of the Building Division. The site selected is on rising ground (elevation 82 feet), about half a mile east of the village. A temporary road has been constructed to it for the transportation of material. This road, which, eventually will be fully improved, leads to a point in front of the dairy house, the first of the group of buildings, thence passes entirely around the cow barn. The road also connects with one leading from the open court where the weigh house is located, which court is formed by the rectangular design of the cow barn. The layout is centrally located in connection with the feed pastures, and provides for buildings of a model nature in respect to conveniences, sanitary precautions, and care of the stock.

COW BARN.

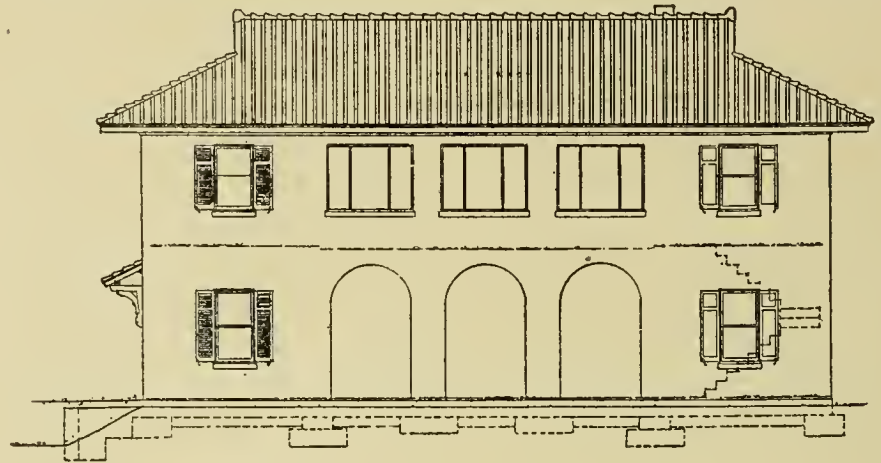
The cow barn is the largest of the group. It is 160 feet long and 121 feet wide, including the open court in the center, and is built entirely of concrete. The roof is six and one-half inches thick, consisting of a bottom layer of concrete four inches thick, a coat of pitch for waterproofing, and a top layer of concrete one and one-half inches thick. It is supported by heavy reinforced concrete beams, spaced 16 feet apart, resting on concrete columns 12 by 16 inches in size. These beams are said to be the longest of their kind installed in any building on the Isthmus—34 feet, with a maximum depth of four feet and a minimum of 30 inches. They support a weight of approximately 75,000 pounds each, and furnish direct support for five longitudinal concrete girders which carry the roof slabs, and which are built into the transverse sections. The floor will be entirely of concrete, with



LAYOUT OF COROZAL FARM BUILDINGS.

aisles and walks extending the length of the building to give access to the stalls. The latter will be arranged in double rows, two double rows on each side of the court, 26 stalls to a double row, or 104 in all. They will

be made of pipe stanchions, with concrete troughs. The weigh house will be 13 feet square, also of concrete, and will contain the scales and milk container; it is situated in the center of the court, and is reached from both sides of the barn by a covered passageway 10 feet eight inches wide. The west end of the barn will be partitioned off into box stalls, a feed room, and a wagon shed. Each outside corner box stall will be used as a bull pen. The partitions in these spaces will be of concrete to a height of three feet 10 inches,



FRONT VIEW OF DAIRY HOUSE.

with a wood grille above, three feet eight inches high. All exterior openings will be screened with one-half-inch wire mesh. The feed room will be of ratproof construction, with gravity doors leading to the stalls. An overhead feed carrier will be installed.

DAIRY HOUSE.

The dairy house will be two stores in height, 50 by 24 feet in plan, and is to be built of hollow concrete blocks, with roof of red tile. It will be provided with an 8-foot porch having arched openings, as shown in the accompanying sketch. The second floor will be used as a dormitory for the silver help, and will have a wood floor, and be equipped with toilet, shower bath, lockers, etc. The stairway will be on the inside. On the first floor will be a milkroom, ice box, shipping room, boiler room, and sterilizing and packing departments. A shipping platform will also be provided. All partitions will be constructed of concrete blocks.

PIGGERY.

The piggery is a detached concrete building, but in close proximity to the cow barn, 44 by 91 feet over all, with concrete roof supported by single span 39-foot concrete beams, having a maximum depth of two feet 10 inches, and a minimum of one foot three inches. The roof is similar to that on the cow barn. An aisle extends through the center of the building, and on either side are five sties, in addition to one extending clear across one end, which will be used as a fattening pen. Each sty contains a shallow concrete trough, equipped with a movable wooden gate, which can be operated back and forth to prevent the pigs from getting access to the troughs while their food is being put in them. The outside entrances to the sties are also provided with gates. At the end of the piggery nearest the cow barn are rooms for feed, stores, and for butchering; the latter is provided with a scalding tank,

sink, etc. Food will be transported by means of an overhead carrier in the same manner as in the cow barn.

Coach Tracks in Panama Yard.

For the purpose of providing facilities for the Mechanical Division in the Panama railroad yard for the washing and general cleaning of coaches and testing in the passenger service of the road, a new track layout has recently been completed. In order to make room for these tracks, the old machine shop, engine house,

sand house, coal chute, cinder pit, and turntable that formerly stood there had to be removed. The machine shop had been in disuse for some time, while the engine house, sand house, cinder pit, etc., were no longer necessary on account of the improved facilities at Balboa. The turntable was a landmark in the Panama yard having been in continuous existence at the same point for a period of about 60 years.

The new layout provides for tracks spaced on 18-foot centers, giving a total storage space of 2,510 feet. For the crossovers to the main line and other tracks in the yard, two special and two double end crossing frogs were manufactured and installed. The estimated cost of the improvements was \$10,938.43.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., December 7, 1914.

The following insufficiently addressed letters originating in the United States and its possessions have been received in the office of the Director of Posts, and may be procured upon request of the addressees:

Arbogast, Joseph	Jackson, C. M.
Bevington, W. H.	Keys, Willie W.
Coleman, Frank	Leggett, James M.
Dale, Edwin H.	Lockett, Miss F. H.,
Davidson, Jack	c/ Lieut. J. W.
Donado, Jos. M. (paper)	Moyer, Robert E. P.
Ensminger, Federico	Myers, Robert F.
Gaudin, W. F.	Nicholson, W. J.
Gutting, L. A.	Owens, Miss Marion
Guy, Oscar (paper)	Owens, Miss Bell
Hall, William	Robinson, Miss J. P.,
Heil, Miss Carrie	(paper), Mess No. 1.
Hodges, Hugh	Roderick, Morris
Howe, Jack	Shaikh, Abdul Rob
	Verneuil, Sicto

Balboa-Taboga Service.

Launch Q makes trips on the following schedule: *Week days*.—Leave Balboa dredge landing at 5.30 p. m., and Taboga at 6 a. m. *Sundays and holidays*.—Leave Taboga at 6 a. m., Balboa dredge landing at 9.30 a. m., and Taboga at 8 p. m. *Fares*.—Employees, 25 cents gold each way; nonemployees, 50 cents gold each way; children under 12 years, 15 cents gold each way.

OFFICIAL CIRCULARS.

Subscriptions for The Canal Record.

THE PANAMA CANAL.

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 1, 1914.

After January 1, 1915, a subscription rate will be charged for THE CANAL RECORD of \$1 domestic and \$1.50 foreign, except in the case of Government departments and bureaus, Members of Congress, representatives of foreign governments, public libraries, and employees of The Panama Canal on the gold roll, to whom THE CANAL RECORD will be distributed free. This paper, which is published on the Isthmus, under the direction of the Governor of The Panama Canal, will be continued as a weekly publication, with a normal issue of four pages and an 8-page issue once a month; and it will be used primarily for the publication of Executive Orders, special circulars, official notices and advertisements, shipping news and statistics of Canal traffic. The number of prepared articles will be reduced and personal news will be altogether eliminated.

All subscriptions for THE CANAL RECORD will expire on December 31 of each year. Domestic subscriptions received after the beginning of a year will be charged as from the beginning of the particular quarter in which received, in accordance with the schedule of rates shown below. Foreign subscriptions will be charged as from the beginning of the particular third of the year in which they are received:

SUBSCRIPTION RATES—DOMESTIC.

Subscriptions entered between January 1 and April 1.....	\$1.00
Subscriptions entered between April 1 and July 1.....	.75
Subscriptions entered between July 1 and October 1.....	.50
Subscriptions entered between October 1 and January 1.....	.25

SUBSCRIPTION RATES—FOREIGN.

Subscriptions entered between January 1 and May 1.....	1.50
Subscriptions entered between May 1 and September 1.....	1.00
Subscriptions entered between September 1 and January 1.....	.50

Remittances from the Canal Zone, the Republic of Panama, Colombia, the West Indies (excepting Cuba and Porto Rico), Costa Rica, the West Coast, Argentina, Uruguay, and Paraguay should be forwarded to "THE CANAL RECORD, Balboa Heights, Canal Zone," and should be made payable to the "The Collector, The Panama Canal." The name and address to which THE CANAL RECORD is to be sent should be plainly written. Subscribers in the United States and foreign countries other than those mentioned above should address "The Chief of Office, The Panama Canal, Washington, D. C." and make their remittances payable to "The Disbursing Clerk, The Panama Canal," Washington, D. C.

The word "Foreign" refers to countries where mail cannot be forwarded under official frank. The word "Domestic" refers to the United States and its possessions, as well as to Canada, Cuba, Mexico, and the Republic of Panama, to which last named foreign countries Government mail can be forwarded under official frank.

Assignment of Quarters for Gold Employees.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 3, 1914.

CIRCULAR No. 627-2:

In future in making assignments to family quarters, preference will be given to employees who are:

1. Working and quartered in the district where the assignment is to be made.
2. On the waiting list and working at that station.
3. Quartered in the district, but working elsewhere.
4. On the waiting list, but working at some other station.

GEO. W. GOETHALS,

Governor.

Vacations.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 2, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The desirability of making up a schedule of leaves of absence for the employees in the various units of the organization is hereby brought to your attention.

The cumulative leave for all employees who were in the service on April 1 will fall due on February 1, 1915, and unless exceptions are authorized, it must be taken within four months after that date or accumulated.

Each employee should be permitted to nominate three dates, as widely separated as he finds convenient, for entering upon his leave. The schedule should then be arranged so that the employees in the same class of

work, who will have to relieve each other, shall be given preference according to seniority as far as possible.

The 4-month period will be extended where it is necessary to do so for the good of the service.

Employees who have completed eight months service, and who may desire to go to the States on leave before February 1, and not take their cumulative leave this coming year, may be granted any balance remaining of their 24 days annual leave, provided they expect to return to duty. If they should resign while on such leave they would only be allowed the usual two days per month.

This rule is adopted for the purpose of encouraging employees to take their leave before February 1, if possible.

GEO. W. GOETHALS,

Governor.

Addressing of Official Mail.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 1, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

My attention has been directed to the practice of addressing official mail to clerks and subordinates in the several bureaus and offices, instead of to the head of the department or division interested. This practice must be discontinued.

All official mail should be addressed to the head of the department, division, or bureau to which the business pertains, and, to facilitate its delivery and handling, routine mail intended for particular individuals may be marked "For Mr.". For example, routine mail or papers relating to property and requisitions now addressed to the several property clerks should be addressed to the property and requisition bureau, Balboa Heights.

It is, therefore, directed that these instructions be brought to the attention of all persons who have occasion to forward official mail to heads of departments, divisions, and bureaus at Balboa Heights.

GEO. W. GOETHALS,

Governor.

Permits to Military Reservations.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 3, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

As all permits to military reservations expire December 31, 1914, it is requested that you submit, by December 15, the names of employees of your department or division whose duties necessitate frequent visits to the reservations.

It is desired to issue extended permits only as above outlined, and names of employees who make but occasional trips to reservations should not be submitted. These should be covered by individual request from head of department or division whenever necessity requires.

GEO. W. GOETHALS,

Governor.

Family Quarters for Silver Employees.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 30, 1914.

CIRCULAR No. 628-1:

Circular No. 628, dated April 1, 1914, providing for rental of quarters to silver employees, is amended by adding at the end of Paragraph 8, the following:

Refund of rental for a fractional part of a month will be made only to employees when the quarters rented are vacated upon transfer or separation from the service.

GEO. W. GOETHALS,

Governor.

Maximum Rate—Silver Clerks.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 2, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

It is intended to establish a maximum rate of \$60 per month for silver clerks. If there are any silver clerks in your organization receiving more than \$60 per month please furnish names and rates of pay.

GEO. W. GOETHALS,

Governor.

Shipments of Supplies Returned to the United States.

THE PANAMA CANAL,

SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., November 24, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

In order that proper customs declaration and steamship billing can be prepared to cover all shipments of supplies returned to the United States, it is essential

that the following information be furnished this department:

Serial number of items or packages.

Value of material.

Whether freight charges are to be prepaid, or collect.

Weight of each package.

Washington order and Canal Zone requisition number under which the material was purchased.

Date of arrival of the material on the Isthmus.

All packages should be marked, as follows:

Shipment No.

Panama Railroad Company, New York City,
c/o Assistant Purchasing Agent.

For.....

Shipment number and any information that may be required by the department shipping the material will be furnished by the United States requisition division of this office.

A packing list, in quadruplicate, showing the above information, should be prepared to cover all shipments to be returned to the United States and should be distributed, as follows:

One to office of Chief Quartermaster; one to storekeeper, Balboa; one to inspector, Supply Department, post-office box No. 164, Cristobal; and one to department shipping the material.

All supplies to be returned should be shipped to the inspector, Supply Department, pier No. 11, Cristobal, C. Z.

Approved:

GEO. W. GOETHALS,

Governor.

Delivery of Personal Mail.

THE PANAMA CANAL,

OFFICE OF EXECUTIVE SECRETARY,

BALBOA HEIGHTS, C. Z., December 1, 1914.

To all employees, Administration Building, Balboa Heights.—Effective today, the delivery to the several offices of personal mail addressed to employees will be discontinued, and all mail for employees who have not provided themselves with lock boxes will be placed in the general delivery case for distribution as is customary in other post-offices.

C. A. McILVAINE,

Executive Secretary.

Inspection Calls.

THE PANAMA CANAL,

SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., November 30, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

In order that all dealers' invoices may be certified for payment with the least possible delay, it is necessary that inspection calls be checked, properly accomplished, and returned to this office immediately on the receipt of the supplies which they cover. It is, therefore, requested that you instruct all employees under your direction, and who are now authorized to sign inspection calls, to give this subject preferred attention.

In order that a complete record can be kept as to the status of all outstanding calls, it is further requested that every employee authorized to sign inspection calls furnish this office on the 15th and 30th day of each month a list showing the calls which they have on hand, with a statement in detail as to the reason the calls cannot be accomplished.

Approved:

GEO. W. GOETHALS,

Governor.

WM. R. GROVE,

Chief Quartermaster.

Proposals for Painting Houses 740, 753 and 756, Balboa.

THE PANAMA CANAL,

OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., December 10, 1914, and then opened for furnishing the necessary labor for painting the interior of Houses 740, 753 and 756, Balboa. This work must be done equal to that in the houses of similar type previously completed at Balboa, and must be satisfactory to the Constructing Quartermaster or his representative.

Separate bids should be submitted for each house, but one bidder may bid on all three houses.

Bids must be accompanied by \$50.

Bidders should state in their proposal the time in which they propose to complete the work.

Any further information may be obtained upon application to the office of the Constructing Quartermaster, Balboa Heights.

The Government reserves the right to reject all bids. Bids should be marked "Proposal for painting houses 740, 753, and 756, Balboa."

WM. R. GROVE,

Chief Quartermaster.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 1.30 to 6.30 p. m. The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective December 10:

FRESH MEATS.

No changes in prices of fresh meats since last week.

MISCELLANEOUS.	Price.
Livers—Beef, per pound.....	13
Calf, each.....	65
half, each.....	33
Oysters, fresh, per pkt.....	*45
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	14
Frankfurter, per pound.....	14
Lieberwurst, per pound.....	12
Pork, per pound.....	18
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	47
per 1-dozen.....	24
Bluefish, per pound.....	10
Halibut, fresh, per pound.....	7
Salmon, per pound.....	8
Yeast, per pound.....	31
per cake.....	2

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound.....	25
Chickens—Fancy, roasting, corn fed, per pound.....	24
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	30
Broilers, milk fed, per pound.....	25
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	26
Squabs, each.....	30
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	24
Half, per pound.....	26
Sliced, per pound.....	32
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	30
Half, boiled, per pound.....	32
Sliced, boiled, per pound.....	38
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.42
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	43
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	21
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	**15
Ferrellac, bottle.....	**25
Ice cream, quart.....	125
1-gallon.....	150
Cream, Sheffield Farms, quart.....	**33
pint.....	**19
1/2 pint.....	**12

VEGETABLES.

Cauliflower, per pound.....	10
Beets, per pound.....	2 1/2
Brussels sprouts, per pound.....	15
Celery, per head.....	*5
Cabbage, per pound.....	2 1/2
Carrots, per pound.....	2
Cucumbers, per pound.....	8
Lettuce, per pound.....	7
Onions, per pound.....	*2 1/2
Peppers, per pound.....	5
Parsnips, per pound.....	3
Potatoes, white, per pound.....	2
sweet, American, per pound.....	*3
sweet, tropical, per pound.....	2
Yams, tropical, per pound.....	3
Eggplant, per pound.....	9
Turnips, per pound.....	2
Tomatoes, per pound.....	*8
Squash, per pound.....	*2 1/2

FRUITS.

Apples, per pound.....	3
Apples, fancy, per pound.....	5

	Price.
Cranberries, fresh.....	6
Grapes, per pound.....	14
Grape fruit—American, each.....	15
Tropical, each.....	3 1/2
Lemons, per dozen.....	14
Limes, per 100.....	40
Oranges—American, each.....	2 1/2
Tropical, per dozen.....	9
Pears, per pound.....	4 1/2
Coconuts, each.....	5
Bananas, per bunch.....	38
Bananas, each.....	1 1/2
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Tangerines, each.....	1

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§Not less than 1/2 ham or 1/2 shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective December 5, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Hose, ladies, black, pr.....	.25	.34
Hose, ladies, white, pr.....	.25	.34
Hose, ladies, tan, pr.....	.25	.34
Pans, pudding, 2-quart, ea.....	.17	.13
Wash tubs, ea.....	.56	.43
Wash tubs, ea.....	.75	.54
Kettles, Berlin, ea.....	.61	.53
Plates, 9-inch, ea.....	.22	.26
Plates, 7-inch, ea.....	.16	.20
Raisins, seeded, carton.....	.09	.13
Oil, olive, Italian, 5-gal. tin.....	7.10	6.45
Pimenton, superior, tin.....	1.23	1.05
Bed bug exterminator, tin.....	.12	.09
Clothesline, hank.....	.51	.43
Napkins, paper, plain, doz.....	.03	.01
Ribbon, seal, No. 3, yd.....	.06	.04
Beds, No. 295, ea.....	6.20	6.65
Beds, No. 365, ea.....	2.35	2.90
Beds, No. 360, ea.....	3.35	3.85
EFFECTIVE DECEMBER 9.		
Ties, four in hand, ea.....	.43	.46
Shoes, tan, calf, blu., pr.....	3.80	3.90
Shoes, box calf, blu., pr.....	3.60	3.75
Shoes, Boy Scout, pr.....	2.55	2.35
Raisins, seeded, ctn.....	.13	.09
Ribbon, satin, yd.....	.16	.12

Proposals for Plastering Two-Family and Four-Family Quarters, Balboa Dump.

THE PANAMA CANAL,

OFFICE OF CHIEF QUARTERMASTER,

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., December 19, 1914, and then opened for furnishing necessary labor to do all plastering required to finish two four-family houses and two two-family houses at Balboa dump. One of these houses will be ready for plastering about January 1, 1915, another about January 10, and the other two about January 15.

Specifications for this work may be obtained upon ap-

plication to the Constructing Quartermaster, Room 266, Balboa Heights.

Bids may be submitted for each house or a total for the four houses.

Bids must be accompanied by \$100.

The Government reserves the right to reject all bids. Bids should be marked "Proposal for plastering two-family and four-family quarters, Balboa Dump."

WM. R. GROVE,
Chief Quartermaster.

Rainfall from November 1 to 30, 1914, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>			
Balboa.....	2.22	3	11.99
Balboa Heights.....	2.07	3	10.35
*Miraflores.....	2.69	3	10.79
Pedro Miguel.....	1.67	16	10.88
Rio Grande.....	1.94	16	9.60
<i>Central Section—</i>			
Culebra.....	1.37	16	7.77
*Camacho.....	1.45	17	7.34
Empire.....	.76	16	6.00
Gamboa.....	1.34	11	7.70
*Juan Mina.....	2.16	5	8.26
Alhajuela.....	1.12	18	7.56
*El Vigia.....	2.29	18	10.72
Frijoles.....	1.45	29	8.83
*Trinidad.....	2.25	29	15.00
*Monte Lirio.....	2.40	9	14.32
<i>Atlantic Section—</i>			
Gatun.....	1.50	13	12.57
*Brazos Brook.....	2.51	9	16.61
Colon.....	3.77	13	18.35

*Standard rain gage—readings at 5 p. m., daily. Automatic rain gage at unstarred stations—values midnight to midnight.

November Rainfall for Three Years.

STATIONS.	1912	1913	1914	Station Av.	Years of record	Rainy days, '14
Pacific Section—						
Balboa.....	6.14	9.30	11.99	9.28	16	25
*Balboa Heights.....	6.38	10.63	10.35	10.45	18	24
Miraflores.....	11.89	9.15	10.79	11.58	7	20
Pedro Miguel.....	8.43	10.17	10.88	19.86	7	19
Rio Grande.....	7.01	9.15	9.60	10.77	10	23
Central Section—						
Culebra.....	7.59	11.21	7.77	12.69	26	22
Camacho.....	7.06	12.90	7.34	12.58	9	23
Empire.....	7.24	14.23	6.00	10.81	10	21
Gamboa.....	6.56	14.13	7.70	12.18	32	28
Juan Mina.....	12.75	16.34	8.26	12.44	5	23
Alhajuela.....	9.62	16.56	7.56	13.97	16	24
El Vigia.....	10.79	16.91	10.72	15.70	7	23
Frijoles.....	15.88	17.81	8.83	14.17	3	26
Trinidad.....	20.36	10.43	15.00	19.28	7	27
Monte Lirio.....	16.35	15.02	14.32	21.66	7	20
Atlantic Section—						
Gatun.....	19.18	15.88	12.57	20.76	10	22
Brazos Brook.....	21.86	21.32	16.61	23.42	9	27
Colon.....	21.81	16.75	18.35	21.66	44	23

*Formerly Ancon.

WEATHER CONDITIONS, CANAL ZONE, NOVEMBER, 1914.

Rainfall for the month was below normal at all stations, except Balboa and Pedro Miguel. The deficiencies were greatest in the central section and over the upper Chagres basin. The monthly totals ranged from six inches at Empire to 19.58 inches at the Gatun River station above Monte Lirio. The maximum precipitation recorded in any one day was 3.77 inches at Colon on the 13th. The estimated average rainfall over the Chagres River basin figures 44 per cent below normal—11.01 inches against a 14-year November average of 19.50 inches.

The average air temperature and atmospheric pressure were slightly above normal, while the wind movement was generally deficient.

The daytime cloudiness was above normal in the Pacific section, but deficient on the Atlantic side. Night and early morning fogs were numerous at the interior stations. Of the fogs observed, 48 per cent were dissipated by 6.30 a. m., 76 per cent by 7.30 a. m., and 98 per cent by 8.30 a. m.

Elevation of Gatun Lake (feet above mean sea level): Mean for the month \$6.26; maximum, \$6.74 on the 29th; minimum, \$5.91 on the 5th. Evaporation from lake surface, 4.180 inches.

The following table summarizes the weather conditions for the month:

STATION.	Pressure (reduced to mean of 24 hourly).	Temperature.				Mean relative humidity.	Precipitation.			Wind.		
		Mean.	Maximum.	Date.	Minimum.	Date.	Total inches.	Station average.	Days of 0.1 inch or more.	Total movement (miles).	Prevailing direction.	Max. velocity in (miles).
Colon.....	29.850	79.9	86	Nov. 2	74	Nov. 1	18.35	21.66	23	5,287	W.	28
*Balboa Heights.....	29.849	80.1	91	Nov. 15	71	Nov. 1	10.35	10.45	24	4,392	N.W.	29

*Formerly Ancon.

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next six weeks are given in the following table:

DECEMBER.

DATE.	Time and height of high and low water.			
Thurs., Dec. 10....	2.8	13.1	2.4	13.6
	2.45	8.35	15.06	21.14
	2.9	12.8	2.8	13.4
Fri., Dec. 11.....	3.44	9.38	16.06	22.14
	3.0	12.5	3.0	23.3
Sat., Dec. 12.....	4.47	10.46	17.11	23.18
	2.8	12.5	3.0	13.4
Sun., Dec. 13.....	5.50	11.56	18.14	.....
	2.3	12.8	2.7	.....
Mon., Dec. 14.....	0.21	5.50	13.01	19.14
	13.9	1.5	13.4	2.1
Tues., Dec. 15.....	1.20	7.46	14.01	20.10
	14.6	0.7	14.2	1.5
Wed., Dec. 16.....	2.10	8.40	14.55	21.04
	15.5	-0.1	14.9	0.9
Thurs., Dec. 17.....	3.09	9.31	15.45	21.55
	15.8	-0.7	15.5	0.5
Fri., Dec. 18.....	3.58	10.20	16.34	22.45
	16.1	-1.0	15.8	0.4
Sat., Dec. 19.....	4.47	11.09	17.21	23.34
	16.6	-1.0	15.8	0.5
Sun., Dec. 20.....	5.36	11.56	18.08	.....
	15.6	-0.6	15.6	.....
Mon., Dec. 21.....	0.21	6.24	12.44	18.55
	0.9	13.0	0.1	15.0
Tues., Dec. 22.....	1.12	7.14	13.33	19.44
	1.4	14.2	1.0	14.3
Wed., Dec. 23.....	2.04	8.04	14.23	20.34
	2.1	13.2	2.0	13.5
Thurs., Dec. 24.....	2.58	8.59	15.16	21.28
	2.8	12.3	3.0	12.8
Fri., Dec. 25.....	3.25	10.00	16.12	22.25
	3.5	11.5	3.9	12.1
Sat., Dec. 26.....	4.54	11.09	17.11	23.25
	3.9	10.9	4.5	11.7
Sun., Dec. 27.....	5.55	12.18	18.12	.....
	4.1	10.8	4.8	.....
Mon., Dec. 28.....	0.25	6.50	13.19	19.09
	11.7	4.0	10.9	4.7
Tues., Dec. 29.....	1.17	7.40	14.07	19.58
	11.9	3.5	11.3	4.4
Wed., Dec. 30.....	2.03	8.24	14.46	20.42
	12.3	3.0	11.9	3.9
Thurs., Dec. 31.....	2.44	9.06	15.21	21.24
	12.8	2.3	12.6	3.3

JANUARY.

DATE.	Time and height of high and low water.			
Fri., Jan. 1.....	3.22	9.46	16.01	22.05
	13.4	1.5	13.3	2.6
Sat., Jan. 2.....	4.00	10.25	16.40	22.43
	14.0	0.8	14.0	1.9
Sun., Jan. 3.....	4.40	11.04	17.16	23.23
	14.5	0.4	14.5	1.5
Mon., Jan. 4.....	5.20	11.43	17.51	.....
	14.7	0.3	14.8	.....
Tues., Jan. 5.....	0.03	5.58	12.21	18.28
	1.3	14.7	0.3	15.0
Wed., Jan. 6.....	0.44	6.38	13.01	19.05
	1.3	14.5	0.6	15.0
Thurs., Jan. 7.....	1.29	7.21	13.44	19.48
	1.3	14.2	1.0	14.8
Fri., Jan. 8.....	2.16	8.08	14.32	20.36
	1.5	13.7	1.6	14.5
Sat., Jan. 9.....	3.10	9.03	15.26	21.31
	1.8	13.1	2.2	14.1
Sun., Jan. 10.....	4.09	10.07	16.28	22.36
	2.0	12.7	2.7	13.8
Mon., Jan. 11.....	5.14	11.22	17.36	23.48
	2.1	12.3	2.9	13.7
Tues., Jan. 12.....	6.23	12.38	18.45	.....
	1.8	12.7	2.7	.....
Wed., Jan. 13.....	1.00	7.28	13.49	19.51
	14.0	1.3	13.4	2.2
Thurs., Jan. 14.....	2.07	8.27	14.51	20.50
	14.5	0.6	14.2	1.5
Fri., Jan. 15.....	3.06	9.21	15.45	21.44
	15.1	-0.1	15.0	0.9
Sat., Jan. 16.....	3.59	10.12	16.33	22.34
	15.5	-0.5	15.5	0.5
Sun., Jan. 17.....	4.47	10.59	17.18	23.22
	15.7	-0.7	15.8	0.4
Mon., Jan. 18.....	5.31	11.43	18.01	.....
	15.5	-0.5	15.7	.....
Tues., Jan. 19.....	0.06	6.14	12.25	18.41
	0.6	15.0	0.0	15.2
Wed., Jan. 20.....	0.50	6.55	13.05	19.30
	1.0	14.3	0.8	14.6

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the

meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m. All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15.47 is 3.47.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies, may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.30 per barrel, reduced to 60° Fahrenheit.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Subsistence supplies, including a large stock of fresh meats, vegetables, canned groceries, fruits, bakery products, etc., are available for quick delivery at either terminal. Prices are generally lower than the retail prices in the United States, and compare favorably with prices in any part of the world.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each, aprons, caps; sheets, tablecloths, napkins, towels, one cent each.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS THROUGH THE CANAL.

Approximately regular services between the Atlantic and the Pacific seaboard from Boston, New York, Philadelphia, and Baltimore, occasionally Charleston and New Orleans, to San Pedro, San Francisco, Portland, and Puget Sound, and return, are maintained by the American-Hawaiian Steamship Company, with a sailing each way about every five days; the Luckenbach Steamship Company, with a sailing each way about every 10 days; Sudden and Christenson, approximately fortnightly; the Atlantic and Pacific Steamship Company, about every three weeks; and the Boston and Pacific Line, and the Arrow Line, each sending a vessel each way about once a month.

Between the east coast of the United States and the west coast of South America, fortnightly services are maintained by the Merchants' Line and by the New York and South America Line; the West Coast Line has sailings each way about every four weeks.

Between the west coast of the United States, with connections to lower British Columbia and Europe the following lines are in service: The Harrison-Direct Line, monthly; the Maple Leaf Line, about every six weeks; the East Asiatic Company, monthly, and the Johnston Line, every six or seven weeks.

The Pacific Steam Navigation Company is operating approximately a monthly service around South America from Liverpool, by way of the Canal.

The American-Australian Line has been sending ves-

sels through the Canal about fortnightly from New York to ports in Australia and New Zealand.

PACIFIC COAST CONNECTIONS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acapulco, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central America line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports above named between Balboa and Ocos.

The cable address of The Panama Canal on the Isthmus is "Isthmian, Balboa Heights;" in the United States, "Isthmian, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Payta, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa for Valparaiso, calling at Paita, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro; and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service each way between New York and Southampton, making the following way ports: Antilla, Jamaica, Colon, Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores, and Cherbourg. Its vessels all arrive at Colon on Sundays and sail on Tuesdays.

The Compagnie Générale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compagnia Transatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every seven days, direct; between Colon and New York by the United Fruit Company and the Royal Mail Company, sailings via Kingston weekly and fortnightly, respectively; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

in the near future.

	Sails.	Arrives.
NEW YORK TO CRISTOBAL.		
Panama.....	P. R. R. Dec. 5	Dec. 11
Alliance.....	P. R. R. Dec. 10	Dec. 16
Colon.....	P. R. R. Dec. 17	Dec. 23
Advance.....	P. R. R. Dec. 24	Dec. 31
Panama.....	P. R. R. Dec. 31	Jan. 6
CRISTOBAL TO NEW YORK.		
Advance.....	P. R. R. Dec. 12	Dec. 19
Panama.....	P. R. R. Dec. 17	Dec. 23
Alliance.....	P. R. R. Dec. 26	Jpn. 1
Colon.....	P. R. R. Jan. 2	Jan. 8
Advance.....	P. R. R. Jan. 9	Jan. 16
Panama.....	P. R. R. Jan. 12	Jan. 18
NEW YORK TO COLON.		
Steamer.....	U. F. C. Dec. 2	Dec. 9
Oruba.....	R. M. Dec. 5	Dec. 13
Steamer.....	U. F. C. Dec. 9	Dec. 16
Steamer.....	U. F. C. Dec. 16	Dec. 23
Trent.....	R. M. Dec. 19	Dec. 27
Steamer.....	U. F. C. Dec. 23	Dec. 30
Steamer.....	U. F. C. Dec. 30	Jan. 6

(Continued on Page 160.)

(Continued on Page 160.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon December 6.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Nov. 30....	<i>Santa Clara</i>	American.....	Atlantic & Pacific S.S. Co.....	New York.....	San Pedro.....	General mdse.....	5,400	6,748	4,475
Nov. 30....	<i>Buford</i>	American.....	U. A. Army transport.....	Weehawken.....	San Francisco.....	No cargo.....		4,834	3,621
Nov. 30....	<i>Swazi</i>	British.....	Ellerman & Bucknell Co.....	Galveston.....	Yokohama.....	Cotton, steel (a).....	4,688	4,940	3,728
Nov. 30....	<i>Kirwood</i>	British.....	Constantine-Middlesboro.....	Cardiff.....	Pacific Ocean.....	Coal.....	4,221	3,692	1,952
Nov. 30....	<i>Roddam</i>	British.....	Stephen Sutton.....	Newport, Eng.....	Pacific Ocean.....	Coal.....	4,878	3,640	2,055
Dec. 2....	<i>Colon</i>	American.....	Panama Railroad S.S. Line.....	New York.....	Balboa.....	General mdse.....	1,091	5,866	4,222
Dec. 2....	<i>Corozal</i>	American.....	Boston & Pacific Line.....	Boston.....	San Pedro.....	General mdse.....	1,700	3,225	2,198
Dec. 2....	<i>Baja California</i>	Norwegian.....	A. Lindvig.....	Hull.....	San Francisco.....	Cliff stone, coke.....	2,050	1,900	1,138
Dec. 2....	<i>Henry T. Scott</i>	American.....	Sudden & Christenson.....	Baltimore.....	San Pedro.....	Coal.....	1,700	1,763	892
Dec. 3....	<i>Oregonian</i>	American.....	American-Hawaiian S.S. Co.....	New York.....	San Pedro.....	General mdse.....	5,834	5,903	4,135
Dec. 3....	<i>Celia</i>	British.....	Merchants' Line.....	New York.....	Paleta, Peru.....	General mdse.....	6,000	5,852	4,377
Dec. 4....	<i>Edgar H. Vance</i>	American.....	Arrow Line.....	New York.....	San Francisco.....	General mdse.....	3,200	2,555	1,433
Dec. 4....	<i>Kelbergen</i>	Dutch.....	Furness Agency.....	Rio de Janeiro.....	San Francisco.....	Ballast.....		5,320	3,858
Dec. 6....	<i>Trafalgar</i>	British.....	Glen & Co.....	New York.....	Melbourne.....	General mdse.....	6,560	5,089	3,316

(a) 1,363 tons steel. (b) 1,300 tons cliff stone, 550 tons coke, 200 tons general cargo.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Nov. 30....	<i>Cacique</i>	American.....	Merchants' Line.....	Iquique.....	New York.....	General produce.....	8,370	6,193	4,638
Nov. 30....	<i>Lyra</i>	American.....	Luckenbach S. S. Co.....	San Francisco.....	New York.....	General produce.....	6,500	4,703	3,637
Dec. 1....	<i>Crosshill</i>	British.....	Marshall & Co.....	Tacoma.....	Marshall.....	Wheat.....	7,415	5,590	3,984
Dec. 1....	<i>Croster Hall</i>	American.....	N. Y. & South America Line.....	Iquique.....	Pensacola.....	Nitrates, copper wool.....	6,630	4,882	3,552
Dec. 2....	<i>Limari</i>	Chilean.....	South American S.S. Co.....	Valparaiso.....	Cristobal.....	General produce.....	1,894	3,631	2,421
Dec. 3....	<i>Baron Twissmouth</i>	British.....	S. Hogarth & Son.....	San Francisco.....	Norfolk, orders.....	Barley.....	7,207	5,452	4,065
Dec. 4....	<i>Louis K. Thurlow</i>	American.....	Crowell & Tarrlow.....	San Francisco.....	New York.....	Lumber, general (a).....	5,527	3,440	2,444
Dec. 4....	<i>Harry Luckenbach</i>	American.....	Luckenbach S. S. Co.....	San Francisco.....	New York.....	General produce.....	3,000	3,001	2,047
Dec. 5....	<i>Nyanza</i>	British.....	Marley & McIntyre.....	Eten.....	Liverpool.....	Sugar.....	5,750	4,325	3,245
Dec. 5....	<i>Adrianic City</i>	British.....	R. S. Smith.....	Eten.....	Holyhead.....	Sugar.....	7,610	5,270	3,801
Dec. 6....	<i>Colon</i>	American.....	Panama Railroad S.S. Line.....	Balboa.....	New York.....	General produce.....	2,876	5,866	4,222
Dec. 6....	<i>Luz Blanca</i>	British.....	Lya Ida & Pac. Petroleum Co.....	Talara, Peru.....	London.....	Gasoline.....	6,001	5,147	3,260
Dec. 6....	<i>Oriano</i>	British.....	Furness Line.....	Portland.....	Newport News.....	Wheat and oats.....	7,116	4,593	3,401
Dec. 6....	<i>Hondalun</i>	American.....	American-Hawaiian S.S. Co.....	San Pedro.....	New York.....	General produce.....	5,261	7,651	5,472

(a) 300 tons general, 5,227 tons, (2,300,000 feet, board measure) lumber.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessels	Line	From
Dec. 5....	<i>Advance</i>	Panama Railroad S.S. Line.....	New York.
Dec. 6....	<i>Royal Prince</i>	Prince Line.....	New York.
Dec. 6....	<i>Conch</i>	Anglo-Saxon Petroleum Co.....	New Orleans.
Dec. 7....	<i>San Mateo</i>	Luckenbach S.S. Co.....	New York.
Dec. 8....	<i>Tokushima Maru</i>	Nippon Yusen K.isha.....	Guveston.
Dec. 8....	<i>Lewis Luckenbach</i>	Luckenbach S.S. Co.....	New York.
Dec. 10....	<i>Arizonan</i>	American-Hawaiian S.S. Co.....	New York.
Dec. 19....	<i>Director</i>	Harrison Line.....	Liverpool.

*Vessels which will pass through the Canal.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessels	Line	From
Dec. 5....	<i>Indradeo</i>	Indra Line.....	Japan.
Dec. 5....	<i>Mallina</i>	Amsterdam U. Steam Co.....	Victoria, B. C.
Dec. 5....	<i>Isabela</i>	Luckenbach S.S. Co.....	San Francisco.
Dec. 15....	<i>Santa Cecilia</i>	Atlantic & Pacific S.S. Co.....	San Francisco.
Dec. 15....	<i>Kentuckian</i>	American-Hawaiian S.S. Co.....	Hilo.
Dec. 15....	<i>Texon</i>	American-Hawaiian S.S. Co.....	San Pedro.

PORT OF CRISTOBAL.

*ARRIVALS.

Nov. 30....	<i>Siena</i>	La Veloce.....	Genoa.
Dec. 1....	<i>Haii</i>	Cie Generale Transatlantique.....	Bordeaux.
Dec. 4....	<i>Vitalia</i>	Galveston S.S. Co.....	Philadelphia.
Dec. 6....	<i>Essequibo</i>	Royal Mail.....	Southampton.
Dec. 6....	<i>Median</i>	Leyland Line.....	Liverpool.

*DEPARTURES.

Nov. 30....	<i>Tordenskjold</i>	Earn Line.....	Nima Nima.
Dec. 1....	<i>Merchan</i>	Harrison Line.....	New Orleans.
Dec. 1....	<i>Tren</i>	Royal Mail.....	Southampton.
Dec. 2....	<i>Hilling</i>	Seeberg S.S. Co.....	Bluefields.
Dec. 3....	<i>Siena</i>	La Veloce.....	Genoa.
Dec. 3....	<i>Falk</i>	Seeberg S.S. Co.....	Puerto Colombia.
Dec. 4....	<i>Wegadesk</i>	Earn Line.....	Felton.
Dec. 4....	<i>Haii</i>	Cie Generale Transatlantique.....	Bordeaux.
Dec. 5....	<i>Vitalia</i>	Galveston S.S. Co.....	Cartagena.

*EXPECTED ARRIVALS.

Dec. 11....	<i>Monterideo</i>	Cia. Trasatlantica.....	Barcelona.
Dec. 12....	<i>Berlin</i>	West India S.S. Co.....	Jacksonville.
Dec. 21....	<i>Nilonian</i>	Leyland Line.....	Liverpool.
Dec. 23....	<i>Ocland</i>	Earn Line.....	Norfolk.

*EXPECTED DEPARTURES.

Dec. 12....	<i>Monterideo</i>	Cia. Trasatlantica.....	Barcelona.
Dec. 12....	<i>Nilonian</i>	Leyland Line.....	Unknown.

*Other than vessels passing through the Canal. United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Nov. 30....	<i>Quilpue</i>	Pacific Steam Nav. Co.....	Guayaquil.
Dec. 2....	<i>Pachitea</i>	Peruvian S.S. Co.....	Paiza.
Dec. 5....	<i>Manari</i>	Pacific Steam Nav. Co.....	Guayaquil.

*DEPARTURES.

Dec. 4....	<i>Chile</i>	Pacific Steam Nav. Co.....	Callao.
Dec. 5....	<i>Acajula</i>	Salvador S.S. Co.....	Central America.

*EXPECTED ARRIVALS.

Dec. 8....	<i>Guatemala</i>	Pacific Steam Nav. Co.....	Callao.
Dec. 13....	<i>City of Para</i>	Pacific Mail S.S. Co.....	Callao.

*EXPECTED DEPARTURES.

Dec. 7....	<i>San Juan</i>	Pacific Mail S.S. Co.....	San Francisco..
Dec. 7....	<i>Pachitea</i>	Peruvian S.S. Co.....	Callao.
Dec. 7....	<i>Jamaica</i>	Pacific Steam Nav. Co.....	Colombian ports.
Dec. 12....	<i>Manari</i>	Pacific Steam Nav. Co.....	Guayaquil.

*Other than vessels using the Canal.

(Continued from Page 159.)

Ebro.....R. M.....Jan. 2....Jan. 10

COLON TO NEW YORK.

Santa Marta.....	U. F. C.....	Dec. 10....	Dec. 17
Steamer.....	U. F. C.....	Dec. 17....	Dec. 24
Ebro.....	R. M.....	Dec. 22....	Dec. 30
Steamer.....	U. F. C.....	Dec. 24....	Dec. 31
Steamer.....	U. F. C.....	Dec. 31....	Jan. 7

Danube.....R. M.....Jan. 5....Jan. 13

NEW ORLEANS TO COLON.

Parismina.....	U. F. C.....	Dec. 2....	Dec. 9
Atenas.....	U. F. C.....	Dec. 5....	Dec. 10
Cartago.....	U. F. C.....	Dec. 9....	Dec. 16
Turrialba.....	U. F. C.....	Dec. 12....	Dec. 17

COLON TO NEW ORLEANS.

Abangatez.....U. F. C.....Dec. 10....Dec. 15

Heredia.....U. F. C.....Dec. 10....Dec. 17
 Atenas.....U. F. C.....Dec. 17....Dec. 22
 Parismina.....U. F. C.....Dec. 17....Dec. 24
 Irregular services between Cristobal and gulf ports of the United States, with way calls at Central American and Mexican ports, are maintained by the Leyland and Harrison Lines, sailings about every fortnight, and the Seeberg Line, sailings about every 18 days.



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

First Night Lockage at Pacific Locks.

The first night lockage at the Pacific Locks occurred on Monday, December 7, when the *Limari* of the South American Steamship Company (Compañía Sud Americana de Vapores), on authority of the Governor, was passed through Pedro Miguel and Miraflores Locks. The operations in detail were, as follows:

Pedro Miguel Lock.—Arrived at 6.34 p. m.; entered chamber at 6.50; lines on at 6.53; lines off at 7.13; left chamber at 7.15. Time of lockage 25 minutes.

Miraflores Locks.—Arrived at 7.37 p. m.; entered upper chamber at 7.45 p. m.; gates between chambers opened at 8.17; lower gates opened at 8.38; left lower chamber at 8.57. Time of lockage one hour and 12 minutes.

The vessel was held in the lower chamber at Miraflores for 15 minutes, waiting for the currents, consequent upon the mixing of the salt with fresh water, to subside.

Five towing locomotives were used at Pedro Miguel; the sixth was not used, because there were apparently no bits on the starboard side of the steamer amidships. Only four locomotives were employed at Miraflores Locks.

Arrival of Vessels Without Bills of Health.

Since December 5, six British colliers and two British merchant vessels have arrived at Cristobal and Balboa without bills of health or supplemental bills of health. This is a violation of the quarantine regulations, and is punishable by a fine of not to exceed \$500. The *Roddam* and the *Kirwood* arrived at Cristobal on November 28, the former from Newport, England, with a cargo of 4,878 tons of coal, and the latter from Cardiff, Wales, with a cargo of 4,221 tons. They were allowed to proceed through the Canal, but were held at Balboa pending disposition of their cases in the District Court. The captains were fined \$25 in each instance for failure to comply with the quarantine regulations. The merchant vessels *Nyanza* and *Atlantic City* arrived at Balboa from the south, with cargoes of sugar, on December 2 and 4, respectively, without supplemental bills of health, and the *Mallina* arrived at Balboa

from the north on December 5, also, without a bill of health. The captains of the *Nyanza* and *Atlantic City* were each fined \$25, and the captain of the *Mallina* \$50. The *Withernsea*, from Barry, England, via Kingston, with 5,000 tons of coal, arrived at Cristobal on December 8; the *Lena*, from Cardiff, Wales, direct, with 5,600 tons of coal, arrived at the same port on December 10, and the *Boyne*, also from Cardiff direct, with 6,500 tons of coal, on December 11. The captain of the *Withernsea* was fined \$50, and the captains of the *Lena* and *Boyne* \$100 each. All of the six coal vessels were consigned to the British Admiralty.

First Japanese Vessel to Use the Canal.

The steamship *Tokushima Maru* of the Nippon Yusen Kaisha Line, which arrived at Cristobal from Galveston, Texas, on Wednesday, December 9, and went through to Balboa on the following day, is the first Japanese vessel to use the Canal. It was bound for Yokohama, with a cargo of 15,052 bales (4,000 tons) of southern cotton. The vessel has a length of 423 feet, beam 55 feet, and draft, 20.6 feet; and carried a crew of 61. The members of the crew are Japanese, but the captain and chief officers are English. This makes the sixth cargo of cotton transported through the Canal to Japan since August 15.

New Bridge Over French Canal Completed.

The new bridge over the French canal, connecting Telfer's Island, on which the Cristobal coaling plant is located, with the mainland, has been completed, and was placed in service at 7 o'clock Monday morning, December 14. This permits abandonment of the pile trestle close by, which had been used for rail transportation to and from the island up to this week.

Quarters for Operating Force, Miraflores Locks.

A Type 18 bachelor quarters, formerly at Culebra, has been moved to a location on the backfill at Miraflores Locks, and will be converted into permanent quarters for the gold lock operating force at that point. The lower floor will be partitioned off into a dining room, recreation room, and four bedrooms. The second floor will have 12 bedrooms, six on a side. There will be a 1-story annex to furnish space for a kitchen and quarters for the silver help, and a 2-story annex to contain the toilets and shower baths.

Abandonment of Cucaracha.

The camp for silver employees at Cucaracha, situated on the east bank of the Canal, a little north of Paraiso, will be completely abandoned about January 1, but such buildings as are in an insanitary and unstable condition will be vacated at once. Cucaracha labor camp was established by the French, and the buildings there are mostly of French construction.

SENDING VESSELS TO CANAL.

Government's Arrangements for Payment of Tolls—Looking After Interests of Owners.

The Government is endeavoring to handle vessels through the Canal with a minimum of delay and of expense to the owners, and has provided a system by which all the owner has to do is to make a deposit covering the vessel's probable Canal expenses. The rest of the business is attended to by the Government, and no further thought or care is imposed on the owner.

The deposit may be made with any Assistant Treasurer of the United States (there is one in every large American port), or bonds may be placed with the Assistant Auditor of The Panama Canal, in Washington, D. C., to secure the payment of drafts, or cash may be paid on the Isthmus to the Collector. The first method is the simplest and the one usually adopted. A foreign owner or agent can direct his local bank, which has connections with United States banks, to have the deposit placed with an Assistant Treasurer, say in New York or San Francisco, and will be put to no more difficulty than an owner in the United States.

Upon the deposit being made in the United States, notice is forwarded immediately to the Canal authorities, who then make all arrangements to give the vessel the most satisfactory despatch through the Canal as soon as it presents itself at either port of entry. Such notice is forwarded by cable when requested, the expense of the cablegram being charged to the depositor.

In whatever way the advance payment is made, it should be ample to cover the estimated tolls, as well as any other expected expenses, such as for fuel, supplies, etc. Whatever balance is due the depositor after the vessel's expenses have been met will be refunded him by check on the Treasurer of the United States directly after the vessel has cleared from the Canal. If the depositor expressly requests it, any balance due him will be left to his credit, to apply on future bills. In any event, an itemized statement of the vessel's expenses is forwarded immediately.

Some owners and agents who may have been unaware of the Government's provisions for handling these matters, have employed local agents to look after their business, or arranged with local banks to pay their bills. It has been pointed out by the Canal authorities that such arrangements are neither necessary nor desirable; that the system provided by the Government is the most expeditious, and that the introduction of a third party in the transaction complicates the situation and is liable to delay the handling of a ship, by interfering with the usual movement of the machinery. It also adds to the owner's minimum expenses the fees charged by representatives. The services have to be performed by the Canal organization in any event, and it is be-

lieved the work can be handled most satisfactorily by dealing direct with the owner and with the master of the vessel.

In requesting the elimination of third parties, the Government does not lessen the protection of the shipowner's interests, though it endeavors to do for the owner all that a local representative could do. The rules for the navigation of the Canal and the cost of any accessory services that may be required are made plain to the master of a vessel as soon as it enters a terminal port. Officers of the Canal inquire as to the vessel's needs, if any, and the port captain sees to it that these needs are met fully, to the extent of the local facilities. The master of the vessel is fully competent to see that his vessel receives no less than it is charged for. All charges are levied according to specific printed schedules and all bills are fully itemized. Receipt of goods or of services is acknowledged by the master before collection is made, and if, in spite of the accurate system employed, a mistake should be made, it would be detected afterward in the careful auditing to which all transactions are subjected, and a refund, if due, would be made to the depositor.

In handling a vessel through the Canal, every precaution is taken to insure its safety. The channel is fully charted and fitted with every requisite aid to navigation, and towing is resorted to whenever the interests of safety make it advisable. If towing is required by some navigational defect of the vessel, or is requested by the vessel, a charge will be made for the service, but if it be needed on account of conditions in Culebra Cut, the Government renders the service without charge. The Government assumes responsibility for the safety of vessels in the locks. If, in spite of the precautions taken, an accident should occur to a vessel in transit, the matter would be investigated on the spot by the Board of Local Inspectors and an accurate report would be made. In such an investigation, the master and crew of the vessel, on board at the time, would be the owner's most competent witnesses, and it has been the policy of the Canal to show them every consideration, and to give the owners the benefit of any doubt.

The Government's endeavor is to handle the Canal business with as great simplicity as possible and with continued satisfaction to those who send vessels through it. The elimination of third parties in the transaction of business with owners has been found to be a step in this direction. It may be noted, in this connection, that the Panama Railroad Company, though closely related to The Panama Canal, is not to be employed as agent for vessels going through the Canal. This is because the employment of the Panama Railroad Company as agent, like the employment of any other agent, complicates the situation, introduces additional correspondence, and accomplishes nothing that could not be done better without it.

Progress on New Canal Colliers.

The progress report for the month ending October 31 on the new Canal colliers *Achilles* and *Ulysses*, now under construction at the yards of the contractor at Sparrow's Point, Md., shows that on the *Achilles*, the elapsed time since the date of the contract was 6.6 months; therefore, it is estimated that the vessel was .8 month ahead of contract time. The elapsed time on the *Ulysses* since the

date of the contract was 6.6 months; therefore, it is estimated that on October 31 the work was 1.3 months ahead of contract time.

Net Emigration from the Isthmus in 16 Months

20,491.

The report of quarantine operations for November shows an excess of emigration over immigration of 537, as compared with a net emigration in October of 1,990, and in September of 1,115. The total net emigration from the Isthmus through the terminal ports since July, 1913, has been 20,491. This figure does not represent a corresponding reduction in the Canal force, for in June, 1913 there were 42,262 employees on the rolls, while on November 25, 1914 there were 26,957, a difference of 16,305. It may be assumed, therefore, that in addition to the 16,305 Canal laborers who have returned to their homes, over 4,000 others have left also. In the work of depopulating the Canal Zone, many of the nonemployee residents moved to the terminal cities, others sought new homes outside the Zone boundary, while a few thousand appear to have left the Isthmus altogether.

The total number of persons embarking at the ports of Cristobal and Colon for foreign ports during November was 2,895, consisting of 1,041 cabin, and 1,854 steerage passengers. The number of persons entering from foreign ports was 2,571, consisting of 1,349 cabin, and 1,222 steerage passengers. The excess of those who embarked over those who landed was 324. There was an increase in the number of steerage passengers entering, and a corresponding decrease on those leaving, as compared with October. The percentage increase in steerage arrivals is almost wholly due to a record emigration from the United States in this class, 763, which constituted nearly one-half of the total. During October, only 34 persons arrived in steerage from the United States. The November increase may be accounted for in part to business conditions which have led men to seek work elsewhere, and also to avoid the hardships of the Northern winter. The steerage immigration from the West India islands remains about stationary, the arrivals totaling 260 for November, as compared with 255 for October. Forty-five steerage passengers came from Europe, 70 from Colombia, 22 from Cuba, and 26 from Costa Rica. A total of 182 entered from Bocas del Toro, and 212 from other coast towns on the Atlantic side of the Isthmus. Of the arrivals at Cristobal and Colon in the steerage class, 1,850 were men, 455 were women, and 205 were children. The number of persons arriving in transit was 715, a slight

increase over October, while the number arriving in transit through the Canal southbound was 133.

The number of persons arriving at the ports of Balboa and Panama from foreign ports during November was 420, consisting of 275 cabin, and 145 steerage passengers. The number of persons departing was 633, consisting of 502 cabin, and 131 steerage passengers. The number of those who embarked over those who landed at these ports was 213. The number of persons arriving from the coast towns on the Pacific side was 1,105; departing, 1,287.

One hundred and twelve vessels entered at the ports of Cristobal and Colon during the month, and 62 at Balboa, a total of 174, as compared with 176 for October. No disease of a quarantinable nature arrived at the terminal ports during the month.

Handbook of General Information.

A handbook, containing sailing directions and general information concerning the Panama Canal, has just been issued. It will be sent free to shippers and others interested in Canal navigation and the prices and charges for services and supplies to vessels.

Gatun Lake at Maximum Level.

Instructions have been given to hold the level of Gatun Lake at between 86.9 and 87.1 feet from now on, in order to obtain the maximum amount of storage for the approaching dry season.

A Useful Book Varnish.

The following ingredients make a varnish that has been found very useful in protecting books from mould and from roaches: Bichloride of mercury two parts; orange shellac 20 parts; oil of turpentine 250 parts, and the balance up to 1,000 parts, 95 per cent ethyl alcohol. The general directions are to mix the above ingredients thoroughly, shake before using, and to apply with a rag.

Vaccination of Schoolchildren.

The district physicians, together with the health officers of Panama and Cristobal-Colon, have been instructed to visit all schools in their respective districts and to vaccinate the pupils who have not had smallpox, or who have not been successfully vaccinated within the past five years. A certificate showing that a child has been successfully vaccinated within the 5-year period, signed by a reputable physician, will be considered as having fulfilled the requirements. A record will be kept and certificates issued to all children and teachers successfully vaccinated during the present visitation.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Holder, Herbert	41622	Barbados	Mount Hope ...	Supply Dept. ...	1914. Dec. 7.
Smith, James	26395	Montserrat	Balboa	Oper. & Mtee.	Dec. 6.

The estates of these deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

TRIPS TO TABOGA ISLAND.

Hotel Aspinwall Enjoying an Increased Patronage Due to Improved Transportation Service.

Since the inauguration of the daily launch service to Taboga Island on December 1, there has been a marked increase in the travel in that direction. Especially is this so on Saturdays and Sundays, when employees, and in the case of married men, their families, can go over on Saturday night and stay, if they choose, until Monday morning, or go over on Sunday morning, come back that night, or stay until the following morning. The week-ends at the Hotel Aspinwall are becoming more and more popular, and with the appearance of the dry season, it is expected that the number of visitors will still further increase. On Saturday and Sunday, December 12 and 13, there were more guests at the hotel than any previous time since the special launch service was started. The low rates for transportation and the moderate charges for hotel accommodations, combined with the rest and change afforded by a visit to the island, make the trip unusually attractive. To those seeking an absolute rest, or to those convalescing from a spell of sickness, the conditions are almost ideal, and this fact is beginning to be realized more and more.

In former times, when the hotel was operated as a sanitarium, to those of the patients who liked diversion, the days were a little dull. There was nothing to do, but to sit around, read, wait for the meal hours, and to go in bathing when the spirit prompted, while one's movements were naturally restricted to a certain extent. The aim of the present management in its plan to popularize the place is to furnish every reasonable comfort and convenience to its guests, and in addition, to provide suitable forms of diversion. To this end, a croquet ground has been laid out, and the construction of a lawn tennis court is under way, which will be available for the holding of tournaments by Canal Zone clubs, as well as for the use of the individual hotel guests. The hotel is already provided with a poolroom, and a piano has recently been installed in the parlor, so that music for dancing is now available. The management is arranging to procure the services of one, who, in addition to performing other duties about the hotel, will be able to play the piano on dance nights. Other forms of diversion will probably be introduced later, including something for the little folks.

The rates at the hotel, as compared with other resort hotels, are very reasonable. Fifty cents is the charge for breakfast, and 75 cents each for luncheon and dinner, with a rate of \$2 by the day. A special rate has recently been authorized whereby patrons who go over on the afternoon boat can obtain dinner, lodging, and breakfast for \$1.50, and another arrangement has been placed in effect whereby employees can have their bills deducted from their pay at the end of the month, if so desired. The bedrooms at the hotel are airy and clean, and added privacy has been secured by enclosing the veranda space pertaining to each room on the second floor with wire partitions. This permits occupants of various rooms to carry on conversations when seated on the porch, but eliminates the constant passing back and forth in front of the rooms. The dinner at the hotel on Sunday evening, December 13, as shown by the menu

given below, may be considered as typical of the meals now served at the hotel:

MENU.		
Celery	Consomme Royale	Pickles
Breaded Fish,	Tartare Sauce,	Julienne Potatoes
Duchesse Potatoes	Roast Stuffed Chicken	Creamed Carrots
Asparagus		Steamed Rice
TO ORDER		
Eggs and Plain Omelettes		
Sirloin Steaks		
COLD		
York Ham	Papaya Salad	Roast Lamb
Strawberry Ice Cream and Cakes		
Fruit		
Crackers and Cheese		
Tea	Coffee	Cocoa

The natural beauty of the island is always a sterling attraction; its quaint village with crooked cobble stone streets perched on the hillside; its sand beaches and almos: perfect bathing; its fruits, embracing nearly every variety common to the tropic, and particularly its pineapples, known far and wide, which may be seen growing in patches on the steep hill slopes; its tamarind grove, said to be the largest of its kind in the country, located on the beach path to La Restinga, the little suburb to the main village, opposite Morro Island; its pure spring water, and its conch and coral specimens, all afford abundant opportunities for lovers of nature, and for pleasure and curiosity seekers.

Transfer Values of Canal Buildings.

A committee, consisting of Maj. B. T. Clayton, Capt. R. E. Wool, and Chas. L. Parker, appointed to consider the general question of transfer values in connection with the taking over of Panama Canal buildings by the military forces of the United States, has submitted its report and recommendations. The committee was of the opinion that, although there is in some cases considerable difference in the value of buildings on account of local conditions, a general depreciation percentage basis would be the best, and, therefore, recommended that the following percentages of original cost govern in the transfer of such buildings:

Portable buildings.....	10 per cent of original cost.
French buildings.....	25 per cent of original cost.
American buildings.....	50 per cent of original cost.

Drawing Money Orders on European Countries.

The United States Post-office Department has advised the Director of Posts of the Canal Zone that money orders in small sums, not to aggregate more than \$100 in favor of one payee, can be drawn, as usual, for payment in European countries, excepting only Austria, Belgium, and Portugal, and that it is immaterial whether the remittance represented by the order is personal or commercial. This supersedes instructions contained in the Director of Posts' circular of August 6, 1914.

Employees Shipping Household Goods to New York.

Officials of the Panama Railroad Steamship Line have noticed that, during the past few months, some employees of The Panama Canal and the Panama Railroad Company on the Isthmus have been forwarding their shipments of household goods under consignment to customs brokers in New York City.

When boxes of household goods are shipped under the certificate of the Canal Zone customs service that they are exempt from custom charges in the United States, and the freight

has been paid from Cristobal to New York, there is no difficulty about securing their release on the pier at New York, and employees will do well in such cases to consign shipments to themselves and avoid the unnecessary expense and trouble of dealing with customs brokers.

Danger of Contracting Malaria.

The Health Department calls attention to the fact that a considerable proportion of the malarial infection lately encountered in Americans has been contracted during evenings spent at pleasure resorts, especially in the suburbs of Panama.

All persons are warned that it is not safe to spend evenings in the open and urged to abstain from doing so. In case necessity, or the search for pleasure leads one to so expose himself, quinine should be taken thereafter.

Resorts in the neighborhood of marshes or of new construction work are the most dangerous.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., December 14, 1914.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Bernard, W. F.	DeBarrows, D.
Bryson, Carl E.	Jacobs, Lt. F. P.
Burgess, C. E. (paper)	Hooker, J. S.
C. stills, M. J.	Minnix, Mrs. W. E.
Cavalli, G. etimo	Olsen, W. S.
Clarke, Mrs. Alice	Roberts, Charles Wm.
	Walsh, Mrs. John

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday December 12, 1914. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gatun Lake.	Miraflores Lake.	
Sun., Dec. 6.....	127.2	93.31	36.71	36.70	54.05
Mon., Dec. 7.....	127.20	93.36	46.68	46.68	54.25
Tues., Dec. 8.....	127.2	93.2	6.67	6.71	53.95
Wed., Dec. 9.....	127.2	93.13	36.70	36.72	54.42
Thurs., Dec. 10.....	127.30	93.41	86.72	86.69	54.13
Fri., Dec. 11.....	127.25	93.25	86.70	86.70	54.01
Sat., Dec. 12.....	137.90	101.00	86.95	86.93	54.11
Height of low water to nearest foot....	125.0	91.0			

Rainfall from December 1 to 12, 1914, Inclusive.

STATIONS.		Maximum in one day.	Date.	Total for period.
Pacific Section—				
Balboa.....	1.11	12	3.60	
Balboa Heights.....	1.29	7	4.38	
*Miraflores.....	1.65	6	2.66	
Pedro Miguel.....	1.78	6	2.51	
Rio Grande.....	1.36	7	2.23	
Central Section—				
Culebra.....	.26	3	.46	
*Cruces.....	.84	7	1.61	
Embarcadero.....	.50	7	1.00	
Gatun.....	1.72	8	2.43	
*Juan Milla.....	.87	7	1.35	
Alhajuela.....	.61	7	1.33	
*El Vigia.....	1.85	9	4.53	
Frijoles.....	1.35	1	4.07	
*Tribal.....				
*Monte Lirio.....	1.50	1	3.35	
Atlantic Section—				
Gatun.....	.79	12	2.29	
*Brazos Brook.....	.93	2	2.29	
Colon.....	2.27	12	4.92	

*Standard rain gage—readings at 5 p. m. daily.
Automatic rain gage at unstarred stations—values midnight to midnight.

ROCK AND SAND OPERATIONS.

Review of Work Performed at Ancon Quarry and Punta Chame—Future Supply.

The Ancon quarry plant was closed down on Saturday night, October 31, but the machinery, with the exception of the screens, will be left in position for use in case it becomes necessary to renew operations at some later date. The plant is equipped with one No. 12 primary, and four No. 6 secondary, McCully crushers, and has a normal capacity of from 2,500 to 3,000 cubic yards of crushed rock per day. The plant started work on February 8, 1910, and has, therefore, been in operation, with the exception of temporary interruptions from breakdowns, for about four years and eight months. The plant has supplied the greater part of the crushed rock used in the concrete work at Pedro Miguel and Miraflores Locks, and Miraflores Spillway; and, in addition, has furnished rock and screenings for the miscellaneous requirements of all departments and divisions, the Panama railroad, Canal contractors, and private individuals and companies. Concrete construction at Pedro Miguel Lock was begun in September, 1909, and until the Ancon quarry plant was ready for operation, crushed rock was obtained from the Rio Grande quarry, which was closed down after the Ancon crushers were in a position to supply the material.

On August 8, 1910, there was a record day's output at the Ancon plant, consisting of 3,330 cubic yards in eight hours and 35 minutes, an average of 391 cubic yards per crusher hour. On December 1, 1910, owing to an increased demand for rock, for the 12-hour shift then in force, was substituted two 8-hour shifts, which arrangement continued for several months. With the completion of lock construction at the Pacific end, the demand lessened, and it has been possible to accumulate a considerable amount of rock and screenings in storage, although the requirements of the new work around Balboa have been large.

The output of the plant from the beginning of operations up to and including October 31, 1914, by years, is as follows:

	Cubic yards.
1910.....	175,174
1911.....	855,824
1912.....	839,279
1913.....	638,301
1914.....	532,793
July 1 to October 31, 1914.....	184,090
Total.....	3,245,466

The amount of crushed rock and screenings in storage on October 31 was approximately, as follows:

	Cubic yards.
No. 1 rock.....	111,356
No. 2 rock.....	15,400
Screenings.....	11,176
Total.....	137,932

The dredging of sand at Punta Chame was discontinued on October 20. The equipment employed in this service consisted of the ladder dredge *Gopher* and six barges. The sand beds at Punta Chame, about 23 miles from Balboa docks, were first opened in September, 1909. Up to February, 1910, when the first of the three special unloading cranes at the Balboa sand dock was placed in operation, sand was unloaded from barges by means of a locomotive crane equipped with a clamshell bucket. With the installation of the three unloading cranes, the output was greatly augmented. Upon the completion of lock masonry work at Pedro Miguel, the demand for sand lessened, and it was possible to ac-

cumulate a considerable amount in storage, south of Miraflores Locks. The sand service was entirely suspended for several months in 1913 and 1914. When gravel operations were started up at Gamboa, one of the unloading cranes at Balboa was removed to that point, and subsequently a second one. It is possible that the third crane will also be established there later.

The amount of sand supplied from the beds at Punta Chame during the years of operation is shown in the following table:

	Cubic yards.
1910.....	235,869
1911.....	494,841
1912.....	564,837
1913.....	445,658
1914.....	199,319
July 1 to October 31, 1914.....	67,075
Total.....	2,007,590

Punta Chame sand, like Ancon rock, has been supplied to all departments and divisions, and a considerable quantity was used in the construction of Gatun Locks, supplementing the supply from Nombre de Dios.

With the discontinuance of the above rock and sand supply, future requirements will be met, as far as possible, by using Chagres River gravel. A gravel screening plant has been installed, on a barge, and is designed to separate the gravel into two grades. In addition, sand will be supplied by screening through a 4-inch mesh. The screening plant, which has a capacity of about 500 cubic yards a day, was placed in regular operation this week; on Tuesday about 400 cubic yards were screened and on Wednesday about 500 cubic yards. At present, only the sand is being screened from the gravel. This gives three different classes of material the run of gravel from the stock pile, which contains about 70,000 cubic yards, the coarse screened gravel, and the sand.

Proposals for Clearing Margarita Island.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., December 22, 1914, and then opened for clearing the entire area of Margarita Island of all growth, with the exception of coconut trees, to within three inches of the ground and burning all material so cut; work to be begun within five days after signing contract and completed within 30 days thereafter. Bids must be for a lump sum for the entire job.

Bids must be accompanied by cash, post-office money order, or certified check for five per cent of the amount bid.

Form of contract and bond may be obtained upon application to this office.

Bids should be marked "Proposal for clearing Margarita Island."

WM. R. GROVE,
Chief Quartermaster.

Proposals for Plastering Two-Family and Four-Family Quarters, Balboa Dump.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., December 19, 1914, and then opened for furnishing necessary labor to do all plastering required to finish two four-family houses and two two-family houses at Balboa dump. One of these houses will be ready for plastering about January 1, 1915, another about January 10, and the other two about January 15.

Specifications for this work may be obtained upon application to the Constructing Quartermaster, Room 256, Balboa Heights.

Bids may be submitted for each house or a total for the four houses.

Bids must be accompanied by \$100.

The Government reserves the right to reject all bids. Bids should be marked "Proposal for plastering two-family and four-family quarters, Balboa Dump."

WM. R. GROVE,
Chief Quartermaster.

OFFICIAL CIRCULARS.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., December 11, 1914.

CIRCULAR No. 80:

Effective January 1, 1915, Mr. X. D. Holt is designated an accountable official of The Panama Canal, and as such will account for the stock charged to Paraiso store. Nonexpendable property in use at Paraiso store will be accounted for by the district quartermaster at Paraiso.

H. A. A. SMITH,
Auditor, Panama Canal.

Approved:

GEORGE W. GOETHALS,
Governor.

Customs Regulations.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., November 21, 1914.

CIRCULAR No. 679 (Revised):

Article 1. There is hereby established a Bureau of Customs for The Panama Canal which shall be charged with the following duties:

(a) The entry and clearance of vessels at the ports of the Canal Zone.

(b) The custody of goods, wares, and merchandise introduced into the Canal Zone, pending the release thereof on presentation of evidence in due form that said goods, wares, and merchandise are entitled to free entry, or that the import duties due to the Republic of Panama have been paid, or that payment has been waived.

(c) The enforcement of the immigration laws and regulations of the Canal Zone, except as this duty is assigned by law or Executive Order to the Chief Quarantine Officer.

(d) The certification of invoices covering shipments from the Canal Zone to the United States.

(e) Such services to seamen as are commonly rendered by shipping commissioners in American ports, or by American consuls in foreign ports.

Article 2. The Executive Secretary of The Panama Canal shall be charged with the supervision of the Customs Service. The captains of the ports of the Canal Zone shall be, *ex officio*, officers of the Customs Service for the purpose of entering and clearing vessels. There shall be employed such inspectors and other subordinate officers as may be necessary to carry on the work of the bureau as determined by competent authority. Employees of The Panama Canal or the Panama Railroad Company on the Isthmus, whose duties relate to vessels using the Panama Canal and its terminal ports, or to cargo discharged in the Canal Zone, may be appointed customs officers for special and defined purposes, and they shall discharge their duties as such without additional compensation.

Article 3. Subject to the direction of the Executive Secretary, and except as otherwise provided for in these regulations, inspectors of customs shall perform the duties heretofore performed by deputy collectors or customs in the Canal Zone.

Article 4. Vessels may enter either at the port of Balboa, or at the port of Cristobal. A vessel arriving for passage through the Canal, with through clearance from port of departure for port of final destination, which does not stop at either terminal port, will not be required to enter or clear. A vessel that stops at either or both terminal ports will be required to enter, and clearance will be issued from the last port at which the vessel stops. In no case will a vessel be required to clear from Balboa to Cristobal or vice versa.

Article 5. When a vessel arrives at the port of Balboa, or the port of Cristobal, or at the Panama Canal in transit, the master thereof shall furnish to the boarding officer representing the Bureau of Customs, or if no customs officer shall come aboard, to the captain of the port, on a blank form which will be furnished him for that purpose, a report of arrival, which shall include such statistical data relating to the vessel, its cargo and passengers, as may be required by the various departments of The Panama Canal.

Article 6. If cargo is to be discharged in the Canal Zone there shall also be furnished to the boarding officer a full manifest of such cargo, in writing, signed by the master and specifying the marks, kinds, and quantities thereof, the port or ports where the cargo was shipped, the different port to which it is consigned or intended to be entered and the names of the consignees. Any form of manifest in substantial compliance with these requirements will be accepted, and it may be in English or in the language of the nation to which the vessel belongs. If in a foreign language other than Spanish, the master or agent of the vessel must furnish a translation. If the regular manifest does not substantially comply with the requirements, then a statement shall be furnished for statistical purposes containing the in-

formation specified. This article shall not apply to cargo landed in the Canal Zone for immediate transshipment.

Article 7. An additional copy of the manifest must be furnished by the master or agent of the vessel for each port in the Canal Zone at which cargo is discharged; provided, that in lieu of a copy of the complete manifest there may be furnished at the option of the master or agent a copy of only such portions of the manifest as relate to the cargo to be so discharged.

Article 8. There shall also be furnished to the boarding officer the clearance issued to the vessel at the last port of call, a copy of the passenger list, which shall distinguish between passengers in transit and passengers to be landed in the Canal Zone, a copy of the crew list, list of sea stores, and certificate of discharge from quarantine; provided, that in the case of vessels in transit through the Canal which do not take on or discharge freight or passengers or ship or discharge seamen in the Canal Zone, the exhibition of these documents when required by a customs officer will be sufficient and copies need not be furnished.

Article 9. The master shall certify under oath that the manifest, passenger list, and other documents delivered by him to the boarding officer are complete and true.

Article 10. No vessel shall be permitted to enter until the master or agent shall produce a certificate of discharge from quarantine.

Article 11. Before an entry is made of a vessel of the United States, the register and articles must be produced to the customs officers, and these documents may be retained until a clearance is granted.

Article 12. It is not necessary for the captain or master of any vessel of war or public vessel owned or chartered by a foreign government to report and enter on arrival at the Panama Canal, at either of the terminal ports, unless engaged in the transportation of merchandise in the way of trade, but such vessel shall be subject to the quarantine regulations and to the regulations relative to the payment of tolls and of bills for material, supplies, repairs, harbor pilotage, towage, wharfage, and other services furnished to vessels by The Panama Canal; and such public or chartered vessels, other than men-of-war, may be required to certify as to the number of passengers or troops on board, and the character and kind of cargo, when requested by the Canal authorities to do so.

Article 13. The Bureau of Customs shall have exclusive control over all goods, wares, and merchandise, including passengers' baggage and packages of every kind and nature introduced into the Canal Zone, pending the release thereof on presentation of evidence in due form that such goods, wares, and merchandise are entitled to free entry, or that the import duties due to the Republic of Panama have been paid, or that payment has been waived. No such goods, wares, or merchandise shall be released for delivery to consignees or for reexport, except upon the order of a customs officer.

Article 14. A copy of the manifest of cargo landed at any point in the Canal Zone shall be delivered by the Bureau of Customs to the customs authorities of the Republic of Panama.

Article 15. The master of a vessel clearing from any port of the Canal Zone shall be required to furnish to the Bureau of Customs a manifest of all goods, wares, and merchandise, including packages of every kind and description, accepted for shipment from the Canal Zone in said vessels, showing the kinds, quantities, and destination thereof, and also a list of all passengers embarked in the Canal Zone; or if no cargo has been accepted for shipment and no passengers have embarked, a statement to that effect. But with the consent of the Bureau of Customs, previously obtained, these documents may be furnished through an agency on the Isthmus within 48 hours after the clearance of the vessel. The manifests, passenger lists, and statements submitted in compliance with this article shall be subscribed and sworn to by the master or agent of the vessel. This article shall not apply to vessels in transit through the Canal which do not take on passengers or cargo in the Canal Zone, nor to cargo or passengers transhipped from connecting lines or other vessels.

Article 16. Vessels leaving the port of Balboa, or the port of Cristobal, shall be cleared by the port captain, except as provided in Article 4.

Article 17. The captain of the port will not issue a clearance until he has ascertained:

(a) That the documents and statistical data in regard to cargo and passengers, as required by these and other regulations governing the use of the Panama Canal, have been furnished by the master of the vessel, or that satisfactory arrangements have been made to furnish same through an agency on the Isthmus.

(b) That all tolls, and bills for materials, supplies, repairs, harbor pilotage, towage, or wharfage, furnished to vessels by The Panama Canal, or by the Panama Railroad Company, have been paid, or that their payment has been secured.

(c) That the vessel has complied with the quarantine and immigration laws and regulations of the Canal Zone.

(d) That the laws and regulations governing the shipment and discharge of seamen, and for the protection of seamen, have been complied with.

Article 18. The Executive Secretary charged with the supervision of the Customs Service of the Canal Zone shall, in person, or through such assistants as he may designate, perform the duties of a shipping commissioner, and he shall render such services to American seamen as are commonly rendered by shipping commissioners in the United States, and by American consuls abroad. In the performance of these duties he shall be governed by the Navigation Laws of the United States and by the United States Consular Regulations, insofar as they are applicable.

Article 19. Questions which may arise in the administration of the Customs Service of the Canal Zone, which are not specifically provided for in these regulations, shall be decided in accordance with the Customs Regulations of the United States insofar as the latter regulations are not locally inapplicable.

GEO. W. GOETHALS,

Governor.

Material Salvaged from Garbage Dumps.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 7, 1914.

CIRCULAR No. 631-3:

1. The Health Department recovers from the garbage dumps at Colon and Panama, quite a number of oil, wine and other classes of barrels, some galvanized iron roofing, bottles, etc.

2. In future, all this salvaged material for which any department or division of The Panama Canal or the Panama railroad may have use, will be turned over to such department or division at such prices as the Health Department would be offered, for same by private parties in the open market.

3. Orders should be placed with the Health Department for such items as can be utilized in the work of The Panama Canal or the Panama railroad, and salvage not required for work on the Canal or railroad will be sold by the Health Department to the best possible advantage.

GEO. W. GOETHALS,

Governor.

Tags Torn Off Bad Order Cars.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 10, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The attention of this office has been directed to the fact that tags are being removed from bad order cars, and that such cars are placed in service without authority from the Mechanical Division.

As this practice is a very dangerous one and is liable to result in serious accidents, heads of departments and divisions are requested to instruct their employees not to remove bad order tags from cars without proper authority from the Mechanical Division, nor to place in service any cars from which such tags have been removed without proper authority.

GEO. W. GOETHALS,

Governor.

Lock Permits.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 11, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

All lock permits expire on or before December 31, 1914. Please submit, not later than December 20, the names of all employees whose duties require them to frequently visit or cross the locks. The names of employees whose duties take them to the locks only occasionally should not be submitted, as permits for such employees will be issued upon request from the head of the department or division in each individual case.

GEO. W. GOETHALS,

Governor.

Local Notice to Mariners.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 10, 1914.

During the continuance of the obstruction in Culebra Cut the northbound range lights in the Gatun Lake section will be lighted.

GEO. W. GOETHALS,

Governor.

Addressing of Letters for Balboa Heights.

THE PANAMA CANAL,

OFFICE OF EXECUTIVE SECRETARY,

BALBOA HEIGHTS, C. Z., December 5, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The Director of Posts has advised me that a great

many letters for Balboa Heights are delayed because of improper address. Mail for departments and divisions formerly at Ancon, Culebra, Cristobal, and Empire, continues to be improperly addressed to the old stations, instead of Balboa Heights. Part of this trouble is due to the use of obsolete envelopes bearing printed addresses. A large amount of mail for Balboa Heights is improperly addressed to Balboa. Please bring this to the attention of employees who are delinquent in this respect.

C. A. McILVAINE,

Executive Secretary.

Preparation of Papers for Termination of Service.

THE PANAMA CANAL,

OFFICE OF EXECUTIVE SECRETARY,

BALBOA HEIGHTS, C. Z., December 9, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

Herewith a supply of leaflets outlining instructions to govern in the preparation of papers incident to terminating the service of employees.

In order to facilitate the handling of personnel papers, please see to it that your outside offices, foremen, and field clerks are made acquainted with these instructions, in order that the proper cooperation may be obtained.

C. A. McILVAINE,

Executive Secretary.

Charges for Interments.

THE PANAMA CANAL,

OFFICE OF CHIEF HEALTH OFFICER,

BALBOA HEIGHTS, C. Z., December 11, 1914.

CIRCULAR No. 62:

To all concerned.—Effective at once, with the approval of the Governor, the charges for interments is increased from \$2 to \$3.

CHAS. F. MASON,

Chief Health Officer.

Rates at Hotel Aspinwall for Supper, Lodging, and Breakfast.

THE PANAMA CANAL,

OFFICE OF CHIEF QUARTERMASTER,

BALBOA HEIGHTS, C. Z., December 9, 1914.

A rate of \$1.50 for supper, lodging and breakfast at the Hotel Aspinwall has been authorized. The daily rate will remain the same and this rate of \$1.50 is intended to apply to patrons who come over on the afternoon boat, stay over night, and return the next morning.

WM. R. GROVE,

Chief Quartermaster.

Checking Colon Baggage on Boat Tickets.

THE PANAMA RAILROAD COMPANY,

OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., November 30, 1914.

To all concerned.—Effective at once, employees holding tickets purchased for passage through the Canal will be allowed to check the usual allowance of baggage by rail from Panama to Colon upon presentation of such tickets. Should they also present steamship transportation, their baggage can be checked to the dock as has been customary in the past.

C. H. MOISETT,

Superintendent.

Examinations by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 308, on Wednesday, December 30, 1914, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

By direction of the chairman of the board.

F. M. NIXON,

Recorder, Board of Local Inspectors.

COMMISSARY DEPARTMENT.

Christmas Fruit Cakes.

THE PANAMA CANAL,
SUPPLY DEPARTMENT.

CRISTOBAL, C. Z., December 10, 1914.

TO COMMISSARY STOREKEEPERS:

One dollar fruit cakes for Christmas will be ready for sale on and after December 20, 1914.

Please advertise this fact at once, and begin taking orders for delivery on and after that date, so as to be able to phone this office approximately what your requirements will be. Your first order should be phoned to this office on December 19, 1914.

By direction of the Chief Quartermaster.

BENJ. L. JACOBSON,
Depot Commissary.

Sale of German Binoculars.

THE PANAMA CANAL,
SUPPLY DEPARTMENT.

CRISTOBAL, C. Z., December 11, 1914.

TO COMMISSARY STOREKEEPERS:

The Panama Canal has turned over to this depot to be sold to whosoever desires to purchase them, a surplus stock of German binoculars in leather cases supplied by the C. P. Goetz American Optical Company of New York City, of which six are still on hand in the wholesale hardware section.

These glasses are priced at \$16.25, and are described, as follows:

"Plain lens (not prismatic), independent adjustable eye piece in each barrel; no in-and-out motion of inner barrel; carrying eye piece to be adjustable for space between eyes; to magnify six times."

Please bring this circular to the attention of your customers and advise them that they can secure glasses through you or by sending money order, payable to the commissary cashier, to this office direct.

BENJ. L. JACOBSON,
Depot Commissary.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective December 17:

FRESH MEATS.

No changes in prices of fresh meats since last week.

MISCELLANEOUS.

	Price.
Livers—Beef, per pound.....	13
Calf, each.....	65
balf, each.....	33
Oysters, fresh, per pkt.....	130
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	14
Frankfurter, per pound.....	14
Lieberwurst, per pound.....	12
Pork, per pound.....	18
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	47
per 1-dozen.....	24
Bluefish, per pound.....	10
Halibut, fresh, per pound.....	49
Salmon, per pound.....	16
Yeast, per pound.....	31
per cake.....	2

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound.....	25
Chickens—Fancy, roasting, corn fed, per pound.....	24
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	30
Broilers, milk fed, per pound.....	25
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	26
Squabs, each.....	30
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	24
Half, per pound.....	26
Sliced, per pound.....	32
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	30
Half, boiled, per pound.....	32
Sliced, boiled, per pound.....	38
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32

Ham, lunch, per pound.....	Price.
Pork, salt, family, per pound.....	40
Ox tongues, each.....	14
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	43
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	21
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	**15
Fermillac, bottle.....	**25
Ice cream, quart.....	125
1-gallon.....	150
Cream, Sh. field Farms, quart.....	**33
pint.....	**19
1 pint.....	**12

VEGETABLES.

Cauliflower, per pound.....	12
Beets, per pound.....	24
Brussels sprouts, per pound.....	15
Celery, per head.....	5
Cabbag, per pound.....	24
Carrots, per pound.....	2
Cucumbers, per pound.....	8
Lettuce, per pound.....	7
Onions, per pound.....	24
Peppers, per pound.....	5
Parsnips, per pound.....	*44
Potatoes, white, per pound.....	2
sweet, American, per pound.....	*5
sweet, tropical, per pound.....	2
Yams, tropical, per pound.....	3
Eggplant, per pound.....	9
Turnips, per pound.....	2
Tomatoes, per pound.....	8
Squash, per pound.....	*3

FRUITS.

Apples, per pound.....	3
Apples, fancy, per pound.....	5
Cranberries, fresh.....	6
Grapes, per pound.....	14
Grape fruit—American, each.....	5
Tropical, each.....	34
Lemons, per dozen.....	14
Limes, per 100.....	40
Oranges—American, each.....	24
Tropical, per dozen.....	9
Pears, per pound.....	44
Coconuts, each.....	5
Bananas, per bunch.....	38
Bananas, each.....	4
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Tangerines, each.....	1

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§Not less than 1/2 ham or 1/2 shoulder of fresh pork will be sold.

Additions to Stock.

Parasols, white, ea.....	1.00
Parasols, tan, ea.....	1.35
Hats, men's, felt, ea.....	.72
Tape, bias, linen, No. 3, 6-yd., pc.....	.08
Tape, bias, linen, No. 4, 6-yd., pc.....	.09
Tape, bias, linen, No. 5, 6-yd., pc.....	.10
Tape, bias, linen, No. 6, 6-yd., pc.....	.12
Tape, bias, linen, No. 7, 6-yd., pc.....	.13
Tape, bias, linen, No. 8, 6-yd., pc.....	.14
Slippers, bath, ladies, pr.....	.50
Slippers, bath, mens, pr.....	.50
Oil, olive, Francesconi, gal. tin.....	3.40
Handkerchiefs, ladies, ea.....	.10
Handkerchiefs, ladies, ea.....	.10
Handkerchiefs, ladies, ea.....	.16
Handkerchiefs, ladies, ea.....	.35
Handkerchiefs, ladies, ea.....	.41
Handkerchiefs, ladies, ea.....	.71
Handkerchiefs, ladies, ea.....	.13
Linen cambric, 36-inch, yd.....	.30
Measures, pt., ea.....	.15
Umbrellas, ladies, ea.....	.78
Umbrellas, ladies, ea.....	.93
Suits, union, ladies, ea.....	.38
Suits, union, mens, ea.....	.68
Belting, dress, yd.....	.04
Belting, dress, yd.....	.03
Napkins, paper, assorted, doz.....	.02
Books, memo., indexed, ea.....	\$0.14
Pads, scratch, 5" by 8", ea.....	.02
Robes, T. B., ea.....	5.90
Dress sets, gold plated, set.....	2.40
Studs, gold plated.....	.46
Bags, fitted, womens, ea.....	16.63
Bags, unfitted, womens, ea.....	5.75
Cases, dressing, mens, ea.....	3.70
Wire, picture, 25-yd roll.....	.08
Brushes, varnish, flat, 1 1/2", ea.....	.25

Brushes, varnish, flat, 2", ea.....	.33
Brushes, varnish, flat, 2 1/2", ea.....	.49

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective December 9, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Shirts, soft, ea.....	.82	.70
Shoes, mens, tan, blu., pr.....	4.15	4.30
Shoes, mens, G. M., blu., pr.....	4.15	4.30
Shoes, mens, G. M., Blu., pr.....	4.05	4.25
Bowls, yellow, 1-qt., ea.....	.08	.06
Perfume, Eclat, bot.....	.58	.70

EFFECTIVE DECEMBER 16.

Shirts, negligee, E & W, ea.....	\$1.15	\$1.10
Towels, T. B., ea.....	.23	.19
Bowls, yellow, 2-qt., ea.....	.14	.12
Freezers, 8-qt., ea.....	4.30	3.90
Pitchers, water, glass, ea.....	.41	.25
Cribs, baby, ea.....	5.35	5.05
Shoes, womens, vici blu., pr.....	2.75	2.85
Shoes, womens, tan, russ., pr.....	3.15	3.25
Water, toilet, bot.....	.38	.50
Ammonia, violet, bot.....	.18	.10
Ribbon, No. 22, yd.....	.13	.11
Ribbon, No. 16, yd.....	.12	.10
Cloth, Palm Beach, yd.....	.75	.88
Trousers, blue, working, pr. No. 9372.....	.80	.93
Trousers, blue, working, pr. No. 9592.....	.80	.93
Purses, leather, ea.....	.26	.30
Pans, muffin, 12 cup, ea.....	.15	.30
Papeteries, box.....	.37	.18
Shoes, glazed, kid, blu., pr.....	5.05	5.35
Cases, suit, fibre, ea.....	1.09	.90
Mace, ground, tin.....	.12	.08
Hose, black, white sole, pr.....	.12	.18
Hunyadi water, bot.....	.19	.26

Proposals for Plumbing, Barracks "I" and "K", Balboa Dump.

THE PANAMA CANAL.

OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., December 23, 1914, and then opened for furnishing the necessary labor for installing plumbing in Army Barracks "I" and "K," Balboa Dump, in accordance with drawings of these buildings which may be seen upon application to the Architect, Balboa Heights, C. Z. This work must be done to the satisfaction of the Constructing Quartermaster or his representative. Any further information relative to specifications, etc., may be obtained upon application to the office of the Constructing Quartermaster, Room 266, Balboa Heights.

Separate bid should be submitted for each house, but one bidder may bid on both buildings.

Bidders should state in their proposal the time in which they propose to complete this work.

The Government reserves the right to reject all bids. Bids must be accompanied by \$75.

Bids should be marked "Proposal for plumbing, Barracks "I" and "K," Balboa Dump."

WM. R. GROVE,

Chief Quartermaster.

Proposals for Carpentry Work, Houses 753 and 756, Balboa.

THE PANAMA CANAL,

OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., December 21, 1914, and then opened for furnishing the necessary labor to complete the interior carpentry work in houses Nos. 753 and 756, Balboa. This work must be finished in accordance with detail drawings which will be furnished the contractor, which drawings will be the same as have been used in finishing the houses previously completed at Balboa of the same type. These drawings may be seen upon application to the Architect, Balboa Heights. The work must be equal to that done in the other houses on Balboa Flat and must be done to the satisfaction of the Constructing Quartermaster or his representative.

Bidders should state the time in which they propose to complete the work.

Separate bid must be submitted for each house, but one bidder may bid on both houses.

Bids must be accompanied by \$50.

The Government reserves the right to reject all bids. Bids should be marked "Proposal for carpentry work, Houses 753 and 756, Balboa."

WM. R. GROVE,

Chief Quartermaster.

SHIPPING INFORMATION.

January Weather Probabilities.

Based on the records at Colon and Ancon for the past seven years, the following weather conditions may be expected to prevail at the canal entrances during the month of January: Predictions for the month of December were published in THE CANAL RECORD of November 11.

Winds.—January is normally a dry season month. Fresh northerly trade winds will prevail. There will be an increase in the average wind velocity on both coasts, compared with December conditions. The average hourly velocity on the Atlantic side should be about 14 miles per hour. North and northeast winds will prevail. The maximum velocity may not be expected to exceed 35 miles per hour.

The prevailing winds at the Pacific entrance will be from the northwest. The average wind velocity should be about nine miles per hour, and the maximum velocity may not be expected to exceed 30 miles per hour.

Rain.—Although January is normally a dry season month, occasional light showers may be expected. Rainfall during the month is usually heavier on the Atlantic side than at the Pacific entrance. The average January rainfall has been 3.97 inches at the Atlantic entrance, and 0.95 inches on the Pacific side.

Sixteen days with rain may be expected on the Atlantic side and seven on the Pacific. The average number of days with heavy rain (one inch or more) has been one on the Atlantic side, while no heavy rains may be expected at the Pacific entrance to the Canal.

Fogs.—No fogs may be expected during the month at either Canal entrance. The average number of nights with fog over the Culebra Cut section of the Canal has been eight. Most of these fogs are light, and as practically all of them lift or dissipate before 8.30 a. m., they will not affect the navigation of the Canal under present operating conditions.

Temperature.—There is little change in average air temperature on the Isthmus from month to month. The average temperature in the shade should be about 80 degrees Fahrenheit on both coasts. The extreme maximum may not be expected to rise above 93 degrees Fahrenheit, nor the minimum to fall below 63 degrees Fahrenheit. The mean daily range is approximately seven degrees Fahrenheit at the Atlantic entrance, and 18 degrees Fahrenheit on the Pacific side.

Barometric pressure.—Barometric readings on the Isthmus are almost uniform from day to day. Changes in pressure are very slight, except for the regular well marked diurnal fluctuations characteristic of tropical regions. For this reason local barometric readings are practically valueless in forecasting weather conditions. As a rule, barometric readings run slightly higher in the dry season than during the rainy season months.

The average sealevel pressure should be about 29.88 inches. The maximum reading during the month may not be expected to exceed 30.04 inches, nor the minimum to fall below 29.70 inches.

Storms.—No severe general storms may be expected during the month, although the so-called "Northerners" occasionally reach as far south as the Atlantic entrance to the Canal during the period from November to April. These storms are characterized by steady, brisk, northerly winds ranging in

velocity up to 30 miles or more per hour. The winds alone are of insufficient force to constitute a hindrance to navigation at the Atlantic entrance, but they are usually accompanied by a heavy sea that may prove troublesome at times outside the breakwater.

Fair weather may be expected at the Pacific entrance to the Canal, with smooth to moderate seas.

Tides.—Tidal fluctuations need not be considered in navigating the Atlantic entrance to the Canal, as the average tidal range is less than one foot, and the extreme range approximately two feet.

The average tidal range at the Pacific entrance is about 13 feet, while the maximum range may reach 20 feet. Panama tide predictions for the next six weeks are given below.

Tide Predictions.

Panama tide predictions for the next six weeks are given in the following table:

DECEMBER.

DATE.	Time and height of high and low water.			
Wed., Dec. 16.....	14.0	0.7	14.2	1.5
	2:10	8:40	14:55	21:04
	15.1	-0.1	14.9	0.9
Thurs., Dec. 17.....	3:09	9:31	15:45	21:55
	15.8	-0.7	15.5	0.5
Fri., Dec. 18.....	3:58	10:20	16:34	22:45
	16.1	-1.0	15.8	0.4
Sat., Dec. 19.....	4:47	11:09	17:21	23:34
	16.0	-1.0	15.8	0.5
Sun., Dec. 20.....	5:36	11:56	18:08	.....
	15.6	-0.6	15.6	.....
Mon., Dec. 21.....	0:21	6:24	12:44	18:55
	0.9	15.0	0.1	15.0
Tues., Dec. 22.....	1:12	7:14	13:33	19:44
	1.4	14.2	1.0	14.3
Wed., Dec. 23.....	2:04	8:04	14:23	20:34
	2.1	13.2	2.0	13.5
Thurs., Dec. 24.....	2:58	8:59	15:16	21:28
	2.8	12.3	3.0	12.8
Fri., Dec. 25.....	3:25	10:00	16:12	22:25
	3.5	11.5	3.9	12.1
Sat., Dec. 26.....	4:54	11:09	17:11	23:25
	3.9	10.9	4.5	11.7
Sun., Dec. 27.....	5:55	12:18	18:12	.....
	4.1	10.8	4.8	.....
Mon., Dec. 28.....	0:25	6:50	13:19	19:09
	11.7	4.0	10.9	4.7
Tues., Dec. 29.....	1:17	7:40	14:07	19:58
	11.9	3.5	11.3	4.4
Wed., Dec. 30.....	2:03	8:24	14:46	20:42
	12.3	3.0	11.9	3.9
Thurs., Dec. 31.....	2:44	9:06	15:21	21:24
	12.8	2.3	12.6	3.3

JANUARY.

DATE.	Time and height of high and low water.			
Fri., Jan. 1.....	3:22	9:46	16:01	22:05
	13.4	1.5	13.3	2.6
Sat., Jan. 2.....	4:00	10:25	16:40	22:43
	14.0	0.8	14.0	1.9
Sun., Jan. 3.....	4:40	11:04	17:16	23:23
	14.5	0.4	14.5	1.5
Mon., Jan. 4.....	5:20	11:43	17:51	.....
	14.7	0.3	14.8	.....
Tues., Jan. 5.....	0:03	5:58	12:21	18:28
	1.3	14.7	0.3	15.0
Wed., Jan. 6.....	0:44	6:38	13:01	19:05
	1.3	14.5	0.6	15.0
Thurs., Jan. 7.....	1:29	7:21	13:44	19:48
	1.3	14.2	1.0	14.8
Fri., Jan. 8.....	2:16	8:08	14:32	20:36
	1.5	13.7	1.6	14.5
Sat., Jan. 9.....	3:10	9:03	15:26	21:31
	1.8	13.1	2.2	14.1
Sun., Jan. 10.....	4:09	10:07	16:28	22:36
	2.0	12.7	2.7	13.8
Mon., Jan. 11.....	5:14	11:22	17:36	23:48
	2.1	12.5	2.9	13.7
Tues., Jan. 12.....	6:23	12:38	18:45	.....
	1.8	12.7	2.7	.....
Wed., Jan. 13.....	1:00	7:28	13:49	19:51
	14.0	1.3	13.4	2.2
Thurs., Jan. 14.....	2:07	8:27	14:51	20:50
	14.5	0.6	14.2	1.5
Fri., Jan. 15.....	3:06	9:21	15:45	21:44
	15.1	-0.1	15.0	0.9
Sat., Jan. 16.....	3:59	10:12	16:33	22:34
	15.5	-0.5	15.5	0.5
Sun., Jan. 17.....	4:47	10:59	17:18	23:22
	15.7	-0.7	15.8	0.4
Mon., Jan. 18.....	5:31	11:43	18:01	.....
	15.5	-0.5	15.7	.....
Tues., Jan. 19.....	0:06	6:14	12:25	18:41
	0.6	15.0	0.0	15.2
Wed., Jan. 20.....	0:50	6:55	13:05	19:30
	1.0	14.3	0.8	14.6

DATE.

Time and height of high and low water.

Thurs., Jan. 21.....	1:28	7:35	13:47	19:58
	1.6	13.5	1.8	13.8
Fri., Jan. 22.....	2:16	8:17	14:30	20:39
	2.4	12.5	2.9	12.9
Sat., Jan. 23.....	3:03	9:03	15:18	21:24
	3.2	11.6	3.8	12.1
Sun., Jan. 24.....	3:54	9:57	16:10	22:18
	3.9	10.9	4.6	11.5
Mon., Jan. 25.....	4:53	11:05	17:12	23:14
	4.3	10.5	5.1	11.2
Tues., Jan. 26.....	5:57	12:22	18:17	.....
	4.3	10.5	5.1	.....
Wed., Jan. 27.....	0:35	6:59	13:31	19:19
	11.4	3.9	11.0	4.6

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 15° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15 47 is 3.47.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies, may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Sailings of Vessels in Regular Service With the Isthmus.

NEW YORK TO CRISTOBAL-COLON.

	Sails.	Arrives.
Zacapa.....	U. F. C., Dec. 9	Dec. 16
Allianca.....	P. R. R., Dec. 10	Dec. 16
Calamures.....	U. F. C., Dec. 12	Dec. 20
Carrillo.....	U. F. C., Dec. 16	Dec. 23
Colon.....	P. R. R., Dec. 17	Dec. 23
Tenadores.....	U. F. C., Dec. 19	Dec. 27
Trent.....	R. M., Dec. 19	Dec. 27
Almirante.....	U. F. C., Dec. 23	Dec. 30
Advance.....	P. R. R., Dec. 24	Dec. 31
Metapan.....	U. F. C., Dec. 26	Jan. 4
Santa Marta.....	U. F. C., Dec. 30	Jan. 6
Panama.....	P. R. R., Dec. 31	Jan. 6
Pastores.....	U. F. C., Jan. 2	Jan. 10
Danube.....	R. M., Jan. 5	Jan. 13
Zacapa.....	U. F. C., Jan. 6	Jan. 13
Allianca.....	P. R. R., Jan. 7	Jan. 13
Calamures.....	U. F. C., Jan. 9	Jan. 17

CRISTOBAL-COLON TO NEW YORK.

Panama.....	P. R. R., Dec. 17	Dec. 23
Santa Marta.....	U. F. C., Dec. 17	Dec. 24
Pastores.....	U. F. C., Dec. 21	Dec. 28
Ebro.....	R. M., Dec. 22	Dec. 30
Zacapa.....	U. F. C., Dec. 24	Dec. 31
Allianca.....	P. R. R., Dec. 26	Jan. 1
Calamures.....	U. F. C., Dec. 28	Jan. 4
Carrillo.....	U. F. C., Dec. 31	Jan. 7

(Continued on page 168.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon December 13.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Dec. 6.	Trafalgar	British	Glenn & Co.	New York	Melbourne	General mdse	6,500	5,089	3,816
Dec. 7.	Limari	Chilean	South American S.S. Co.	Cristobal	Valparaiso	General mdse	584	3,631	2,431
Dec. 7.	Royal Prince	British	Prince Line, Ltd.	New York	Vladivostok	General mdse	7,500	7,105	5,274
Dec. 8.	Advance	American	Panama Railroad S.S. Line	New York	Balboa	General mdse	1,328	2,965	2,161
Dec. 8.	Conch	British	Anglo-Saxon Petroleum Co.	New Orleans	Hongkong	Kerosene	6,398	5,980	4,345
Dec. 8.	Skippon Castle	British	Lancashire Shipping Co., Ltd.	New York	Auckland	General mdse	5,500	4,634	3,481
Dec. 8.	Lewis Luckenbach	American	Luckenbach S.S. Co.	New York	San Francisco	General mdse	4,300	4,599	3,601
Dec. 9.	Wilherusca	British	Sea S.S. Ltd.	Barry	For sea	*Coal	5,600	4,046	2,980
Dec. 10.	Pleiades	American	Luckenbach S.S. Co.	New Orleans	San Pedro	General mdse	3,500	4,147	3,255
Dec. 10.	Tokushima Maru	Japanese	Nippon Yusen Kaisha	Galveston	Yokohama	Cotton	4,000	4,410	4,731
Dec. 11.	Lena	British	Mercantile S.S. Co.	Cardiff	Sealed orders	*Coal	5,600	4,288	3,113
Dec. 11.	Arizona	American	American-Hawaiian S.S. Co.	New York	San Francisco	General mdse	5,336	8,759	6,576
Dec. 12.	Boyne	British	Mercantile S.S. Co.	Cardiff	Sealed orders	*Coal	6,500	4,965	3,776

*For British Admiralty.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Dec. 7.	Masaruu	British	MacLay & McIntyre	Tocopilla	Genoa	Nitrates	7,700	5,594	4,175
Dec. 7.	Indradeo	British	Indra Line	Orient	New York	General mdse	7,500	6,220	4,521
Dec. 8.	Santa Cecilia	American	Atlantic & Pacific S.S. Co.	San Pedro	Charleston	Gen'l mdse, Lumber	6,000	6,748	4,661
Dec. 8.	Queen Eugenie	British	Queen Line	Seattle	England	Wheat	6,329	4,707	3,516
Dec. 8.	Franklyn	British	Palace Shipping Co.	Tocopilla	Alexandria	Nitrates	7,500	5,470	3,767
Dec. 9.	M. S. Dollar	British	Dollar Line	Nanaimo	New York	*Lumber	3,500	4,421	4,011
Dec. 9.	Isabela	American	Luckenbach S.S. Co.	San Francisco	New York	General mdse	3,500	3,224	2,206
Dec. 10.	Barrington Court	British	Court Line	Portland, Ore.	Cardiff	Wheat	6,500	4,777	3,328
Dec. 10.	Zeta	British	Robt. Wilcox & Co.	Balboa	Mobile	Ballast	372	372	313
Dec. 10.	Buenaventura	American	Anglo-American S.S. Co.	Santa Rosalia	Norfolk	General mdse	7,200	5,483	3,908
Dec. 11.	Texas	American	American-Hawaiian S.S. Co.	San Pedro	New York	General mdse	7,500	8,996	6,400
Dec. 11.	Advance	American	Panama R. R. S.S. Line	Balboa	New York	General mdse	533	2,965	2,161
Dec. 11.	St. Hugo	British	Saint Line	Portland, Ore.	Falmouth	Wheat and flour	7,065	5,480	3,895
Dec. 12.	Farnebo	British	Houlder & Middleton	Tacoma	Teneriffe	*Flour	3,331	4,488	3,028

*3,032,236 board feet lumber. †339,865 bbls. flour.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessels	Line	From
Dec. 14.	Ardgarry	Lang & Fulton	New York
Dec. 14.	Lowther Castle	Lancashire Shipping Co.	New York
Dec. 15.	San Mateo	Luckenbach S.S. Co.	New York
Dec. 15.	Strathgyle	Strathgyle S.S. Co.	New York
Dec. 15.	Colombian	American-Hawaiian S.S. Co.	New York
Dec. 17.	Altima	P. R. R. S.S. Line	New York
Dec. 17.	Jean	Luckenbach S.S. Co.	New York
Dec. 19.	Dyector	Harrison Line	Liverpool
Dec. 19.	Montanan	American-Hawaiian S.S. Co.	New York
Dec. 19.	Bellgrano	Bellgrano S.S. Co.	New York
Dec. 19.	Mimira	Tyler Line, Ltd.	New York
Dec. 19.	Earl of Elgin	Earl of Elgin S.S. Co.	New York

*Vessels which will pass through the Canal.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Dec. 10.	Protesilaus	China Mut. Steam Nav. Co.	Victoria
Dec. 14.	Lowther Range	Furness, Withy & Co.	Portland, Ore.
Dec. 14.	S. V. Luckenbach	Luckenbach S.S. Co.	Los Angeles
Dec. 14.	Henrickian	American-Hawaiian S.S. Co.	Hilo
Dec. 16.	Huasco	South American S.S. Co.	Valparaiso
Dec. 17.	Panaman	American-Hawaiian S.S. Co.	San Pedro
Dec. 18.	Lawan	American-Hawaiian S.S. Co.	San Francisco
Dec. 26.	Santa Cruz	Grace Line	San Francisco
Dec. 26.	Quila	Ocean Nav. Co., Ltd.	San Francisco
Dec. 26.	Craigina	Craigina S.S. Co., Ltd.	Tacoma
Dec. 26.	Crown of Toledo	Harrison Line	Tacoma

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date	Vessel	Line	From	Date	Vessel	Line	To
Dec. 11.	Monterideo	Cia Transatlantica	Barcelona	Dec. 7.	Median	Leyland Line	Port Limon.
Dec. 12.	Potomac	U. S. Navy	Guantanamo	Dec. 8.	Essequibo	Royal Mail S. P. Co.	New York
Dec. 13.	Guadeloupe	Cie. Gen. Transatlantique	St. Nazaire	Dec. 13.	Monterideo	Cia. Transatlantica	Barcelona
*EXPECTED ARRIVALS.				*EXPECTED DEPARTURES.			
Dec. 14.	Berlin	West India S.S. Co.	Jacksonville	Dec. 14.	Nitonian	Leyland Line	
Dec. 14.	Byland	United Fruit Co.	Port Limon.	Dec. 14.	Berlin	West India S.S. Co.	
Dec. 14.	Freda	Seaberg Line		Dec. 14.	Hermad	Earn Line	
Dec. 18.	Hermad	Earn Line	Norfolk	Dec. 18.	Guadeloupe	Cie Gen. Transatlantique	St. Nazaire
Dec. 21.	Nitonian	Leyland Line	Liverpool	Dec. 18.	Potomac	U. S. Navy	

*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.				*DEPARTURES.			
Date	Vessel	Line	From	Date	Vessel	Line	To
Dec. 8.	Guatemala	Pacific Steam Nav. Co.	Callao	Dec. 7.	Pachileo	Peruvian S.S. Co.	Callao
				Dec. 7.	San Juan	Pacific Mail S.S. Co.	San Francisco
				Dec. 8.	Jamaica	Pacific Steam Nav. Co.	Colombian ports
*EXPECTED ARRIVALS.				*EXPECTED DEPARTURES.			
Dec. 15.	City of Paris	Pacific Mail S.S. Co.	San Francisco	Dec. 12.	Manati	Pacific Steam Nav. Co.	Guayaquil
Dec. 15.	Ecuador	Pacific Steam Nav. Co.	Guayaquil	Dec. 13.	Guatemala	Pacific Steam Nav. Co.	Callao
Dec. 16.	Montara	Peruvian S.S. Co.	Callao	Dec. 13.	Quilpue	Pacific Steam Nav. Co.	Laid up

*Other than vessels using the Canal.

(Continued from page 167.)

Colon	P. R. R.	Jan. 2	Jan. 8	Pastores	U. F. C.	Jan. 18	Jan. 25	Cartago	U. F. C.	Dec. 30	Jan. 6
Tenadores	U. F. C.	Jan. 4	Jan. 11	Zacapa	U. F. C.	Jan. 21	Jan. 28				
Danube	R. M.	Jan. 5	Jan. 13	Allianza	P. R. R.	Jan. 23	Jan. 29				
Almirante	U. F. C.	Jan. 7	Jan. 14	NEW ORLEANS TO CRISTOBAL-COLON.							
Advance	P. R. R.	Jan. 9	Jan. 16	Turrialba	U. F. C.	Dec. 12	Dec. 17	Atenas	U. F. C.	Dec. 17	Dec. 22
Metapan	U. F. C.	Jan. 11	Jan. 19	Heredia	U. F. C.	Dec. 16	Dec. 23	Cartago	U. F. C.	Dec. 17	Dec. 24
Santa Marta	U. F. C.	Jan. 14	Jan. 21	Abangarez	U. F. C.	Dec. 19	Dec. 24	Turrialba	U. F. C.	Dec. 24	Dec. 29
Panama	P. R. R.	Jan. 16	Jan. 22	Parismina	U. F. C.	Dec. 23	Dec. 30	Heredia	U. F. C.	Dec. 24	Dec. 31
				Atenas	U. F. C.	Dec. 26	Dec. 31	Abangarez	U. F. C.	Dec. 31	Jan. 5
								Parismina	U. F. C.	Dec. 31	Jan. 7



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

NOTES OF PROGRESS.

Lock Entrance Caisson Accepted.

The lock entrance caisson, which arrived from the yards of the contractor, the Union Iron Works of San Francisco, in tow of the tug *Hercules*, on October 29, has been accepted on the part of The Panama Canal. Structurally and mechanically it was found to be in accordance with the specifications; there were, however, some features of the electrical system that required correcting.

The caisson was placed in position against the sill at the lower end of the east lock at Miraflores on the morning of December 7, and fitted satisfactorily; the leakage, with the sill dry and with a full head on the outside of the caisson, was negligible. The leakage in the lock pit, principally due to cylinder valves from the twin lock chamber, which was in use during the time of the test, exceeded anticipations, but this trouble can be easily remedied.

Of the four pumps with which the caisson is equipped, three draw directly from the sump and are available only until the water reaches one foot above the lock floor, at which level the miter sill of the gate acts as a dam to keep the water in the chamber. The fourth pump is provided with an extension suction going into the lock chamber to remove the last foot of water. The performance of the pumps was regarded as satisfactory.

The contractor has given bond of \$10,000 that the bitumastic covering on the caisson will stand for five years.

Permanent Wrecking Organization.

The operation of the new floating cranes *Ajax* and *Hercules* will be placed under the jurisdiction of the Mechanical Division, in conjunction with the railroad wrecking outfit, and the whole will constitute a general wrecking organization with the following positions: One wreckmaster; an assistant to the wreckmaster, who will ordinarily be in direct charge of the railroad wrecking outfit, but will also act as substitute on derricks during the absence of the wreckmaster, or in charge of the second derrick when both are in use; one engineer; two electricians, and six laborers, the

latter to work as oilers and firemen when the derricks are in service.

As soon as the floating derricks have been turned over to The Panama Canal, one of them will probably be stationed at Gamboa, and the other at Paraiso. The derrick at Paraiso will facilitate hoisting spuds and other heavy weights of the dredging equipment in the Cut. In case a slide or a saucer vessel should obstruct the Cut, the derrick stationed at Gamboa would be manned to meet any emergency north of that point. So long as the Canal is open, either or both derricks may be used at any point, but as a matter of economy only the one at Paraiso (which will doubtless be transferred to Balboa when work in the Cut ceases) will be fully manned. The other will have only a sufficient crew for keeping it in good condition.

Sodding and Planting.

In connection with landscape work in the permanent towns, it is planned to have the forces of the Division of Municipal Engineering do the necessary grading, complete the top soil and sodding, and to perform a limited amount of planting around public buildings and quarters, along streets, and in park areas. Following this, the maintenance work will be turned over to the Supply Department to be handled by forces of the district quartermasters. In line with this plan, the horticulturist, Mr. Otis W. Barrett, was transferred from the Division of Municipal Engineering to the Supply Department on December 15. The municipal engineering forces are now at work sodding the areas around the Administration Building. Crab grass, obtained from Las Sabanas, is being used. This species does not grow upward, but spreads over the ground forming a perfect mat. A good example of sodding with this grass is found in Mount Hope cemetery.

Manganese Steel Dippers in Use on Dredges "Gamboa" and "Paraiso."

Two manganese steel dippers of 10 cubic yards capacity and weighing 37,627 pounds each, for use on the big dipper dredges *Gamboa* and *Paraiso*, were received a short time ago. These dippers were manufactured by the Edgar Allen American Manganese Steel Company of Chicago, for the contractor, the Bucyrus Company of Milwaukee; are known as the Missabe type, and are said to be the largest ever produced from manganese steel. This metal is used throughout, with the exception of the bolts, nuts, and rivets. The overall dimensions of the dippers are 10½ by 9 by 9 feet; the lips are three and one-fourth inches thick underneath the teeth, one and one-half inches thick between the teeth, and three and one-fourth inches thick at the bottom band; the backs are one and one-fourth inches thick at the sides, and three and one-fourth inches thick at the bottom bands.

The body of the dipper consists of only two

pieces, the front and back castings, and the whole contains but few rivets, as compared with a dipper of the built-up type. The lip joints at the sides are designed to give rigidity to the dipper and to relieve the rivets from strain. The strain is still further decreased by shoulders or offsets. The bail brackets are attached to the front casting at an angle conforming to the line of the pull on the bail, which throws the strain of the pull directly on the front casting.

The contract price for the two dippers was \$9,240, plus transportation, which amounted to \$730.78. Two 10-cubic yard dippers of the built-up type cost, delivered at Colon, \$9,600. The manganese dippers are now in constant use by the Dredging Division and so far have given satisfaction.

New Services Operating via The Panama Canal.

The Pacific Coast lumber-carrying firm of Swayne and Hoyt, organized in 1863, with headquarters at San Francisco, is operating a service through the Canal on an irregular schedule. It has six vessels in its service, the *Alvarado*, built in 1913, having a length of 240 feet, gross tonnage of 1,383, lumber carrying capacity of 1,200,000 board feet, and accommodations for 46 passengers; the *Camino*, built in 1911, having a length of 291 feet, gross tonnage of 3,303, lumber carrying capacity of 2,500,000 board feet, and accommodations for 87 passengers; the *Navajo*, built in 1911, having a length of 253 feet, gross tonnage of 2,755, lumber carrying capacity of 1,700,000 board feet, and accommodations for 30 passengers; the *Paraiso*, built in 1912, having a length of 214 feet, gross tonnage of 1,383, lumber carrying capacity of 1,200,000 board feet, and accommodations for 46 passengers; the *Yellowstone*, purchased from W. S. Scamman and Company, built in 1907, having a length of 188 feet, gross tonnage of 767, and a lumber carrying capacity of 800,000 board feet; the *Edgar H. Vance*, a chartered vessel, built in 1913, having a length of 290 feet, gross tonnage of 2,521, and a lumber carrying capacity of 2,200,000 board feet. Of these vessels, the *Camino* and *Edgar H. Vance* have so far used the Canal, plying between Californian ports to ports in eastern United States. The *Camino* was recently chartered by the San Francisco Chamber of Commerce as that city's relief ship for the Belgian sufferers, and is scheduled to leave for Rotterdam via the Canal, some time this month.

The Isthmian Steamship Company, of San Francisco (the Maple Leaf Route), will hereafter operate its ships in conjunction with those of the Hall line, owned by the United States Steel Products Company. The Isthmian Company formerly operated its vessels from New York and Savannah to British Columbia ports via the Strait of Magellan, making stops at South American ports en

route. All the voyages formerly made on that route will now be made through the Canal to ports in the United Kingdom and the Continent, usually Swansea and Avonmouth, England, and Dunkirk, France. The ships of the Isthmian Steamship Company's fleet are the *Santa Rosalia*, *Buenaventura*, *Kentra*, and *San Francisco*; the vessels of the United Steel Products Company are the *Charlton Hall*, *Craster Hall*, *Crofton Hall*, and the *Hewick Hall*. Of these ships, the *Santa Rosalia*, and *Buenaventura*, and all of the Hall boats mentioned have used the Canal at least once. The United Steel Products Company is able to operate with practically full cargoes each way, carrying foodstuffs on the outward bound voyage and loading with nitrates, copper, etc., at Chilean ports for the return trip.

New Schedule for Dispatching Mail.

In view of the changes in sailings of the Panama railroad steamers, and of the inauguration of a weekly service to New York, via Havana, by the United Fruit Company, dispatches of mail to the United States will be made hereafter by the Cristobal post-office, as follows:

On Thursdays, mail will be dispatched to New Orleans, for all States, by the United Fruit Company's steamers sailing direct. This mail is due to arrive in New Orleans on the following Tuesday.

On Saturdays, mail will be dispatched to New York, for all States, by the Panama railroad steamships, due to arrive in New York on the following Friday, with the exception of the *Advance*, which is not scheduled to arrive until the following Saturday.

On Mondays, mail will be dispatched to New York, for all States, with the exception of Louisiana, Mississippi, Arkansas, and Texas, by the United Fruit Company's steamships sailing via Havana. This mail is due to arrive in New York on the following Monday. Mail for the four States above mentioned will be held for Thursday's New Orleans dispatch. A direct dispatch to Havana will also be made by the Monday steamers.

The United Fruit Company sailings on Monday, January 11, February 8, March 8, and April 5, have been set for 10 a. m., and the ships are not due in New York until Tuesday of the following week; therefore, dispatches of mail on these dates will be confined to the New England States, New York, Pennsylvania, Delaware, District of Columbia, Maryland, Virginia, West Virginia, New Jersey, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, the Dakotas, Iowa, Montana, Wyoming, Idaho, Washington, Oregon, and Northern California. Mail for the States not listed above will go by way of New Orleans.

Lease of Lots in the Canal Zone.

Effective January 1, 1915, an annual ground rental will be charged for all lots leased to individuals and companies in the Canal Zone, including employees of The Panama Canal and the Panama Railroad Company. The only exception made to this rule will be in the case of lots assigned to church societies. A committee, consisting of Judge Frank Feuille, Maj. Wm. R. Grove, and Mr. Geo. M. Wells, has been appointed to submit its recommendation as to the rental to be charged when applications for lots are received and approved. The rentals are to cover cost of street improvements, outside lighting, fire protection,

etc., and must be sufficient to reimburse The Panama Canal for any outlay connected with the occupancy of lots that may be leased. The committee has only one application before it at the present time, that of the Masonic order, which has applied for the lease of Lot C at Ancon.

Contract for Lumber.

A contract was entered into with W. R. Grace and Company on November 23, 1914, for the following quantities of lumber:

500,000 board feet of Douglas fir ceiling lumber at \$19.40 per thousand feet.

200,000 board feet of Douglas fir siding lumber at \$19.60 per thousand feet.

Two spud timbers for dredges, 32 inches in diameter and 65 feet long, fashioned from Oregon fir, at \$380 each.

Royal Mail Discontinues its New York Service Temporarily.

The Royal Mail Steam Packet Company announces that its service to New York has been discontinued temporarily. This also cancels sailings to Kingston, Jamaica, and Antilla, Cuba. The sailings from Colon to England, via Cartagena, Puerto Colombia, Trinidad, and Barbados, will be continued as at present. The *Danube* sailing from Colon on Tuesday, December 22 is making the last trip to Jamaica until further notice. The next sailings for London will be, as follows: *Essequibo*, December 29; *Danube*, January 5; *Tagus*, January 19; *Trent*, February 2.

Steamship "Falk" Goes on a Reef.

The steamship *Falk* of the Seeborg Line, operating out of gulf ports, went aground near Halandis Cays off the mouth of the Rio Diablo on the San Blas coast of Panama, on Tuesday, December 15. The vessel left Cristobal for Puerto Colombia on December 3, and was returning light to Cristobal to load there and at a Central American port, for New Orleans. The Canal tug *Porto Bello* and the United States Navy tug *Potomac* went to its assistance, but owing to the heavy sea running, and to the vessel's hard and fast condition on the reef, they were unable to be of use. A wrecking tug has been sent out from Jamaica to pull the *Falk* off. The agents of the vessel on the Isthmus are The Panama Agencies.

No More Assignments to Quarters at Culebra.

No more assignments to quarters will be made at Culebra, as it is expected that the Twenty-ninth Infantry will be stationed at that point as soon as the settlement can be vacated by Canal employees and the buildings

made ready for the troops. In the plan of moving the employees out of the village and finding quarters for them elsewhere, it is proposed to install plumbing in several of the houses recently reerected at La Boca and use them for gold quarters until such time as the situation becomes less congested. According to present plans, the Twenty-ninth Infantry will be sent to the Isthmus some time during March, 1915.

Steamshovel Work at Sosa Hill on 8-Hour Basis.

Effective Monday, December 21, the four steamshovels working at Sosa Hill were placed on an 8-hour basis, which arrangement will probably continue until the completion of the trestle at the east breakwater.

Two Towers at Darien Radio Station Completed.

The second of the three 600-foot towers or the Darien radio station was completed to its full height on Saturday, December 19. The third tower is now up about 100 feet, and will probably be finished about February 1.

Hotel Aspinwall Notes.

Due to the fact that, under the revised Panama-Balboa train schedule, the train for Balboa docks does not reach there until 9.40 a. m., the launch announced to sail at 9.40 sharp, will not leave hereafter until the train arrives, unless it is unusually late. Passengers for the launch can either take this train at the Panama and Balboa stations, or take the Ancon street cars, which go through to the docks without change.

Heretofore, getting ashore from the launch at the hotel has been dependent on the local boatmen, who make a charge of 20 cents, silver, for the transfer. In order to relieve guests of this extra charge, the hotel management now operates its own boat service.

The prospects are that the hotel will be well filled for the holidays. A number of reservations have been made in advance.

Shipping Information.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment in ward is \$1 per day.

Application for supplies, or for services, should be made to the captain of the port, Cristobal or Balboa.

Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired; or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case the vessel has a known representative on the Isthmus in care of such representative.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Harvey, Clifford.....	24775	Jamaica.....	Colon.....	Dredging Div.....	1914.
Jordan, Wilfred.....	8509	Barbados.....	Colon.....	Panama R. R.....	Dec. 13.
John, Constantine.....	14212	St. Lucia.....	Colon.....	Panama R. R.....	Dec. 15.
Morgan, James.....	23064	Jamaica.....	Lirio.....	Dredging Div.....	Dec. 12.
Stewart, Robert.....	15314	Jamaica.....	Colon.....	Panama R. R.....	Dec. 17.
					Dec. 16.

The estates of these deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

OIL LICENSE TO TERMINATE.

Contract By Which Union Oil Company Has Supplied Fuel Oil to Canal Ends December 31.

The Panama Canal has served notice on the Union Oil Company of its desire to terminate, on December 31, 1914, the revocable license under which the oil company has been operating its pumping plant and oil pipe lines on the Isthmus. As a result of bids recently received from eleven oil companies, for deliveries of fuel oil during 1915, recommendations for award of contract have been forwarded to the Washington Office, and it is expected that a shipment of two 60,000-barrel cargoes, one for each terminal, will be delivered on the Isthmus between January 10 and 25. A short time ago one of the two new oil tanks erected by The Panama Canal at the Pacific end was leased to the Union Oil Company on condition that it was to be emptied and returned upon request. The oil company has been asked to empty this tank on or before December 31; to fill all of the Canal tanks on the Isthmus to their capacity under the present agreement by that time, and to quote a price on any oil that might be required pending the arrival of the Canal shipment, same to be covered by a special open market contract.

The revocable license, under which the Union Oil Company constructed, and has since operated and maintained a pipe line and appurtenances across the Isthmus in the Canal Zone, was given by the President on January 10, 1906. It provided that the company should pay into the treasury of the Canal Zone, the sum of \$500 a month for the support of the public schools, and to furnish to the Isthmian Canal Commission and Panama railroad such crude oil as might be required at the rate of 90 cents a barrel. On April 1 1909, this license was amended by doing away with the monthly payment of \$500, by exempting the company from all forms of taxation in the Canal Zone during the life of the agreement, by fixing the price of oil at \$1.10 a barrel, instead of 90 cents, and by limiting the takings to 60,000 barrels a month. The consumption of oil so increased

that, on February 17, 1911, it was found necessary to enter into a supplemental agreement providing for an increase in the monthly consumption to 100,000 barrels. This agreement further provided for a distillation test to determine the water content. An extension of this agreement was authorized on April 1, 1913, and again on July 1, 1914 to continue until the end of the present year.

The first deliveries of oil by the company were made in August, 1906, but the pipe line across the Isthmus was not completed and in operation until November, 1907. The smallest takings in any one year was in 1908—154,817 barrels—and the heaviest in 1912—913,723 barrels.

The Union Oil Company plans to continue storage of oils on the Isthmus under a new revocable license, in the same manner as other oil companies who have been granted revocable licenses for tank sites at the Canal terminals. The transisthmian pipe line of the company will be taken up.

Sale of Cruces Schoolhouse.

The old schoolhouse at Cruces on the Chagres, the only remaining building in the place when Gatun Lake was allowed to rise to the 85-foot level, causing abandonment of this historic village, has been sold to Marcelino Murgues for \$25. It was built by the Canal Zone Government during the latter part of 1910, and consisted of a 1-story frame building, 36 feet long by 24 feet wide, divided into a class room 24 by 28 feet, and a living room for the teacher eight by 24 feet. At the time the schoolhouse was erected, a census showed the number of children of school age in the town to be 51.

Reduced Price of Fuel Oil to Steamships.

The Balboa agency of the Union Oil Company of California announces that fuel oil delivered on steamships at Balboa, reduced to a temperature of 60 degrees Fahrenheit, will be sold at \$1.25 per barrel until further notice. The company expects to be in a position to supply ships with Diesel engine oil at Balboa after January 15, 1915.

SWINGING PONTOON BRIDGE.

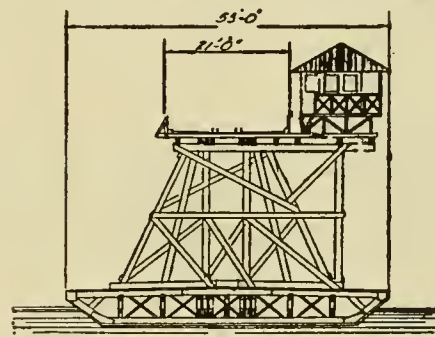
Construction and Mode of Operation of Bridge Across Culebra Cut at Paraiso.

The pontoon bridge at Paraiso, over which the railroad crosses the Canal, is similar to bridges which have been used successfully for many years in crossing the upper Mississippi River. The details of its construction were worked out for local conditions by Canal engineers, who were assisted greatly in the preparation of the design by plans of the Prairie du Chien, Wis.—North McGregor, Ia., pontoon bridge, furnished by Mr. C. F. Loweth, chief engineer of the Chicago, Milwaukee, and St. Paul Railway Company.

In order to afford a clear channel of 300 feet at the crossing, which is the minimum proposed width of the Canal, the abutments for the approaches to the bridge were set in recesses dug back from the original sides of the Cut. Another recess was dug in the east bank of the Canal, south of the abutment, to contain the barge, clear of the Canal channel, when it is in the open position.

The movement of the pontoon is like that of a simple gate or door, describing a quarter of a circle. Its pivot, or hinge, is at the north corner of its east end. The closed position is when the barge lies directly across the Canal, and opening is effected by swinging it to the south on its pivot.

The general assembly of the bridge is shown in the accompanying sketch of its longitudinal elevation. The pontoon is 378 feet long, 55 feet wide, and six feet three inches



SECTIONAL VIEW OF PONTOON BRIDGE.

deep at the center line. It was built of heavy timbers, with transverse frames, spaced every 24 inches, of four by 12-inch floor and rake timbers and deck beams four by 10 inches. At intervals of 14 feet there are trussed frames, consisting of three ordinary frames bolted together and braced with steel rods. The bents of the trestle rest on these special frames.

Six longitudinal bulkheads of eight by 16-inch timbers extend the length of the pontoon. A pumping system was provided for the removal of bilge water. The deck, of three by 10-inch timbers, and the sheathing, of four by 10-inch timbers, were calked and pitched. The deck is to be covered with an asphalt coating.

The trestle bents, spaced 14 feet apart, consist of a sill of 12 by 14-inch timber, 40 feet long, and six 12 by 12-inch posts, surmounted by caps 18 feet long and 12 by 14 inches in section. The outer and intermediate posts are heavily battered, in order to distribute the weight over the width of the barge, and ample transverse bracing is provided.

The trestle is designed, in addition to its primary service, to act as a stiffening truss

CANAL EXCAVATION TO DECEMBER 1, 1914.

By French companies	78,146,960
French excavation useful to present Canal.....	29,908,000
By Americans—	
Dry excavation.....	130,256,273
Dredges.....	97,725,091

Total.....	227,981,364
May 4 to December 31, 1904.....	243,472
January 1 to December 31, 1905.....	1,790,227
January 1 to December 31, 1906.....	4,948,497
January 1 to December 31, 1907.....	15,765,290
January 1 to December 31, 1908.....	37,116,735
January 1 to December 31, 1909.....	35,096,166
January 1 to December 31, 1910.....	31,437,677
January 1 to December 31, 1911.....	31,603,899
January 1 to December 31, 1912.....	30,269,349
January 1 to December 31, 1913.....	27,177,960
January 1 to November 30, 1914.....	12,523,092

TOTALS BY SECTIONS AND AMOUNT TO BE EXCAVATED.

SECTIONS.	Amount excavated.	Remaining to be excavated.
<i>Atlantic—</i>	<i>Cu. yds.</i>	<i>Cu. yds.</i>
Dry excavation.....	8,864,729	22,248
Wet excavation.....	41,763,232	2,751,678
Total.....	50,627,961	2,776,926
<i>Central—</i>		
Chagres section.....	12,945,824	251,000
Culebra section.....	105,225,218	2,608,602
Total.....	118,171,042	2,859,602
<i>Pacific—</i>		
Dry excavation.....	11,285,282	5,227,695
Wet excavation.....	47,899,079	
Total.....	59,182,361	5,227,695
Grand total.....	227,981,364	10,864,223

for the pontoon, in conjunction with a longitudinal chord of heavy timbers at the bottom of the barge. The track stringers, of which there are three on either side, two 10 by 16, and one eight by 16 inches in section, are fitted with splice plates, to form a continuous chord. Additional longitudinal stiffness in the pontoon was provided by horizontal girts, and bracing of timber.

The base of the rails on the approach piers is at 113.5 feet above sealevel, and the trestle was built to give a moderate upward gradient from the piers at high lake levels. The base of the rails on the trestle is four feet higher than the piers, or at 117.5 feet when the water in the Cut is at the 87-foot level and there is no live load on the barge. The passage of a train sinks the barge from six to nine inches.

The devices for effecting rail connection between the trestle and the piers were made a part of the trestle. They consist, at each end, of an apron hinged near the end of the trestle, and extending to rest on the shoulder of the pier. Each apron is made of two spare girders for the lock gates, is 65 feet long, and weighs, equipped complete with the track, about 150,000 pounds. When the bridge is to be opened, the aprons are raised clear of the abutments. They are held up until the bridge has been swung to closed position, when they are lowered to rest again on the piers.

OPERATING MECHANISMS.

The raising and lowering of the hinged aprons is done by means of a heavy toggle-joint device. The mechanism is attached to the under side of the apron. When the apron

joint is locked by transverse bars, passing through holes in the base casings and the hinged section. When the bridge is to be opened, the bars are withdrawn and the hinged casting is swung up, clear of the approach, by a counterweight. The movements of the counterweights and locking bars at both ends of the trestle are actuated simultaneously by a single lever in the control house, connecting through signal pipe.

The entire pontoon is swung on its pivot by means of a wildcat and chain. The wildcat is situated at the outer, or west, end of the pontoon, and by drawing the chain over its toothed wheel, causes the end of the pontoon to follow the line of the chain. The chain extends from a point about 50 feet north of the west abutment to one about 350 feet south of the abutment on the east bank, thus roughly subtending the arc described by the swinging of the outer end of the barge. The chain is carried to the barge through chocks, under idlers, over the wildcat wheel, and off of the barge through similar idlers and chocks. It is 800 feet long, consequently, as motion of the barge can be effected only by tension on the chain on the side toward which the barge is swinging, there is always plenty of loose chain on the lee side; this lies on the bottom of the Cut and offers no interference with ships. The chain is fastened to the banks through springs, which take up the shock at the time of starting or stopping. The 1-inch chain has links approximately five inches in length, and was made up of various lengths of chain in stock, the wildcat being especially designed to work with varying lengths of links.

than in the center, exposing a convex surface toward the vertical pipe.

When the bridge is closed it is locked at its outer end by means of an adaptation of the ordinary car coupling. The part of the coupler on the barge is as usual, but the part fixed to the west abutment is a vertical casting, 10 feet long, which can thus be engaged by the other while the water in the Cut is at any ordinary level. An air baffle has been provided at the outer end of the barge to take up the shock at the time the barge comes to rest against the coupler.

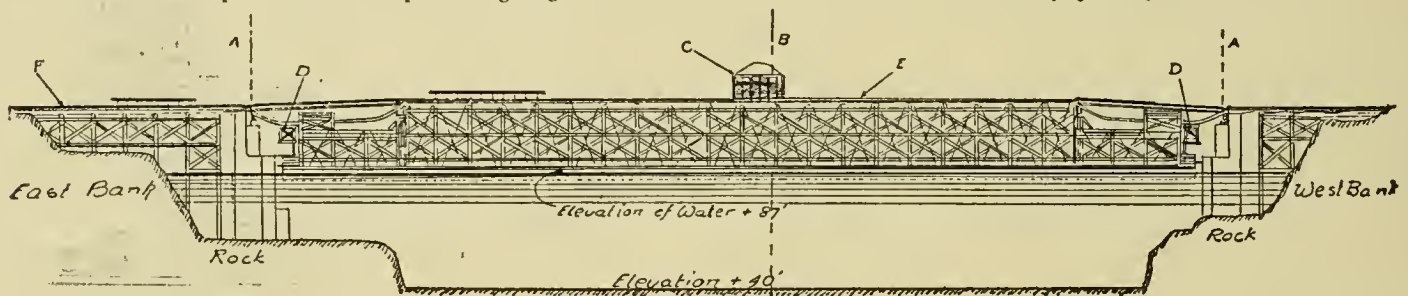
The operations of the motors for swinging the pontoon and raising the aprons are controlled from the operator's house, on the north side of the trestle, near the center. The operator also controls, by manual levers, the signals and derails governing the approaches.

Awards for Plastering Houses.

Bids for plastering houses Nos. 753 and 755, new permanent quarters at Balboa, and the Balboa commissary, were opened in the office of the Chief Quartermaster on Tuesday, December 1. Five proposals were received. That of Messrs. McCall and Sullivan for \$2,180 was the lowest on the quarters, and award of the work has been made to them. No award for plastering the commissary was made.

Stenographer and Typewriter Examination.

An examination will be held for the position of stenographer and typewriter, The Panama Canal Service, in Room 303, Administration Building, Balboa Heights, probably on Sunday, January 31, 1915.



SIDE VIEW OF PONTOON BRIDGE.

KEY—A—Center of apron girder bearing. B—Canal axis. C—Operating house. D—Mechanism for lifting apron. E—Elevation at base of rail + 117.25 feet. F—Elevation at base of rail + 113.5 feet.

is resting on the abutment, in its closed-bridge position, and it is desired to raise it, the toggle mechanism is drawn to its contracted position. Timber blocking is then built up from the deck to the base of the toggle, and a pull being then applied to the knuckle of the toggle causes the device to straighten. The resultant thrust pushes down on the blocking and upward on the apron, causing the latter to rise. Consideration is now being given to a plan by which the blocking now built up by hand under the lifting mechanism will be replaced by hydraulic jacks. The knuckle is moved through the instrumentality of a 7-horse power motor driving a worm, worm wheel, pinion, and spur gears. The motors for the two aprons were originally samples for the operation of the cylindrical valves in the lock wall culverts.

When the apron is lowered to the abutment, the rail connection is secured against lateral or vertical motion. This is effected by a rail section casting, hinged on the apron end and fitting against the rails in diagonal scarf-joints. The whole is made secure in heavy fixed castings. In closed position, the

The wildcat wheel is 24 inches in diameter. It is driven by a worm and worm wheel direct-connected to a 50-horsepower motor, which was originally submitted as a sample for use with the Stoney gate valves of the lock culverts, the worm and wheel being spare parts for the emergency dams. The arrangement is capable of swinging the bridge from open to closed position, or the other way, in about eight minutes. The tension on the chain when the barge is being swung against the maximum wind pressure is about 20,000 pounds.

The pontoon is hinged, at its southeast corner, to the east abutment by a vertical steel pipe, 18 inches in diameter, set in the concrete of the abutment, and enclosed by a steel hinge, with a bronze bushing, attached rigidly to the barge. The fit is loose enough to allow free vertical motion with the fluctuations of the water surface. The horizontal twisting on the hinge, liable to result from the effects of waves on the barge, is cared for by giving the inner face of the bushing a toric surface; that is, by making the diameter of the enclosing hinge greater at top and bottom

Application forms may be procured from the secretary of the local board and must be filled out and filed with this board not later than January 8, 1915.

An examination for the position of clerk, The Panama Canal Service, will be held in the near future, the exact date to be published in a later issue of THE CANAL RECORD.

Application forms for the clerk examination may be procured at once and filed with this board as soon as completed.

ISTHMIAN CIVIL SERVICE BOARD.

BALEOA HEIGHTS, C. Z.,

December 21, 1914.

Work of Abandoning Ancon Hospital Farm Begun.

The removal of the pigs belonging to Ancon Hospital, from the stock farm on the hospital reservation, to the new piggery at Corozal was effected last week, which is the first step taken in abandoning the Ancon location. The work of removing the dairy cattle will probably take place some time in January.

A bicycle parcel delivery service has been started at the Ancon commissary.

CANAL WORK IN NOVEMBER.

Monthly Report of the Governor to the Secretary of War.

BALBOA HEIGHTS, C.Z., December 16, 1914.
The Honorable the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of operations on the Isthmus for the month of November, 1914:

Department of Operation and Maintenance.

Lock Operation and Maintenance—Two towing locomotives were received, making a total of 40 to the end of the month. This completes the order for lock equipment of this class. The installation of chain fender machines at all locks was completed. Of the 24 fender chains ordered, 20 have been received; all chains at Gatun, seven at Pedro Miguel and two at Miraflores have been installed. The floating caisson is undergoing final test at Miraflores. The work of grading the dams and backfill at Pedro Miguel and Miraflores was continued. Eighty-nine lockages were made at Gatun, 86 at Pedro Miguel, and 85 at Miraflores.

Electrical—The net output of the Gatun hydroelectric station was 619,200 kilowatt hours; of the Miraflores steam station 1,811,620 kilowatt hours, and of the Balboa power plant 3,563 kilowatt hours. The Balboa and Miraflores substations were completed, tested, and put into service. The Gatun and Cristobal substations were practically completed. Work was continued on the construction of the underground conduit systems and on new and reconstructed quarters. The east side of the 44,000-volt transmission line between Miraflores and Balboa substations was put into service.

Municipal engineering—In addition to maintenance work in the northern and southern districts, work was in progress on the installation of water and sewer systems and the construction of a water supply system for the military reservation at Toro Point; installation of a sewer system for the quarantine reservation at Balboa dump; construction of the Atlantic and Pacific terminal oil handling plants, and the construction of a sea wall for the Panama Railroad Company at Folks River. All landscape work in connection with Balboa townsite and Balboa Heights was turned over to this division on November 1.

Meteorology and hydrography—Rainfall was below normal at all stations, except Balboa and Pedro Miguel. The deficiencies were greatest in the central section and over the upper Chagres basin. The monthly totals ranged from six inches at Empire to 19.58 inches at the station on the Gatun River above Monte Lirio. The maximum precipitation recorded in any one day was 3.77 inches at Colon on the 13th. The estimated average rainfall over the Chagres River basin figures 44 per cent below normal, or 11.01 inches against a 14-year November average of 19.50 inches. Slight seismic disturbances were recorded at Balboa Heights on November 18 and 24; they were of insufficient intensity to be felt locally and no damage resulted from them.

Division of Terminal Construction.

PACIFIC TERMINALS.

Shops—Work requests were prepared for the manufacture and erection of partitions in Building 28, and for the changing of lights in Building 4 to prevent crane interference.

Dry dock—The design of all portions of the

dock not previously approved was decided upon. Contractor's drawings for the girders supporting the track around the dock for the 50-ton crane and for the deck beams over the suction chamber were completed, and requisition was made for the fabrication of this material in the United States. A total of 10,027 cubic yards of concrete was placed.

Balboa coaling plant—Two hundred and eighty-two cubic yards of concrete were placed in the berm crane track supports and 43 cubic yards were placed for the viaduct basin running along the south rail of the berm crane, making a total of 325 cubic yards for the month.

Quay wall and pier—Excavation from the cylinders amounted to 288 cubic yards, the greater portion of which was rock. Concrete filler in the caissons was increased by 677 cubic yards. Eleven cubic yards were placed in the substructure for anchoring beams and 1,352 cubic yards in the reinforced concrete floor slab. Work on pier No. 1 was confined chiefly to painting bollards and general cleaning up.

Fuel oil plant—Excavation progressed slowly, due chiefly to the fact that the mud has been scraped off the bottom at this site, allowing water to percolate through the layer of sand surrounding the caissons and making it extremely difficult to seal the caissons at the bottom. Four of the six caissons were placed on rock.

Sosa Hill quarry—Excavation totaled 92,690 cubic yards, all of which was classified as rock.

ATLANTIC TERMINALS.

East breakwater—In the construction of the trestle for the fill 183 untreated piles were driven. The total fill in place at the close of the month was 240,687 cubic yards.

Coaling plant—Dredging was completed to elevation -28 in the area to be occupied by subaqueous coal storage. The filling of pipe piles and forms for viaduct posts in loops at the south end of the plant was commenced. Concrete pedestals were set on bridge track wall for steel tees under the stocking and reclaiming bridge tracks. At the end of the month only 19 caissons remained to be filled to complete the foundations for the southern 500 feet of the reloader wharf.

FLOATING CRANES.

The *Ajax* and *Hercules* were dry docked in the upper chamber of the east flight at Gatun Locks, where the underwater portion of the hulls was cleaned and painted.

Ajax—After the dry docking was completed the cast iron counterweights were placed upon the spindle carriage, in order to prepare the crane for immediate service in raising the drill barge *Teredo*, sunken several months ago in Culebra Cut. After completing this work satisfactorily the crane was returned to the contractor on November 24, and during the remainder of the month work consisted of doing various small jobs and making adjustments. At the close of the month the crane had not yet been offered for test.

Hercules—This crane was brought to Gatun Locks on November 4 for attachment of the jib. The jib was completely assembled on the crane structure by November 8 and, after the dry docking referred to above, the crane was returned to dock No. 13, where the wire ropes for both main blocks were put in place and all parts of the test load were received.

Division of Terminal Construction.

Ninety-five vessels passed through the Canal

in November, 57 southbound and 38 northbound. Collections for tolls amounted to \$349,382.15; for pilotage \$2,208; for launch service \$67.50; for service of deck hands, etc., \$444.90, or a total of \$352,102.55.

Fifteen vessels were measured and 60 inspected to see that their certificates conform to the rules.

Several of the slides which developed during October continued during the month but, with the exception of a few days, it was possible to maintain a channel of sufficient width and depth through the Culebra Cut for the accommodation of Canal traffic.

Dredging Division.

The total dredge excavation for the month, including earth, rock, sand, and gravel, was 1,173,722 cubic yards, as follows:

	Cu. yds.
Pacific entrance	61,944
Pacific terminals (inner harbor)	288,472
Cucaracha slide	5,930
New Culebra slide	484,697
Empire slide	490
Balboa (P. R. R. steel wharf)	1,207
Atlantic entrance	13,424
Cristobal coaling plant	30,039
Breakwater, Limon Bay	30,366
Cristobal approach channel	168,183
Chagres river gravel	59,930
Other plant excavation	58,020

Total 1,173,722

The destruction of water hyacinths continued; 19,200 square yards of plants were poisoned and 2,450 square yards were pulled and piled on the bank. No new slides developed during the month.

Mechanical Division.

The general character of the work in this division was about the same as that for the previous month, with a further reduction in volume resulting in a net decrease in force of 38 gold roll and 198 silver roll employees.

Shop orders authorized during the month numbered 678; those left over from the previous month, 432; those completed during November, 726; carried forward into December, 384. The output of the foundry was 117,302 pounds of iron, 37,024 pounds of steel, and 4,503 pounds of brass. Hostling was done on 5,330 pieces of equipment. Shop repairs were made on 1,235 cars, and field repairs on 5,434.

With the consent of the contractor, the floating crane *Ajax* was taken to Culebra Cut and there removed the sunken portion of the rock drill barge *Teredo*. During the time the *Ajax* was under the supervision of this division, its machinery functioned very satisfactorily.

Building Division.

The Building Division was created on October 1, 1914, as a part of the organization of the Department of Operation and Maintenance, and is in charge of Captain R. E. Wood as Constructing Quartermaster. This division is charged with all work of construction and repair of buildings of The Panama Canal and the Panama Railroad Company, exclusive of minor repairs costing less than \$50, as well as all building construction for the United States Army.

The principal operations of this division during the month were, as follows: Construction work on the Colon radio station was completed, and the substation at Cristobal was completed and turned over to the Electrical Division. The work of alteration and conversion of buildings at Empire for the use of the Fifth Infantry was completed during the month, before the arrival of that regiment. The first of a group of buildings for the Corozal dairy farm was completed.

At Balboa, four 4-family houses and four 2-family houses were completed, making a total of twenty-four 4-family and four 2-family houses completed out of the original twenty-eight 4-family and nine 2-family houses authorized. The shops office building and the electrical substation at Balboa were completed during the month and turned over to their respective departments. The police station at Balboa was also completed.

Supply Department.

The force report for the last Wednesday in November showed a total of 26,220 employees of The Panama Canal and Panama Railroad Company, of whom 3,940 were white Americans and 22,280 were laborers. Of the latter, approximately 480 were Europeans and the remainder West Indian negroes. The total force was reduced 482; Americans 175, laborers 307.

The occupants of Government quarters numbered 6,967 white Americans, of whom 3,904 were men, 1,548 women and 1,515 children; 8,140 West Indians, of whom 5,203 were men, 1,256 women and 1,681 children.

The value of the material received during the month was \$769,383.61. It came forward in 25 steamers; the total weight of the cargo, exclusive of lumber and piles, was 17,921 tons. Some of the principal items were: 3,065,125 board feet of lumber for stock and the Mechanical Division, 36,795 linear feet of piles, and 122,000 bags of Portland cement.

Health Department.

General—No case of yellow fever, smallpox, or plague originated on or was introduced to the Isthmus during the month. Forty-four deaths occurred in the Canal Zone. The death rate for disease for the Canal Zone, based upon a population of 36,977, was 12.66 per thousand, as compared with 13.85 for the preceding month and 15.82 for the corresponding month of last year.

Employees—The health of employees continued good. The number of names on the pay rolls for the preceding month was 37,172. On this basis the admission to hospitals and quarters on account of illness, 926, gave a rate of 298.93 per thousand, as compared with 344.23 for the preceding month, and 479.84 for the corresponding month of last year. The admission rates to hospitals for all diseases were: White 308.39, blacks 114.98, Europeans 509.49, Americans 260.53. The admission rates for malaria were: Whites 166.70, blacks 83.02, Europeans 119.24, Americans 177.99. The total number of deaths from all causes was 14. Of these, five died from disease, or 1.61 per thousand, as compared with 4.68 for the preceding month, and 4.89 for the corresponding month of last year. Of the deaths from disease, two were whites, three blacks, one European, and one American.

Accounting Department.

The cash balance in Canal Construction appropriations on November 30 was \$16,032,585.49; in the fortification appropriations \$4,512,816.08. The pay rolls for November, exclusive of Army quarters, storehouses, fortifications, etc., amounted to \$964,227.66, and the fortification roll amounted to \$113,790.56. Payments by the disbursing clerk in Washington amounted to \$856,863.60; by the Paymaster on the Isthmus, \$1,792,137.02. Collections on the Isthmus amounted to \$999,679.11, of which \$459,905.40 were repaid to appropriations, \$188,256.38 were trust funds, and \$351,518.33 were covered into the Treasury as miscellaneous receipts. Of

the miscellaneous receipts, \$349,382.15 were collected on account of tolls, as compared with \$349,986.48 for October. Deposits in the amount of \$139,151.35 were made with the Assistant Treasurer, to be applied in payment of tolls and other charges. Canal Zone revenue collections and miscellaneous funds received amounted to \$225,041.17, and disbursements under the same heading amounted to \$267,796.62.

Executive Department.

Customs service—The work of revision of the customs regulations was completed and the new regulations were published as Circular No. 679, Revised, under date of November 21, 1914.

Administration of estates—During the month of November, 18 estates were received and 11 settled. The total cash received in estates during the month amounted to \$1,089,15, and the total value of estates closed during the month was \$619.95. On November 30, there were 33 estates in course of settlement.

Licenses and taxes—Three hundred and thirty-nine licenses were issued during November. Of this number, 14 were for automobiles and motorcycles, 14 for bicycles, 27 for hunting and the keeping or carrying of firearms, and 284 for the peddling of foodstuffs.

Postal service—Postmasters remitted on account of stamp sales, second-class collections, and postage due collections, \$5,886.17. The money order business aggregated \$355,885.69, and the fees collected thereon amounted to \$1,868.71. Of the total value of money orders issued \$124,697 represent the value of deposit orders issued without fee. Deposit orders to the value of \$59,692 were paid and postal savings certificates to the value of \$81,208 were paid. The balance of postal savings deposits on hand, represented by the unpaid certificates and deposit money orders, aggregated \$740,710, as compared with \$756,913 at the close of the previous month. The new post-office building at Corozal was completed and occupied during the month.

Police and fire division—Three hundred and fifty-six arrests were made during the month. Of these, 340 were males and 16 females, a decrease from the previous month of 139 and seven, respectively. Sixty-three convicts were confined in the penitentiary at the close of the month. Nine persons were deported; of this number, six were convicts who had completed their sentences in the penitentiary. Five fires occurred during the month. The damage to Panama Canal property was less than \$25.

Courts—In the District Court, one civil and eight probate cases were settled; five civil, 20 probate, and 28 criminal cases were filed, and 138 cases of all kinds were pending on November 30. In the Magistrates' Courts, 30 civil and 360 criminal cases were tried.

Schools—The total enrollment in the Canal Zone schools for the month was 1,357 in the white schools and 1,127 in the colored schools. In the white schools the net enrollment was 1,090, the average number belonging 1,113.4, and the average daily attendance 1,084.6. In the colored schools the net enrollment was 2,162, the average number belonging 2,054.6, and the average daily attendance 1,900.2.

Panama Railroad.

Cargo handled at the Colon and Balboa agencies aggregated 84,163 tons, which includes 2,230 tons transfer cargo transported through the Canal by steamers of the Panama

Railroad Steamship Company. Effective November 17, 1914, the agreement between the Panama Railroad Company and connecting lines under which the railroad acts as a co-carrier was terminated, causing the movement of freight to be diverted through the Canal.

Work on the transisthmian duct line was continued. The duct work, transformer houses, etc., for the Electrical Division in the townsites of Colon, Cristobal, and Mount Hope was 90 per cent completed at the close of the month. Terminal connections for the transisthmian duplex cable were completed at Colon, Gatun, Pedro Miguel, and Balboa exchange and cables placed in service across the Isthmus for through trunks and for all lines between Balboa and Pedro Miguel. The signal cable has been spliced and connected between Colon and Gatun, work on this section being 90 per cent completed on November 30. The status of the entire signal cable was 31 per cent complete at the close of the month.

Plans and specifications for the steel required in the floor system of the Cristobal terminal docks were approved and requisition submitted. One hundred and eighty-six linear feet of trestle were driven during the month, making the total driven to the close of the month 3,811 linear feet, or 76 per cent of the amount required. During the month, 3,085 linear feet of steel cylinders were placed, making 10,010 feet to the end of the month, or 46 per cent completed. One thousand ninety-five cubic yards of spoil were removed from caissons, making the total at the end of the month 1,311 cubic yards, or eight per cent of the total yardage for the pier.

On November 30, the bridge across the French canal was 99 per cent assembled and 100 per cent riveted.

Respectfully submitted,

H. F. HODGES,
Acting Governor.

Inspection of the "Chitre".

At the request of the owners, the National Navigation Company of Panama, a board, consisting of Messrs. C. W. Chaddock and R. B. Sanford, measurers, and W. I. Pender, deputy inspector, was appointed to inspect the condition of the hull, machinery, including boilers, and other parts of the coast steamer *Chitre*.

Visits to Palo Seco.

The practice of making visits to the Palo Seco leper colony has assumed such proportions as to constitute an inconvenience and somewhat of a menace to the public health. For these reasons, the Chief Health Officer has made a regulation to the effect that no one will be permitted to visit the colony unless it is on official business, or unless the person has a signed permit from the Health Office.

Family Quarters.

Applications for married quarters on file on November 30, were, as follows:

DISTRICT.	List No. 1.	List No. 2.
Ancon	41 (19)	359 (119)
Ancon Hospital	4 (4)	6
Corozal	8 (5)	141 (37)
Cristobal		184 (32)
Gatun		85 (2)
Paraiso		139 (29)
Total	53 (28)	914 (219)

NOTE—The figures in parentheses show the number of applicants already occupying regular or nonhouse-keeping family quarters at stations other than those at which applications are filed.

SITE FOR PANAMA STABLES.

Amended Sanitary Regulations Provide for Segregation of All New Erections.

A tract of land situated between the Chinese and Catholic cemeteries, fronting the old road to Balboa, has been assigned for the erection of stables in the plan to segregate all new stables in Panama city in restricted areas. The site was formerly known as the Huerta de Sandoval, and was acquired by the Panama Railroad Company from the Panama Government for the above purpose. It has a maximum length of 368 feet, and a maximum width of 550 feet. The tract will be divided into lots, each having a width of 50 feet, but with varying depths owing to the fact that the site is wider at one end than it is at the other.

Work has been begun by the railroad forces in bringing the ground to grade; this is being done by scrapers and wheelbarrows, and enough material is found in the higher spots to fill in the low sections. Following this, the Division of Municipal Engineering will install the necessary drains, together with sewer and water connections, and will also build a 40-foot roadway to be surfaced with concrete, extending from the Balboa road entirely through the center of the tract. The construction of all stables is to be done by the lessees of lots.

The following amendments have been made to the building regulations for the cities of Panama and Colon with reference to the construction and maintenance of stables:

Section 94. Stables shall be built in accordance with plans and specifications approved by the Health Office, and a permit must be secured before work can be commenced. Stables shall have water and sewer connections and good ventilation. The stalls shall be approximately 10 feet long, five feet six inches wide, and 10 feet high at entrance. All buildings now or hereafter to be constructed and used for stabling horses, mules, cows, and other animals shall be constructed, as follows:

Walls—The foundation walls of such buildings shall be constructed of concrete, brick, or stone laid in cement mortar, and shall not be less than six inches thick, and shall extend into and below the surface of the surrounding ground not less than two feet, and shall extend above the ground a sufficient height, as to be not less than one foot above the floor level. All openings in such foundation walls shall be covered with metal gratings having openings not greater than one-half inch between the gratings.

Floors—The floors of stables and stalls shall be of concrete not less than three inches thick of cement or stone laid in cement mortar in such way as to prevent ingress or egress of rats, and such floor to have a slope of one-eighth inch per foot to the gutter drains hereafter provided for.

Stalls—The floors of stalls may be of planking fitting either tightly to the concrete floor or elevated not less than one-half inch from the stall floor, and so constructed as to be easily removable. Such removable planking shall be raised at least once a week and the said planking and the concrete floor beneath thoroughly cleaned.

When two rows of stalls are constructed with a space between, this entire area shall be concreted.

Gutters—Semicircular or V-shaped gutter drains shall be constructed in such stables in such manner that a gutter shall be placed, so as to receive all liquid matter from each stall and each of these gutters to connect with the public sewer, or with a main gutter of the same construction, which, in turn, shall be connected with the public sewer. All openings from drains into sewers shall be protected by a metal grating having openings not more than one-half of an inch between the gratings.

Manure—All manure from each stable shall be removed therefrom at least once in 24 hours, and disposed of as the Health Office may direct. All manure so removed shall be placed in wagons so protected as to render said manure inaccessible to flies.

Mangers—Each manger shall be constructed, so as to have a slope of two inches toward the bottom; shall be covered with tin or zinc, and shall be at least 18 inches deep to avoid spilling of food.

Feed bins—All feed bins shall be constructed of concrete, stone, or metal, or wood, and if constructed of wood shall be lined or covered with metal, and the whole so constructed as to prevent the ingress or egress of rats. All grain, malt, and other animal foods, except hay

stored or kept in any stable must be kept in such feed bins. Said feed bins must be kept closed at all times, except when momentarily opened to take feed therefrom, or when same are being filled. No feed shall be scattered about such bin or stable, and all such feed found or in the stalls shall be removed daily. No food-stuffs intended for or susceptible of human consumption shall be kept or stored in any stable or any other place where animals are kept.

Each stable must be provided with a cemented area of sufficient size upon which carriages and animals are washed. This area shall be properly concreted and trapped to sewer.

Section 95. Cow stables shall be used for no other purpose than for the keeping of cows. All manure shall be removed twice daily, and no manure shall be removed during the milking or within one hour prior thereto. No stagnant water, hog pen, privy, or cesspool shall be maintained within 100 feet of the cow stables.

Section 96. Hereafter, no building shall be constructed or used for stabling purposes, except in certain restricted areas to be designated by the local Health Officer in the permit for same.

Section 96½. Any person, firm, association, or corporation failing to comply with any of the conditions of Sections 94, 95, and 96 of these regulations shall be punished by a fine of not less than 25 balboas, nor more than 100 balboas.

Restaurant for Shop Employees.

The old office building of the Mechanical Division at Balboa will be fitted up as a restaurant on the order of the lunch room in the basement of the Administration Building, Balboa Heights, where the shop employees can obtain their noonday lunch. Under the new schedule of working hours, the shop employees have but one hour at noon, and this time has been found insufficient to permit them to take their meals at the East Balboa hotel.

LABOR FORCE AND QUARTERS IN NOVEMBER.

The force report of November 25 shows the actual working force of The Panama Canal on that date to have been 23,113; of the Panama railroad 3,164, and of contractors 57, a total effective working force of 26,277. This is a decrease of 432, as compared with the statement of October 28. The gold force on the Canal, composed almost exclusively of white Americans, was 3,973, divided, as follows: The Panama Canal 3,566; Panama railroad 374; contractors 33, a decrease in the total gold force of 175, as compared with the preceding month. Detailed figures of the total force employed on the Isthmus, by departments and divisions, follow:

DEPARTMENT OR DIVISION.	SILVER EMPLOYEES*												Total silver.	Total gold.	Grand total.
	Artisans.						Laborers.								
	Monthly.	Special.	22 cents.	18 cents.	15 cents.	12 cents.	Special.	Euro- peans 16 cents	13 cents.	10 cents	7 cents.	5 cents.			
Operation and Main- tenance; office & locks	101	...	...	187	314	86	6	1	95	164	...	3	957	189	1,146
Terminal Construc't'n	549	...	38	194	480	180	79	204	465	590	5	20	2,804	332	3,136
Building Division...	59	17	278	435	682	100	...	2	451	346	4	15	2,389	286	2,675
Electrical.....	67	11	24	53	112	115	...	1	25	102	...	...	510	168	678
Municipal Eng.....	314	...	106	297	516	391	...	44	162	385	3	50	2,768	128	2,896
Dredging.....	1,616	2	7	19	48	12	...	13	123	57	...	1	1,898	303	2,201
Mechanical.....	146	12	83	114	575	590	...	10	60	167	10	5	1,712	861	2,573
Canal Transporta'on	87	...	...	...	...	...	...	...	...	...	...	...	87	42	129
Fortifications.....	103	...	79	135	284	27	469	3	99	289	...	7	1,495	107	1,602
General Construct'n	24	...	2	10	9	1	62	169	62	108	...	8	455	9	664
Total.....	3,066	42	617	1,444	3,020	1,502	616	447	1,542	2,648	22	169	15,075	2,425	17,500
Supply: main office.....	...	...	...	...	...	...	...	...	...	...	...	...	...	13	13
Commissary.....	621	2	4	6	9	12	235	7	2	99	10	...	1,007	169	1,176
Subsistence.....	529	1	2	1	1	...	...	...	...	...	...	...	535	31	566
Quartermaster.....	788	29	81	94	90	1	36	10	59	746	...	1	1,934	76	2,010
Accounting.....	14	...	...	...	...	...	...	...	...	...	...	...	14	205	219
Health.....	403	...	3	3	7	...	...	...	4	294	2	38	754	180	934
Executive.....	166	2	...	2	...	...	...	...	...	1	...	...	171	467	638
Panama railroad.....	412	64	93	220	122	224	208	16	490	911	5	25	2,790	374	3,164
Contractors.....	1	...	2	4	...	...	...	...	17	...	...	...	24	33	57
Grand total.....	6,000	140	802	1,774	3,249	1,739	1,095	480	2,114	4,699	39	173	22,304	3,973	26,277
Month previous.....	6,227	198	825	1,838	3,521	1,880	401	711	2,358	4,414	44	194	22,611	4,148	26,759
Changes.....	-227	-58	-23	-64	-272	-141	+694	-231	-244	+285	-5	-21	-307	-175	-482

*The wages are stated in United States currency.

QUARTERS.

A report of Canal and Panama railroad quarters occupied on November 30, follows:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Children	Men	Women	Children	Men	Women	Children
Balboa	681	145	141	309	12	29	1,440	472	591
Ancon	853	361	313	...	...	...	635	53	6
Corozal	567	219	226	77	...	...	521	51	47
Pedro Miguel	182	104	107	23	...	...	232	19	28
Paraiso	263	76	84	101	5	18	335	110	156
Culebra	162	134	125	6	7	12	466	298	385
Gamboa	15	8	9	...	...	...	89	17	10
Gatun	269	171	180	233	3	6	372	67	70
Cristobal	910	330	330	39	...	...	988	169	383
Toro Point	2	...	...	...	...	...	125	...	...
Total	3,904	1,548	1,515	788	27	65	5,203	1,256	1,681

(1) Includes eight American negroes, and two Panamanians on the gold roll. (2) Includes Sabanas police station, Taboga Island, Naos Island, Culebra Island, and Palo Seco. (3) Includes Miraflores. (4) Includes one Asiatic. (5) Includes 41 Panamanians. (6) Includes Empire, Las Cascadas and Bas Obispo. (7) Includes Colon Beach and Colon Hospital. (8) Includes 26 East Indians, 15 American citizens, and 61 Panamanians. Gold force of contractors (included above), 86 bachelors.

JOINT LAND COMMISSION.

Awards.

Award No. 69, docket Nos. 90 and 90-A, December 17, 1914—In the matter of the claim of Ora Miller, for property situated in the Canal Zone at the junction of Fourth of July avenue, the Balboa road and B Street of the city of Panama and opposite the Chorrillo district of the city of Panama, formerly a part of the Los Posillos estate—This claim is for land expropriated by the Government of the United States, the property expropriated being well situated for building purposes for residence and business properties. It lies immediately across the street from the residence and business district of Chorrillo in Panama city. It is agreed by the Government and the claimant that claimant owned in fee simple at the time of the expropriation the 1,884 square meters of land in question. A number of witnesses were introduced by the claimant, who placed the value of the land at from six to ten dollars per square meter at the time of the expropriation of said property. The Government introduced some uncertified excerpts from deeds for lands in the vicinity of this property, showing the consideration stated therein, from the year 1883 up to 1907. No witnesses were introduced on behalf of the Government relative to the value of the land expropriated.

The property in question was not expropriated by the Government of the United States until the year 1912. Counsel for the Government insist that the value of the property should be fixed under Article VI of the Treaty between the United States and the Republic of Panama according to its value at the date of the Treaty, but under the ruling of Justice McReynolds, then Attorney General of the United States, dated at Washington, D. C., October 13, 1913, which the commission regards as resting upon principles of equity and justice, we hold that the rule insisted on does not apply, but that the value should be fixed as on the date of the expropriation of the lands in question.

The property was inspected personally by the members of the Joint Land Commission. After an examination of the premises and a consideration of all the evidence introduced relative to the claim, the commission has reached the conclusion that the sum of \$8,557.97, United States currency, should be awarded to the claimant for the said property.

An award is therefore made against the United States of America, in favor of Ora Miller, for the sum of \$8,557.97, United States currency, for all his right, title and interest in and to the aforesaid property. This award shall be paid to the aforesaid claimant, in the amount specified, on or before the 17th day of January, 1915, and if the payment or tender of payment is not made on or before that date, the said award shall thereafter bear interest at the rate of six percentum per annum until paid.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Award No. 70, docket No. 2, December 17, 1914—In the matter of the claim of Encarnación Rangel, for the property called Naranjal.—This claim is for land, buildings, fruit trees and improvements expropriated by the Government of the United States, the property expropriated being situated in the district of Empire, near the city of Empire, Canal Zone, the property being known as Naranjal. The original claim is for 159,866.7 hectares. The Government survey of the property, as shown by Government's Exhibit Q, shows that the entire tract comprises 156.8 hectares.

Near the northern limits of the property is a wire fence extending from the Rio Mandinga on the west to the Rio San José on the east, as shown by said Exhibit Q, and the area of the tract of land claimed by Rangel is bounded on the north by the old San José trail, and the area of the tract between the old San José trail and the said wire fence comprises 32.9 hectares. This property is claimed by John MacGregor.

The southern boundary of the land is the Quebrada del Muerto, or del Credo, and the Chorrera trail. There are two Chorrera trails, the old Chorrera trail and the new Chorrera trail, and the title of the claimant to the tract of land between the old Chorrera trail and the new Chorrera trail is disputed.

The commission, after making a personal inspection of the premises and considering all the evidence introduced in the case, finds:

That the claimant, Encarnación Rangel, is the owner of a good and sufficient title to all of the lands described in the original claim, except the 32.9 hectares between the wire fence and the old San José trail, on the north of said tract, as shown by said Exhibit Q, and also except the area of 10.3 hectares of land between the old Chorrera trail and the new Chorrera trail, as shown on said Exhibit Q, and that the lands owned by the said Rangel comprise the 113.6 hectares between the wire fence on the north, the Quebrada de la Cal or de San José on the east, the line of the old Chorrera trail and the Quebrada

del Muerto or del Credo on the south, and the Rio Mandinga on the west.

The commission further finds that the lands, and improvements thereon, so owned by the said Rangel, are worth the sum of \$8,694.25, United States currency.

The commission further finds that the claim should be dismissed, without prejudice, as to the area of 32.9 hectares between the wire fence as shown on said exhibit Q, and the old San José trail as shown on said Exhibit, and as to the area of 10.3 hectares between the old Chorrera trail and the present or new Chorrera trail, and that the award to be made herein should be made in its entirety to the said Encarnación Rangel.

An award is therefore made against the United States of America in favor of Encarnación Rangel, for the sum of \$8,694.25, United States currency, for all the right, title, and interest of the said Encarnación Rangel in and to the lands so herein found to be owned by him, and all improvements of every kind and nature situated thereon. This award shall be paid to the aforesaid claimant, in the amount specified, on or before the 17th day of January, 1915, and if payment or tender of payment is not made on or before that date, this award shall thereafter bear interest at the rate of six percentum per annum until paid.

The claim of the said Encarnación Rangel to the said 32.9 hectares in the northern portion of said lands, claimed by him, between the said wire fence and the said old San José trail, and the 10.3 hectares of land comprised in the tract between the old Chorrera trail and the new Chorrera trail, is hereby dismissed, without prejudice, to the lawful owners thereof.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of Dismissal.

Rule of dismissal No. 154, docket No. 30, December 17, 1914—In the matter of the claim of Enrique Rodriguez Fernandez, for property located near Pedro Miguel—In the case of Enrique Rodriguez Fernandez, docket number above shown, an examination of the claim and of the documents submitted shows that whatever rights claimant had in the property in question arose under a lease from the Isthmian Canal Commission.

In a decision in the case of Augusta Dunlop, rendered April 16, 1913, the commission said:

"We have, therefore, reached the conclusion that it is not within the province of the Joint Land Commission to take cognizance of claims arising out of the revocation of revocable leases or licenses issued by the Isthmian Canal Commission. Such claims have no organic relation to the grants contained in the Treaty, nor to the international obligations which the United States has agreed to discharge under the Treaty, and for the adjudication of all such claims the claimants must seek a remedy through the procedure afforded by municipal laws."

In accordance with the foregoing decision, the claim of Enrique Rodriguez Fernandez, above shown, is hereby dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule.

Rule No. 153, docket No. 1433, December 16, 1914—In the matter of the claim of The Las Cascadas Estates Company, Ltd., for the property known as Las Cascadas plantation.—The Joint Land Commission having heretofore heard the above claim and having on the fifth day of December, 1914, made an award in the usual form to the claimant in the sum of \$75,000, Messrs. Fenille and Williams, attorneys for the Government, on the tenth day of December, 1914, five days after said award had been made, filed their written request with the commission that a specific finding be submitted by the commission as to the title and extent of the land found by the commission to be owned by the said claimant and for which said award had been made, and also requested the commission to state any other facts leading up to said award.

The commission is of the opinion that it is not obliged to furnish to any of the parties, either to the Government or to the claimant, the reasons on which its decisions are based; nevertheless, owing to the fact that it may be of importance to counsel for the Government in the defence against other claims to know what lands, or the title to what lands, the commission adjudicated in the claimant, the commission makes the following special finding in connection therewith:

The commission arrived at the conclusion that the Las Cascadas Estates Company, Limited, at the time of the expropriation, held by good and valid title all the lands included within their fences and bounded on the north and east by the lands claimed by Martina Cajar, shown to be 570.56 acres, on the map furnished by the United States and introduced by counsel for the Government as Government's Exhibit C in the hearing of this cause.

Inasmuch as the commission is unable to see how any further explanation of the grounds upon which the finding was made can now be of material interest to either party, the commission declines to go into any further details concerning its findings.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

OFFICIAL CIRCULARS.

Appointments.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 16, 1914.

CIRCULAR No. 661-12:

ACTING GOVERNOR—ENGINEER OF MAINTENANCE.
Effective December 17, 1914, Col. Harry F. Hodges, U. S. A., Engineer of Maintenance, will act as Governor of The Panama Canal during the absence of the Governor on leave. By order of the Secretary of War, Colonel Hodges will be relieved from Panama Canal duty effective January 1, 1915, upon which date, Lieut.-Col. Chester Harding, U. S. A., will be appointed Engineer of Maintenance and will act as Governor during the remaining period of the Governor's absence.

GEO. W. GOETHALS,
Governor.

Engineer of Maintenance.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 17, 1914.

All concerned—Effective this date, Lieut.-Col. Chester Harding, U. S. A., will perform the duties and exercise the authority of Engineer of Maintenance, under his title of Assistant to the Governor, pending his appointment as Engineer of Maintenance to become effective January 1, 1915.

H. F. HODGES,
Acting Governor.

Colonel Hodges Relieved from Duty with The Panama Canal.

SPECIAL ORDER
No. 287.
WAR DEPARTMENT,
WASHINGTON, December 5, 1914.
Extract.

20. Col. Harry F. Hodges, Corps of Engineers, is relieved from duty with The Panama Canal, to take effect January 1, 1915, and will then repair to this city, take station, and report to the Chief of Engineers for duty.

The travel directed is necessary in the military service. (2234744 A. G. O.)

By order of the Secretary of War.

H. L. SCOTT,
Brigadier General, Chief of Staff.

Official:
H. P. McCAIN,
The Adjutant General.

Command of Canal Zone Military Forces.

HEADQUARTERS, COAST DEFENSE OF PANAMA,
CRISTOBAL, C. Z., December 10, 1914.

GENERAL ORDERS
No. 7.

Pursuant to cabled instructions from the Commanding General, Eastern Department, dated December 15, 1914, the undersigned hereby assumes command of all United States troops, excepting officers and enlisted men on duty with The Panama Canal Government, within the limits of the Panama Canal Zone.

A. CRONKHITE,
Colonel, Coast Artillery Corps.

Reduction of Force on Silver Roll.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 10, 1914.

CIRCULAR No. 604-3:

When a reduction of force on the silver roll is necessary citizens of the United States and of Panama will, if their services are satisfactory, be retained in preference to aliens.

GEO. W. GOETHALS,
Governor.

Notice to Steamship Lines.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 10, 1914.

1. Vessels using the Panama Canal are towed through the locks. Ordinarily, six locomotives will be used, two forward for towing and steadying the vessel in the lock chambers, two amidships for towing and afterward for checking the vessel's headway, and two aft for steadying her and checking her headway.

2. The average rise and fall in each lock chamber is about 30 feet; hence, when a vessel is at the lowest level, the lead through the ship's chocks to the locomotives on the lock walls is often very sharp, and unless the chocks be closed the line will have a tendency to slip out and damage the rail and other light construction equipment in its vicinity. Experience has demonstrated the fact that most of the chocks and bits are too light in construction, and that the chocks in particular should not only be made heavier and stronger, so

that their jaws may stand a vertical strain, but that they should be of a permanently closed pattern and not be made with open jaws.

3. In cases where open-jawed chocks are installed, they should at once be replaced by closed ones or be fitted with an appliance for closing them, taking care that the appliance itself will stand a heavy vertical strain in case the line slips from under the jaws.

4. With some minor modifications, there are three general designs of chocks which are usually fastened on ocean steamers: (1) Heavy cast iron open-jawed, secured on deck or to the upper edge of the side plating; (2) the same as (1), but with rollers in each end; and (3) oval closed chocks let into the side plating for leads to covered and well decks.

5. The latter (3) gives very satisfactory results, but the former (1) and (2) are liable to cause damage from the chunge both in the vertical and horizontal lead of the line, due to change in level of the water, and angle from the locomotives when shifting from a towing to a retarding position or vice versa, and should be replaced as recommended in Paragraph 3.

6. In many cases the bitts have been found to be too light in construction or poorly secured. They should be sufficiently strong to withstand the strain of a 1½-inch (diameter) wireline with a pull of 50,000 pounds, and be firmly riveted to the decks, and if necessary where the deck is of wood or light plating, they should have an under deck plate, or be secured between two deck frames.

7. It has been noted that some vessels have light iron cleats riveted to the inside of the side plating or to the deck plates in lieu of bitts. This is very unsatisfactory, as almost invariably they will not stand the strain, owing to their light construction or insecure fastening; they should be replaced by bitts.

8. In the installation of chocks and bitts for Panama Canal towing attention should be given to placing the several sets in convenient and accessible places, and that in each set there should be but a short distance between the chock and its accompanying bitts.

9. In some cases suitable bitts have been installed, but there were no convenient or accessible chocks; hence, the bitt of the tow rope has a tendency to slip off the bitts, and, if the lead be under the rail, endangers carrying it away. In such cases chocks should be installed at once.

10. While The Panama Canal assumes the liability for any damage to vessels during lockage, for which it may be responsible, yet it will not do so when vessels are not fitted with the proper appliances for Canal towage, and when damage may result in consequence thereof; hence, steps should be taken immediately to remedy any defects herebefore mentioned.

11. A vessel which presents herself for transit through the Canal, which is in compliance with these recommendations, and which is thoroughly and strongly so equipped for towing, will not only have her passage through the several locks greatly facilitated, but will avoid the annoyance and expense due to possible damage to chocks, bitts, rail, and other light equipment, for which The Panama Canal will not assume responsibility.

12. The Canal pilot will always examine each vessel's towing appliances before she enters the locks, and will not only call attention to any defects, but will gladly offer advice and suggestions toward remedying any that may be found, and at the same time will furnish the master or captain with a brief notice in reference to such alterations as in his opinion should be made before the vessel next transits the Canal.

GEO. W. GOETHALS,
Governor.

Rates of Pay, Silver Roll.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 15, 1914.

CIRCULAR No. 666-1:

Circular No. 666, Revised is hereby amended to include the following ratings:

Lockman.....\$75
Lockman.....30

GEO. W. GOETHALS,
Governor.

Notice to Mariners.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 10, 1914.

CIRCULAR No. 643-9:

COLON-CRISTOBAL HARBOR.

1. The 17-foot spot, Limoa Bay, Colon-Cristobal harbor, Panama, Canal Zone, about half way between the end of Cristobal mole and Toro Point light, as shown on U. S. C. and G. S. chart No. 950, still remains, but the harbor in its vicinity, with the exception of a small circle with a radius of about 150 yards, has been dredged to the normal depths of the surrounding waters, with a least depth of 30 feet. This shoal was

Inadvertently omitted from Isthmian Canal Commission chart No. 1 of the Panama Canal.

2. Upon the completion of the east breakwater it is the intention to remove this shoal to normal depths. Until its removal the shoal will be marked by a buoy painted red and black in horizontal stripes.

GEO. W. GOETHALS,
Governor.

Accounting for Cement Bags and Other Containers THE PANAMA CANAL, EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 10 1914.

CIRCULAR No. 56-7 (Superseding Circular No 656-3):
1. The provisions of Circular 656-3, dated July 20, 1914 are amended, as follows:

CEMENT BAGS.

2. When cement in bags is delivered to a division or to the Panama Railroad Company, the bags will be covered by a separate invoice or foreman's order.

3. The value of the bags will be charged to the equipment account of the division and accounted for on the property records.

4. When empty cement bags are turned in to the Supply Department for return to contractor, carload lots will be billed by the division to the inspector, Supply Department, Cristobal, and less than carload lots will be delivered to the nearest storekeeper or quartermaster, except that at Cristobal less than carload lots may also be delivered to the inspector. Bundles will be securely tied and tagged, showing the name of division. Divisions turning in bags will at once notify the consignee of shipment or delivery and will forward invoice based on the field count. Invoices will be accomplished by the receiving official who will return one copy to the division, and send the original and one copy to the Auditor for credit to property accounts. Bags turned in to line storehouses will be charged to stock account, Class 19. The inspector is authorized to accomplish invoices for cement bags; such invoices will be charged to "Cement bags in transit." When bags, which have been turned into line storehouses, are forwarded to Cristobal for shipment to the United States, an invoice showing divisions from which bags were received will be sent to the inspector who will accomplish and return one copy to the storekeeper or district quartermaster and send the original and one copy to the Auditor for credit to the proper stock account and charge to "Cement bags in transit."

5. When a shipment is forwarded to the United States, the invoices furnished the inspector will be the basis of the Isthmian count. A statement of each shipment, showing divisions returning bags and giving details as to invoices included in same, will be furnished the Auditor.

6. The inspector will see that bundles are tagged with name of division, and will report all cases of carelessness on the part of divisions in this respect to the Chief Quartermaster.

7. The General Purchasing Officer will furnish the Auditor a statement of the output of each steamer, showing the names of all divisions, the bags received, accepted, and rejected. The Auditor will credit "Cement bags in transit" on the basis of the General Purchasing Officer's report, and will notify the divisions of the rejections and shortages, which will be charged to divisions accounts.

8. In the case of the Panama Railroad Company or contractors, the Auditor will notify them of bags accepted for their account, for which the Auditor will prepare a voucher upon receipt of bill.

OIL DRUMS AND OTHER EMPTY CONTAINERS RETURNABLE TO CONTRACTORS.

9. Where the contractor charges for containers, for which credit will be allowed when returned, the Balboa storekeeper will invoice against various divisions financially for such containers as may be issued or transferred. Separate invoices will be issued to cover such containers. When divisions return containers, they will be invoiced in the same manner as other material returned to store. Carload lots will be shipped direct to the inspector, Pier 11, Cristobal, and less than carload lots will be consigned to the storekeeper, oil house, Mount Hope. When, in any case, it is impracticable to ship drums to Cristobal or Mount Hope, they may be turned in to line stores and invoiced to the receiving storekeeper.

10. Where the contractor furnishes containers without charge, under a contract providing that The Panama Canal shall make payment for those not returned, the Balboa storekeeper will accept a charge for the containers received, at the rate payable for those not returned, as fixed in the contract, and the Auditor will credit the amount on his books to the contractor. When shipment in such containers is made by a storekeeper to other storekeepers or divisions, containers will be invoiced at the contract rate charged in case of failure to return. When empty, the containers will be returned to the storekeeper at the same value. When containers are returned to the contractor, the Auditor

will credit Balboa store and charge the contractor's account for their value.

11. The storekeeper, Balboa, will forward to the Auditor at the end of each month a statement showing the number, kind and value of containers returned, the name of contractor, and the order number. The Auditor will credit the storekeeper for such containers.

GEO. W. GOETHALS,
Governor.

Transmission Line Between Miraflores and Gatun Energized.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 21, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

Both sides of the transisthmian transmission line between Gatun and Miraflores substations will be put in service at 44,000 volts, beginning at 12 noon on December 22. All employees should be notified of the fact that almost certain loss of life will result from contact with or close approach to these wires after they are put in service. Cranes or other equipment or tools should be handled so that a clearance of at least six feet from the wires is maintained.

H. F. HODGES,
Acting Governor.

Steam Engineers.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 19, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

Hereafter, no silver roll employee will be employed as steam engineer on locomotive cranes, spreaders, unloaders, truckshifters, or pile drivers, except in emergency, or in case no gold roll employee is available.

H. F. HODGES,
Acting Governor.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., December 21, 1914.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Avelisian, K. D.	Klemmer, Miss Sarah
Baltzell, Capt. G. F. (2)	Leon, Enrique
Beller, Lieut. J. E.	Morton, J. Webb
Bitting, Mrs. Eva H.	Reid, John
Breen, W. A. (spl. del.)	Saunders, R. M.
Cappor, Jaime	Slattery, Wm.
Christ, Mrs. Samuel	Smiley, Samuel
Coleman, Frank	Smith, Chas. O.
Crandall, Harry	Stramberg, Mrs. Kaut
Dahl, Morris (Hosp. Corps)	Sudron, Mrs. M.
Dickinson, Wm. E.	Wies, Samuel
Edwards, Mrs. Margaret	Weidner, Mrs. Percy
Ferguson, Fred P.	Williams, David
Gooden, S. A.	Willis, L. B. (2)
Grace, Mrs. John T.	Young, Anthony
Haack, Miss Lydia	Zink, Raymond L.
Hull, J. B. (paper)	

Rainfall from December 1 to 19, 1914, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
Pacific Section—	<i>Ins.</i>		<i>Ins.</i>
Balboa	1.11	12	4.62
Balboa Heights	1.29	7	5.29
*Miraflores	1.65	6	3.48
Pedro Miguel	1.78	6	3.20
Rio Grande	1.36	7	2.83
Central Section—			
Culebra .....	.60	15	1.10
*Camacho .....	.84	7	2.43
Empire .....	.50	7	1.58
Gambua	1.72	8	3.01
*Juan Mina .....	.87	7	1.48
Alhajuela .....	.67	7	1.49
*El Vigia	1.85	9	5.27
Frijoles	1.35	1	4.23
*Trinidad			
*Monte Lirio	1.50	1	3.54
Atlantic Section—			
Gatun .....	.79	12	2.88
*Brazos Brook .....	.93	2	3.11
Colon	2.22	12	6.28

*Standard rain gage—readings at 5 p. m. daily.

Automatic rain gage at unstarred stations—values midnight to midnight.

Balboa-Taboga Service.

Launch Q makes trips on the following schedule:
Week days.—Leave Balboa dredge landing at 5.30 p.m., and Taboga at 6 a. m. Sundays and holidays.—Leave Taboga at 6 a. m. Balboa dredge landing at 9.40 a. m., and Taboga at 8 p. m. Fares—Employees, 25 cents gold each way; nonemployees, 50 cents gold each way; children under 12 years, 15 cents gold each way.

COMMISSARY DEPARTMENT.

Trial of New Selling System.

A system of selling without the use of sale slips has been tried out in some of the commissaries, which has considerably reduced the selling expense and enables salesmen to make quicker sales and deliveries than was possible under the old system. It is intended to establish the system in other commissaries as soon as practicable.

Rules for Sale of Ice.

The following rules in connection with the sale of ice are published for the information and guidance of all concerned:

Remittance will be received only in amounts sufficient to cover the current month's requirements.

No stops or starts will be made after receipt of the 10 o'clock a. m. mail for the succeeding waybill (two days thereafter.)

No changes will be made in the current month's waybill after the 27th of each month.

Remittances received after the 4 o'clock p. m. mail is received on the 27th of each month, will not be credited for the first waybill in the succeeding month.

Ice accounts run from the first of one month to the end of that month. No ice accounts will run from the middle of one month to the middle of the next month. Midmonth changes on ice accounts will be made only in case of persons going on vacations, leaving the service, or returning from leave. In such cases, the necessary information must be shown on the card in the space provided for "Remarks."

Ice will not be shipped unless sufficient funds are on hand to cover amount desired up to and including the end of the month, and balances remaining from previous ice accounts will not be applied on a succeeding month's account until sufficient additional funds are received to cover the entire month.

Proposals for Furnishing the Commissary Branch With Beef Cattle.

THE PANAMA CANAL.

OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Depot Commissary, Cristobal, C. Z., until 4 p. m., January 11, 1915, and then opened, for furnishing the commissary branch with 200 head of beef cattle.

Specifications may be obtained upon application to the Depot Commissary, Cristobal, C. Z.

The Government reserves the right to reject all bids, or to accept any bid in part.

Bids should be marked "Proposal for furnishing beef cattle, to be opened January 11, 1915."

WM. R. GROVE,
Chief Quartermaster.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days or Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective December 24:

FRESH MEATS.

	Price.
Mutton—Stewing, per pound.....	10
Shoulder, trimmed, per pound.....	16
Leg (8 to 10 pounds), per pound.....	25
Short cut chops, per pound.....	30
Shoulder, chops, per pound.....	18
Lamb—Stewing, per pound.....	13
Shoulder, trimmed, per pound.....	19
Leg (5 to 8 pounds), per pound.....	30
Chops, per pound.....	36
Chops, shoulder, per pound.....	23
Veal—Stewing, per pound.....	13
Shoulder, for roasting (not under 4 pounds), per pound.....	17
Chops, shoulder, per pound.....	23

	Price.
Chops, per pound.....	35
Loin, for roasting, per pound.....	35
Cutlets, per pound.....	40
Suet, per pound.....	03½
Soup, per pound.....	08
Soup bones, per pound.....	02½
Stew, per pound.....	12
Plate, per pound.....	14
Corned, No. 1, per pound.....	20
Corned, No. 2, per pound.....	17
Chuck roast, 3 lbs., and over, special, per pound.....	13
Rib roast, second cut (not under 3½ pounds), special, per pound.....	18
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
Rib roast, first cut (not under 3 pounds), special, per pound.....	22
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27
Pot roast, special, per pound.....	23
choice, per pound.....	28
Rump roast, special, per pound.....	23
choice, per pound.....	28
Porterhouse roast, special, per pound.....	25
choice, per pound.....	31
Steak, chuck, special, per pound.....	15
Round, bottom, special, per pound.....	15
choice, per pound.....	19
Round, top, special, per pound.....	17
choice, per pound.....	22
Sirloin, special, per pound.....	23
Sirloin, choice, per pound.....	28
Sirloin, choice cut, special, per pound.....	26
Sirloin, choice cut, choice, per pound.....	32
Rump, special, per pound.....	23
choice, per pound.....	28
Porterhouse (not less than 1½ pounds), special, per pound.....	26
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse, short, Delmonico, special, per pound.....	23
Porterhouse, short, Delmonico, choice, per pound.....	28
Tenderloin, Western, special, per pound.....	40
Tenderloin, Western, choice, per pound.....	46
Pork—Hams, fresh, per pound.....	26
Shoulders, fresh, per pound.....	22
Loin, chop, or roast, per pound.....	24
Pigs' feet, fresh, each.....	8
Pigs' head, fresh, whole.....	95
½ head.....	48
Sausage, home made, per pound.....	26
MISCELLANEOUS.	
Livers—Beef, per pound.....	13
Calif, each.....	65
half, each.....	33
Oysters, fresh, per pkt.....	30
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	14
Frankfurter, per pound.....	14
Lieberwurst, per pound.....	12
Pork, per pound.....	18
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	47
per ½-dozen.....	24
Bluefish, per pound.....	10
Halibut, fresh, per pound.....	9
Salmon, per pound.....	6
Yeast, per pound.....	31
per cake.....	2
POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound.....	25
Chickens—Fancy, roasting, corn fed, per pound.....	24
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	30
Broilers, milk fed, per pound.....	25
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	26
Squabs, each.....	30
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30
CURED AND PICKLED MEATS.	
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	24
Half, per pound.....	26
Sliced, per pound.....	32
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	30
Half, boiled, per pound.....	32
Sliced, boiled, per pound.....	38
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.42
Pigs' feet, per pound.....	7
Tongues, per pound.....	22
DAIRY PRODUCTS.	
Butter—Creamery, special, per pound.....	43
Sheffield Farms, extra fancy, per lb.....	54

	Price.
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	21
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	**15
Fermillac, bottle.....	**25
Ice cream, quart.....	125
½-gallon.....	150
Cream, Sheffield Farms, quart.....	**33
pint.....	**19
½ pint.....	**12

VEGETABLES.

Cauliflower, per pound.....	*16
Beets, per pound.....	2½
Brussels sprouts, per pound.....	15
Celery, per head.....	5
Cabbag, per pound.....	1½
Carrots, per pound.....	*2½
Cucumbers, per pound.....	8
Lettuce, per pound.....	7
Onions, per pound.....	2½
Peppers, per pound.....	*14
Parsnips, per pound.....	13½
Potatoes, white, per pound.....	2
sweet, American, per pound.....	12½
sweet, tropical, per pound.....	2
Yams, tropical, per pound.....	3
Turnips, per pound.....	2
Tomatoes, per pound.....	8
Squash, per pound.....	12½

FRUITS.

Apples, per pound.....	3
Apples, fancy, per pound.....	5
Cranberries, fresh.....	6
Grapes, per pound.....	14
Grape fruit—American, each.....	5
Tropical, each.....	3½
Lemons, per dozen.....	14
Limes, per 100.....	40
Oranges—American, each.....	2½
Tropical, per dozen.....	9
Coconuts, each.....	5
Bananas, per bunch.....	38
Bananas, each.....	1½
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Tangerines, each.....	*1½

*Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

†Indicates reduction from preceding list.

‡Sold only from commissaries, no orders taken for delivery.

§Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Additions to Stock.

Caviar, 1½ oz tin.....	\$.20
Shoes, play, youths, pr.....	1.65
Shoes, play, youths, pr.....	2.05
Hooks, gate, brass wire, ea.....	.03
Wrappers, infants, ea.....	.21

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective December 19, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Pumpkins, tin.....	.10	.08
Sheets, 54 by 90, ea.....	.60	.55
Shirts, ea.....	1.15	1.10
Shirts, ea.....	1.15	1.10
Spring beds, double, ea.....	2.40	1.85
Tubs, wash, ea.....	.59	.50
Paper, writing, box.....	.31	.27
Bay leaves, tin.....	.21	.10
Cayenne pepper, bottle.....	.12	.08

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday December 19, 1914. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gatun Lake.	Miraflores Lake.	
Sun., Dec. 13.....	131.00	96.50	86.91	86.98	53.77
Mon., Dec. 14.....	128.60	94.51	87.00	87.00	53.84
Tues., Dec. 15.....	128.60	94.30	86.93	87.00	54.06
Wed., Dec. 16.....	128.45	94.22	87.03	87.00	54.10
Thurs., Dec. 17.....	129.45	94.89	87.07	87.01	54.10
Fri., Dec. 18.....	127.95	93.92	87.08	87.01	54.10
Sat., Dec. 19.....	127.55	93.56	87.06	87.00	54.15
Height of low water to nearest foot.....	125.0	91.0			

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next six weeks are given in the following table:

DECEMBER.				
DATE.	Time and height of high and low water.			
Wed., Dec. 23.....	2:04	8:04	14:23	20:34
Thurs., Dec. 24.....	2:1	8:12	2.0	13.5
Fri., Dec. 25.....	2:58	8:59	15:16	21:28
Sat., Dec. 26.....	3:25	10:00	16:12	22:25
Sun., Dec. 27.....	3:5	11:5	3.9	12.1
Mon., Dec. 28.....	4:54	11:09	17:11	23:25
Tues., Dec. 29.....	5:55	12:18	18:12	24:25
Wed., Dec. 30.....	6:56	13:27	19:13	25:25
Thurs., Dec. 31.....	7:57	14:36	20:14	26:25

JANUARY.				
DATE.	Time and height of high and low water.			
Fri., Jan. 1.....	3:22	9:46	16:01	22:05
Sat., Jan. 2.....	3:4	1.5	13.3	2.6
Sun., Jan. 3.....	4:00	10:25	16:40	22:43
Mon., Jan. 4.....	4:40	11:04	17:16	23:23
Tues., Jan. 5.....	5:20	11:43	17:51	24:03
Wed., Jan. 6.....	6:00	12:22	18:27	24:43
Thurs., Jan. 7.....	6:40	13:01	19:03	25:23
Fri., Jan. 8.....	7:20	13:40	19:39	26:03
Sat., Jan. 9.....	8:00	14:19	20:15	26:43
Sun., Jan. 10.....	8:40	14:58	20:51	27:23
Mon., Jan. 11.....	9:20	15:37	21:27	28:03
Tues., Jan. 12.....	10:00	16:16	22:03	28:43
Wed., Jan. 13.....	10:40	16:55	22:39	29:23
Thurs., Jan. 14.....	11:20	17:34	23:15	30:03
Fri., Jan. 15.....	12:00	18:13	23:51	30:43
Sat., Jan. 16.....	12:40	18:52	24:27	31:23
Sun., Jan. 17.....	13:20	19:31	25:03	32:03
Mon., Jan. 18.....	14:00	20:10	25:39	32:43
Tues., Jan. 19.....	14:40	20:49	26:15	33:23
Wed., Jan. 20.....	15:20	21:28	26:51	34:03
Thurs., Jan. 21.....	16:00	22:07	27:27	34:43
Fri., Jan. 22.....	16:40	22:46	28:03	35:23
Sat., Jan. 23.....	17:20	23:25	28:39	36:03
Sun., Jan. 24.....	18:00	24:04	29:15	36:43
Mon., Jan. 25.....	18:40	24:43	29:51	37:23
Tues., Jan. 26.....	19:20	25:22	30:27	38:03
Wed., Jan. 27.....	20:00	26:01	31:03	38:43
Thurs., Jan. 28.....	20:40	26:40	31:39	39:23
Fri., Jan. 29.....	21:20	27:19	32:15	40:03
Sat., Jan. 30.....	22:00	27:58	32:51	40:43
Sun., Jan. 31.....	22:40	28:37	33:27	41:23
Mon., Feb. 1.....	23:20	29:16	34:03	42:03
Tues., Feb. 2.....	24:00	29:55	34:39	42:43
Wed., Feb. 3.....	24:40	30:34	35:15	43:23

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the

meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15.47 is 3.47.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies, may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bukkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.25 per barrel, reduced to 60° Fahrenheit.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each, aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the turning of the largest crank shafts or longest line shafts.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Subsistence supplies, including a large stock of fresh meats, vegetables, canned groceries, fruits, bakery products, etc., are available for quick delivery at either terminal. Prices are generally lower than the retail prices in the United States, and compare favorably with prices in any part of the world.

The cable address of The Panama Canal on the Isthmus is "Isthmian, Balboa Heights;" in the United States, "Isthmian, Washington".

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS THROUGH THE CANAL.

Approximately regular services between the Atlantic and the Pacific seaboard from Boston, New York, Philadelphia, and Baltimore, occasionally Charleston and New Orleans, to San Pedro, San Francisco, Portland, and Puget Sound, and return, are maintained by the American-Hawaiian Steamship Company, with a sailing each way about every five days; the Luckenbach Steamship Company, with a sailing each way about every 10 days; Sudden and Christenson, approximately fortnightly; the Atlantic and Pacific Steamship Company, about every three weeks; and the Boston and Pacific Line, and the Arrow Line, each sending a vessel each way about once a month.

Between the east coast of the United States and the west coast of South America, fortnightly services are maintained by the Merchants' Line and by the New

York and South America Line; the West Coast Line has sailings each way about every four weeks.

Between the west coast of the United States, with connections to lower British Columbia and Europe the following lines are in service: The Harrison-Direct Line, monthly; the Maple Leaf Line, about every six weeks; the East Asiatic Company, monthly, and the Johnson Line, every six or seven weeks.

The Pacific Steam Navigation Company is operating approximately a monthly service around South America from Liverpool, by way of the Canal.

The American-Australian Line has been sending vessels through the Canal about fortnightly from New York to ports in Australia and New Zealand.

PACIFIC COAST CONNECTIONS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acapulco, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central America line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports abovenamed between Balboa and Ocos.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Paipa, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Moadays from Balboa for Valparaiso, calling at Paipa, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Moadays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro; and an additional weekly sailing to Bocas del Toro.

The Royal Mail Steam Packet Company maintains approximately a fortnightly service between Colon and England, via Cartagena, Puerto Colombia, Trinidad, and Barbados. Its service to New York, via Kingston, has been temporarily discontinued.

The Compagnie Générale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compania Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular service is maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every seven days, direct; between Colon and New York by the United Fruit Company twice a week, one sailing via Port Limon and Havana, and the other via Kingston; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

		<i>Sails.</i>	<i>Arrives.</i>
NEW YORK TO CRISTOBAL-COLON.			
Carrillo.....	U. F. C., Dec.	16.....	Dec. 23
Colon.....	P. R. R., Dec.	17.....	Dec. 23
Tenadores.....	U. F. C., Dec.	19.....	Dec. 27
Almirante.....	U. F. C., Dec.	23.....	Dec. 30
Advance.....	P. R. R., Dec.	24.....	Dec. 31
Metapan.....	U. F. C., Dec.	26.....	Jan. 4
Santa Marta.....	U. F. C., Dec.	30.....	Jan. 6
Panama.....	P. R. R., Dec.	31.....	Jan. 6
Pastores.....	U. F. C., Jan.	2.....	Jan. 10
Zacapa.....	U. F. C., Jan.	6.....	Jan. 13
Alliaoca.....	P. R. R., Jan.	7.....	Jan. 13
Calamarez.....	U. F. C., Jan.	9.....	Jan. 17
Carrillo.....	U. F. C., Jan.	13.....	Jan. 20
Colon.....	P. R. R., Jan.	14.....	Jan. 20
Tenadores.....	U. F. C., Jan.	16.....	Jan. 24
Almirante.....	U. F. C., Jan.	20.....	Jan. 27
Advance.....	P. R. R., Jan.	21.....	Jan. 28

CRISTOBAL-COLON TO NEW YORK.

Zacapa.....	U. F. C., Dec. 24.....	Dec. 31	
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(Continued on page 170.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon December 20.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Dec. 15	Lowther Castle	British	Lancashire Shipping Co., Ltd.	New York	Vladivostok	General mdse	6,500	5,738	4,604
Dec. 15	Ardgarry	British	Lung and Fulton	New York	New Zealand	General mdse	5,800	5,081	3,704
Dec. 16	Columbian	American	American-Hawaiian S. S. Co.	New York	San Diego	General mdse	8,000	8,662	6,404
Dec. 19	Allianca	American	Panama Railroad S. S. Line	New York	Balboa	General mdse	1,494	4,120	2,640
Dec. 19	Jean	American	Luckenbach S. S. Co.	New York	San Pedro	General mdse	3,500	3,307	2,347
Dec. 20	Montanan	American	American-Hawaiian S. S. Co.	New York	San Pedro	General mdse	6,299	6,857	4,696

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Dec. 14	Protesilaus	British	China Mutual Steam Nav. Co.	Victoria	Jamaica	Ballast		9,781	7,148
Dec. 14	Tremeadow	British	Edward Hain & Son	Balboa	Cardiff	Ballast		4,094	2,922
Dec. 14	S. V. Luckenbach	American	Luckenbach S. S. Line	San Pedro	New York	General mdse	2,100	3,859	2,632
Dec. 14	Lowther Range	British	Furness, Withy & Co.	Portland, Ore.	*United Kingdom	Wheat and oats	5,567	4,255	3,013
Dec. 15	Kentuckian	American	American-Hawaiian S. S. Co.	San Francisco	Del. Breckwater	Sugar and G. mdse	3,205	6,878	4,675
Dec. 16	Ecclesia	British	Manchester & Salfors S. S. Co.	Portland, Ore.	Cristobal	Wheat and flour	5,485	4,218	3,130
Dec. 16	King Edgar	British	King Shipping Co.	Seattle	Isleworth, Eng.	Barley	6,028	4,486	3,318
Dec. 16	Panaman	American	American-Hawaiian S. S. Co.	San Francisco	Philadelphia	General mdse	2,140	6,937	4,760
Dec. 17	Huasco	Chilean	South American S. S. Co.	Valparaiso	Cristobal	General mdse	2,129	4,563	3,121
Dec. 17	Strathgyle	British	Strathgyle S. S. Co.	Tacoma	Newport News	Wheat	6,322	4,614	3,426
Dec. 17	Iowan	American	American-Hawaiian S. S. Co.	Los Angeles	New York	General mdse	3,899	6,819	4,663
Dec. 17	Crown of Toledo	British	Crown Line	Tacoma	London	General mdse	8,300	7,730	5,444
Dec. 18	Trinulo	British	Union Oil Company	Port Harford	New Orleans	Ballast		5,352	3,501
Dec. 20	Jamaica	British	Pacific Steam Nav. Co.	Tumaco	Cristobal	General mdse	591	1,170	620

*Via Newport News. †For orders.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessels	Line	From
Dec. 21	Director	Harrison Line	Liverpool
Dec. 21	Bellgrano	S. S. Co.	New York
Dec. 21	English Monarch	Monarch S. S. Co., Ltd.	New York
Dec. 21	Saint Ursula	Rankin, Gilmour & Co., Ltd.	New York
Dec. 21	Roseric	Bank Line, Ltd.	New York
Dec. 22	Sirathorne	Strathorne S. S. Co.	New York
Dec. 22	Huasco	South American S. S. Co.	Cristobal
Dec. 23	Colon	Panama Railroad S. S. Line	New York
Dec. 23	Georgian	Hawaiian-American S. S. Co.	New York
Dec. 27	Cricket	Cricket S. S. Co.	New York
Dec. 27	Mimiro	Tyser Line, Ltd.	
Dec. 27	Earl of Elgin	Earl of Elgin S. S. Co.	

*Vessels which will pass through the Canal.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Dec. 22	Nevadan	American-Hawaiian S. S. Co.	San Francisco
Dec. 25	San'a Cruz	W. R. Grace & Co.	San Francisco
Dec. 30	Mexican	American-Hawaiian S. S. Co.	Honolulu
Dec. 30	Palma	South American S. S. Co.	Valparaiso
Dec. 30	A. Court	Court Line	
Dec. 30	Craigina	Craigina S. S. Co.	
Dec. 30	Qui-o	Ocean Navigation Co.	

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
Dec. 14	Bygland	United Fruit Co.	Port Limon
Dec. 16	Freda	Seeborg Line	New Orleans
Dec. 17	Wilhelmina	Caribbean Transport Co.	Bluefield
Dec. 18	Hermol	Era Line	Norfolk
Dec. 19	Tug Potomac	U. S. Navy	Hallandis Cays
Dec. 19	Tug Porto Bello	The Panama Canal	Hallandis Cays
Dec. 20	Tacoma	U. S. Navy	Guntwano

*DEPARTURES.

Date	Vessel	Line	To
Dec. 14	Zela	Robert Wilcox & Co.	Mobile
Dec. 18	Guadeloupe	Cie Gener de Transatlantique	St. Nazaire
Dec. 18	Tug Potomac	U. S. Navy	Hallandis Cays
Dec. 18	Tug Porto Bello	The Panama Canal	Hallandis Cays
Dec. 19	Wilhelmina	Caribbean Transport Co.	Bluefield

*EXPECTED ARRIVALS.

Dec. 21	Semantha	Haws S. S. Co., Ltd.	New York
Dec. 21	Nionian	Leyland Line	Liverpool
Dec. 23	Amelia	United Fruit Co.	New Orleans
Dec. 25	Berlin	Lancashire & Yorkshire Co.	New York
Dec. 26	Chagres	United Fruit Co.	Port Limon
Dec. 27	Nor	Harloff & Rodseth	New York
Dec. 29	Dictator	Harrison Line	Liverpool

*EXPECTED DEPARTURES.

Dec. 21	Bygland	United Fruit Co.	Puerto Colombia
Dec. 24	Amelia	United Fruit Co.	Bocas del Toro
Dec. 30	Tug Potomac	U. S. Navy	
Dec. 30	Nionian	Leyland Line	
Dec. 30	Hermol	Era Line	
Dec. 30	Freda	Seeborg Line	
Dec. 30	Semantha	Haws S. S. Co., Ltd.	
Dec. 30	Nor	Harloff & Rodseth	

*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Dec. 15	Ecuador	Pacific Steam Nav. Co.	Guayaquil
Dec. 15	City of Para	Pacific Mail S. S. Co.	San Francisco
Dec. 16	Montano	Peruvian S. S. Co.	Mollendo

*DEPARTURES

Dec. 12	Manavi	Pacific Steam Nav. Co.	Guayaquil
Dec. 13	Guatemala	Pacific Steam Nav. Co.	Callao

*EXPECTED ARRIVALS.

Dec. 24	Peru	Pacific Mail S. S. Co.	San Francisco
Dec. 30	Pachico	Peruvian S. S. Co.	Callao
Jan. 2	Pennsylvania	Pacific Mail S. S. Co.	San Francisco

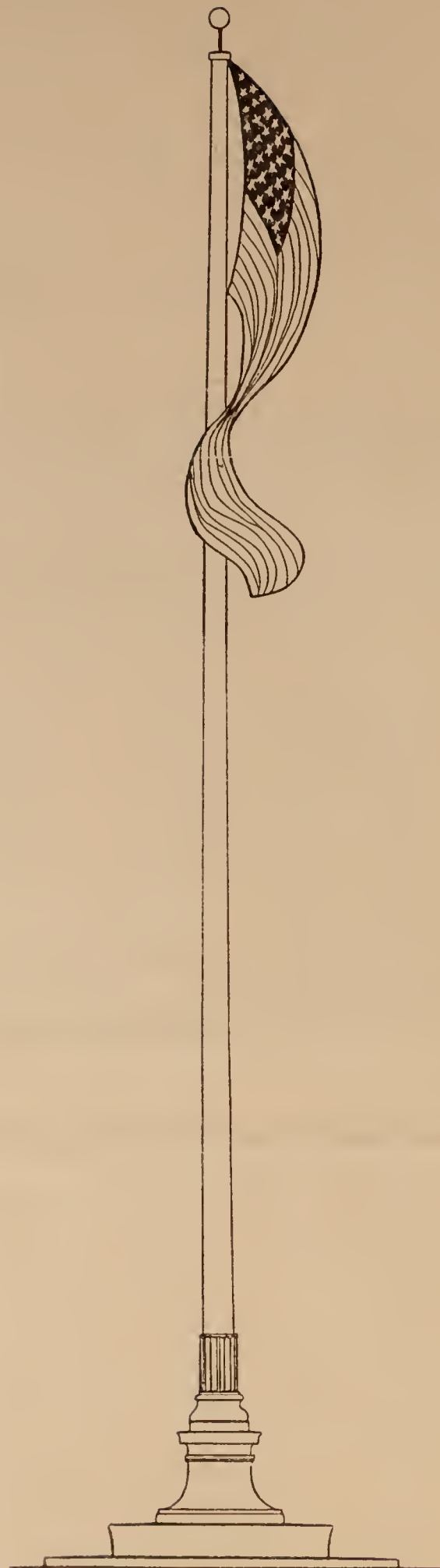
*EXPECTED DEPARTURES.

Dec. 21	Ecuador	Pacific Steam Nav. Co.	Guayaquil
Dec. 21	Montano	Peruvian S. S. Co.	Callao
Dec. 22	City of Para	Pacific Mail S. S. Co.	San Francisco

*Other than vessels using the Canal.

(Continued from Page 179.)

Allianca	P. R. R.	Dec. 26	Jan. 1	Pastores	U. F. C.	Jan. 18	Jan. 25	Atenas	U. F. C.	Dec. 26	Dec. 31
Calamares	U. F. C.	Dec. 28	Jan. 4	Allianca	U. F. C.	Jan. 21	Jan. 28	Cartago	U. F. C.	Dec. 30	Jan. 6
Carrillo	U. F. C.	Dec. 31	Jan. 7	Calamares	U. F. C.	Jan. 23	Jan. 29	Turrialba	U. F. C.	Jan. 2	Jan. 7
Colon	P. R. R.	Jan. 2	Jan. 8	Colon	U. F. C.	Jan. 25	Feb. 1	Heredia	U. F. C.	Jan. 6	Jan. 13
Tenadores	U. F. C.	Jan. 4	Jan. 11	Carrillo	U. F. C.	Jan. 28	Feb. 4	CRISTOBAL-COLON TO NEW ORLEANS.			
Danube	R. M.	Jan. 5	Jan. 13	Tenadores	U. F. C.	Feb. 1	Feb. 8	Turrialba	U. F. C.	Dec. 24	Dec. 29
Almirante	U. F. C.	Jan. 7	Jan. 14	Almirante	U. F. C.	Feb. 4	Feb. 11	Heredia	U. F. C.	Dec. 24	Dec. 31
Advance	P. R. R.	Jan. 9	Jan. 16	NEW ORLEANS TO CRISTOBAL-COLON.				Abangarez	U. F. C.	Dec. 31	Jan. 5
Metapan	U. F. C.	Jan. 11	Jan. 19	Abangarez	U. F. C.	Dec. 19	Dec. 24	Parigmina	U. F. C.	Dec. 31	Jan. 7
Santa Marta	U. F. C.	Jan. 14	Jan. 21	Parigmina	U. F. C.	Dec. 23	Dec. 30	Atenas	U. F. C.	Jan. 7	Jan. 12
Panama	P. R. R.	Jan. 16	Jan. 22					Cartago	U. F. C.	Jan. 7	Jan. 14

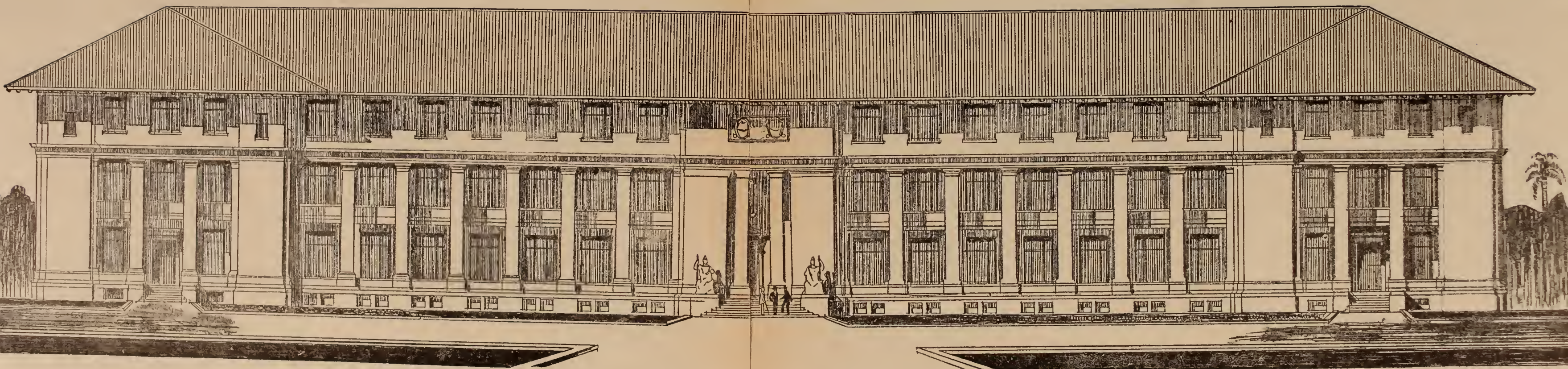


FLAGPOLE IN FRONT OF ADMINISTRATION BUILDING.

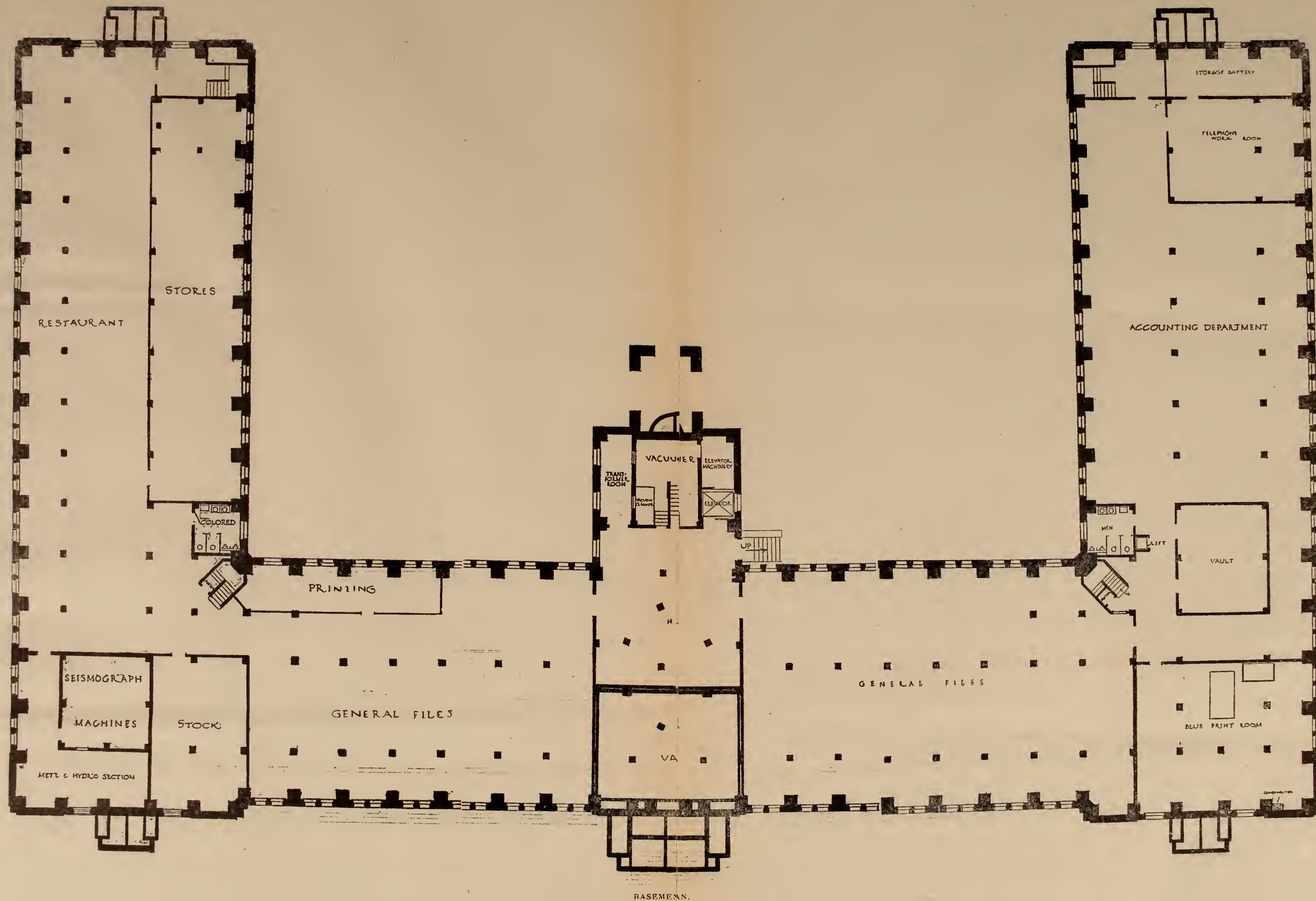
FRONT ELEVATION
AND
FLOOR PLANS
OF
ADMINISTRATION BUILDING

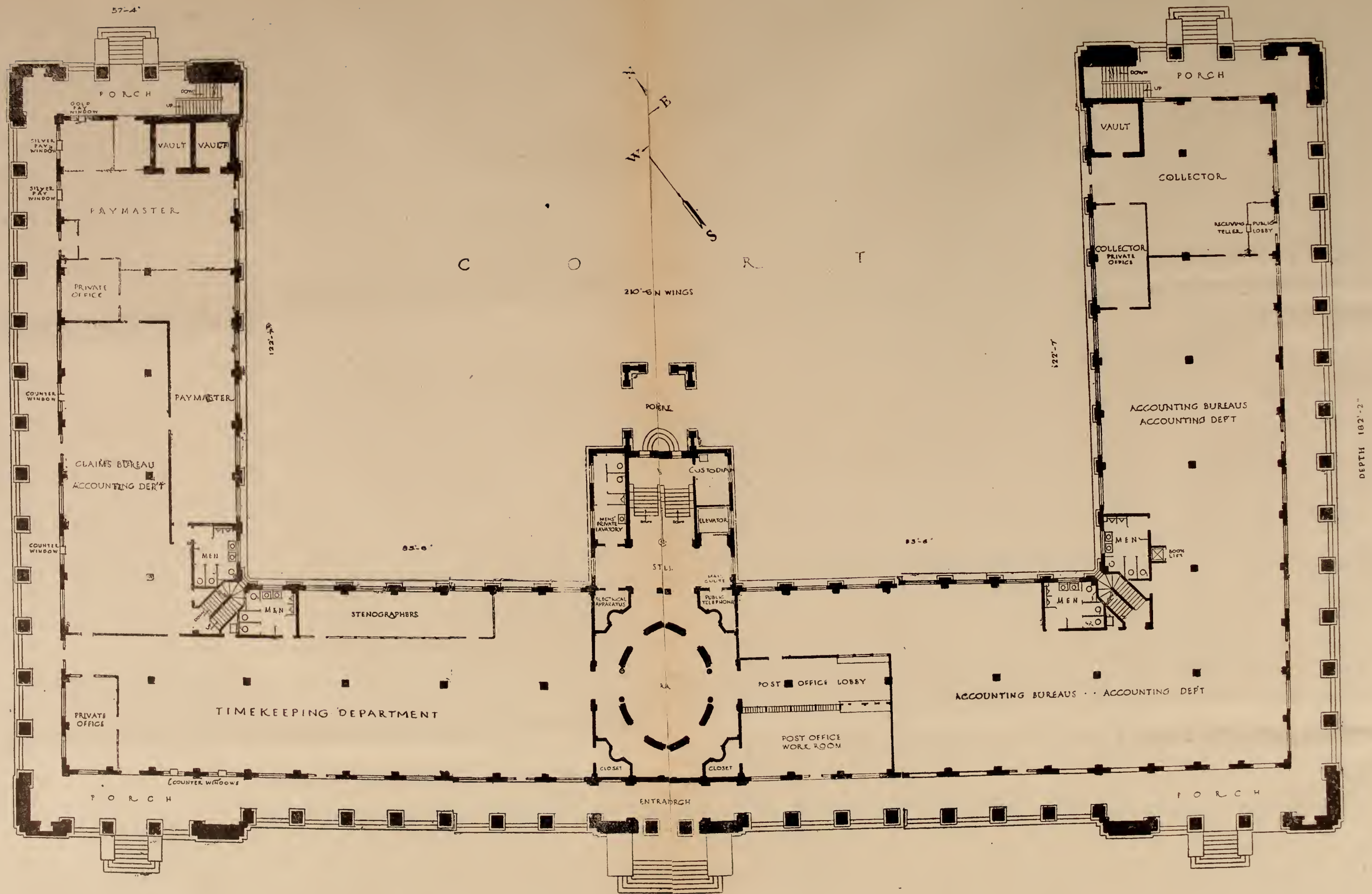
Balboa Heights, C. Z.

See p. 181

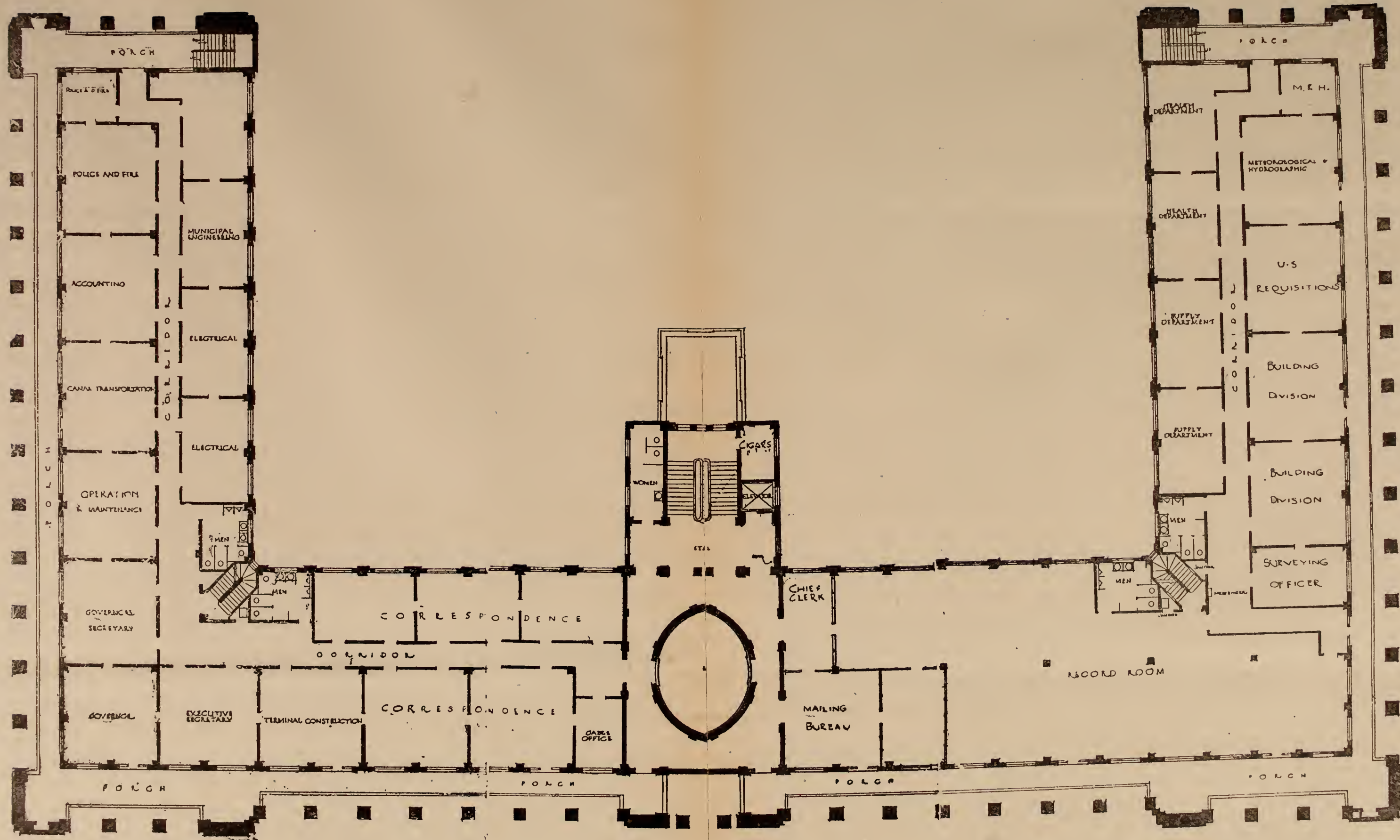


ADMINISTRATION BUILDING BALBOA PRADO.
(Front.)

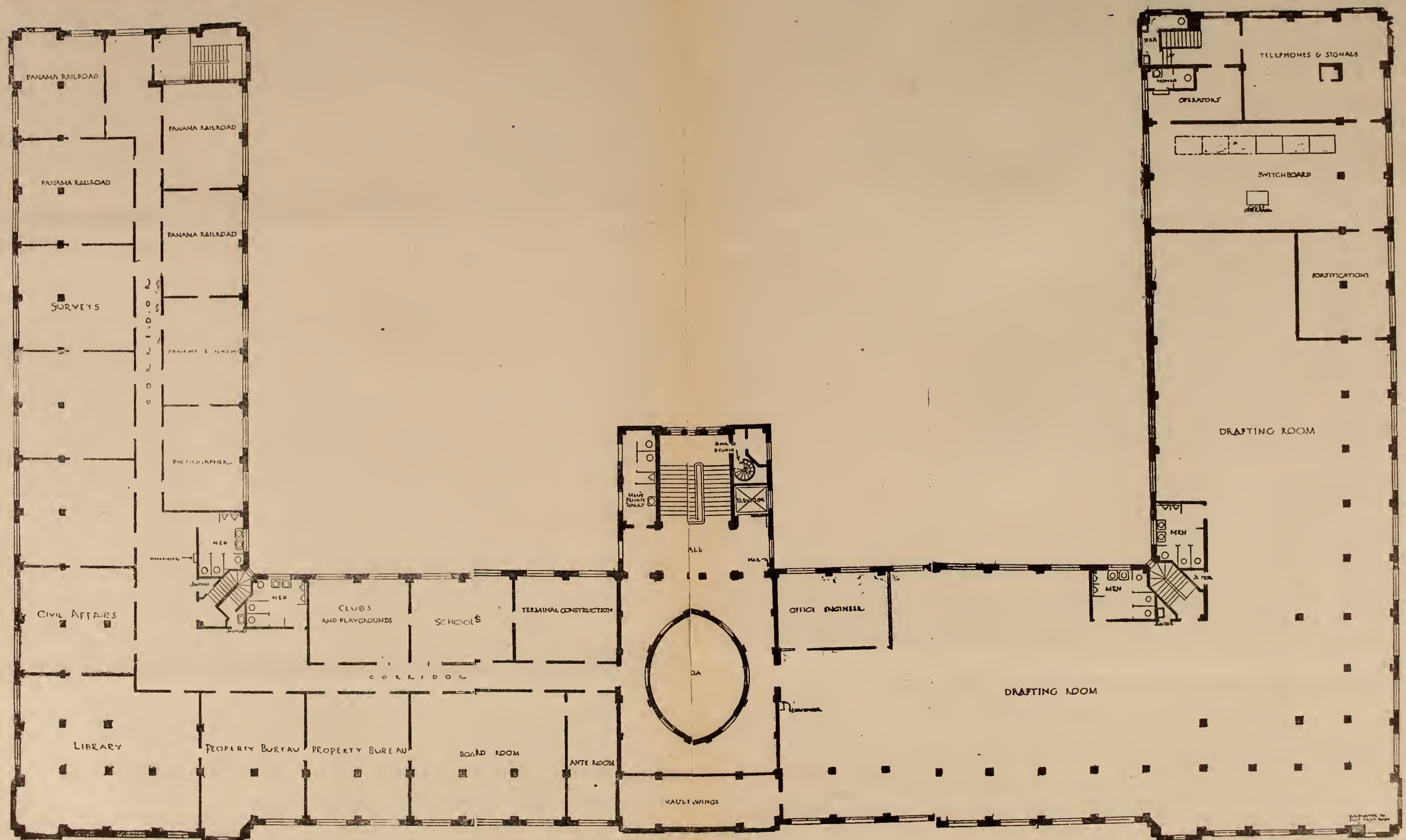




FIRST F PLAN



SECOND F. PLAN.



THIRD PLAN.



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. Extra copies and back numbers can be obtained from the news stands of the Panama Railroad Company for five cents each.

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Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Completion of Miraflores-Gamboa Water Pipe Line.

The laying of the water pipe line, connecting the new pumping plant on the bank of the Chagres River at Gamboa with the purification plant on Miraflores Hill, was completed on Tuesday, December 29. The digging of the trench to receive the pipe was performed by contract, and the contractor finished with his work on Friday, December 18. The installation of the pipe, and the work of covering it was done by forces of the Division of Municipal Engineering. The line was completed well within the estimated time; the best day's record was approximately 2,000 feet of pipe, equal to about 165 12-foot lengths. The 22 gate valves boxes have been complete, and a few of the valves have been installed, but not all of them are on the Isthmus. The purification plant at Miraflores is well toward completion, and water was turned in for the first time, as a trial, a few days ago. The No. 1 gravel is in place, and work is progressing on the No. 2 gravel.

Chronometers for Furnishing Ships with Standard Time.

The United States Navy collier *Caesar*, which arrived at Cristobal on December 23, brought two chronometers for use of The Panama Canal. They will be placed in the offices of the captains of the port, and will be used in furnishing ships passing through the Canal with standard time for the 75th meridian W.

Movements of U. S. Naval Vessels.

The United States Navy collier *Caesar* arrived at Cristobal on Monday, December 28, on its way to San Francisco, with Government exhibits for the Panama-Pacific Exposition. Upon discharging its cargo, it will return, via the Canal, to the Atlantic coast.

The United States cruiser *Tacoma*, until recently at Santo Domingo, arrived at Cristobal on December 20, having been ordered here for patrol duty in connection with the enforcement of neutrality regulations in Canal Zone waters.

The United States transport *Buford*, which brought the Fifth Infantry to the Isthmus,

and then went on to San Francisco, for the purpose of transporting the Thirtieth Infantry stationed at the Presidio, to Philadelphia, is due at Balboa about January 10, and at Philadelphia about January 19. The Thirtieth will be stationed at Plattsburg Barracks, N. Y., the post made vacant by the departure of the Fifth. It is expected that Brig. Gen. Clarence R. Edwards, who is to command the Panama garrison, will arrive on the *Buford*.

Change in Hat Check System.

The present hat check system in use on the Panama railroad will be discontinued on January 1, and a new one will be installed in its place. The new checks will be numbered one to 31 inclusive, the numbers signifying the dates on which they are to be used. The same color of check will be used for an entire month, but for each succeeding month, a new color scheme will be prepared, and instructions concerning the use of same issued in advance. The gatemen at the terminal stations will be charged with the custody and issuance of the hat checks, and instead of destroying them after they have been taken up, as heretofore, conductors and collectors have been notified that they are to be turned back again to the gatemen.

Another P. R. R. Landmark to be Removed.

A 2-story frame building, known as the engineers' quarters, situated on North avenue, at the south end of the Panama railroad yard, will be torn down. This is one of the few landmarks left of the railroad at the Panama terminal, the others consisting of the old American wharf, and a 2-story frame building, situated in the yard, near the freight house, occupied in the '80s by the sectionmaster, later, by the unmarried clerks, and more recently converted into married quarters for two families. The building to be dismantled is one of two erected in that locality shortly after the tearing down of the first station ever erected by the railroad company in Panama, which occurred in 1885. The other building, which was a 1-story mamposteria structure, with red tile roof, used by the railroad agent for an office, was demolished about the year 1890. In the rear of this building there formerly existed a flower garden, said by one who was here at the time to have been extremely well arranged. The engineers' quarters originally stood farther back from the street, and a little to one side of its present location. By 1907, the building had fallen into a bad state of repair, and during that year was moved to the present site and placed in a habitable condition. Its rooms, however, were ceiled, which made it accessible to rats, and, therefore, a menace to health. Within recent years, it has been used altogether as quarters for unmarried employees of the railroad. These employees have recently been assigned to quarters above the new station.

CANAL OFFICE BUILDING.

Description of the Structure that Houses Administrative Offices of The Panama Canal.

The purpose of the Administration Building is to concentrate the offices of the several departments of The Panama Canal under one roof for the sake of efficiency and economy, and the convenience of the general public which has business with the Canal.

The plan, which has the form of the letter E, was arrived at after a process of elimination, in which many other schemes were considered and discarded. It has as its basis the fact that beyond a certain width of building, the intensity of light decreases to an extent which makes the central portion unfit for use. With this in view, the present wings and main building were laid out and their width fixed. On account of the very large amount of floor space required, it would have made too long a building to have put it end to end in one line, so the E form was decided on.

The location of the building on a natural toe of the northwestern slope of Ancon Hill is well fitted to the purpose and character of an edifice which is to guard and direct the interests and operation of the Canal, overlooking, as it does, what will be the first permanent town of the Zone.

Actual work of excavating, filling, and leveling of the site was commenced in March, 1913, by forces of the former Fifth Division, Department of Construction and Engineering, and on completion of the grading, the concrete foundation piers were laid, so that the United States Steel Products Company was able to start the erection of the steel skeleton on June 18, 1913. During the setting of the foundations, final working drawings were being made, and as the work progressed, the necessary details were laid out.

The entire building was planned without any definite knowledge of what offices were to occupy it, how much space they would require, or how they were to be correlated. No such building had ever been required on the Zone up to this time; therefore, there was no precedent on which to base the new building. The original floor plans showed each floor as two rooms separated by the rotunda and central wing. Just before the new organization went into effect on April 1, 1914, it became better known what departments were to be housed at Balboa, and about this time drawings were made showing the building cut up into smaller offices, but too late to prevent the many irregularities apparent in the present layout as shown in the accompanying plates.

The design of the exterior of the building adapts the Renaissance of the Fifteenth Century in Italy to modern building conditions and materials; and to local requirements.

The front and outer sides of the wings are characterized by a basement story about five feet above the ground, and a 2-storied colonnade of square columns, supporting the

third story wall and the eaves of the roof.

In the large wall area over the front entrance, at the third story level, a decorative inscription, flanked by two cartouches, has been placed. The letters are sunk in a V section and are 10 inches high; the cartouches bear the letters U. S. and C. Z. in monogram.

On account of the intensity of the sun in the middle of the day, porches were necessary to protect the rooms from direct rays, and extra large and numerous windows were required to obtain proper natural ventilation, to prevent stagnation of the humid air of the wet season. The overhang of the eaves of the roof takes the place of a porch for the third or top story, which allows of bringing the latter out over the porches below, thereby increasing the area of the third floor by the width of the porch. Porches were omitted on the court sides as a matter of economy. Besides serving the above purposes, the porches or galleries serve as corridors for public communication to and between the various offices.

The front of the building is considered as the one which faces the Canal and the town of Balboa, in which all the public buildings, shops, and, in fact, all the important buildings of the Zone are located. On account of the precipitous grades of the terrace on this side, roads were impossible, and for this reason, the carriage entrance was placed at the rear where vehicles could approach it at an ordinary grade.

THE TERRACES.

The building is surrounded on all sides by wide concrete paved terraces, set off at the front by panels of lawn running longitudinally, and bounded by concrete balustrades at the outer edge. The center of the court side is taken up by a large circular panel of lawn sloping easily away from the building, around which, roads lead up to the *porte cochere*, and to the wagon doors of the Paymaster's and Collector's offices in the wings. The latter roads are four feet above the main court level at the ends of the wings, making necessary a low retaining wall, which is crowned by a balustrade. On the center line of the ends of the wings, a short flight of steps leads from this upper level down to the main court; concrete sidewalks connect all the entrances of the building with the main highways and with the steps leading down to the railroad station.

The paved terrace at the front of the building is 50 feet wide to the center of the balustrade; the southeast side is 16 feet wide, and the northwest side is 12 feet wide; all are bounded by the type balustrade. The latter is constructed of pre-cast base mouldings, pedestals, balusters, and cap mouldings, all reinforced and cast in plaster moulds. They were set up, hooked together with steel, and grouted in, after which all joints and defects were pointed up. The balusters are four and one-half inches square, with plain small caps and bases; there will be approximately 1,000 of them used. The same type balustrade will also be used on the ramp retaining walls at the foot of the main front steps. At intervals, cast iron lamp standards will be placed on the pedestals of the balustrade.

FLAGSTAFF.

On the broad terrace of the southwest, or town front, of the Administration Building, a reinforced concrete flagstaff has been constructed, on the main axis of the building and

59 feet away from it. Its position at the head of the spacious flight of steps from the terrace to the main townsite gives it added prominence, and it can be seen from a considerable distance. The top of the pole is 70 feet above the terrace level; the foundation extends 12 feet below it and rests on natural soil. It is 16-sided, and has a diameter of eight and one-half inches at the top and 17 inches where it joins the ornamental base.

It is reinforced longitudinally by eight square bars, which are one and one-half inches in diameter at the base, graduate down to three-fourths of an inch at the top, and are welded together at intervals to form continuous rods from top to bottom. The welds are staggered, so that they do not all come at the same elevation. Horizontal reinforcement is obtained by the use of hoops of $\frac{3}{4}$ -inch square bars spaced every four inches. The concrete was a 1:1:2 mixture, using Chame sand and Ancon rock; and about two cubic yards were used for that part of the pole above ground, excluding the spreading base members.

The pole was cast horizontally on the ground in wood forms, which had to be constantly adjusted to keep the pole in alignment, due to the settling of the fill on which the forms were set up, and to blasting in the neighborhood. Eighteen days after pouring, it was erected; stresses were developed during the erection much greater than would be caused by a hurricane of 100 miles per hour velocity.

The lower 10 feet of the pole consists of a spreading octagonal base of flutes and plain mouldings, with a seat and platform at the bottom. These members were all pre-cast and set up after the pole was erected. They are about three inches thick and heavily reinforced with mesh. The pole itself received a thin coat of stucco after erection to true up the arrises and to remove all form marks.

To the top of the pole is secured a very heavy, cast brass pulleyless block, through a groove in which slides the flag halyard, and through the center a 1-inch brass rod projects three feet, carrying a 12-inch copper ball, double gold leafed. The center of this ball is about 167 feet above sealevel. At the base, the halyard passes through the cap moulding and is secured to a cast brass cleat directly below it.

THE MAIN OUTSIDE STAIRS.

On the center line of the building, starting at the flagstaff, a broad concrete stair leads from the main terrace to the Prado below, where it gives on to the plaza at the foot of hill. It is 40 feet wide at the main portion, dividing into two smaller parts where it meets the semicircular base of the flagstaff; at the bottom inclined ramps, normal to the main stair, carry the traffic off to either side of the plaza. A retaining wall, crowned by a balustrade, carries the two ramps from the lowest platform of the main stair down to the plaza level.

The stair has four flights and two ramps. The semicircular flights at the top are 20 feet wide and have 18 steps each, while the three main flights have 30 steps each, and are 40 feet wide. The proportion of rise to tread is six inches to 13 $\frac{1}{2}$ inches, each tread having a wash of one-fourth of an inch.

Each platform is drained by a cement gutter, under a concrete grille, through the cheek wall, 21 feet six inches wide, on either side of the steps to the earth terraces on either side.

Electric lighting standards of cast iron will be placed at each side of all the landings and on the lower ramp walls.

DETAILS OF THE BUILDING.

Common in the States, but unique for the Zone, is the basement under the entire structure, made possible by the high location and good drainage of the site, and the solid construction of the masonry walls and floor. It adds an extra floor, or 25 per cent of the total floor area of the building, at a great saving in cost.

The plan of this building, as has been stated, has the form of an E, the main building being 326 feet eight inches front by 55 feet eight inches wide, with two large end wings 122 feet seven inches long by 55 feet eight inches wide, and a smaller center wing 32 feet six inches long by 43 feet wide.

From the finished basement floor to the finished first floor is nine feet six inches. The first floor is exactly 100 feet above mean sealevel, and about five feet above the surrounding grade, when finished. From the first to the second floor is 15 feet, and from the second to the third is 14 feet six inches. The third story is 13 feet seven inches clear.

The entire central wing is devoted to service and circulation, no office space occupying any portion. The dominant feature is the central rotunda, running up through the entire building, and encircled by a continuous corridor, off which other corridors lead to the offices and other rooms. It is entered on the first floor from the front, or town side, through the wide porch which overlooks the town, and on the rear, or court side, through the *porte cochere*, or carriage entrance. In that portion of the wing which projects beyond the main building, are the main stairway, the stair hall adjoining the rotunda, the elevator, toilets, the watchman's room and storerooms, the stair to the photographer's studio just under the roof, and the mail chute.

The building is entered from the front and the *porte cochere* through double sliding doors constructed of mahogany, with perforated panels, behind which are glass sash, hinged for cleaning. During the day, these doors are pushed back out of the way, and only the screen doors are used. The vestibule within leads, by an enclosed stair, down to the basement and on either side up a few steps to the main stair hall and rotunda. The floor of the rotunda is of marble and mosaic, the field being of white Italian marble mosaic in $\frac{3}{4}$ -inch squares, laid in the so-called fish scale pattern, radiating in concentric units from the red Numidian marble disc in the center. At the walls, a border of pink Tennessee marble, six inches wide, forms a stop for the mosaic and a transition from the latter to the vertical base of Verde Antique marble, six inches high, which skirts the wall and forms a plinth for the eight columns flanking the four openings on the main axes. The shafts, bases, and caps of these columns are cut from three blocks of Pavanazzo (Italian) marble, polished to a gloss to bring out the color and veining. Throughout the central wing, all marble work, where it has a vertical exposure, *i. e.*, where it is not used as a flooring material, has had the surface polished.

The floors of the entrance vestibule, the main stair hall, stair platforms, and the corridor around the rotunda, have floors of material similar to the rotunda, *i. e.*, marble mosaic

field, pink Tennessee border, and Verde Antique base.

Above the marble base, the walls of the rotunda are of hard cement plaster, with a moulded base and rusticated courses up to the under side of the cornice at the second story floor level. From this point upward, the walls, string courses, balconies, window architraves, cornice, and dome are of plaster of paris (lime plaster.)

On the first floor, the rotunda is pierced by eight openings, four main rectangular doorways, flanked by the marble columns mentioned above, and four smaller round-headed openings centering on the niches in the opposite wall of the rotunda corridor. At the second floor, there is a window over each of the large openings below, protected by a small balustrade. In the panels between these windows, will be four paintings in oil, completely filling them and depicting various phases of construction work and progress in the building of the Canal; below these, the continuous frieze, about three feet high, will contain another canvas showing, on a smaller scale, other characteristic scenes along the line of the Canal during construction days.

The subjects of the four paintings in the large upper panels are "The building of a lock gate," "Construction of a lock," "Construction of Gatun Dam," and "The digging of Culebra Cut."

The main stair treads and risers are of Tennessee marble, the stringer or cheek piece of Verde Antique, and the balusters, base, and handrail composing the railing, of mahogany, all turns being made continuous without newels or other breaks. At the walls, a Verde Antique cheek piece and cement wainscot follow the rake of the stair.

The building is constructed as follows: Mass concrete foundations resting on a bed of decomposed rhyolite, steel skeleton, reinforced stone concrete floor arches, four inches thick, and reinforced sawdust concrete roof arches of the same thickness. All stairs throughout are of reinforced concrete construction.

The curtain walls are of concrete blocks and the spandrels of poured concrete; the roof cover is hard burned clay tile, dark red in color, and of the Spanish S pattern, fastened to the sawdust concrete slab with hardened copper nails.

Floors throughout the office portion are of edge-grained yellow pine, fastened to redwood sleepers, imbedded in cinder concrete. Floors of corridors and porches are of red Ruabon quarry tile, six inches by six inches, with joints, door saddles, and wall base of cement.

The walls and ceilings are lime plastered, except the walls of the rotunda and main stair hall, as before stated, and the wainscot of the corridors and Board Room, which are of white cement plaster. All exterior wall surfaces are plastered in cement stucco, float finished.

The doors, frames, sash and trim throughout are of solid mahogany, rubbed finish, with solid brass hardware.

The marble work of the rotunda and stair hall is as mentioned above.

The toilet rooms are finished with white tile wainscot and floor, and pink Tennessee marble partitions, nickel plated brass fittings, and mahogany doors.

Three fire and burglarproof money vaults are installed, and two fireproof storage vaults have been constructed in the basement. The building is equipped with a passenger elevator,

a vacuum cleaner system connected to a vacuum pump of 6-sweeper capacity, a complete system of fire lines with six risers and outlets on each floor, all outlets having 75 feet of 2½-inch linen hose attached; also, an automatic fire alarm system, watchmen's clocks, a system of selfwinding clocks, and a mail chute.

General service rooms and apparatus have been concentrated in the two angles formed by the wings and the main building on all floors. Here are located the service stairs enclosed in a concrete well, toilets for men, janitor's closet containing slop sink, and closet containing the panel board which controls the lighting of the nearby rooms. In a conspicuous place on the outer or exposed wall is a fire alarm of the contact type, while to an outlet provided in the wood base, the portable hose of the vacuum cleaner system can be attached and carried into any of the adjacent rooms or halls. On the wall is also an annunciator box, with two colored messengers in attendance to answer buzzer calls from nearby offices.

The elevator car is five by seven feet, and is of mahogany with walls and ceiling paneled and finished to match the woodwork of the building. It has a speed of 125 feet per minute, a travel of 39 feet, and has nine separate safety devices. While it is essentially a passenger elevator, it can lift freight weighing up to 2,500 pounds.

Enclosing the shaft on the three principal floors is a cast and wrought bronze screen, with two doors, one fixed and the other sliding, and above these a stationary transom grille. For the removal of bulky freight, the entire lower portion, including both doors and the transom bar carrying same, have been hinged at one side, so that by releasing a bolt the full width of the car can be had at the doorway. The doors have been backed with glass to prevent persons from meeting with accidents, and to prevent tampering with the latches.

The two cash or money vaults in the Paymaster's office together with the one in the Collector's office, are of the most modern construction, and are burglar and fireproof. They rest on a bed of steel rails interlocked and connected to form a solid steel floor, the whole being grouted in with cement after erection. The side walls and roof are constructed in the same manner as the floor.

The vault proper is a steel box entered through a single outer door, vestibule, and two inner doors. The floor, walls, ceiling, and vestibule are of laminated construction, three distinct layers of specially treated steel plates forming the shell.

The main or outside door is five inches thick and weighs about four tons. It is built up of five separate plates of various kinds of steel, the outer one being capable of resisting the oxy-acetylene torch, while the others are designed to be drillproof. The edges of the door are tongued and grooved, ground to a perfect fit, and have a fibre packing, so that no tool can be forced into the joint between the door and its jamb when closed. As a further preventive of such a contingency, a pressure system has been installed on the outer face of the door, which forces the door to a dead fit, making it impossible to get even a knife blade or liquid explosives into the joint.

Running around the four sides of the back of the door is a series of very heavy steel bolts, which lock the door into position when closed. These are actuated by a mechanism controlled from the front of the door and connected to a time clock on the back, which can be set, so

that only at a given time can the door be opened, and then only by operating the combination. The inner door is in two leaves and of lighter construction. During the day, when the vault is in use, both inner and outer doors remain open, so a day gate has been placed between the two, completely filling the opening and preventing any intrusion. It is of steel bars, forming a grille, and is operated by a key. Each vault has a fixed electric light in the ceiling, a portable hand lamp, and an electric fan.

The basement of the building is devoted principally to the storage of records, files, supplies, and general articles not in constant use. For this purpose two large fireproof vaults have been built, one for the use of the Accounting Department, and one for general fireproof storage. Both have steel doors.

In addition to the above, the Meteorological and Hydrographic Section has been assigned to a large room in the northwest corner, in which two sets of Bosch-Omori seismographs have been set up for the recording of earth tremors and quakes. Each set has two separate instruments, one recording north-south, and the other east-west vibrations. One set is adjusted for heavy and violent shocks, while the other, more delicate, is sensitive to the lightest tremor. All the instruments rest on solid concrete foundations, which carry down to bedrock, and are insulated from the building by an air space where they pass through the floor.

The southwest corner is occupied by the blueprint room in which the larger part of all the blueprinting on the Isthmus is done. Both artificial and natural lighting is used, and special tanks and equipment have been installed for this work. In one corner of the room a small metal dumbwaiter connects it with the main drafting room on the third floor, expediting the ordering and delivery of blueprints. The capacity of the plant is about 1,250 square feet per day, and prints can be made as wide as 42 inches, and of any length.

Adjoining the blueprint room and occupying the larger part of Wing A (southwest wing), is the general record and storage room of the Accounting Department, which has a large fireproof vault, as well as the open room, for the filing of records. For facility in the handling of papers, documents, etc., a book lift has been installed connecting this room with the main offices of the department on the floor above. This part of the basement also contains a room in which a Hressograph has been installed, together with accessory equipment.

At the further extremity of this wing, the telephone section occupies two rooms, which have direct access to the outside of the building, via the stairs which lead to the first story porch. One is used as a storage battery room, and the other as a workroom. From the latter, a large cable runway runs to the Balboa Heights exchange on the third floor.

The portion of the basement under the main building is occupied by the general files, and under the rotunda, a large fireproof vault houses the more valuable records.

Under the main stair hall in the central wing, are located the elevator shaft and its electrically driven machinery, the transformer for converting 2200-volt, single phase, 25-cycle to 110-volt, 3-wire, for use in light and power, and the vacuum cleaner pump.

A small printing plant for local use in the building, such as lettering drawings, printing

small blank forms, etc., a room for stationery and other expendable supplies, and a large lunch room occupy the greater part of Wing B. A toilet for blacks adjoins the service stair in the corner.

On the first floor, the north half of the main building is given over to the office of the chief timekeeper. A small vault has been provided in the space made by one of the rotunda cutoffs.

In the north wing, the claims bureau of the Accounting Department, and the Paymaster's office, require all the available space. In the latter office, there are two money vaults, described elsewhere, and pay windows opening on the porch where lines can form. Money is delivered by wagon at a special door facing the court and approached by a road.

Opening off the rotunda on the first floor, in the south half of the main building, is the Balboa Heights post-office, a branch of the Zone postal system, located in the building to expedite the dispatching and delivery of official mail. It also handles money orders, registration of mail, and postal savings accounts. In the public lobby, a bulletin board for the posting of general notices has been placed on the wall adjoining the writing desk. Three hundred and twelve metal and glass keyless lock boxes of the most modern construction have been installed in the place left for them in the dividing partition. For the safekeeping of stamps and cash, a small vault has been provided in the corner, formed by the rotunda and the walls of the rectangle enclosing the latter.

Occupying the remainder and larger part of the south half of the main building and the south wing, as well, is the accounting bureau of the Accounting Department, and at the end of the wing the Collector has his offices, with a money vault opening off one corner of the wing.

On the second floor, a central corridor opens off the rotunda and runs through the main building to the end of the north wing. On either side are ranged the offices of the heads of the various departments, the Governor having two rooms in the northwest corner. Convenient to him are the Engineer of Maintenance, Engineer of Terminal Construction, Executive Secretary, the heads of the Electrical Division, Municipal Engineering, the cable office, and the Correspondence Bureau.

On the opposite side of the rotunda the Chief Clerk of The Panama Canal, and the Record Room, occupy the main building. The south wing is divided by a corridor similar to the north wing and grouped along it are the offices of the Chief Quartermaster, Supply Department inspectors, Chief Health Officer, Chief Quarantine Officer, Section of Meteorology and Hydrography, United States Requisition Division, Constructing Quartermaster, and Surveying Officer.

The northern half of the third floor is divided into offices, separated by a corridor, similar to the floor below. Opening off the corridor are the Board Room, with its ante-room for committee meetings, the offices of the Division of Civil Affairs, Posts, and Customs, and THE CANAL RECORD, Designing Engineer of Terminal Construction, Superintendent of Schools, Superintendent of Clubs and Playgrounds, section of surveys, the library, official photographer, and the Panama railroad, the latter occupying the four offices at the end of the wing.

Occupying almost the entire southern por-

tion of the building on the third floor, is the main drafting room in charge of the Office Engineer. Here are concentrated the drafting forces of most of the departments, including the Department of Operation and Maintenance, Electrical Division, Municipal Engineering, Terminal Construction, permanent shops, fortifications, and permanent buildings. At the end of the room in the wing, the Assistant Engineer of fortifications has a private office.

In the central wing over the main stair, and just under the roof, is the studio of the official photographer, reached by a spiral iron stair in a small room opening off the upper landing of the main stair behind the elevator. It is equipped with a developing room, printing room, dry room and a large studio, with overhead light.

TELEPHONE AND OTHER FACILITIES.

At the end of the south wing on this floor, and disconnected from the rest of the building, except by stairs on the porch at the end of the wing, is the Balboa Heights telephone exchange switchboard. It consists of three sections of the Western Electric Company's relay type switchboard No. 1-N. The central energy is furnished by eleven cells of Electric Storage Battery Company's Type A.E. battery of 160-ampere hour capacity; the charging sets consist of a mercury arc rectifier and the necessary switchboard apparatus.

The main switchboard has nine operating positions, of which seven are equipped at the present time; 10-pair multiple cords are used, and the board is arranged for lamp signaling. This gives 840 multiple lines, 40 incoming trunks, 40 outgoing trunks, and 40 for local pay stations. The maximum total which may be connected to this switchboard will be 2,800 multiple lines, and eventually all telephone business within the territory between Panama, Balboa, and Corozal will be handled on this switchboard. The present telephone exchanges at Corozal and Ancon will be eliminated within the next few weeks.

The telephone exchange is equipped with a chief operator's desk, which allows the best of supervision, and in the apparatus room, a wire chief's desk has been located, with all necessary apparatus for making tests on any of the telephone, telegraph, or special circuits.

A "P. E. X." board of the Western Electric Company's Type 101 has also been installed in

the telephone exchange to take care of the telephone business from the Governor and various heads of departments. This board at the present time is completely filled up, and has in use 20 lines and 20 trunks connected to the main switchboard.

A 40-drop annunciator has been installed on the desk of the chief correspondence clerk, and six annunciators for messenger service are distributed through the building, with the drops located at the end of each wing on all three of the main floors.

Glass break fire alarm boxes are installed, two on each floor and two in the basement.

Eight synchronized clocks are installed in various parts of the building, and operated from a master clock in the telephone exchange.

The chief dispatcher's office of the Panama railroad has been located on the third floor of Wing B, and the master clock controlling all clocks on the Panama railroad is located in that office.

Such a varied collection of functions has seldom before been assembled under one roof, and the building is probably unique and not liable to be duplicated until some undertaking as great in magnitude as the Canal is to be consummated.

Hotel Aspinwall Notes.

A large number of Canal employees spent Christmas Day at the Hotel Aspinwall on Taboga Island; by night every room was taken. Some returned in the evening, but the majority stayed over Saturday and Sunday. The launch *Q* was inadequate to transport the visitors, and the launch *Navy No. 1* was used as an auxiliary. The *Q* left on its regular trip about 9.30 a. m., on Christmas Day, and the *Navy No. 1* half an hour later, both filled to their capacity. The *Navy No. 1* left Taboga at 3.30 o'clock in the afternoon, left the dredge landing at Balboa, with several more passengers, at 6 p. m., and it and the *Q* left again for Balboa at 8 o'clock the same evening.

The launch *Navy No. 1* will be used as an auxiliary in the transportation service between Balboa dredge landing and the hotel. It will leave the landing on Mondays, Thursdays, and Saturdays after the arrival of the 9.40

Deceased Employees.

Name.	Check No.	Native of	Is'hmian residence.	Employed by	Date of death.
Clarence Holder.....	47451	Barbados.....	Panama.....	Panama R. R....	1914.
Cyrus Jones, alias Cep. Powell	13234	Jamaica.....	Colon.....		Dec. 21.

Insane Employees.

Name.	Check No.	Native of	Is'hmian residence.	Employed by	Date of commitment.
Albert Sears.....	33822	Barbados.....		Mun. Eng. Div..	Dec. 23.

The estates of these deceased and insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

a. m. train. The launch Q will continue to run on its present schedule.

A special rate of \$1.75 per day will be made employes and members of their families, providing their stay at the hotel extends to two consecutive weeks. A number of employes expect to spend a portion of their annual leave at Taboga, and the above rate will operate as an additional inducement.

The building of a modified form of "Shoot the chute," in front of the hotel to one side of the stone steps leading to the boat landing, is under consideration. The plan is to give the chute a steep slant, and to keep a stream of water playing into it, so that a person will keep going when once started off.

New Baptist Church and Parsonage at Balboa.

The Southern Baptist Mission Board, represented on the Isthmus by Rev. J. L. Wise, has been assigned a lot in the rear of the Administration Building at Balboa Heights, on the road which turns at this point and goes around the hill, and will begin the erection of a reinforced concrete church thereon some time in January. The board was originally assigned a lot in the Balboa townsite, but it proved to be too small for the plans. The site of the parsonage is to one side of the site for the proposed church. This will be a 2-story frame building, and the materials formerly in the 1-story Baptist parsonage at Empire will be utilized as far as possible. The upper floor will be used as living rooms by the minister and his family, and on the first floor will be the kitchen, dining room, minister's study, etc. Work on the parsonage was begun a few days ago.

Rainfall from December 1 to 26, 1914, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
Pacific Section—	<i>Ins.</i>		<i>Ins.</i>
Balboa	1.11	12	6.33
Balboa Heights	1.29	7	6.40
*Miraflores	1.77	26	5.84
Pedro Miguel	1.78	6	4.24
Rio Grande	1.36	7	3.90
Central Section—			
Culebra	1.38	26	2.65
*Camacho .....	.84	7	3.14
Empire .....	.88	26	2.69
Gamboa	1.72	8	5.17
*Juan Mina .....	.87	7	1.65
Alhajuela .....	.67	7	1.83
*El Vigia	1.85	9	5.38
Frijoles	1.35	1	5.57
*Trinidad	1.50	1	4.62
*Monte Lirio			
Atlantic Section—			
Gatun .....	.79	12	3.53
*Brazos Brook .....	.93	2	4.42
Colon	2.22	12	8.16

*Standard rain gage—readings at 5 p. m. daily.
Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Dec. 20.....	127.4	93.3	47.0	7.01	53.87
Mon., Dec. 21.....	127.3	93.1	7.0	7.04	53.88
Tues., Dec. 22.....	127.1	93.1	7.0	7.06	53.88
Wed., Dec. 23.....	136.7	99.7	47.0	6.98	53.89
Thurs., Dec. 24.....	137.30	100.12	47.0	6.98	53.98
Fri., Dec. 25.....	129.75	95.50	47.0	7.02	53.85
Sat., Dec. 26.....	129.40	94.29	47.0	7.07	53.95
Height of low water to nearest foot. . .	125.0	91.0			

OFFICIAL CIRCULARS.

Storage of Automobiles and Motorcycles.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 10, 1914.

CIRCULAR No. 693:

Employes of The Panama Canal or the Panama Railroad Company, who wish to keep or store automobiles or motorcycles under or near Government buildings will be governed by the following regulations:

1. Automobiles:

(a) Not to be housed under buildings used as quarters, nor in wooden buildings located within 100 feet of other wooden buildings.

(b) In sheds or garages built of frame materials, for the storage of automobiles, and located within townsites, the maximum quantity of gasoline authorized for storage therein should be limited to 100 gallons.

2. Motorcycles:

Employes occupying Government quarters and owning motorcycles, who desire to house same underneath quarters, may be permitted to do so, provided:

(a) That the number of machines so housed shall not exceed one for each family occupying the building.

(b) That the height of the lower floor above the ground where machines are stored be not less than five feet.

(c) That the underneath part of the floor directly over the place where the machine is to be housed, be sheathed with roofing iron or other suitable metal sheathing.

(d) That a metal-lined box be provided for the storage of gasoline, lubricating oil, waste, etc. The amount of gasoline for each machine stored, not to exceed five gallons.

(e) When sheds or garages are to be built for motorcycles, they should be located and maintained under conditions similar to those prescribed above for automobiles.

3. Locations of garages, as well as housing facilities underneath buildings, must be approved by the district quartermaster and a representative of the Police and Fire Division.

GEO. W. GOETHALS,
Governor.

Employment—Physical Examination.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 22, 1914.

CIRCULAR No. 693-6:

Circular 693-1 is amended, as follows:

1. Physical examinations of persons employed on the Isthmus for service on the gold roll will be conducted at Colon Hospital, as well as at Ancon Hospital gate. Applicants for positions at the northern end of the Canal will report for examination at Colon Hospital, unless it is necessary for them to come to Balboa Heights before employment, in which event they will report at Ancon Hospital gate.

2. No special hours are set for examination. Examining physicians will give prior consideration to sick people, in case both sick people and candidates for examination are awaiting attention. The best hours at Ancon are: 8 to 10 a. m.; 12 to 1 p. m.

H. F. HODGES,
Acting Governor.

Clerks, Silver Roll.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., December 22, 1914.

CIRCULAR No. 666-2:

Effective January 1, 1915, the maximum rate for clerk on the silver roll will be \$60 a month. All clerks on the silver roll receiving more than this amount will be reduced.

H. F. HODGES,
Acting Governor.

P. R. R. Annual Passes.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., December 22, 1914.

All concerned—Please be advised that Panama railroad annual passes issued for the year ending December 31, 1914, will be honored on all passenger trains of the Panama railroad, after date of expiration until further notice.

C. H. MOSETT,
Superintendent.

Special Train Service.

PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., December 26, 1914.

To all concerned—In response to numerous requests it has been decided to operate special train service between Las Cascadas and Panama on New Year's Eve, maintaining schedules of Nos. 52 and 53; also, on New Year's night, maintaining schedules of Nos. 54 and 55.

There will also be special trains run from Panama and Colon, leaving 11.30 p. m., New Year's night, maintaining schedules of Nos. 9 and 10.

C. H. MOSETT,
Superintendent.

Stenciling of Dump Cars.

THE PANAMA RAILROAD COMPANY,

OFFICE OF THE MASTER OF TRANSPORTATION,
BALBOA HEIGHTS, C. Z., December 21, 1914.

All concerned—The following dump cars have been light weighed and stenciled:

"FOR COAL SERVICE ONLY:"

5898, 5766, 5798, 5693, 5688, 5781, 5710, 5887, 5707, 5740, 5765, 5677, 5771, 5690, 5676, 5662, 5821, 5664, 5542, 5610, 5754, 5748, 5571.

We will also stencil an additional 25 cars, in order to make an even hundred in this service.

All departments and divisions are respectfully requested to discontinue using cars stenciled as above for any other service.

A great many of these cars have been used recently for gravel, sand, and ball shipments, which necessitates additional expense of cleaning cars before same can be used for coal shipments.

Please be advised accordingly.

S. W. HEALD,
Master of Transportation.

Prices for Decauville Equipment.

THE PANAMA CANAL,
OFFICE OF SURVEYING OFFICER,
BALBOA HEIGHTS, C. Z., December 23, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

The Acting Governor has approved recommendation that the following prices will govern in accounting for Decauville equipment, effective as of April 1, 1914:

Bollies, each.....	\$ 3.00
Trucks, each.....	12.00
Cars, complete, each.....	15.00
Switches, single, each.....	2.00
Switches, double, each.....	4.00
Track, per foot.....	.10
Turntables, each.....	4.00
Frogs, single, each.....	3.00
Frogs, double, each.....	4.00

CHARLES L. PARKER,
Surveying Officer.

Proposals for Earth Fill, Balboa Townsite.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., January 2, 1915, and then opened for placing approximately 75,000 cubic yards of fill in certain low areas in Balboa townsite and railroad yard indicated on Division of Municipal Engineering Drawing No. 5,117, as Areas A, B, and C.

Bids must be at a price per cubic yard for the entire work.

Form of proposal, contract, and specifications, including blueprint of drawing No. 5,117 may be obtained upon written application to the office of the Chief Quartermaster. Any further information may be obtained upon application to Mr. Geo. M. Wells, Resident Engineer, Balboa Heights, C. Z.

Bids must be accompanied by post-office money order, certified check, or cash for 15 per cent of the amount bid.

Bids should be marked "Proposals for earth fill, Balboa townsite" and addressed to Maj. Wm. R. Grove, Chief Quartermaster, Balboa Heights, C. Z.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., December 28, 1914.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressees.

*Blackwood, Mrs. Fred W. Johnson, C. H. Jr.	Kegeris, Milton A.
Boyce, Joseph	*Klippstein, Mrs. Mamie
Brown, William	Larkins, Ray
Burk, Chappie	Lyons, George
Campbell, Lieut. Robt. A.	Matsumati, M.
*Cavanaugh, M. C.	Maybach, Capt. Alfred
Dillipil, Mrs. Clarence	Moe, Einar
Dowell, Mrs. M. P.	Nesfield, Mortimer
Eisgran, Irving	Peterson, Myrtle
Enright, Jack	Pointer, Joseph R.
*Eskridge, C. D.	*Richards, L. E.
*Finelle, Mrs. R. H.	Rose, Lieut. W. W.
*Flynn, C. J.	Schneider, Paul and Eddie
Freeman, Mrs. Samuel	Smith, George
Giron, Wm.	Spooner, Albert (?)
Glockle, Capt. M. B.	Theodore, Evangelos
Hall, William	Thomas, Luther
Hammond, Mrs. J. P.	Thompson, Mrs. James A.
Hoover, Roman	Vonce, S. J.
Hunte, J. S.	
*Papera.	

COMMISSARY DEPARTMENT.

Native Meat.

By reference to the cold storage list printed below, it will be noted that native beef has been added to the stock carried by the Commissary Department. A number of reductions in the price of imported beef have also been made.

Proposals for Furnishing the Commissary Branch With Beef Cattle.

THE PANAMA CANAL.

OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Depot Commissary, Cristobal, C. Z., until 4 p. m., January 11, 1915, and then opened, for furnishing the commissary branch with 200 head of beef cattle.

Specifications may be obtained upon application to the Depot Commissary, Cristobal, C. Z.

The Government reserves the right to reject all bids, or to accept any bid in part.

Bids should be marked "Proposal for furnishing beef cattle, to be opened January 11, 1915."

WM. R. GROVE,
Chief Quartermaster.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days or Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective December 31:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....		†9
Shoulder, trimmed, per pound.....		†12
Leg (8 to 10 pounds), per pound.....		†19
Short cut, chops, per pound.....		†23
Shoulder, chops, per pound.....		†14
Lamb—Stewing, per pound.....		†12
Shoulder, trimmed, per pound.....		†15
Leg (5 to 8 pounds), per pound.....		†24
Chops, per pound.....		†29
Chops, shoulder, per pound.....		†18
Veal—Stewing, per pound.....		†12
Shoulder, for roasting (not under 4 pounds), per pound.....		†15
Chops, shoulder, per pound.....		†20
Chops, per pound.....		†30
Loin, for roasting, per pound.....		†30
Cutlets, per pound.....		†36
Beef—Suet, per pound.....		†33
Soup, per pound.....		†7
Soup, bones, per pound.....		†24
Stew, per pound.....		†11
Plate, per pound.....		†12
Corned, No. 1, per pound.....		†18
Corned, No. 2, per pound.....		†15
Chuck roast, 3 lbs. and over, special, per pound.....		†12
Chuck roast, native (3 lbs. and over), per pound.....		†11
Rib roast, second cut (not under 3 pounds), special, per pound.....		†16
Rib roast, second cut (not under 3 pounds), choice, per pound.....		24
Rib roast, 2d cut, native (3 pounds and over), per pound.....		†15
Rib roast, first cut (not under 3 pounds), special, per pound.....		†19
Rib roast, first cut (not under 3 pounds), choice, per pound.....		27
Rib roast, 1st cut, native, (3 pounds and over), per pound.....		†18
Pot roast, special, per pound.....		†20
choice, per pound.....		28
native.....		19
Rump roast, special, per pound.....		†20
choice, per pound.....		28
native.....		19
Porterhouse roast, special, per pound.....		†22
choice, per pound.....		31
native, per pound.....		21
Steak, chuck, special, per pound.....		†13
native, per pound.....		12
Round, bottom, special, per pound.....		†13
choice, per pound.....		19
native, per pound.....		†12
Round, top, special, per pound.....		†15
choice, per pound.....		22
native, per pound.....		†14
Sirloin, special, per pound.....		†20
Sirloin, choice, per pound.....		28
Sirloin, native, per pound.....		†19
Sirloin, choice cut, special, per pound.....		†23
Sirloin, choice cut, choice, per pound.....		32
Sirloin, choice cut, native, per lb.....		†22
Rump, special, per pound.....		†20
choice, per pound.....		28
native, per pound.....		19
Porterhouse (not less than 1½ pounds), special, per pound.....		†23

	Price.
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse, (1½ pounds and over) native, per pound.....	†22
Porterhouse, short, Delmonico special, per pound.....	†20
Porterhouse, short, Delmonico choice, per pound.....	28
Porterhouse, short, native, per lb.....	†19
Tenderloin, Western, special, per pound.....	†35
Tenderloin, Western, choice, per pound.....	46
Tenderloin, Western, native, per lb.....	†33
Pork—Hams, fresh, per pound.....	†33
Shoulders, fresh, per pound.....	†19
Loin, chop, or roast, per pound.....	†18
Pigs' feet, fresh, each.....	8
Pigs' head, fresh, whole.....	†8
Sausage, home made, per pound.....	†23
MISCELLANEOUS.	
Brains, calves' per pound.....	19
Kidneys, beef, per pound.....	13
Livers—Beef, per pound.....	13
Calf, each.....	65
half, each.....	33
Oysters, fresh, per pkt.....	†33
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	†13
Frankfurter, per pound.....	†13
Liebowurst, per pound.....	†11
Pork, per pound.....	†17
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	†54
per ½ dozen.....	†27
Bluefish, per pound.....	10
Halibut, fresh, per pound.....	9
Salmon, per pound.....	6
Yeast, per pound.....	31
per cake.....	2
POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound.....	25
Chickens—Fancy, roasting, corn fed, per pound.....	24
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	30
Broilers, milk fed, per pound.....	25
Broilers, corn fed, per pound.....	21
Turkeys, per pound.....	26
Squabs, each.....	30
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30
CURED AND PICKLED MEATS.	
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	†20
Half, per pound.....	†22
Sliced, per pound.....	†28
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	30
Half boiled, per pound.....	32
Sliced, boiled, per pound.....	38
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.42
Pigs' feet, per pound.....	7
Tongues, per pound.....	22
DAIRY PRODUCTS.	
Butter—Creamery, special, per pound.....	43
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	21
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	†15
Fermillac, bottle.....	†25
Ice cream, quart.....	125
½ gallon.....	150
Cream, Sheffield Farms, quart.....	†33
pint.....	†19
½ pint.....	†12
VEGETABLES.	
Canflower, per pound.....	16
Beets, per pound.....	24
Brussels sprouts, per pound.....	†20
Celery, per head.....	5
Cabbage, per pound.....	24
Carrots, per pound.....	24
Cucumbers, per pound.....	8
Cucumbers, hothouse per pound.....	16
Lettuce, per pound.....	7
Onions, per pound.....	24
Parsnips, per pound.....	34
Peppers, per pound.....	†16
Potatoes, white, per pound.....	2
sweet, American, per pound.....	2
sweet, tropical, per pound.....	2
Yams, tropical, per pound.....	2
Turnips, per pound.....	2
Tomatoes, per pound.....	8

	Price.
Squash, per pound.....	24
FRUITS.	
Apples, fancy, per pound.....	†6
Cranberries, fresh, per pound.....	6
Grapes, per pound.....	14
Grape fruit—American, each.....	5
Tropical, each.....	34
Lemons, per dozen.....	14
Limes, per 100.....	40
Oranges—American, each.....	24
Tropical, per dozen.....	9
Coconuts, each.....	5
Bananas, per bunch.....	38
Bananas, each.....	4
Apples, evaporated, per pound.....	†23
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Tangerines, each.....	14

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Models of Western Dump Cars for Exhibition Purposes.

A model of a Western dump car of the type used in the construction of the Canal, has been received on the Isthmus, for exhibition in connection with other Canal equipment at the Panama National Exposition. It was contributed by the manufacturers, the Western Wheeler Scraper Company of Aurora, Ill. A similar model has been prepared by the manufacturers for the Canal exhibit at the Panama-Pacific Exposition in San Francisco.

Steamship "Freda" Returns for Repairs.

The Seeborg Line steamer *Freda*, which left Cristobal for Puerto Colombia on December 23, returned on December 28, with a broken propeller. It was dry docked on December 30, at Cristobal, for the necessary repairs.

Notaries Public.

The following are notaries public in the Canal Zone, as of January 1, 1915:

ANCON.

Boyd, Oscar S..... Division of Municipal Engineering
Goolsby, E. M..... Clerk, District Court
Ohlson, Elmer F..... Ancon Hospital Office
Williams, Charles R..... Attorney, P. R. R.

BALBOA HEIGHTS.

Barber, Chas. W..... Police and Fire Division
Donnelly, John W..... Accounting Department
Hamlin, Frank T..... Property and Requisition Bureau
Hammer, H. H..... Property and Requisition Bureau
Helmer, Joseph H..... Claim Officer
Jackson, J. J..... Supply Department
Luedtke, C. L..... Correspondence Bureau
McNiel, Jacob R..... Accounting Department
Morris, Evan J..... Correspondence Bureau
Nixon, Fred M..... Property and Requisition Bureau
Parker, C. L..... Surveying Officer
Stephens, Fred H..... Office of Surveying Officer
Wang, F. H..... Post-Office

BALBOA.

Hunter, Abel A..... Post-Office
Hyde, W. H..... Port Captain's Office
Kahr, John D..... Port Captain's Office
Lindsay, C. T..... Panama Railroad Company
Pender, W. I..... Port Captain's Office
Swanson, F. G..... Mechanical Division

NAOS ISLAND.

Luckey, J. J..... Fortifications Division

COROZAL.

LeMire, George..... Post-Office

PARAISO.

Comber, W. G..... Dredging Division

McFarlane, James..... Dredging Division

GATUN.

Callaway, L. C..... Police and Fire Division
Taylor, Wm. D..... Post-Office

CRISTOBAL.

Bliss, Gerald D..... Post-Office
Cheatham, W. B..... Deputy Clerk, District Court
Daly, James..... Customs Office

Obituary.

SCHELER, THOMAS EDWARD—Accidentally electrocuted, December 27, 1914. American, employe of Mechanical Division, 29 years of age, unmarried, residence, Balboa. Mother resides at 1751 F Street, Fresno, Cal.

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next six weeks are given in the following table:

DECEMBER.

DATE.	Time and height of high and low water.			
Wed., Dec. 30.....	2:03	8:24	14:46	20:42
	12.3	3.0	11.9	3.9
Thurs., Dec. 31....	2:44	9:06	15:21	21:24
	12.8	2.3	12.6	3.3

JANUARY.

DATE.	Time and height of high and low water.			
Fri., Jan. 1.....	3:22	9:46	16:01	22:05
	13.4	1.5	13.3	2.6
Sat., Jan. 2.....	4:00	10:25	16:40	22:43
	14.0	0.8	14.0	1.9
Sun., Jan. 3.....	4:40	11:04	17:16	23:23
	14.5	0.4	14.5	1.5
Mon., Jan. 4.....	5:20	11:43	17:51	.....
	14.7	0.3	14.8	.....
Tues., Jan. 5.....	0:03	5:58	12:21	18:28
	1.3	14.7	0.3	15.0
Wed., Jan. 6.....	0:44	6:38	13:01	19:05
	1.3	14.5	0.6	15.0
Thurs., Jan. 7.....	1:29	7:21	13:44	19:48
	1.3	14.2	1.0	14.8
Fri., Jan. 8.....	2:16	8:08	14:32	20:36
	1.5	13.7	1.6	14.5
Sat., Jan. 9.....	3:10	9:03	15:26	21:31
	1.8	13.1	2.2	14.1
Sun., Jan. 10.....	4:09	10:07	16:28	22:36
	2.0	12.7	2.7	13.8
Mon., Jan. 11.....	5:14	11:22	17:36	23:48
	2.1	12.5	2.9	13.7
Tues., Jan. 12.....	6:23	12:38	18:45	.....
	1.8	12.7	2.7	.....
Wed., Jan. 13.....	1:00	7:28	13:49	19:51
	14.0	1.3	13.4	2.2
Thurs., Jan. 14.....	2:07	8:27	14:51	20:50
	14.5	0.6	14.2	1.5
Fri., Jan. 15.....	3:06	9:21	15:45	21:44
	15.1	-0.1	15.0	0.9
Sat., Jan. 16.....	3:59	10:12	16:33	22:34
	15.5	-0.5	15.5	0.3
Sun., Jan. 17.....	4:47	10:59	17:18	23:22
	15.7	-0.7	15.8	0.4
Mon., Jan. 18.....	5:31	11:43	18:01	.....
	15.5	-0.5	15.7	.....
Tues., Jan. 19.....	0:06	6:14	12:25	18:41
	0.6	15.0	0.0	15.2
Wed., Jan. 20.....	0:50	6:55	13:05	19:30
	1.0	14.3	0.8	14.6
Thurs., Jan. 21.....	1:28	7:35	13:47	19:58
	1.6	13.5	1.8	13.8
Fri., Jan. 22.....	2:16	8:17	14:30	20:39
	2.4	12.5	2.9	12.9
Sat., Jan. 23.....	3:03	9:03	15:18	21:24
	3.2	11.6	3.8	12.1
Sun., Jan. 24.....	3:54	9:57	16:10	22:18
	3.9	10.9	4.6	11.5
Mon., Jan. 25.....	4:53	11:05	17:12	23:24
	4.3	10.5	5.1	11.2
Tues., Jan. 26.....	5:57	12:22	18:17	.....
	4.3	10.5	5.1	.....
Wed., Jan. 27.....	0:35	6:59	13:31	19:19
	11.4	3.9	11.0	4.6
Thurs., Jan. 28.....	1:37	7:53	14:22	20:12
	11.9	3.2	11.8	4.0
Fri., Jan. 29.....	2:27	8:41	15:05	20:55
	12.6	2.4	12.7	3.1
Sat., Jan. 30.....	3:09	9:23	15:43	21:41
	13.4	1.5	13.6	2.2
Sun., Jan. 31.....	3:48	10:03	16:18	22:22
	14.2	0.7	14.5	1.3

FEBRUARY.

DATE.	Time and height of high and low water.			
Mon., Feb. 1.....	4:26	10:40	16:52	23:02
	14.9	0.0	15.3	0.6
Tues., Feb. 2.....	5:05	11:20	17:28	23:42
	15.3	-0.4	15.9	0.1
Wed., Feb. 3.....	5:40	11:57	18:04	.....
	15.5	-0.5	16.2	.....
Thurs., Feb. 4.....	0:21	6:20	12:37	18:41
	-0.1	15.5	-0.3	16.2
Fri., Feb. 5.....	1:05	7:01	13:18	19:23
	0.0	15.1	0.3	15.8
Sat., Feb. 6.....	1:50	7:46	14:00	20:03
	0.4	14.4	1.0	15.2
Sun., Feb. 7.....	2:41	8:37	14:59	21:01
	1.1	13.6	2.0	14.3
Mon., Feb. 8.....	3:30	9:40	16:01	22:07
	1.9	12.7	2.9	13.5
Tues., Feb. 9.....	4:47	10:58	17:14	23:27
	2.4	12.2	3.4	13.0
Wed., Feb. 10.....	6:02	12:25	18:31	.....
	2.5	12.2	3.4	.....

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings

on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15.47 is 3.47.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies, may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.25 per barrel, reduced to 60° Fahrenheit.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each, aprons, caps; sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the turning of the largest crank shafts or longest line shafts.

Mail Dispatches.

Following is the schedule of the dispatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans, for all States. Due at New Orleans the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on a Saturday.

*Every Monday to New York, for all States, except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama at 11 a. m., connects with the above dispatches.

*NOTE—The sailings on Monday, January 11, February 8, March 8, and April 5 will not land mail in New York until Tuesday of the following week; hence, dispatches on those dates will only be for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and Northern California. Dispatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7.10 a. m., connects with the dispatches for the four sailings mentioned above.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS THROUGH THE CANAL.

Approximately regular services between the Atlantic and the Pacific seaboard from Boston, New York, Philadelphia, and Baltimore, occasionally Charleston and New Orleans, to San Pedro, San Francisco, Portland, and Puget Sound, and return, are maintained by the American-Hawaiian Steamship Company, with a sailing each way about every five days; the Luckenbach Steamship Company, with a sailing each way about every 10 days; Sudden and Christensen, approximately

fortnightly; the Atlantic and Pacific Steamship Company, about every three weeks; and the Boston and Pacific Line, and the Arrow Line, each sending a vessel each way about once a month.

PACIFIC COAST CONNECTIONS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acajutla, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central America line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports abovenamed between Balboa and Ocos.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Paita, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa for Valparaiso, calling at Paita, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro; and an additional weekly sailing to Bocas del Toro.

The Royal Mail Steam Packet Company maintains approximately a fortnightly service between Colon and England, via Cartagena, Puerto Colombia, Trinidad, and Barbados. Its service to New York, via Kingston, has been temporarily discontinued.

The Compagnie Générale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curaçao, Puerto Cabello, and Barcelona.

The Compagnia Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curaçao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular services maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every seven days, direct; between Colon and New York by the United Fruit Company twice a week, one sailing via Port Limon and Havana, and the other via Kingston; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

	Sails.	Arrives.
NEW YORK TO CRISTOBAL-COLON.		
Almirante.....	U. F. C. Dec. 23.....	Dec. 30
Advance.....	P. R. R. Dec. 24.....	Dec. 31
Metapan.....	U. F. C. Dec. 26.....	Jan. 4
Santa Marta.....	U. F. C. Dec. 30.....	Jan. 6
Panama.....	P. R. R. Dec. 31.....	Jan. 6
Pastores.....	U. F. C. Jan. 2.....	Jan. 10
Zacapa.....	U. F. C. Jan. 6.....	Jan. 13
Allianca.....	P. R. R. Jan. 7.....	Jan. 13
Calamares.....	U. F. C. Jan. 9.....	Jan. 17
Carrillo.....	U. F. C. Jan. 13.....	Jan. 20
Colon.....	P. R. R. Jan. 14.....	Jan. 20
Tenadores.....	U. F. C. Jan. 16.....	Jan. 24
Almirante.....	U. F. C. Jan. 20.....	Jan. 27
Advance.....	P. R. R. Jan. 21.....	Jan. 28
Metapan.....	U. F. C. Jan. 23.....	Feb. 1
Santa Marta.....	U. F. C. Jan. 27.....	Feb. 3
Panama.....	P. R. R. Jan. 28.....	Feb. 3
CRISTOBAL-COLON TO NEW YORK.		
Carrillo.....	U. F. C. Dec. 31.....	Jan. 7
Colon.....	P. R. R. Jan. 2.....	Jan. 8
Tenadores.....	U. F. C. Jan. 4.....	Jan. 11
Danubio.....	R. M. C. Jan. 5.....	Jan. 13
Almirante.....	U. F. C. Jan. 7.....	Jan. 14
Advance.....	P. R. R. Jan. 9.....	Jan. 16
Metapan.....	U. F. C. Jan. 11.....	Jan. 19
Santa Marta.....	U. F. C. Jan. 14.....	Jan. 21
Panama.....	P. R. R. Jan. 16.....	Jan. 22
Pastores.....	U. F. C. Jan. 18.....	Jan. 25
Zacapa.....	U. F. C. Jan. 21.....	Jan. 28
Allianca.....	P. R. R. Jan. 23.....	Jan. 29
Calamares.....	U. F. C. Jan. 25.....	Feb. 1
Carrillo.....	U. F. C. Jan. 28.....	Feb. 4

(Continued on page 188.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon December 27.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Dec. 21...	Indrakuals.....	British.....	Indra Line, Ltd.....	New York.....	Kobe & Vlad'stok	Cotton.....	8,000	6,809	4,711
Dec. 22...	Montosa.....	American.....	Sudden and Christensen.....	New Orleans.....	Sun Pedro.....	General mdse.....	3,750	3,224	2,206
Dec. 22...	Bilgirono.....	British.....	West Coast Line.....	New York.....	Eten.....	*General mdse.....	6,500	5,102	3,554
Dec. 23...	Georgian.....	American.....	American-Hawaiian S. S. Co.....	New York.....	Sun Pedro.....	General mdse.....	5,982	6,885	4,825
Dec. 25...	Huckness.....	British.....	London & Northern S.S. Co.....	New York.....	Melbourne.....	General mdse.....	7,000	6,423	4,580
Dec. 26...	Director.....	British.....	Harrison Line.....	Liverpool.....	Los Angeles.....	General mdse.....	5,361	5,444	3,742
Dec. 27...	Windber.....	American.....	Pacific American Fisheries.....	New York.....	San Francisco.....	General mdse.....	3,344	3,011	2,100
Dec. 27...	Colon.....	American.....	Panama R.R. S.S. Line.....	New York.....	Bilboa.....	General mdse.....	836	5,866	4,222

*Including 500 tons of coal and 1,000 tons of coke.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Dec. 21...	Earl of Elgin.....	British.....	United States Shipping Co.....	Cruz Grande.....	Philadelphia.....	Iron ore.....	7,300	4,873	3,669
Dec. 22...	Strathorne.....	British.....	Strathorne Shipping Co.....	Tacoma.....	*Cristobal.....	Flour.....	6,248	4,794	3,616
Dec. 23...	Allianca.....	American.....	Panama R. R. S. S. Line.....	Bilboa.....	New York.....	General mdse.....	1,989	4,120	2,670
Dec. 23...	Nevadan.....	American.....	American-Hawaiian S. S. Co.....	San Pedro.....	New York.....	General mdse.....	3,570	4,512	3,103
Dec. 24...	Quito.....	British.....	Bank Line, Ltd.....	Tacoma.....	*Cristobal.....	Flour.....	4,547	3,675	2,685
Dec. 24...	Cape Finisterre.....	British.....	Lyle Shipping Company.....	San Francisco.....	London.....	Barley, canned gds.....	6,196	4,836	3,765
Dec. 26...	Pacific.....	American.....	Emery S. S. Co.....	San Francisco.....	Boston.....	Gen. mdse-lumber.....	6,000	5,421	3,797
Dec. 26...	Camino.....	American.....	Western Steam Nav. Co.....	San Francisco.....	Rotterdam.....	General mdse.....	4,000	3,325	2,207
Dec. 26...	Cardigan.....	British.....	Jenkins Bros.....	Portland, Ore.....	Naples.....	Wheat.....	6,209	4,404	2,994
Dec. 26...	John A. Cooper.....	American.....	Saldaña and Christensen.....	San Francisco.....	New York.....	†Lumber.....	.....	2,462	1,536
Dec. 27...	Carolyn.....	American.....	Luckenbach S. S. Co.....	San Francisco.....	New York.....	General mdse.....	3,000	3,425	2,322
Dec. 27...	A'holl.....	British.....	Warrick and Co.....	Hongkong.....	New York.....	General mdse.....	7,000	4,798	3,627

* For orders. †2,200,000 board feet.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessels	Line	From
Dec. 28...	Ohiaon.....	American-Hawaiian S. S. Co	New York.
Dec. 28...	Caesar.....	U. S. Navy.	Hampton Roads.
Dec. 28...	Rosarie.....	Bank Line, Ltd.	New York.
Dec. 29...	Domara.....	Luckenbach S. S. Co.	New York.
Dec. 29...	English Monarch.....	Monarch S. S. Co.	New York.
Dec. 29...	Saint Ursula.....	Rankin, Gilmour & Co.	New York.
Dec. 29...	Charlton Hall.....	U. S. Steel Products Co.	New York.
Dec. 29...	Chryswale.....	Crickot S. S. Co.	New York.
Dec. 29...	Crickot.....	Crickot S. S. Co.	New York.
Dec. 29...	Kosama.....	Ellerman & Bucknell S.S. Co	G. Iveston.
Dec. 29...	Nile.....	P. & O. Steam Nav. Co.	New York.
Dec. 29...	City of Corinth.....	Ellerman Line, Ltd.	New York.
Dec. 29...	Nairnshire.....	Scottish Line.	New York.
Dec. 30...	Mimiro.....	Tyler Line, Ltd.	New York.
Dec. 30...	Jamaica.....	Pacific Steam Nav. Co.	Cristobal.
Dec. 31...	Virginian.....	American-Hawaiian S.S. Co.	New York.
Dec. 31...	Advance.....	Panama R. R. S. S. Line	New York.

*Vessels which will pass through the Canal.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Dec. 28...	Santa Cruz.....	W. R. Grace & Co.	Telara, Peru.
Dec. 28...	Mina Brae.....	London & Pacific Petro. Co.	San Francisco.
Dec. 30...	Palena.....	South American S. S. Co.	Valparaiso.
Dec. 30...	Mexican.....	American-Hawaiian S. S. Co	Honolulu.
Dec. 30...	Arna.....	U. S. Steel Products Co.	.....
Jan. 3...	Erlyn.....	Luckenbach S. S. Co.	San Francisco.
Jan. 15...	Craigina.....	Craigina S. S. Co.	.....

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
Dec. 23...	Amelia.....	United Fruit Co.	New Orleans.
Dec. 23...	Semanha.....	Haws S. S. Co.	New York.
Dec. 25...	Eggesford.....	Tatum Steam Nav. Co.	Cardiff.
Dec. 26...	Nitonian.....	Leyland Line.	Liverpool.
Dec. 26...	Wezadesh.....	Earn Line.	Norfolk.
Dec. 26...	Chayres.....	Eller & Fyffes	Limona.
Dec. 26...	Bolin.....	West India S. S. Co.	New York.
Dec. 28...	Fredo.....	Seeborg Line	From sea.

*EXPECTED ARRIVALS.

Dec. 27...	Nor.....	Harloff & Rodseth.....	New York.
Dec. 27...	Puerto Rico.....	Cie Gen. Transatlantique.....	Bordeaux.
Dec. 27...	Orland.....	Earn Line.....	Norfolk.
Dec. 27...	Essequibo.....	Royal Mail.....	New York.
Dec. 29...	Dictator.....	Harrison Line.....	Liverpool.
Dec. 30...	Bologna.....	La Veloce.....	Genoa.

*DEPARTURES.

Date	Vessel	Line	To
Dec. 21...	Bygland.....	United Fruit Co.	New York.
Dec. 23...	Freda.....	Seeborg Line.....	Puerto Colombia.
Dec. 23...	Hermol.....	Earn Line.....	Nima Nima.
Dec. 25...	Amelia.....	United Fruit Co.	Bocas del Toro.
Dec. 26...	Chayres.....	Eller & Fyffes	Bristol, Jamaica.

*EXPECTED DEPARTURES.

Dec. 28...	Berlin.....	West India S. S. Co.	.....
Dec. 28...	Nitonian.....	Leyland Line.....	Galveston.
Dec. 29...	Semanha.....	Haws S. S. Co.	.....
Dec. 29...	Essequibo.....	Royal Mail.....	Southampton.
Jan. 2...	Pologna.....	La Veloce.....	Genoa.
Jan. 3...	Puerto Rico.....	Cie Gen. Transatlantique.....	Bordeaux.

*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Date	Vessel	Line	From
Dec. 24...	Peru.....	Pacific Mail S. S. Co.	San Francisco.

*EXPECTED ARRIVALS.

Dec. 30...	Pachitea.....	Peruvian S.S. Co.	Callao.
Jan. 2...	Pennsylvania.....	Pacific Mail S.S. Co.	San Francisco.

*DEPARTURES.

Date	Vessel	Line	To
Dec. 21...	Montaro.....	Peruvian S. S. Co.	Callao.
Dec. 23...	Ecuador.....	Pacific Steam Nav. Co.	Guayaquil.
Dec. 24...	City of Para.....	Pacific Mail S. S. Co.	San Francisco.

*EXPECTED DEPARTURES.

Jan. 2...	Peru.....	Pacific Mail S.S. Co.	San Francisco.
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*Other than vessels using the Canal.

(Continued from page 187.)

NEW ORLEANS TO CRISTOBAL-COLON.

Colo.....	P. R. R.	Jan. 30	Feb. 7	Parismipa	U. F. C.	Dec. 23	Dec. 30	Abaogarez.....	U. F. C.	Dec. 31	Jan. 5
Tenadores.....	U. F. C.	Feb. 1	Feb. 8	Atenas.....	U. F. C.	Dec. 26	Dec. 31	Parismipa.....	U. F. C.	Dec. 31	Jan. 7
Almirante.....	U. F. C.	Feb. 4	Feb. 11	Cartago.....	U. F. C.	Dec. 30	Jan. 6	Atenas.....	U. F. C.	Jan. 7	Jan. 12
Advance.....	P. R. R.	Feb. 6	Feb. 13	Turrialba.....	U. F. C.	Jan. 2	Jan. 7	Cartago.....	U. F. C.	Jan. 7	Jan. 14
Metapan.....	U. F. C.	Feb. 8	Feb. 16	Heredia.....	U. F. C.	Jan. 6	Jan. 13	Turrialba.....	U. F. C.	Jan. 14	Jan. 19
Santa Marta.....	U. F. C.	Feb. 11	Feb. 18	Abaogarez.....	U. F. C.	Jan. 9	Jan. 14	Heredia.....	U. F. C.	Jan. 14	Jan. 21

CRISTOBAL-COLON TO NEW ORLEANS.



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Suggestions Invited From Users of the Canal.

Any pertinent expressions of opinion or suggestions from the masters of ships, the owners, or from any one else who has had to do with the passage of vessels through the Panama Canal, will be welcome. It is probable that among the masters of the several hundred ships that have used the Canal to date, there will be some who have formed ideas of their own concerning details in the operating methods now in effect, which, to their mind, might be improved upon. It is likewise probable that some of these ideas have been reduced to writing and communicated to the vessels' owners. Some of these opinions may be of merit and worthy of careful consideration by those in charge of the operating end of the Canal. It is on this account, as well as by reason of the desire on the part of the Canal authorities to cooperate in every reasonable way with the masters and owners in the passing of ships through the Canal, that the above invitation is extended. In some cases, an exchange of views on a given subject may result, which will be of mutual benefit. An epitome of such suggestions as are of particular value will be published from time to time.

Selection of New Townsite for Village of Limon.

A new townsite for the village of Limon in the Gatun River valley, up the river from Monte Lirio, was selected on December 17. Among the members of the party that went to the locality for this purpose were Mr. Ricardo Bermudez, governor of the province of Colon, Mr. Juan C. Marcelli, inspector of public works of the district of Colon, Mr. Narciso Navas, administrator of public lands, Mr. Ottorino Lorenzoni, official surveyor, and Mr. O. E. Malsbury, assistant engineer of surveys of The Panama Canal. The site selected is on a high neck of land between Quebrada Palenque and Quebrada Chinilla Chica; it extends beyond the 100-foot contour along Gatun Lake toward Santa Rita Mountain, and is entirely outside of the Canal Zone.

The representative of the Land Department of The Panama Canal, while making settle-

ments with the inhabitants, ascertained that a number of them owned cultivations on a peninsula near the island on which the present village is located, which peninsula, although outside the 10-mile limit of the Canal Zone, will come under the jurisdiction of the United States, for the reason that it is inaccessible, except by crossing the waters of Gatun Lake or lands of the Zone. In making settlements with the people having cultivations on this peninsula, they were advised that they would be given the necessary time in which to gather the crops from their last plantings, or until October 1, 1915, by which date they will have had time to harvest all their crops. In order to assure the owners of these small cultivations that they will not be disturbed, a letter of permission was given each planter to occupy the ground and gather his crop until October of next year.

Award for Motor Busses.

Award for the four motor busses for use in passenger transportation around Balboa and Ancon has been made to the Kelly-Springfield Motor Truck Company of Springfield, Ohio, delivery to be made in New York City within 75 days from the signing of the contract. The extreme length of each car will be 20 feet 10 inches, extreme width 72 inches, extreme height nine feet 10 inches, wheel base 144 inches, and width of tread 59 inches. Each car will have seating capacity for 20 passengers.

Boathouse at Cristobal Piers.

The construction of a boat house in connection with the landing for small boats at the head of the slip between Piers 1 and 2, for the use of the captain of the port at Cristobal, has been authorized at an estimated cost of \$1,970. Material recovered from the old dock structures in Colon, recently demolished, will be utilized as far as possible. It was originally intended to have the boat landing at Cristobal, between Piers 8 and 9, but when the office of the captain of the port was moved to the old offices of the Panama railroad in Colon, the new location was found to be more satisfactory. The boathouse will be 40 by 70 feet in plan, and will contain six slips, a workshop, where minor repairs to boats can be made, and a store room for keeping spare gear, lubricating oils, quarantine equipment, etc.

Panama Railroad Steamship Line Relinquishes Pier No. 52, New York City.

Pier 52, formerly leased by the Panama Railroad Steamship Company in New York City for the storage of ocean freight, has been given up. The company had two piers leased in New York, Nos. 52 and 67, but owing to its ceasing to be a cocarrier with other steamship lines, with a consequent decrease in ocean freights, No. 52 was no longer needed.

PRISON SHIP THROUGH CANAL

Historic Relic of the Australian Penal Colony Days on Its Way to San Francisco.

The old English convict ship *Success*, now owned by D. A. Smith of Philadelphia, arrived at Cristobal at 2 p. m., on Thursday, December 31, in tow of the American steamship *Crickel* of the Linderman Steamship Company. It is on its way to San Francisco to be exhibited at the Panama-Pacific Exposition, and started through the Canal on New Year's Day. The *Success* was launched at Moulmein, near Rangoon, Burmah, in the year 1790, and is the last of the prison ships used by England in the forefront of the nineteenth century in the transportation of convicts to the penal settlements in Australia. It is of the barkentine class, 135 feet long, 29 feet in the beam, with a tonnage of 380, and is constructed entirely of Indian teak, the resistance of which to decay is well known. It was first used as a trading ship between England and India, and carried its own guns as indicated by the port-holes, breeching rings, bolts, and other fittings which still remain intact. In one of its early voyages, the vessel successfully resisted an attack made by the heavily armed French picaroon *La Rosa*, in the Bay of Bengal. The shot marks received during this engagement may still be seen in the hull close to the water line.

The *Success* became a prison ship in 1802 and continued to transport convicts to Australia and Tasmania for the next 50 years. In 1852, when the vessel was at Port Williamstown, Australia, news of the gold discoveries was received, and the ship was deserted by officers and crew. Following this period, it became a stationary floating prison, and was remodeled to meet the requirements which remained unchanged to this day. In 1857, it was abandoned as a prison hulk, owing to public indignation at crimes that had been committed on board, and turned into a prison for refractory seamen. In that year, however, all of the hulks in Port Williamstown harbor were ordered removed, and from 1860 to 1863, that of the *Success* was used as a prison for women. In 1869, it was transferred to the Sir Harry Smith reformatory for boys and used as a dormitory for the more refractory of the inmates. Later, for several years it was moored in an out-of-the-way place in the Saltwater River, and used as a storehouse for explosives. Finally, all of the prison hulks were ordered sold on condition that they were to be broken up. Through a clerical error, this condition was omitted in the terms of sale of the *Success*; hence, it was spared from the fate of the other four. For a time the vessel was on exhibition at Sydney, New South Wales, but public sentiment became so aroused against it on account of its prison history that several unsuccessful attempts were made to destroy the boat. It was scuttled one night, however, and sunk in the bottom of Sydney

harbor, where it remained for five years, when it was raised and again placed on exhibition; afterward, it was taken to England, and in 1912, was placed in the Glasson Dock to be prepared for its voyage across the Atlantic. The vessel, in tow of the *Cricket*, left Balboa for San Francisco on Sunday, January 3.

First Month's Prizes Awarded for Care of Houses at La Boca.

The committee on improvements at La Boca inspected the town at various times during the month of December and has awarded prizes to the following houses:

Prize of \$5 for the best kept and neatest one-story building, without plumbing, to house No. 582.

Prize of \$5 for the best kept and neatest one-story house, with plumbing, to house No. 592.

Prize of \$5 for the best kept and neatest two-story house, without plumbing, to house No. 635.

Prize of \$5 for the best kept and neatest two-story house, with plumbing, to house No. 581.

Prize of 16½ per cent rent reduction for the best kept and neatest house, with unscreened porches, to house No. 653.

The improvement in the appearance of the town and the care of the houses was not as great during the first month of operation of the committee's supervision as had been anticipated and desired, but it is hoped that progress will be accelerated during January.

Earth Fill at Balboa Townsite.

Bids for placing approximately 75,000 cubic yards of earth fill in certain sections of the Balboa townsite were opened in the office of the Chief Quartermaster at Balboa Heights on Saturday, January 2. Several proposals were received, the lowest being that of William Bodette, whose offer was 30 cents a cubic yard. The contract has not yet been awarded. The terms call for the excavation, transportation, and placing of material to desired lines and grades; and provides for an increase in the above amount by 20 per cent, if necessary. Approximately 45,000 cubic yards are to be placed in the flat between the concrete quarters and the railroad tracks to an average

depth of about 18 inches. Between 9,000 and 12,000 cubic yards will be required on the low ground in the vicinity of the new Balboa railroad station, with a fill varying from six inches to four feet, and the remainder in a portion of the area formerly occupied by the Panama railroad as a storage yard. The material is to be obtained from the borrow pit at Diablo Hill, and must be free of rock above three feet in size.

The contractor will be allowed the use of the existing railroad tracks of the Panama railroad and The Panama Canal between Corozal and Panama, and will be permitted to extend for his own use such of these tracks as may be necessary for the advantageous handling of his rolling equipment. He will be required to employ train crews qualified to operate on the main line of the Panama Railroad Company, as required by the rules of that company. Train movements will be subject to all rules and regulations obtaining in similar movements of the rolling equipment of the Panama railroad, and such trains will be given similar rights-of-way as are afforded trains of the railroad and the Canal.

The Panama Canal will furnish the contractor free of charge such railroad equipment as may be available for use in this work, and will supply him with such tools and miscellaneous equipment as may be required, at price book prices, plus 15 per cent. This only applies, however, to such tools and equipment as have been used, but these will be placed in good condition prior to issuance. They may be returned to the Canal, upon successful completion of the contract, on the basis of 80 per cent of the price charged for same.

Docks 13 and 14 to be Used as Temporary Oil Docks.

It has been decided to use docks Nos. 13 and 14, Cristobal, temporarily, in discharging oil cargoes and delivering oil to vessels. This will require a deepening of the berths alongside these docks to 30 feet. The suction dredge *Caribbean* has been assigned to this work.

The launch *Patrol* stationed at Cristobal, and the launch *Pioneer* at Balboa, have been transferred to the Dredging Division, together with their crews.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Griffith, Henry.....	10703	Bahamas.....	Cobá.....	Fortifications....	Dec. 31, 1914
Hemmings, Josiah.....	57377	Jamaica.....	Corozal.....	Munitions Eng.....	Dec. 22, 1914
Lailley, J.....	57335	Jamaica.....	Panama.....	Munitions Eng.....	Dec. 29, 1914
Lynch, Hubert.....	61194	Jamaica.....	La Boca.....	P. R. R. Coms.....	Dec. 25, 1914
Scheler, Thos. E.....	1307	U. S. A.....	Balboa.....	Mechanical Div.....	Dec. 27, 1914
Taylor, Elmo A.....	53337	Martinique.....	Culebra.....	Fortifications....	Dec. 24, 1914
Brown, Andrew.....	31353	Jamaica.....	Panama.....	Electrical Div.....	Dec. 27, 1914

Insane Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of commitment.
Marino Rodriguez.....		Nicaragua.....	La Boca.....		Dec. 28, 1914.

The estates of these deceased and insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

NEW BALBOA COMMISSARY.

Second and Largest of the Permanent Type to be Erected.

The new Balboa commissary, situated near the intersection of Balboa Prado with the old Balboa road, will be the largest building of its kind in the Canal Zone, and is the second commissary of the permanent type to be erected, that at Ancon being the first. It is of two stories, 122 feet four inches by 73 feet eight inches in plan, with a total floor space of 23,941 square feet, exclusive of the unloading platform, and is constructed of hollow concrete blocks and poured concrete. It is practically fireproof, the only destructible materials used in its construction and furnishing being the door and window trimmings, some of the doors, and the counters and shelving. Work on the structure was begun on September 16, 1914, and on January 1, 1915, it was about 75 per cent completed.

Front elevation.—The front faces toward the east, and contains the two main entrances, setting back four feet, so as to form vestibules five feet four inches by four feet in size, and seven plate glass display windows, each five feet four inches by six feet six inches in size, one located on each side of the two main entrances, and the other three in the center of the building, the latter separated by 8 by 10-inch square columns. These windows are all trimmed in mahogany, are covered over with a roof of metal lath and plaster, and have window seats, one foot four inches above the floor and four feet wide, allowing adequate space for the showing of goods. A terrace 63 feet six inches long by five feet one inch in width, provided with heavy concrete balustrades, eight inches wide and one foot four inches high, extends clear across the front and from this two sets of eight steps each lead down to the ground. Electric conduit has been placed in the top rail of this balustrade for future use.

On the second floor in front, there will be three window openings, each 10 feet 10 inches by five feet 10 inches, and panel work in plaster in which will be lettering denoting that one side of the building is for silver, and the other for gold employees; the silver entrance, as designed, will be on the side nearest to the Balboa road, and the gold entrance on the side nearest the townsite.

South elevation, Sosa Hill side.—The lower floor on this side will be provided with 10 window openings, 10 feet 10 inches by five feet 10 inches, with sills eight feet seven inches above the floor, allowing clearance for the interior shelving; one window opening, five feet four inches by seven feet one inch, with a transom above, three feet four inches by five feet one inch; one window opening, five feet four inches by five feet 10 inches, and one door opening, five by seven feet, fitted with a set of double doors. This door opening has a sidelight, two feet five inches in size, on each side, and double transoms above both sidelights and door, making the total dimensions of this opening, 10 feet 10 inches by 14 feet five inches.

On the second floor on this side, there are eight window openings, 10 feet 10 inches by four feet seven inches, with sills eight feet five inches above the second floor level, and one window opening, five feet four inches by five feet 10 inches.

Rear elevation, west side.—On the lower floor on this side, there will be one window opening

10 feet 10 inches by four feet seven inches, located eight feet above the floor; one window opening, five feet four inches by four feet seven inches, in the men's toilet; one door opening, 10 by eight feet, fitted with a roller steel door, leading from the unloading platform into the first floor store room, and two door openings, each three feet by seven feet six inches, leading into the double toilet for men.

On the second floor, there will be three window openings, 10 feet 10 inches by four feet

concrete platform extending into the ice chamber, and above this is a 3-foot door, which opens into the same chamber.

In the second story on this side, there are eight window openings, 10 feet 10 inches by four feet seven inches, located eight feet five inches above the second floor level, and one window opening, five feet four inches by five feet 10 inches. All window openings in the building will be glass paned.

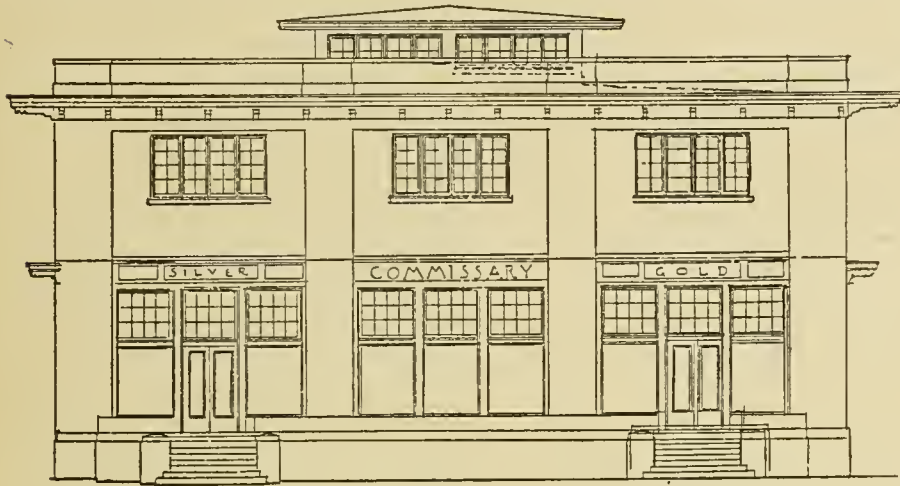
Main roof—The main roof is constructed of 5½-inch concrete slabs carried on beams, 10 by

CANAL RECORD of September 2, 1914. The roof of the monitor, which rises to a height of six feet three inches above the main roof, and is composed of 4½-inch concrete slabs, overlaid with Barrett specification roofing material and a cement finish, rests on beams approximately 10 by 20 inches in plan, with a cornice extending out three feet eight inches.

Second floor—The second floor is composed of 7½-inch concrete slabs, with a cement fill in the store room, four inches thick, making a total thickness of floor at this point of 11½ inches. The entire floor rests on concrete beams running crosswise of the building; they are 12 by 27 inches in plan, are spaced on 15-foot centers, and are supported on the inside of the commissary by a row of round columns, 17 inches in diameter, running through the center, and in the main walls, on square concrete columns, 16 by 16 inches in plan. The floor in the store room will have a cement finish; behind all counters there will be a wood floor, and in the space for customers, there will be a 6 by 6-inch red tile floor, spaced one inch between. The counters will be set in concrete bases, five and one-half inches high from the floor, thereby complying with sanitary requirements. Near the front end, there is a space, 24 by 31 feet in size, encircled by a mahogany-trimmed balustrade, for use as an office, and for the stairways to this floor. The principal divisions on the second floor are the sales-room, which will be devoted to dry goods, notions, etc., and the store room.

Office floor—This floor is 10 feet six inches above the first floor, and rests on two beams, 12 by 24 inches in plan, and two beams, 12 by 16 inches in plan, the latter running lengthwise of the building and extending out under the main staircase, where they rest on square concrete columns, 12 by 12 inches in plan. This floor is reached by a double staircase, which turns and goes up to the second floor, and also by an iron spiral stairway in the rear of the office part, for the use of employees.

First floor—This floor is similar in construction to the second floor. It rests on concrete



FRONT ELEVATION.

seven inches, located seven feet above the second-story floor level.

North elevation, Balboa side—On the lower floor on this side, there will be five window openings, 10 feet 10 inches by five feet 10 inches; one window opening, 10 feet 10 inches by four feet seven inches; one window opening, five feet four inches by four feet seven inches; one window opening, five feet four inches by seven feet one inch; one transom opening, five feet four inches by three feet

23 inches in plan, spaced on 15-foot centers, resting on two rows of round columns, 14 inches in diameter, running through the center of the building. In the main walls, these beams rest on square reinforced columns, 12 by 12 inches in plan. The roof extends out over the main walls for a distance of six feet four inches clear around the main part. In line with the building walls, there is a parapet wall three feet seven inches high, composed of concrete blocks. A cornice, three feet six



ELEVATION ON SOSA HILL SIDE.

four inches; two openings, fitted with sliding doors, each five feet four inches by eight feet two inches, into the vestibule of the refrigerator, with two transoms above, each five feet four inches by two feet 10 inches; one door opening, eight by 10 feet, fitted with steel roller doors, from store room to unloading platform; one door opening, five feet three inches by eight feet, fitted with roller door, from platform to elevator; one door opening, eight feet by three feet eight inches, from the refrigerator into the refrigerator vestibule, and one side entrance door, three feet six inches by seven feet, from which a flight of narrow steps leads to the ground level. Over the door leading from the refrigerator into the vestibule is a

inches wide, consisting of brackets and panel work of poured concrete, with cantilever reinforcing, projects out from the second-story level, around the building, including the unloading platform, to within 12 feet six inches of the front end. The roof is constructed with a pitch of ½-inch to the foot, to furnish sufficient fall to drain rain water into the eight 4-inch leaders connected with the sewer.

Monitor—For light and ventilation, a monitor, 24 by 75 feet in plan, has been built in the center of the main roof. It is provided with 14 casemates, 10 feet 10 inches by three feet four inches in size, to be opened and closed by a sash operating device similar to the one used in Ancon commissary, described in THE

beams, 12 by 37 inches in plan, spaced on 15-foot centers, which, in turn, rest on foundation piers sunk to depths varying from 10 to 36 feet.

Interior arrangement of first floor—The first floor is provided with a store room, a room for the sale of ice cream and cold storage supplies, a refrigerator, and a salesroom. The store-room in the rear is 55 by 73 feet in size, inside measurement, has a cement finished floor, and is equipped with 3-foot shelving. On the south side of the building is a room, 30 by 35 feet in size, for the sale of ice cream and cold storage articles to silver employees, and opposite it is the refrigerator, 24 by 30 feet in size. Between the two last mentioned rooms

is a hallway, 12 feet wide, provided with suitable door openings, leading from the main salesroom into the store room. A concrete staircase has been placed between the refrigerator and the elevator shaft, which leads to the second-story store room.

The elevator is of the plunger type, and will be provided with a car six feet four inches by six feet in size; it will have a rise of 16 feet one inch, and will be used for carrying freight only. It will operate between the first and second-story store rooms; the shaft will be enclosed within 8-inch poured concrete walls.

In the refrigerator, two beams, resting on 8 by 8-inch square concrete columns, run through the center, forming the support for the floor of the ice chamber, which consists of 6-inch concrete slabs, having a pitch of one inch toward the drain, and covered with 1½-inch wood grading. The ice chamber walls are provided with six inches of air space, while the walls of the refrigerator are composed of six inches of poured concrete, lined with a 4-inch thickness of cork, with a 2-inch air space between. The floor of the refrigerator is of solid concrete, with a 4½-inch layer of cement on top. A concrete counter, with a marble top will extend out from the front of the refrigerator, which will also contain four glass windows for display of cold storage supplies. The refrigerator is divided into three compartments, a workroom, 10 feet 10 inches by 24 feet, a vegetable and dairy room, 13 feet eight and one-half inches by 10 feet six inches, and a meat chamber, 10 feet six inches by 13 feet eight inches; all have solid partitions between.

In the main salesroom on the first floor, the counters and shelving are so arranged as to form a natural division between the gold and silver sides. The cigar and candy counter will be placed in front of the main staircase, near the front entrances, and underneath the staircase are two small rooms for the storage of a reserve stock of goods sold at this counter.

Unloading platform—The unloading platform furnishes ample facilities for the loading and unloading of goods; it extends along the rear of the building for a distance of 54 feet six inches, and a width of 27 feet, then turns and extends directly back of the commissary for a distance of 52 feet one inch, and with a width of 16 feet four inches. On the north, or Balboa side, the platform has a length of 104 feet, and narrows in width to 11 feet six inches; the end toward the front on this side has been built to form a vestibule, 26 feet by 11 feet six inches, for the refrigerator. The roof of the platform is supported by concrete columns, 12 by 12 inches in plan, spaced on 26-foot centers, and is composed of 5½-inch concrete slabs, reinforced with wire cloth. To form sufficient fall for rainwater a cinder concrete fill has been placed on the roof, 12 inches thick at high points and about one inch thick where the 4-inch drains, 13 in number, are located. This cinder fill is, in turn, covered with Barrett specification roofing material, and cement finish. The total available space on the unloading platform amounts to 2,844 square feet.

Sunday Evening Dinner Concerts at Hotel Washington.

The Hotel Washington is planning to have an orchestra play at dinner on Sunday evenings, and will commence January 10. Although the *a la carte* menu has been discontinued, one can still get planked steaks or other special dishes by ordering in advance. All

kinds of sandwiches, soft drinks, ice cream, cakes, and tea can be had at any time during the day up to 10 p. m. Arrangements may be made for special dinners, lunches, weddings, ball suppers, etc., at reasonable rates.

The prices for meals are, as follows: Employees, all meals *table d'hôte*, 75 cents; non-employees, breakfast, 75 cents; lunch, \$1; dinner, \$1. All prices are in United States currency.

United States Civil Service Examination, Panama Canal Service (Male.)

The United States Civil Service Commission announces an open competitive examination for clerk, for men only, on February 14, 1915, at Balboa Heights, C. Z. From the register of eligibles resulting from this examination appointments will be made to fill positions of shop checker in the Mechanical Division, Panama Canal, at salaries ranging from \$1,200 to \$1,500 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The examination will consist of the following subjects, which will have the relative weights indicated:

SUBJECTS.	Weights.
1. Spelling—(20 words of average difficulty in common use).....	10
2. Arithmetic—including the four fundamental rules of addition, subtraction, multiplication, and division, common and decimal fractions, compound numbers relating to weights and measures, and percentage, including simple interest).....	20
3. Letter writing—(a letter of not less than 125 words on some subject of general interest. Competitors may select either of two subjects given).....	20
4. Penmanship—(the legibility, rapidity, neatness, and general appearance of the competitor's handwriting in the subject of copying from plain copy).....	15
5. Copying from plain copy—(a simple test in copying accurately, in the competitor's handwriting, a few printed lines containing tabular matter).....	15
6. Time—(consumed in examination)...	20
Total.....	100

In rating the element of time a credit of 70 will be given if the basis subjects of the examination are completed in four and one-half hours, which is the maximum time allowed. For each interval of five minutes less than the maximum time a credit of one in addition to 70 will be given. For completing the examination in two hours, or less, the maximum rating of 100 will be given. No credit will be given for time unless the average percentage on the remaining subjects is at least 70.

Each applicant will be required to attain eligibility on one or more of the following optional subjects:

1. Typewriting, including the typewriting tests of the examination for typewriter. The tests are copying and spacing, copying from rough draft, copying from plain copy, and time, and will be given weights of 4, 3, 2, and 6, respectively. Time not to exceed one hour and ten minutes.

2. Bookkeeping (embracing tests in journalizing and preparation of balance sheet in mercantile transactions.) Time not to exceed two hours.

3. General business training and experience. Rated on statements in application and corroborative evidence. Special consideration will be given to railroad experience and experience in Government offices.

4. Timekeeping training and experience. Rated on statements in application and corroborative evidence. Applicants for this optional should be quick and accurate at figures, and have had at least one year's experience in timekeeping and pay roll work, preferably on construction and engineering work where the time of a large number of men is kept. Experience with gang foreman in keeping the time of a small number of men is not considered sufficient.

Statements as to training and experience are accepted, subject to verification.

Applicants should state in answer to Question 1 of application form 1312 in which of the optional subjects they desire to qualify.

Applicants must have reached their twentieth, but not their forty-fifth birthday on the date of the examination, except that applicants who apply for the optional subject of timekeeping experience must not be over 40 years of age.

Applicants must be in sound physical condition.

Each applicant will be required to submit to the examiner on the day of the examination an unmounted photograph of himself taken within two years. An applicant who fails to present such photograph will not be admitted to the examination. Tintypes will not be accepted.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply to the Secretary of the Civil Service Board, Balboa Heights, Canal Zone, for application form 1312. No application will be accepted unless properly executed, including the medical certificate, and filed with the Secretary of the Civil Service Board at Balboa Heights in time to arrange for the examination of the applicant. The county officer's certificate in the application form need not be executed. The exact title of the examination as given at the head of this announcement should be stated in the application form.

Issued December 19, 1914.

NOTE—Any employe without civil service status, whose duties are more or less of a clerical nature, although not rated as clerk, will be expected to take this examination for his own protection, in the event that any question should be raised in the future regarding his status.

Steamship "Falk" Floated.

The steamship *Falk* of the Seeborg Line, which went on the reef at Halandis Cays, near the mouth of the Rio Diablo, on the San Blas coast of Panama, on December 15, was pulled off by the wrecking tug *Nemesis* and returned to Cristobal on January 1. The *Nemesis* was dry docked on Monday, January 4, for light repairs.

Died.

GREEN, JAMES—At Ancon Hospital on December 17, naturalized American, age 32, unmarried, employed by the Panama Canal at various times between April 1, 1907 and August 20, 1914. Former home at Rochester, N. Y. where interment will take place.

OFFICIAL CIRCULARS.

Charge for Pangas or Whaleboats Without Motive Power.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 31, 1914.
CIRCULAR No. 636-3:

Effective January 1, 1915, in livelihoods and companies will be charged \$1 per hour or fraction thereof, for use of pangas or whaleboats without motive power.

H. F. HODGES,
Acting Governor.

Annual Leave at Termination of Service.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 31, 1914.
CIRCULAR No. 632-11:

It is ruled that annual leave due an employee at termination of service may be commuted into a cash payment at the option of the Governor.

H. F. HODGES,
Acting Governor.

Use of Board Room in Administration Building.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., December 30, 1914.

All concerned—Bards, committees, or others who desire to use the Board Room should consult the custodian of the building, phone No. 235, to make sure the room is not engaged for the time wanted, and so that the room may be opened and prepared for use when wanted.

C. A. McILVAINE,
Executive Secretary.

Retirement of Panama Railroad Brass Checks.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 2, 1915.

To all concerned—All Panama railroad brass checks will be immediately retired and Panama Canal checks issued in lieu thereof. Panama Canal checks Nos. 15001 to 20000 will be immediately issued to or reserved for future issue to Panama railroad gold employees, and Panama Canal checks Nos. 80001 to 100000 for Panama railroad silver employees. All time books for Panama railroad employees for the month of January, 1915, should show both the old and the new check number for each employee. If an employee is absent for any cause during the whole month of January, both the old and new metal check numbers will be entered on the books for the month in which the employee returns to work. Employees will be allowed to retain their old brass checks until their pay checks for the month of December are presented to the Paymaster when all old brass checks will be retained by him. All timekeepers will immediately forward to the Auditor all unissued Panama railroad checks.

A sufficient number of the new series of brass checks will be sent from the Auditor's office direct to the timekeepers, storekeepers, or foremen in charge, to supply all employees now carried on their rolls and for future issue to new employees. Checks 80001 to 86000 will be issued for use of the B. I. agency, and 86001 to 92000 for use of the Colon agency. The old Panama railroad checks are not to be honored for any purpose after January 15, 1915.

H. A. A. SMITH,
Auditor, Panama Canal.

Captain of Port's Office at Balboa to Move.

THE PANAMA CANAL,
OFFICE OF CAPTAIN OF THE PORT,
BALBOA, C. Z., January 4, 1915.

To all concerned—Please be advised that on Sunday, January 10, the office of the captain of the port, Balboa, will be moved to building No. 23, new office building near the concrete dock and Mechanical Division buildings. The offices will be located on the second floor of this building.

H. V. BUTLER,
Captain of the Port.

Cash Sales.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASER,
BALBOA HEIGHTS, C. Z., December 30, 1914.

To depot quartermaster and all district quartermasters: Effective January 1, the work in connection with cash sales handled in this office will be transferred to the storekeeper at Balboa. You will obtain your supply of cash sale slips from him, sending him copies of each completed sale.

No surplus, second-hand, or obsolete items will be sold unless prices have been approved by the Governor, through the Chief Quartermaster.

Employees can purchase material direct from the

nearest district quartermaster or storehouse without securing authority from the Chief Quartermaster.

All correspondence with reference to sales of equipment and scrap will be handled, as heretofore, through this office.

WM. R. GROVE,
Chief Quartermaster.

Car Distribution.

THE PANAMA RAILROAD COMPANY.

OFFICE OF SUPERINTENDENT.

BALBOA HEIGHTS, C. Z., December 22, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS:

It will be necessary to revise the distribution of cars to the several divisions and departments, effective January 1, 1915, for the three ensuing months, and you are requested to advise me at your early convenience the requirements of your department, showing the total number of each class of car you will require for the three months of January, February, and March, 1915.

For your information, I am attaching herewith a copy of car distribution statement covering this equipment for the quarter ending December 31, 1914.

C. H. MOTTETT,
Superintendent.

DISTRIBUTION OF CARS FOR THE MONTHS OF OCTOBER, NOVEMBER, AND DECEMBER, 1914:

DEPARTMENT OR DIVISION.	Flat steel.	Ldg. flat cars.	Dump 12-yd.	Dump 10-yd.	Super. cars.	Box cars.	Total.
Division of Municipal Engineering.	6	3	8	12	....	1	30
Fortifications.	....	....	....	....	....	....	....
Ma. reg. rit.	....	....	....	....	....	....	....
Point.	3	4	12	....	....	1	20
Toro Point.	2	....	10	....	....	1	13
Naos Island.	....	....	50	....	....	....	50
Mechanical Div.	....	8	....	....	....	....	8
Div. Term. Const.	....	....	....	....	....	....	....
Coaling station.	....	....	....	75	....	....	87
Dredging Div.	....	12	....	....	1	....	1
Div. Term. Const.	....	....	....	....	....	....	....
East breakwater.	6	....	15	....	....	....	21
Div. Term. Const.	....	....	....	....	....	....	....
Balboa Terminals.	....	60	190	150	....	....	400
Panama railroad.	431	158	200	137	....	....	926
Totals.	448	245	485	374	1	3	1556

Examinations by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 333, on Wednesday, January 13, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Tuesday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

By direction of the chairman of the board.

F. M. NIXON,
Recorder, Board of Local Inspectors.

New Publications-Bureau of Mines.

The following new publications have been issued by the Bureau of Mines, Department of the Interior:

BULLETINS.

Bulletin 76—United States coals available for export trade, by Van H. Manning. 1914. 13 pp.

Bulletin 77—The electric furnace in metallurgical work, by D. A. Lyon, R. M. Keecey, and J. F. Cullen. 1914. 216 pp., 56 figs.

TECHNICAL PAPERS.

Technical paper 76—Note on the sampling and analysis of coal, by A. C. Fiedler. 1914. 59 pp., 6 figs.

Technical paper 94—Metal mine accidents in the United States during the calendar year 1913, compiled by A. H. Fay. 1914.

Note—Only a limited supply of these publications is available for free distribution, and applicants are asked to cooperate in insuring an equitable distribution by selecting publications that are of especial interest. Requests for all papers cannot be granted without satisfactory reason. Publications should be ordered by number and title. Applications should be addressed to the Director of the Bureau of Mines, Washington, D. C.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., January 4, 1915.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressee:

Birdsall, Mr. and Mrs. A.	Holdeo, Mrs. Kitty
Buchanan, W. S.	Hollingsworth, Roy
Campbell, C. P.	Jurrott, M. J.
Cameron, Mrs. F. F.	Jones, O. T.
Campbell, Lt. R. N. (pkg)	Kerr, Frank W.
Chydock, Clarence W.	Kirby, J. F. (pkg)
Chrisman, Ord	Leek, Henry
Croxton, Maj. Richard	McLaughlin, Mrs. E. J.
Dexter, Mrs. Dr.	Miller, William X.
Dole, C. E.	Miner, Arthur
Edwards, Mrs. Capt. Oliver	Murphy, Charles E.
Edwards, Oliver, Jr.	Nash, Walter (?)
Edwards, Miss Peggy	Platon, William
Engelke, Herbert	Robison, Mrs. Edna
Engelke, Richard	Rogers, W. H.
Evans, Eldie C.	Smith, Mrs. James F.
Flinn, Francis	Stevenson, Mrs. Holman
Fox, Alvin	Stewart, Oscar
French, Joseph	Vairini, Charles
Gardner, W. M.	Walls, Russell
Geddings, Maj. & Mrs. E. F.	Warner, Mrs. Florence
Gumbs, Mrs. Josephine (?)	Waterhouse, Maj. & Mrs. 3
Harris, Miss A. H.	Westcott, Mrs. W. W.
Harris, Miss H. A.	Woodard, W. S.
Hearse, J. Y. (D. D. S.)	Worth, T. S.

Rainfall from December 1 to 31, 1914, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa	1.11	12	7.41
Balboa Heights	1.29	7	8.28
Miraflores	1.77	26	7.42
Pedro Miguel	1.78	6	6.26
Rio Grande	1.36	7	5.87
<i>Central Section—</i>			
Culebra	1.38	26	4.25
Canarcho	.96	29	5.38
Empire	.88	26	4.44
Gamboa	1.72	8	6.15
Juan Mina	.87	7	2.90
Alhajuela	.67	8	2.25
El Vigia	1.85	9	5.93
Trinidad	1.35	1	6.94
Trinidad	1.03	21	5.61
Monte Lirio	1.50	1	5.02
<i>Atlantic Section—</i>			
Gatun	.82	29	4.62
Brazos Brook	.93	2	5.17
Colon	2.22	12	8.88

*Standard rain gage—readings at 5 p. m.

Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday January 2, 1915. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Dec. 27.....	129 25	94 60	87 09	87 07	54 20
Mon., Dec. 28.....	133 20	97 30	87 06	87 05	53 78
Tue., Dec. 29.....	130 35	95 25	87 06	87 06	54 00
Wed., Dec. 30.....	127 71	93 40	87 03	87 05	54 00
Thurs., Dec. 31.....	127 69	93 27	87 02	87 01	54 02
Fri., Jan. 1.....	127 60	93 27	87 02	87 04	54 05
Sat., Jan. 2.....	127 75	93 35	87 03	87 01	54 02
Height of low water to nearest foot.	125 0	91 0			

COMMISSARY DEPARTMENT.

Proposals for Furnishing the Commissary Branch With Beef Cattle.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Depot Commissary, Cristobal, C. Z., until 4 p. m., January 11, 1915, and then opened, for furnishing the commissary branch with 200 head of beef cattle.

Specifications may be obtained upon application to the Depot Commissary, Cristobal, C. Z.

The Government reserves the right to reject all bids, or to accept any bid in part.

Bids should be marked "Proposal for furnishing beef cattle, to be opened January 11, 1915."

WM. R. GROVE,
Chief Quartermaster.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gill departments of the Cristobal store will open at 7 p. m., on Saturdays and sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective January 7, 1915:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....	9	
Shoulder, trimmed, per pound.....	12	
Leg (8 to 10 pounds), per pound.....	19	
Short cut, chops, per pound.....	23	
Shoulder, chops, per pound.....	14	
Lamb—Stewing, per pound.....	12	
Shoulder, trimmed, per pound.....	15	
Leg (5 to 8 pounds), per pound.....	24	
Chops, per pound.....	29	
Chops, shoulder, per pound.....	18	
Veal—Stewing, per pound.....	12	
Shoulder, for roasting (not under 4 pounds), per pound.....	15	
Chops, shoulder, per pound.....	20	
Chops, per pound.....	30	
Loin, for roasting, per pound.....	30	
Cutlets, per pound.....	36	
Beef—Suet, per pound, special.....	03½	
Soup, per pound, special.....	7	
Soup, bones, per pound, special.....	02½	
Stew, per pound, special.....	11	
Plate, per pound, special.....	12	
Corned, No. 1, per pound.....	18	
Corned, No. 2, per pound.....	15	
Chuck roast, special, (3 lbs. and over), per pound.....	12	
Chuck roast, native (3 lbs. and over), per pound.....	11	
Rib roast, second cut (not under 3 pounds), special, per pound.....	16	
Rib roast, second cut (not under 3 pounds), choice, per pound.....	24	
Rib roast, second cut, native (3 pounds and over), per pound.....	15	
Rib roast, first cut (not under 3 pounds), special, per pound.....	19	
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27	
Rib roast, first cut, native (3 pounds and over), per pound.....	18	
Pot roast, special, per pound.....	20	
choice, per pound.....	28	
native.....	19	
Rump roast, special, per pound.....	20	
choice, per pound.....	28	
native.....	19	
Porterhouse roast, special, per pound.....	22	
choice, per pound.....	31	
native, per pound.....	21	
Steak, chuck, special, per pound.....	13	
native, per pound.....	12	
Round, bottom, special, per pound.....	13	
choice, per pound.....	19	
native, per pound.....	12	
Round, top, special, per pound.....	15	
choice, per pound.....	22	
native, per pound.....	14	
Sirloin, special, per pound.....	20	
Sirloin, choice, per pound.....	28	
Sirloin, native, per pound.....	19	
Sirloin, choice cut, special, per pound.....	23	
Sirloin, choice cut, choice, per pound.....	32	
Sirloin, choice cut, native, per lb.....	22	
Rump, special, per pound.....	20	
choice, per pound.....	28	
native, per pound.....	19	
Porterhouse (not less than 1½ pounds), special, per pound.....	23	
Porterhouse (not less than 1½ pounds), choice, per pound.....	34	
Porterhouse, (1½ pounds and over) native, per pound.....	22	
Porterhouse, short, Delmonico special, per pound.....	20	
Porterhouse, short, Delmonico choice, per pound.....	28	
Porterhouse, short, native, per lb.....	19	
Tenderloin, Western, special, per pound.....	35	
Tenderloin, Western, choice, per		

pound.....	46
Tenderloin, Western, native, per lb.	33
Pork—Hams, fresh, per pound.....	23
Shoulders, fresh, per pound.....	19
Loin, chop, or roast, per pound.....	18
Pigs' feet, fresh, each.....	8
Pigs' head, fresh, whole.....	83
S head.....	42
Sausage, home made, per pound.....	23

MISCELLANEOUS.	
Brains, calves' per pound.....	19
Kidneys, beef, per pound.....	13
Livers—Beef, per pound.....	13
Calves, each.....	65
half, each.....	33
Oysters, fresh, per pkt.....	33
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	13
Frankfurter, per pound.....	13
Lieberwurst, per pound.....	11
Pork, per pound.....	17
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	151
per dozen.....	120
Bluefish, per pound.....	10
Halibut, fresh, per pound.....	9
Salmon, per pound.....	6
Yeast, per pound.....	31
per cake.....	2

POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound.....	25
Chickens—Fancy, roasting, corn fed, per pound.....	24
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	30
Broilers, milk fed, per pound.....	*29
Broilers, corn fed, per pound.....	*27
Turkeys, per pound.....	26
Squabs, each.....	30
Partridges, per pair.....	1.30
Grouse, per pair.....	1.30
Pheasants, per pair.....	1.30

CURED AND PICKLED MEATS.	
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	20
Half, per pound.....	22
Sliced, per pound.....	28
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	30
Half boiled, per pound.....	32
Sliced, boiled, per pound.....	38
1 hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.42
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

DAIRY PRODUCTS.	
Butter—Creamery, special, per pound.....	43
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	21
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	*15
Fermilac, bottle.....	*25
Ice cream, quart.....	25
gallon.....	50
Cream, Sheffield Farms, quart.....	*33
pint.....	*19
gallon.....	*12

VEGETABLES.	
Cauliflower, per pound.....	16
Beets, per pound.....	24
Brussels sprouts, per pound.....	116
Celery, per head.....	5
Cabbage, per pound.....	2
Carrots, per pound.....	24
Cucumbers, per pound.....	24
Lettuce, per pound.....	14
Onions, per pound.....	24
Parsnips, per pound.....	34
Peppers, per pound.....	*18
Potatoes, white, per pound.....	2
sweet, tropical, per pound.....	2
Turnips, per pound.....	2
Tomatoes, per pound.....	8
Squash, per pound.....	24

FRUITS.	
Apples, per pound.....	3
Apples, fancy, per pound.....	6
Cranberries, fresh, per pound.....	6
Grapes, per pound.....	14
Grape fruit—American, each.....	5
Tropical, each.....	34
Lemons, per dozen.....	14
Limes, per 100.....	40
Oranges—American, each.....	24
Tropical, per dozen.....	9
Coconuts, each.....	5
Bananas, per bunch.....	38
Bananas, each.....	4

Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	23
Pears, evaporated, per pound.....	23
Tangerines, each.....	14

* Indicates advance from preceding list.
 ** Indicates five cents allowed for return of bottle.
 † Indicates reduction from preceding list.
 ‡ Sold only from commissaries, no orders taken for delivery.
 § Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Wholesale Prices of Fresh Meats.

The following price list of fresh meats became effective December 31, 1914, and will remain unchanged until further notice. This list will govern whether sold from commissaries or cold storage:

	Pound.
Beef hinds, No. 1.....	\$0.194
Beef hinds, No. 2.....	.157
Beef fores, No. 2.....	.124
Lamb carcasses.....	.184
Mutton carcasses.....	.144
Veal carcasses.....	.184
Pig carcasses.....	.17
Pork, loin chops or roast.....	.164
Beef hinds, native.....	.134
Beef fores, native.....	.114

† Indicates reduction from list list.
 Prices of all articles on this list sold to commercial lines and all foreign naval vessels will be increased by 10 per cent.

An additional charge of 10 per cent will be made on all supplies furnished yachts.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective December 26, 1914:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Borax, lump, lb.....	.11	.08
Brushes, hair, ea.....	.65	.73
Hammocks, ea.....	3.15	2.80
Diaper cloth, pc.....	.90	.66
Diaper cloth, pc.....	.95	.84
Shoes, tan, calf, blu., pr.....	3.80	3.90
Scissors, cuticle, ea.....	.75	.61
Shades, electric light, ea.....	.31	.35
Hammers, tack, ea.....	.19	.21
Bowls, finger, ea.....	.16	.13
Rugs, Crex, 6 by 9 feet, ea.....	3.40	2.85
Toffee, McIntosh, tin.....	.11	.13
Rice, second grade, lb.....	.034	.04
Borax, powdered, pkt.....	.04	.03
Pajamas, pr.....	1.35	1.15
Knives, butcher, ea.....	.21	.16
Cups, custard, ea.....	.12	.09
Boilers, wash, ea.....	1.11	1.05
Boxes, sugar, ea.....	2.45	2.60
Bowls, s. lid, ea.....	1.20	1.30
Dishes, ea.....	.60	.68
Plates, Minton, ea.....	1.65	1.35
Dishes, Minton, ea.....	5.40	5.65
Plates, ea.....	.31	.28
Platters, oval, ea.....	2.00	2.20
Platters, oval, ea.....	3.00	3.15
Teapots, Minton, ea.....	4.05	4.25
Water, toilet, bot.....	.50	.38

CHANGES EFFECTIVE JANUARY 4, 1915.

Soap dishes, ea.....	.09	.07
Wash boilers, ea.....	1.35	1.20
Water coolers, 8 g. l., ea.....	3.05	2.48
Shades, electric light, ea.....	.35	.28
Hooks, coat and hat, doz.....	.06	.04
Screwdrivers, ea.....	1.16	1.10
Flyers, side-cutting, ea.....	.41	.38
Suit hangers, ea.....	.09	.06
Bird cages, ea.....	1.20	.95
Table sets, glass, set.....	.55	.51
Extract beef, Rex, jar.....	1.63	3.25
Peach butter, tin.....	.19	.13
Cloths, sideboard, ea.....	.59	.65
Napkins, damask, ea.....	.20	.23
Canvas, 54 inch, yd.....	.67	.72
Diaper cotton, 24-inch, yd.....	.66	.65
Ticking, bed, yd.....	.22	.19
Underwaists, ea.....	.23	.20
Cards, playing, pkg.....	.38	.34
Belts, mens', ea.....	.35	.26
Pajamas, suit.....	.92	.82
Sandals, barefoot, pair.....	1.45	1.65
Shoes, white, duck, pair.....	4.50	4.65
Shoes, tan, russ., pair.....	3.90	4.15
Shoes, G. M. blu., pair.....	3.90	4.15
Shoes, vici, blu., pair.....	3.90	4.05
Cups custard, ea.....	.12	.10

Additions to Stock.

Embroidery, edging, yd.....	.05
Embroidery, edging, yd.....	.07
Embroidery, edging, yd.....	.07
Embroidery, edging, yd.....	.12
Embroidery, edging, yd.....	.14
Embroidery, edging, yd.....	.17
Embroidery, edging, yd.....	.23
Embroidery, insertion, yd.....	.04
Embroidery, insertion, yd.....	.07

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next six weeks are given in the following table:

JANUARY.

DATE.	Time and height of high and low water.			
Wed., Jan. 6.....	0:44	6:38	13:01	19:05
Thurs., Jan. 7....	1:3	7:21	13:44	19:43
Fri., Jan. 8.....	2:16	8:08	14:32	20:36
Sat., Jan. 9.....	3:10	9:03	15:26	21:31
Sun., Jan. 10.....	4:09	10:07	16:28	22:36
Mon., Jan. 11.....	5:14	11:22	17:36	23:48
Tues., Jan. 12.....	6:23	12:38	18:45	24:59
Wed., Jan. 13.....	7:35	1:00	19:51	26:10
Thurs., Jan. 14....	8:50	2:07	20:50	27:15
Fri., Jan. 15.....	10:08	3:06	21:44	28:15
Sat., Jan. 16.....	11:29	4:00	22:34	29:10
Sun., Jan. 17.....	12:54	4:59	23:22	30:00
Mon., Jan. 18.....	14:13	5:53	24:08	30:45
Tues., Jan. 19.....	15:28	6:44	24:41	31:25
Wed., Jan. 20.....	16:40	7:35	25:00	32:00
Thurs., Jan. 21....	17:49	8:21	25:15	32:40
Fri., Jan. 22.....	18:55	9:03	25:26	33:15
Sat., Jan. 23.....	19:58	9:41	25:34	33:45
Sun., Jan. 24.....	20:58	10:16	25:38	34:10
Mon., Jan. 25.....	21:55	10:48	25:39	34:40
Tues., Jan. 26.....	22:49	11:17	25:37	35:05
Wed., Jan. 27.....	23:40	11:43	25:32	35:25
Thurs., Jan. 28....	24:28	12:07	25:24	35:40
Fri., Jan. 29.....	25:13	12:28	25:13	35:50
Sat., Jan. 30.....	25:55	12:46	25:00	35:55
Sun., Jan. 31.....	26:34	13:01	24:45	35:55

FEBRUARY.

DATE.	Time and height of high and low water.			
Mon., Feb. 1.....	4:26	10:40	16:52	23:02
Tues., Feb. 2.....	5:05	11:20	17:28	23:42
Wed., Feb. 3.....	5:40	12:00	18:04	24:18
Thurs., Feb. 4.....	6:11	12:40	18:31	24:50
Fri., Feb. 5.....	6:39	13:19	18:50	25:18
Sat., Feb. 6.....	7:04	13:57	19:01	25:41
Sun., Feb. 7.....	7:27	14:34	19:04	26:00
Mon., Feb. 8.....	7:47	15:10	19:08	26:15
Tues., Feb. 9.....	8:05	15:45	19:13	26:27
Wed., Feb. 10.....	8:21	16:19	19:18	26:35
Thurs., Feb. 11....	8:35	16:51	19:23	26:40
Fri., Feb. 12.....	8:47	17:22	19:28	26:42
Sat., Feb. 13.....	8:57	17:51	19:33	26:41
Sun., Feb. 14.....	9:05	18:19	19:38	26:37
Mon., Feb. 15.....	9:11	18:45	19:43	26:30
Tues., Feb. 16.....	9:15	19:10	19:48	26:20
Wed., Feb. 17.....	9:17	19:34	19:53	26:08

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Goedicke Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the

soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from Oh (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies, may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.25 per barrel, reduced to 60° Fahrenheit.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa. Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the turning of the largest crank shafts or longest line shafts.

The cable address of The Panama Canal on the Isthmus is "Isthmian, Balboa Heights;" in the United States, "Isthmian, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans, for all States. Due at New Orleans the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on a Saturday.

*Every Monday to New York, for all States, except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*Note—The sailings on Monday, January 11, February 8, March 8, and April 5 will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will only be for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minn-

esota, Montana, Wyoming, Idaho, Washington, Oregon, and Northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7.10 a. m., connects with the despatches for the four sailings mentioned above.

Sailings of Vessels in Regular Service With the Isthmus.

PACIFIC COAST CONNECTIONS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Punta Arenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acapulco, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central America line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports abovementioned between Balboa and Ocos.

The Luckenbach Steamship Company is operating a 10-day service between New York and San Francisco, calling at East San Pedro both ways. Its vessels handle cargo at Balboa when sufficient business offers.

The American-Hawaiian lines between New York and San Francisco, and New York and Honolulu discharge and take on cargo at Balboa when sufficient business offers. At present, a vessel of this company passes through the Canal about every third day.

Grace and Company maintain an irregular service between New York and San Francisco, calling at way ports. Sailings are made about every 12 days. A vessel plying between San Francisco and Valparaiso, calling at way ports, makes a round voyage about every 10 weeks.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Paita, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa for Valparaiso calling at Paita, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombia and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail Steam Packet Company maintains approximately a fortnightly service between Colon and England, via Cartagena, Puerto Colombia, Trinidad, and Barbados. Its service to New York via Kingston has been temporarily discontinued.

The Compagnie Générale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Santander.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compania Transatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on or about the 8th day of each month.

Regular service is maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every six days, direct; between Cristobal and New York by the United Fruit Company, sailings about twice a week; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

	Sails.	Arrives.
NEW YORK TO CRISTOBAL-COLON.		
Santa Marta.....	U. F. C. Dec. 30....	Jan. 6
Panama.....	P. R. R. Dec. 31....	Jan. 6
Pastores.....	U. F. C. Jan. 2....	Jan. 10
Zacapa.....	U. F. C. Jan. 6....	Jan. 13
Allianca.....	P. R. R. Jan. 7....	Jan. 13
Calamares.....	U. F. C. Jan. 9....	Jan. 17
Carrillo.....	U. F. C. Jan. 13....	Jan. 20
Colon.....	P. R. R. Jan. 14....	Jan. 20

(Continued on page 196.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon January 3.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Dec. 28....	Caesar.....	American.....	U. S. Navy.....	Norfolk.....	San Francisco.....	Govt. Expo. Exh.....	2,000	2,934	1,731
Dec. 28....	Hawaitian.....	American.....	American-Hawaiian S.S. Co.....	New York.....	San Pedro.....	General mdse.....	6,000	5,903	4,193
Dec. 28....	Rosario.....	British.....	Bank Line, Ltd.....	New York.....	Japan & China.....	General mdse.....	8,673	6,136	4,731
Dec. 29....	Kusama.....	British.....	Ellerman & Bucknell S.S. Co, Ltd.....	Galveston.....	Yokohama & Kobe.....	*Cotton.....	3,556	5,552	4,093
Dec. 31....	Crickel.....	American.....	Linderman S.S. Co.....	Portland, Me.....	San Francisco.....	General mdse.....	2,016	1,330	805
Dec. 31....	Success.....	British.....	D. A. Smith.....	Philadelphia.....	San Francisco.....	General mdse.....	570	570	570
Jan. 1....	Virginian.....	American.....	American-Hawaiian S.S. Co.....	New York.....	San Diego.....	General mdse.....	10,168	9,836	7,398
Jan. 3....	Advance.....	American.....	Panama R. R. S.S. Line.....	New York.....	Balboa.....	General mdse.....	1,546	2,965	2,161

*13,400 bales, amounting to 7,102,000 pounds.

†Barkentine, convict ship, in tow of the steamship Crickel.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Dec. 28....	Santa Cruz.....	American.....	W. R. Grace & Co.....	San Francisco.....	New York.....	General mdse.....	6,000	5,427	3,748
Dec. 29....	Mina Brea.....	British.....	London & Pacific Pet. Co.....	Talpa, Peru.....	Falmouth.....	Fuel oil.....	2,200	4,317	2,635
Dec. 30....	Palena.....	Chilean.....	South American S.S. Co.....	Talcahuano.....	Cristobal.....	General mdse.....	1,549	3,639	2,537
Dec. 30....	Colon.....	American.....	Panama R. R. S.S. Co.....	Bilboa.....	New York.....	General mdse.....	2,857	5,866	4,222
Dec. 30....	Mexican.....	American.....	American-Hawaiian S.S. Co.....	Honolulu.....	New York.....	Sug. & gen. mdse.....	10,338	8,713	6,436
Jan. 1....	Pennsylvania.....	American.....	American-Hawaiian S.S. Co.....	Seattle.....	New York.....	General mdse.....	4,000	6,819	4,663
Jan. 3....	Strathalbyn.....	British.....	Strathalbyn S.S. Co.....	Iquique.....	*Colon.....	Nitrates.....	6,550	4,794	3,566
Jan. 3....	Cathay.....	Danish.....	East Asiatic S.S. Co, Ltd.....	Guayaquil.....	Copenhagen.....	General mdse.....	5,731	4,584	3,611
Jan. 3....	J. L. Luckenbach.....	American.....	Luckenbach S.S. Line.....	San Francisco.....	Philadelphia.....	Ballast.....	5,114	3,258	3,258

*For orders.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessels	Line	From
Jan. 1....	Gen. Jno M Schofield	U. S. Navy.....	Newport News.
Jan. 2....	Damara.....	Luckenbach D.S. Co.....	New York.
Jan. 2....	Pro cus.....	U. S. Navy.....	New York.
Jan. 3....	Arduinhor.....	American-Australian S.S. Co.....	New York.
Jan. 4....	Francis Hanify.....	Hanify S.S. Co.....	Norfolk.
Jan. 5....	English Monarch.....	Monarch S.S. Co.....	New York.
Jan. 5....	Saint Ursula.....	.....	New York.
Jan. 5....	Charlton Hall.....	U. S. Steel Prod. Co.....	New York.
Jan. 5....	City of Carinik.....	Ellerman Line, Ltd.....	New York.
Jan. 5....	Nairnshire.....	Scottishshire Line.....	New York.
Jan. 5....	Rhodesia.....	.....	New York.
Jan. 5....	Strathallan.....	.....	New York.
Jan. 5....	Lyra.....	Luckenbach S.S. Line.....	New York.
Jan. 5....	Blaugton.....	T. S. N. Co.....	Cardiff.
Jan. 6....	Panama.....	Panama R.R. S.S. Line.....	New York.
Jan. 7....	Panaman.....	American Hawaiian S.S. Co.....	New York.

*Vessels which will pass through the Canal

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Jan. 2....	J. L. Luckenbach.....	Luckenbach S.S. Line.....	San Francisco.
Jan. 3....	Boukdale.....	Bank Shipping Co., Ltd.....	San Francisco.
Jan. 4....	Evelyn.....	Luckenbach S.S. Line.....	San Francisco.
Jan. 4....	Olson & Mahony.....	Olson & Mahony Line.....	San Francisco.
Jan. 5....	August.....	Jacob Christenson.....	Antofagasta.
Jan. 6....	Dakota.....	American-Hawaiian S.S. Co.....	Honolulu.
Jan. 6....	Ohioan.....	American-Hawaiian S.S. Co.....	San Pedro.
Jan. 6....	Craigie.....	Craigie S.S. Co.....	San Pedro.
Jan. 6....	Craiser Hall.....	U. S. Steel Products Co.....	.....
Jan. 6....	Arma.....	Akties Arna.....	.....

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
Dec. 30....	Puerto Rico.....	Cie Gen. Transatlantique.....	Bordeaux.
Dec. 31....	Bologna.....	La Velvece.....	Genoa.
Jan. 1....	Falk.....	Seaberg S.S. Line.....	H. L. Indis Cays.
Jan. 1....	Nemesia.....	Lindsey, Swan, Hunter, Ltd.....	Jamaica.
Jan. 2....	Diala.....	Harrison Line.....	Liverpool.
Jan. 3....	Danube.....	R. M. S. P. Co.....	Jamaica.

*DEPARTURES.

Date	Vessel	Line	To
Dec. 28....	Niponian.....	Leyland Line.....	Galveston.
Dec. 30....	Wegadesk.....	Erna Line.....	Felton, Cuba.
Dec. 31....	Nar.....	Harloff & Ro'seth.....	Cienfuegos.
Jan. 1....	Puerto Rico.....	Cie Gen. Transatlantica.....	Bordeaux.
Jan. 2....	Ocland.....	Erna Line.....	Nima Nima.
Jan. 2....	Freda.....	Seaberg S.S. Line.....	Laguna.
Jan. 3....	Bologna.....	La Velvece.....	Genoa.

*EXPECTED ARRIVALS.

Jan. 9....	Legaspi.....	Cia Transatlantica.....	Barcelona.
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*EXPECTED DEPARTURES.

Jan. 4....	Berlin.....	West India S.S. Co.....
Jan. 4....	Dicator.....	Harrison Line.....	Belize.
Jan. 5....	Danube.....	R. M. S. P. Co.....	Southampton.
Jan. 12....	Legaspi.....	Cia Transatlantica.....	Barcelona.

*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Dec. 28....	Chile.....	Pacific Steam Nav. Co.....	Callao.
Dec. 31....	Pachico.....	Peruvian S. S. Co.....	Callao.
Dec. 31....	Manavi.....	Pacific Steam Nav. Co.....	Guayaquil.

*DEPARTURES.

Jan. 2....	Chile.....	Pacific Steam Nav. Co.....	Callao.
Jan. 2....	Peru.....	Pacific Mail S.S. Co.....	San Francisco.

*EXPECTED ARRIVALS.

Jan. 4....	Pennsylvania.....	Pacific Mail S.S. Co.....	San Francisco.
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*EXPECTED DEPARTURES.

.....	Pachico.....	Peruvian S.S. Co.....	Callao.
.....	Manavi.....	Pacific Steam Nav. Co.....	Guayaquil.

*Other than vessels using the Canal.

(Continued from page 195.)

Tenadores.....	U. F. C. Jan. 16.....	Jan. 24	Santa Marta.....	U. F. C. Jan. 14.....	Jan. 21	Zacapa.....	U. F. C. Feb. 18.....	Feb. 25
Almirante.....	U. F. C. Jan. 20.....	Jan. 27	Panama.....	P. R. R. Jan. 16.....	Jan. 22	NEW ORLEANS TO CRISTOBAL-COLO.		
Ajvaque.....	P. R. R. Jan. 21.....	Jan. 28	Pastores.....	U. F. C. Jan. 18.....	Jan. 25	Cartago.....	U. F. C. Dec. 30.....	Jan. 6
Metapan.....	U. F. C. Jan. 23.....	Feb. 1	Zacapa.....	U. F. C. Jan. 21.....	Jan. 28	Turrialba.....	U. F. C. Jan. 2.....	Jan. 7
Santa Marta.....	U. F. C. Jan. 23.....	Feb. 1	Allianca.....	P. R. R. Jan. 23.....	Jan. 29	Heredia.....	U. F. C. Jan. 6.....	Jan. 13
Panama.....	P. R. R. Jan. 27.....	Feb. 3	Calamarez.....	U. F. C. Jan. 25.....	Feb. 1	Abangarez.....	U. F. C. Jan. 9.....	Jan. 14
Pastores.....	U. F. C. Jan. 30.....	Feb. 7	Carrillo.....	U. F. C. Jan. 28.....	Feb. 4	Parismina.....	U. F. C. Jan. 13.....	Jan. 20
Zacapa.....	U. F. C. Feb. 3.....	Feb. 10	Colon.....	P. R. R. Jan. 30.....	Feb. 7	Atenas.....	U. F. C. Jan. 16.....	Jan. 21
Allianca.....	P. R. R. Feb. 4.....	Feb. 10	Tenadores.....	U. F. C. Feb. 1.....	Feb. 8	CRISTOBAL-COLON TO NEW ORLEANS.		
CRISTOBAL-COLON TO NEW YORK.			Almirante.....	U. F. C. Feb. 4.....	Feb. 11	Atenas.....	U. F. C. Jan. 7.....	Jan. 12
Almirante.....	U. F. C. Jan. 7.....	Jan. 14	Advance.....	P. R. R. Feb. 6.....	Feb. 13	Cartago.....	U. F. C. Jan. 7.....	Jan. 14
Advance.....	P. R. R. Jan. 9.....	Jan. 16	Metapan.....	U. F. C. Feb. 8.....	Feb. 16	Turrialba.....	U. F. C. Jan. 14.....	Jan. 19
Metapan.....	U. F. C. Jan. 11.....	Jan. 19	Santa Marta.....	U. F. C. Feb. 11.....	Feb. 18	Heredia.....	U. F. C. Jan. 14.....	Jan. 21
			Panama.....	P. R. R. Feb. 13.....	Feb. 19	Abangarez.....	U. F. C. Jan. 21.....	Jan. 26
			Pastores.....	U. F. C. Feb. 15.....	Feb. 22	Parismina.....	U. F. C. Jan. 21.....	Jan. 28

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, JANUARY 13, 1915.

No. 21.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

First Large Cargo of Diesel Engine Oil.

The Union Oil Company's tank steamer *Cordelia* is due to arrive at Balboa from California about January 14, with a cargo of 37,000 barrels of Diesel engine oil for local storage. Forces of The Panama Canal are engaged in laying a 6-inch pipe line from the Pacific terminal handling plant to oil crib No. 1, for the express purpose of handling Diesel engine oil, and if completed in time, it will be used in discharging the cargo of the *Cordelia*; if not, the Union Oil Company has been authorized to deliver the oil through its own 8-inch pipe line.

La Veloce to Build an Office at Cristobal.

Alot on the waterfront at Cristobal, situated a little to the west of the partly constructed office building of the Hamburg-American Line, has been let to the Italian Steam Navigation Company (La Veloce), under a revocable license, for the construction of a 2-story building, the first floor to be used for offices in connection with the company's local steamship business, and the second, as quarters for the resident manager and his assistants.

Sale of the Steamer "Chitre."

The steamer *Chitre* of the National Navigation Company of Panama has been sold to the Panama Government for use as a patrol boat along the San Blas coast. The vessel was built for the Panama Timber Company, in 1911, by Edwards and Company, Limited, of Millwall, England, and was brought to the Isthmus knocked down. It was originally christened the *Lillian*, but upon its sale to the Panama Steamship Company, shortly after that company was organized, its name was changed to *Chitre*, from a seaport town and port of call of the steamship line in Los Santos province. The Panama Steamship Company was recently consolidated with the National Navigation Company, and upon the consummation of the arrangement, the *Chitre* was retired from the coastal service. At the request of the owners, a board, consisting of Messrs. W. I. Pender, R. B. Sanford, and C. W. Craddock, made an inspection of the machinery

in the vessel a few weeks ago, and found it to be in fairly good condition, although a general overhauling was recommended. It was passed through the Canal this week and will be placed in dry dock at Cristobal, in order that a thorough inspection may be made of the hull at the same time the machinery is being overhauled. The *Chitre* is an iron twin screw steamer, with a length of 93 feet, moulded breadth of 21 feet, depth of seven feet, and loaded draft of five feet. Its boiler is of the Scotch marine type, with a diameter of 10 feet three inches, and length of nine feet three inches. It has a Canal tonnage of 241 gross.

Malaria Infection—Unprotected Localities.

COL. CHESTER HARDING,

Acting Governor, Building.

SIR: Although our malaria rate among employees is lower than for the corresponding month of any previous year, there is still danger of contracting this disease, unless reasonable care is taken against exposing oneself at night in unprotected localities. A large proportion of the cases which have occurred recently among white employees are directly traceable to such exposure. A recent sad and unexpected death among our female employees was almost certainly due to just such a cause. I, therefore, recommend that this letter be published in THE CANAL RECORD, for the information of, and as a warning to, all employees. Respectfully,

CHAS. F. MASON,

Chief Health Officer.

Balboa Heights, C. Z.

January 11, 1915.

Union Oil Company to Supply Fuel Oil until Canal Shipment Arrives.

The Union Oil Company has agreed to supply The Panama Canal with fuel oil after the expiration of its present contract on December 31, 1914, in any quantity that may be desired, until such time as the permanent oil handling plants are in operation, and the first cargoes of fuel oil have been received by the Canal under the 1915 contract. The price will be the same, \$1.10 a barrel. It is estimated that approximately 27,500 barrels of oil will be required from the 1st to the 15th of January, when the first shipment is expected. The quality of the oil, the conditions governing tests, etc., called for in the existing agreement, will apply to any purchases under this arrangement.

Christian Science Society to Buy Old Ancon Court Building.

The Ancon Christian Science Society has applied for the purchase of the old Circuit Court building at Ancon, together with a lease of the ground on which it stands. The committee on church sites has taken favorable action on the society's application, and has recommended that a price be fixed for the building by the Chief Quartermaster and Surveying Officer.

CANAL TRAFFIC IN DECEMBER.

Ninety-Nine Vessels Made the Transit and over \$403,000 were Collected in Tolls.

The receipts from Canal tolls for the month of December, 1914, aggregated \$411,895.44, an increase of \$24,653.04, as compared with November, the previous high month. Following is a summary of toll collections, by months or periods, up to January 1, 1915:

PERIOD.	Amount.
Period to August 15, 1914.....	\$ 11,610.69
August 15 to August 31.....	84,401.80
September 1 to September 30....	269,863.00
October 1 to October 31.....	378,089.12
November 1 to November 30.....	387,242.40
December 1 to December 31.....	411,895.44
Total.....	\$1,547,100.45

The aggregate of cargo tonnage for December, 446,415 tons, shows a slight decrease, but these figures do not include two lumber cargoes amounting to 5,232,236 board feet, the cargo tonnage of which is not stated. The transits of vessels through the Canal up to January 1, 1915, together with the totals of cargo carried, eastbound and westbound, were, as follows:

Month.	Eastbound.		Westbound.		Total.	
	Ves-sels.	Cargo.	Ves-sels.	Cargo.	Ves-sels.	Cargo.
Aug....	12	57,182	12	49,106	24	106,288
Sept....	30	186,776	27	135,262	57	322,038
Oct....	40	252,288	44	163,069	84	420,357
Nov....	38	242,391	54	206,510	92	448,901
Dec....	57	267,670	42	184,735	99	446,415
Total.	177	1,007,377	179	743,682	356	1,743,899

Eastbound traffic refers to vessels going from the Pacific to the Atlantic; westbound, to vessels going from Atlantic to the Pacific.

Of the total of 356 vessels, 319 were laden, and 36 were in ballast or not cargo carriers.

As distributed over the principal routes on which the traffic through the Canal is moving, the transits to January 1, 1915 may be summarized, as follows:

ROUTE.	No. V'sls.	Cargo Tonnage.
Coastwise, eastbound.....	74	399,450
Coastwise, westbound.....	81	353,230
U. S. Pacific coast to Europe.....	51	351,880
Europe to U. S. Pacific coast.....	10	45,732
South America to U. S. and Europe.....	37	230,942
U. S. and Europe to South America.....	21	104,828
U. S. Atlantic coast to Far East.....	36	224,134
Far East to U. S. Atlantic coast.....	2	14,500
Miscellaneous routings.....	8	19,203
Vessels without cargo.....	36	
Totals.....	356	1,743,899

The month of December marked the passage of vessels from the Far East to the Atlantic coast of the United States for the first time. There were two, one the *Indradeo* from China and Japan, and the other the *Atchell*, from Hongkong, both for New York.

Among the principal items of cargo that were carried through the Canal in December were 91,560 tons of wheat, barley, and flour; 14,350 tons of coal and coke, 28,350 tons of nitrates, 26,903 tons of sugar, 14,600 tons of

oil and benzine, 15,555 tons of cotton, 7,300 tons of iron ore, and 5,232,236 board feet of lumber.

Office of Captain of the Port at Balboa Moved.

The office of the captain of the port at Balboa was moved on Sunday, January 10, from the Panama railroad building at the steel pier, to the second floor of the new shops office structure of the Mechanical Division. The quarters at the new location are much more commodious; the captain of the port has his private office on one side of the hall in a part of the building looking toward the Canal, with a room in front, where the assistant captain of the port, the harbor master, and the despatch clerk are stationed. On the other side of the hall is the general office, containing the desk of the chief clerk and his assistants, as well as those of the deputy inspector of customs, the deputy steamship inspector, the deputy revenue collector, a representative of the Supply Department, and a field office of the Dredging Division. Adjoining this, is an office for the admeasurers, and an office and rest room for the pilots.

Award for Metal Furniture.

An award has been made to the General Fireproofing Company of Youngstown, Ohio, for furnishing 80 steel cabinet filing cases for the blueprint vault in the drafting room on the third floor of the Administration Building, and a quantity of adjustable steel shelving for use in storing books in the library and time rolls in the basement, at a total price of \$3,093.10.

Sixty-four of the 80 cabinets for the blueprint vault are for use in filing tracings, when rolled up on wooden sticks, which are usually about three-fourths of an inch in diameter and 36 inches long. Each of these cabinets will be made up of five compartments, having a clear space of 37 inches between the front and rear, capable of containing 100 tracings, when rolled up in the manner above indicated. Each compartment is equipped with shelves, which must be able to support a load of 60 pounds to the square foot without noticeable deflection, and has a pressed steel swing door in front.

Of the remaining cabinets, 12 are for use in filing miscellaneous sketches and tracings. They will contain five drawers each, with inside dimensions of three feet four inches by 20 inches, and are to be three inches deep. They are to slide back and forth on roller bearings,

and are to be equipped with heavy brass handles. Each drawer will be provided with a metal guard to prevent the contents from being torn or otherwise injured. The remaining four filing cases will contain 15 drawers each, and in construction, will be similar to the above cabinets, except that each drawer will be 12 inches wide and 24 inches deep.

For the time roll section and library, the following shelving has been ordered: One stack six shelves high, 21 inches deep, and in four sections; three stacks six shelves high, 21 inches deep, and in three sections each; one stack six shelves high, 21 inches deep, and in eight sections; four stacks five shelves high, 30 inches deep, and in seven sections each, and four stacks six shelves high and 21 inches deep, and in eight sections each. All sections will be 36 inches in length, and the shelves must be able to support a weight of 300 pounds to the square foot.

Up to the present time, the use of metal furniture in the Canal offices on the Isthmus has not been entirely satisfactory, owing to its tendency to rust. In order to obviate this condition in the above order, it has been stipulated that all steel and iron be either electro or hot galvanized, and all small parts to be made of bronze or brass. All exterior surfaces will have an olive green shade.

Sunday Evening Dinners at Hotel Washington.

The Sunday evening dinner concerts at the Hotel Washington have been discontinued, though the Sunday evening dinners will continue to be a special feature. On the Saturday evenings on which there are no Washington Cotillon Club dances at the hotel there will be music provided during the dinner and evening. The first of these will be January 23.

"Navy No. 1" to Replace the "Q" in Hotel Aspinwall Sunday Service.

Hereafter, the launch *Navy No. 1* will replace the *Q* on the Saturday evening and Sunday service to Taboga, and the Aspinwall management hopes to be able to prevent a repetition of the troubles of January 9.

Board of Admeasurers' Decisions on Exemptions.

At the meeting of the Board of Admeasurers, held January 8, it was decided that a carpenter shop on board vessel, provided it is used as such and so designated, will be entitled to deduction and will not be charged tolls. Vessels with fumigating plants will likewise be entitled to a deduction for the space so occupied.

Deceased Employees.

Name.	Check No.	Native of	Isthmian residence.	Employed by	Date of death.
Baker, William.....		Jamaica.....	Corozal.....	P. R. R.....	Jan. 7, 1915
Barnett, Percy.....	36251	Barbados.....	Colon.....	Oper. & Mtce....	Jan. 5, 1915
Garcia, Leoncardo.....	5905	Curaçao.....	Caimito.....	P. R. R.....	Dec. 31, 1914
Graves, Chas. C.....		Barbados.....	Panama.....	Y. M. C. A.....	Dec. 30, 1914
Greenidge, William.....	21789	Barbados.....	Panama.....	Dredging.....	Dec. 30, 1914
Hall, Augustus.....	20964	Jamaica.....	Colon.....	Health Dept.....	Jan. 1, 1915
Heron, Arthur.....	38817	Jamaica.....	La Boca.....	Municipal Eng.....	Jan. 2, 1915
Lindo, Clodric.....	34761	Jamaica.....	Paraiso.....	Supply Dept.....	Jan. 6, 1915
Malcolm, Richard.....	57420	Jamaica.....	Colon.....	P. R. R.....	Jan. 6, 1915
McGowan, Anna.....	435	U. S. A.....	Ancon.....	P. R. R.....	Jan. 6, 1915
Smith, Cornelius.....	15405	Jamaica.....	Colon.....	P. R. R.....	Jan. 3, 1915

The estates of these deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

LIGHT AND POWER SERVICE.

New Transmission System and Substations Complete—East Line in Operation.

The month of December marked the completion by the Electrical Division of all construction work in connection with the trans-isthmian transmission line, and the four principal substations at Cristobal, Gatun, Miraflores, and Balboa. The Miraflores and Balboa substations and the transmission line connecting them were energized on November 29, and placed in service two days later. The energizing of the east transmission line between Miraflores and Gatun was delayed until the Panama railroad could remove its overhead telephone, telegraph, and signal wires, but on December 23 this line was tested out, and the generators at the Miraflores power plant and the Gatun hydroelectric station were operated in parallel for a short time. On December 28, the load at Miraflores was transferred to the hydroelectric station, and the east line placed in permanent service. The placing of the west line in service will be effected as soon as the Panama railroad completes the removal of its overhead work. No special difficulties were experienced in placing the substations and the various parts of the transmission line in operation.

Until both sides of the duplicate transmission line are in service, steam will be kept up in five of the boilers at the old plant at Miraflores, so as to take care of any interruptions that may occur, and two generators are kept running for the purpose of power factor correction, as well as to be ready for instant service in case of peak loads or emergencies. Practically all current for the power and lighting service of the Canal is now supplied by the generating plant at Gatun Spillway, and sent over the transmission line to the various substations, where it is transformed for distribution as required. The steam plant at Miraflores assists the hydroelectric station at times of peak loads, which occasionally exceed the capacity of the turbines in the hydro station.

The permanent feeders between the Gatun substation and the hydroelectric station have been completed and placed in service, and three permanent outgoing feeders at Cristobal, eleven at Gatun, one at Miraflores, and six at Balboa have been completed and the load transferred from the former temporary feeders. The work of changing the steam generator control and excitation from the steam plant to the new substation at Miraflores has been begun. The temporary 11,000-volt substation at Balboa, which had been in service for about a year, has been dismantled; the feeders from it have been transferred to the new substation, while the transformer, switchboard, and other equipment have been installed in a box car as a portable substation for use in connection with the relay pumps at Coco Solo Point.

In order to give a clearance of at least 10 feet between the transmission line wires and the ground, a considerable amount of earth and rock excavation had to be made in cuts along the Panama railroad right-of-way between Gatun and Miraflores. This work was begun in October, and completed in December; it involved the removal of about 5,800 cubic yards of material, of which 3,900 cubic yards were rock, and 1,900 cubic yards earth.

Barge 28, assigned to the gravel service at Gamboa, sank in the Chagres River on December 28.

JOINT LAND COMMISSION.

Rules of Dismissal.

*Rule of dismissal No. 155, docket numbers as shown, December 22, 1914.—In the matter of sundry claims—*The United States in its answer to the following claims stated that payment has been made for the improvements covered by such claims. At a public session held this date the claimants appeared in person and informed the commission that they have received payment in full. These claims are, therefore, dismissed on account of previous payment: Docket No. 93, Cisto Carrillo (Sixto Carrilla), paid March 9, 1914; docket No. 94, Lorenzo Nedrano (Medrano), paid March 7, 1914; Docket No. 92, Manuel Vallaeta (Ballestre), paid March 2, 1914.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

*Rule of dismissal No. 157, docket No. 89, December 24, 1914.—In the matter of the claim of Victoria de los Rios, viuda de Jimenez, for the lands of Aguadientito—*Under date of April 1, 1913, Victoria de los Rios, vda. de Jimenez, filed with the commission a claim for an interest claimed by her in the lands of Aguadientito, and for certain improvements thereon. On August 1, 1914, by motion of the claimant through her attorney, Valentine E. Bruno, the claim was consolidated with the claim of Hortensio de Leon et al, as amended, docket No. 27-1.

This latter claim was subsequently dismissed under the commission's rule of dismissal No. 140, which specified only docket No. 27-1.

This formal rule, therefore, entered dismissing the claim of Victoria de los Rios, vda. de Jimenez, docket No. 89, for the reasons specified in rule of dismissal No. 140 above referred to.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

*Rule of dismissal No. 159, December 31, 1914.—In the matter of sundry claims—*With reference to the claims for improvements of the persons hereinafter named, the evidence before the commission is that they have made settlement with the United States for their houses and other improvements. The names of such persons, their docket numbers, the tax numbers, where stated, of the houses included in the settlements, and their location follow:

Docket No.	Name.	Vou. No.	Tax No.	Locality.
761	Angeron, Maria Magallan de.....	3315	1633 1644 1655 1665 1667 1687	Mandinga.
959	Bailey, Joseph.....	3252	.....	Empire.
856	Barrio, Julian.....	3593	.....	Lion Hill.
1041	Boreck, Alto.....	3213	.....	Peña Blanca
1220	Camarin, Manuel.....	3214	.....	Monte Lirio.
1239	Cerezo, Valentin.....	3226	.....	Monte Lirio.
1714	Flori, Maria A. de la.....	3504	.....	Ranchito Quemado.
1217	Gonzalez, Porfirio.....	3313	.....	Monte Lirio.
853	Gadin, Thomas (Gordon).....	3132	.....	Bohio.
1763	Henry, James.....	3216	192	Bohio.
1124	Henry, Samuel.....	3233	58	"Orchilla Garto."
175	Hernandez, Reginaldo.....	3507	.....	Escoval.
666	Hylton, Joseph.....	3344	453	Matachina.
1733	Jimenez, Inocencio.....	1037	.....	Quejra lo Inglesa.
1785	McPherson, Daniel.....	3218	.....	Bohio.
208	Prima, Francois, and Marie Roland.....	2863	.....	Majagual.
1594	Quiro, José de la Cruz.....	1661	1576	Cerro Calderon.
1698	Ramos, José.....	3510	.....	Cienega.
1150	Segura, Valentin.....	17751	.....	Palo Horquetu.

In view of the agreements before noted, these claims call for no further action by this commission, and they are accordingly dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

*Rule of dismissal No. 161, docket numbers as shown, January 7, 1915.—In the matter of sundry claims—*In the following claims, an examination of the claims and of the documents submitted shows that whatever rights the claimants had in the properties in question arose under leases from the Isthmian Canal Commission: Mrs. St. Louis Andre..... Docket No. 98
Felipe Gomez..... Docket No. 105
Bernard Joseph..... Docket No. 107

In a decision in the case of Augusta Dunlop, rendered April 16, 1913, the commission said:

"We have, therefore, reached the conclusion that it is not within the province of the Joint Land Commission to take cognizance of claims arising out of the revocation of revocable leases or licenses issued by the Isthmian Canal Commission. Such

claims have no organic relation to the grants contained in the Treaty, nor to the international obligations which the United States has agreed to discharge under the Treaty, and for the adjudication of all such claims the claimants must seek a remedy through the procedure afforded by municipal laws."

In accordance with the foregoing decision, the claims of the above claimants are hereby dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

*Rule of dismissal No. 162, January 7, 1915, docket numbers as shown.—In the matter of sundry claims—*With reference to the claims for improvements of the persons hereinafter named, the evidence before the commission is that they have made settlement with the United States for their houses and other improvements. The names of such persons, their docket numbers, their tax numbers, where stated, of the houses included in the settlements, and their location follow:

Docket No.	Name.	Vou. No.	Tax No.	Locality.
106	Cabeza, Pantaleon.....	.....	.....	La Tulua
111	Francis, Richard.....	3413	3323	Gold Hill Valley
109	Johnson, Alexander.....	.....	332	Gold Hill Valley
110	Juliano, Florentino.....	.....	331	Gold Hill Valley
112	Williams, Richard.....	611	313	Gold Hill Valley

In view of the agreements before noted, these claims call for no further action by this commission, and they are accordingly dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

*Rule No. 162, docket No. 5, January 8, 1915.—In the matter of the claim of Laurent Requelet for property of Chagrecito—*This case has previously been heard by the commission, but in view of the fact that there are certain features of the case upon which the commission has not been thoroughly informed it is hereby ordered that this case be set for further public hearing at 9 a. m., Monday, January 18, 1915, and that the parties have the right to submit, if they so desire, further evidence and citations of authorities on the following questions:

1. What relations, if any, existed between the claimant and the United States Government prior to the entering into of the lease between the claimant and the United States Government.

2. What effect did the entering into the lease between the United States Government and the claimant have upon any rights which the claimants may have acquired prior thereto.

3. How long or for what period of time did the lease between the claimant and the United States Government remain in force, and how much, if any, rent was paid by the claimant to the United States.

4. Was there any agreement between the United States and the claimant that notice would be given to the claimant of the time that the United States desired to use and occupy the premises covered by claimant's lease.

5. What was the number and value of the rubber trees claimed by claimant at the time they were alleged to have been cut down and destroyed by the Government.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

WEATHER CONDITIONS, CANAL ZONE, DECEMBER, 1914.

Normal conditions of rainfall distribution across the Isthmus were reversed during the month of December the average monthly rainfall being higher in the Pacific section than in either the central or Atlantic sections.

Rainfall for the month was generally below normal, except along the Pacific coast. The deficiencies were greatest in the Atlantic section, amounting to nearly 50 per cent of the normal December rainfall. Monthly totals ranged from 2.25 inches at Alhajuela to 10.39 inches at the Caño station on Gatun lake. The maximum precipitation recorded in any one day was 2.22 inches at Colon on the 12th.

Average air temperatures on both coasts were the highest of record for the month of December. The relative humidity and daytime cloudiness were slightly above normal, while the atmospheric pressure and wind movement were deficient at both stations.

No fogs were observed during the month at either coast station, but night and early morning fogs were numerous at the interior stations. Of the fogs observed, 65 per cent were dissipated by 6.30 a. m., 93 per cent by 7.30 a. m., and 100 per cent by 8.30 a. m.

*Elevations of Gatun Lake, (Feet above mean sealevel)—*Mean for month, 86.87; maximum, 87.07 on the 24th; minimum, 86.65 on the 4th. Evaporation from lake, surface 5,933 inches.

STATION.	Pressure reduced to mean of 24 hourly.	Temperature.				Mean relative humidity.	Precipitation.			Wind.			
		Mean.	Maximum.	Date.	Minimum.	Date.	Total inches.	Station average.	Days of .01 inch or more.	Total movement (inches.)	Prevailing direction.	Max. velocity in (miles.)	Date.
Colon.....	29.822	81.5	89	Dec. 11	75	Dec. 13	8.88	12.10	20	8,187	N.E.	29	N.E. Dec. 10
* Balboa Heights.....	29.818	81.2	92	Dec. 5	72	Dec. 28	8.28	4.41	20	4,669	N.W.	36	S.E. Dec. 26

*Formerly Ancon.

Rules.

*Rule No. 156, docket No. 1976, December 24, 1914.—*In the matter of the claim of Gerardo Ortega for the lands of Barro Colorado Arriba—Under date of October 11, 1914, Gerardo Ortega, through his attorneys Fabrega and Arias, filed with the commission his claim for the lands known as Barro Colorado Arriba.

Subsequently, on November 16, 1914, the claimant filed with the commission a motion for permission to withdraw this claim without prejudice. The motion of the claimant was granted and this formal rule dismissing the claim is entered, in order that it may be properly stricken from the trial docket.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, January 9, 1915. All heights are in feet above mean sealevel:

DAY AND DATE.	STATIONS.				
	Vigla.	Alhajuela.	Gatun Lake.	Miraflores Lake.	
Sun., Jan. 3.....	127.6	93.10	7.02	87.02	54.00
Mon., Jan. 4.....	29.0	94.05	87.02	87.02	53.97
Tues., Jan. 5.....	127.50	93.47	7.03	87.00	53.83
Wed., Jan. 6.....	127.41	92.96	87.01	87.04	54.03
Thurs., Jan. 7.....	127.55	92.95	87.08	86.99	53.92
Fri., Jan. 8.....	127.55	93.69	87.02	87.00	53.83
Sat., Jan. 9.....	127.55	93.08	87.08	87.01	53.77
Height of low water to nearest foot....	25.0	91.0			

December Rainfall for Three Years.

STATIONS.	1912	1913	1914	Station Av.	Years of record	Rainy days '14
<i>Pacific Section</i>						
Balboa.....	4.94	8.72	7.41	5.92	16	20
* Balboa Heights.....	3.27	4.84	8.25	4.44	18	20
Miraflores.....	6.75	4.33	7.42	7.51	7	20
Puerto Miguel.....	3.91	2.14	6.26	6.47	7	17
Rio Grande.....	4.04	1.59	5.87	5.49	10	15
<i>Central Section</i>						
Culebra.....	4.87	1.50	4.25	7.28	24	13
Camacho.....	3.46	1.98	5.38	5.98	9	15
Empire.....	3.71	2.03	4.44	5.15	11	17
Gatun.....	3.63	1.82	6.15	6.79	32	18
Juan Mena.....	2.02	1.67	2.90	4.76	5	14
Alhajuela.....	2.20	1.59	2.25	6.43	16	19
El Vigila.....	1.53	1.03	5.53	5.59	7	18
Frijoles.....	5.65	4.73	6.94	5.77	3	21
Trinidad.....	5.61	4.12	5.61	9.40	7	17
Monte Lirio.....	5.24	7.19	5.02	9.84	6	14
<i>Atlantic Section</i>						
Gatun.....	9.42	8.06	4.62	11.97	10	18
Brazos Brook.....	9.63	2.55	5.17	13.00	9	21
Colon.....	11.47	6.55	8.88	12.10	44	20

*Formerly Ancon.

BALBOA RAILROAD STATION.

Single Umbrella Shed with Main Building and Comfort Stations: the Principal Features.

Located at a point convenient to the new Administration Building, to the east side of the main line tracks, is the new umbrella type station building for the town of Balboa. It follows parallel to the tracks and is 507 feet long, its center being coincident with the center line of the road which swings down from Balboa Heights into what will eventually be Station Plaza, an open place of the full length of the station. The original plans contemplated a corresponding umbrella shed on the west side of the tracks, but owing to the uncertain bearing power of the hydraulic

inches in level between the north and south ends of the track in the length of the station. This necessitated making the platforms and roofs parallel to the grade of the tracks, but the floors of the buildings are kept horizontal. In addition, the north end, for a distance of 137 feet, will be curved to follow the spiral curve of the track, which starts at a point 115 feet from the center line of the building. The front edge of the roof however, will run through in a straight line, as the departure of the curve is only a foot at the end of the station.

The roof of the sheds are composed of a $4\frac{1}{2}$ -inch slab of reinforced concrete covered by a waterproofing member of 5-ply tar and paper, and a $1\frac{1}{2}$ -inch layer of concrete to protect the

wainscot, and framed in with wood mouldings.

In the erection of the station, plans and specifications were prepared in the office of the Chief Quartermaster, and bids were invited from contractors for the labor only, The Panama Canal furnishing all material, except the rough material, such as concrete forms, etc. Under this method, Mr. Eladio Lasso of Panama, was awarded the contract and started work on November 15, 1914; he is to complete it within 140 days, not including any additional time which may be allowed him for delays.

Joint Land Commission Calendar.

The following is a calendar of claims set for hearing for the week ending January 16, 1915:

R. H.



ELEVATION

fill on that side this shed was abandoned as impracticable.

The plan shows a single umbrella shed at either end for a distance of 130 feet, the center portion of 247 feet being of double width and containing the three buildings, i. e., the main building at the center, and the comfort stations for first and second-class passengers at the ends of the central portion, besides the waiting platforms of double width between the buildings. The center, or main building, will project above the umbrella roof of the sheds, but the comfort stations will be all below the shed roof.

In the main building the space is occupied by the station agent's office, a freight and

latter. Reinforced concrete cantilever beams, with an eccentric overhang of 14 feet on the front and six feet six inches on the rear, 12 inches wide on the face, support the roof, in bays of 13 feet each, of which there are 39 in all. The roof panels are 14 by 13 feet and have no intermediate beams, giving a clear unobstructed ceiling. The columns are octagonal, and are 11 feet six inches high, a continuous longitudinal beam, one foot two inches high by 12 inches wide, connecting them all at the top.

The main building takes in five bays of the double width platform, and is 65 feet long by 28 feet wide, with a projecting bay window on the track side for the sale of tickets and for

Monday, January 11—Docket 104, Joaquín García Soto.

Tuesday, January 12—Docket 84, Geo. B. Jones and F. E. Frink.

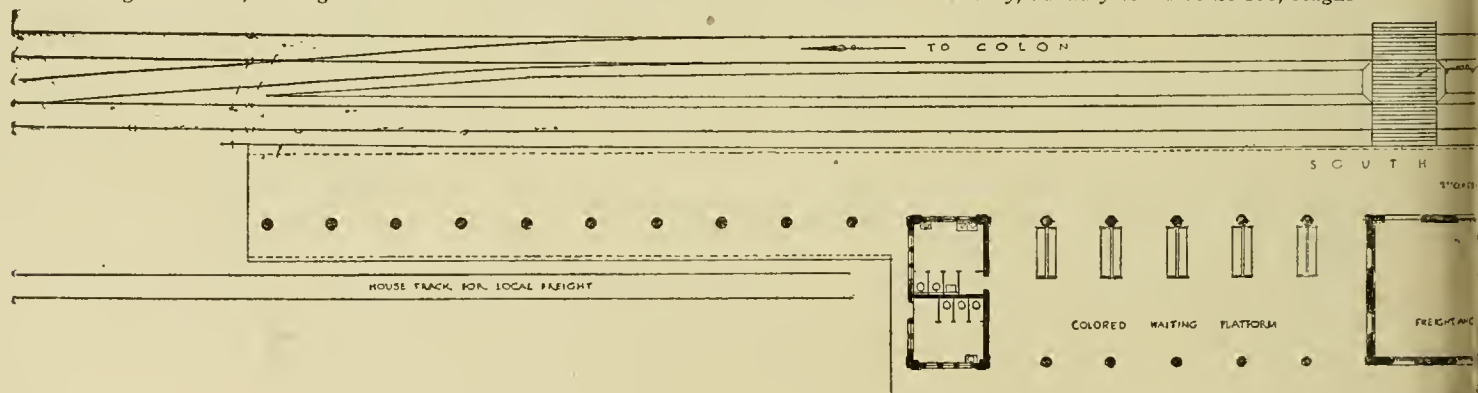
Wednesday, January 13—Docket 127, Pachita Salusada Pinel; Docket 144, Geronimo Gutierrez (Gutierrez); Docket 228, Enrique Rivera; Docket 229, Josefa María Alvear, Docket 235, Wigram Pierce Newsam.

Thursday, January 14—Docket 236, Guillermo Nelson and Delia Nelson de Boy.

Friday, January 15—Docket 257, Ashby 11. Bethancourt.

The following is a calendar of claims set for hearing for the week ending January 23:

Monday, January 18—Docket 258, August-



baggage room, and a barber shop, the latter facing the first-class waiting platform. In the comfort stations, conveniences will be installed for both sexes.

The arrangement of the plaza facing the station calls, in part, for a roadway adjoining the main portion of the station, so that vehicles can drive up to and discharge passengers on the platform under partial cover of the sheds, similar to the arrangement now in use at the Panama station.

Two telephone pay station booths will be installed for the use of first-class passengers.

CONSTRUCTION.

Owing to the existence of a grade of 0.45 per cent in the tracks in front of the building, there is a difference of about two feet six

the telegraph instruments. Hollow concrete blocks from the Corozal plant are used for the walls of all the buildings, and will be stuccoed with cement plaster outside and white plaster inside. The station agent's room will have a wood floor and base, the freight room a concrete floor, and the barber shop a tile floor with a tile wainscot four feet high. Cabinets, mirrors, lavatories, and a hot water heater will be provided in the latter room.

The roof is of wood construction, covered with red tile, similar to the adjacent buildings, and with a cornice of wood. The millwork throughout is of cypress.

The comfort stations will have tile floors, high tile wainscots, marble partitions, and wood doors. Mirrors will be set into the

tin and Manuel de Jesus Rodriguez.

Tuesday, January 19—Docket 259, Juan Gris.

Wednesday, January 20—Dockets 273 and 274, Adolphus del Valle; Docket 275, José Cullen; Docket 295, Narciso Garay, for Hurtado family.

Thursday, January 21—Docket 296, Hurtado family and Josefina and Arturo Miller.

Friday, January 22—Docket 297, Victoriano Pierre; Docket 299, Francisco Campos; Docket 301, Julian Alvarez; Docket 302, José F. Gutierrez; Docket 319, Manuel Gonzalez; Docket 321, Cristo Teodoro; Docket 325, Augustino Baldecchi; Docket 326, William Reid; Docket 327, Alexander McLean; Docket 336, José María Lasso.

WILLIAM TAYLOR, Secretary.

NEW ASYLUM FOR INSANE.

Permanent Institution Will be Located Back of Corozal Village.

A new site for the insane asylum buildings now in the Ancon Hospital district, has been laid out at Corozal on the road, recently built, extending east from the village to the dairy farm. A group of 21 buildings has been planned, including two to be used as quarters for colored employes all, except the latter, to be reconstructed from existing houses in Corozal, as follows: Seven Type 18 two-story bachelor quarters, one Type 5 two-story bachelor quarters, three Type 1 two-story two-family houses, seven Type 17 cottages, and an undetermined type. The work of tearing down some of these quarters, removing the lumber

room, linen room, dry room, office for female nurses, office for male nurses, two examining rooms, and a waiting room; on the upper floor will be operating and dressing rooms. The main office will be a reconstructed Type 17 house, and will consist of offices for physicians, farm manager, and clerk; a laboratory, a room for files, a store room, and toilets. Two cottages will be made into wards for tubercular insane, and two other cottages will serve as additional quarters for nurses. The type not yet agreed upon will serve as a chapel and amusement hall.

The buildings on the north side of the road will set back from it 50 feet; on the south side 20 feet. It is expected that most of the new layout will be completed and ready for oc-

the Mount Hope labor train, effective the morning of the 8th inst.:

SOUTHWARD.		a. m.
Leave north of Fifth street.....		6.44
Leave commissary.....		6.48
Leave water tank, Cristobal roundhouse.....		6.51
Leave dry dock.....		6.55
Arrive Mount Hope.....		6.53

p. m.		
Leave north of Fifth street.....		12.44
Leave commissary.....		12.48
Leave water tank, Cristobal roundhouse.....		12.51
Leave dry dock.....		12.55
Arrive Mount Hope.....		12.53

NORTHWARD.		a. m.
Leave dry dock.....		11.05
Leave point opposite water tank.....		11.08
Leave commissary.....		11.12
Arrive south of Fifth street.....		11.15

p. m.		
Leave dry dock.....		5.05
Leave point opposite water tank.....		5.08
Leave commissary.....		5.12



BALBOA HEIGHTS.

to the new location, and recreation of the buildings has already been begun by forces of the Constructing Quartermaster. 4 4 1

The buildings will occupy both sides of the road, but the larger number, including all of the wards for the insane, will be on the north side, the wards for the insane to be enclosed, as they are now, in a suitable wire protected fence. Although existing buildings are to be used, extensive alterations will have to be made, especially in their interiors, to meet the requirements. Two of the Type 18 bachelor quarters will be converted into wards with reinforced rooms, where the more violent of the insane will be kept; four more of this type will be used as wards for the mildly insane,

occupancy some time in March, when it is proposed to transfer the male section of the present institution, while the female patients will be retained at Ancon until such time buildings for their accommodation are completed. The present buildings at Ancon, when vacated, will probably be converted into quarters for employes.

Failure to Report Cases of Infectious and Contagious Diseases.

Recent instances of parents having failed to report the occurrence of infectious and contagious diseases, including malaria, in the persons of their children make it seem advisable to the Health Department to call attention to the Executive Order of October 14, 1911,

Arrive south of Fifth street..... 5.15

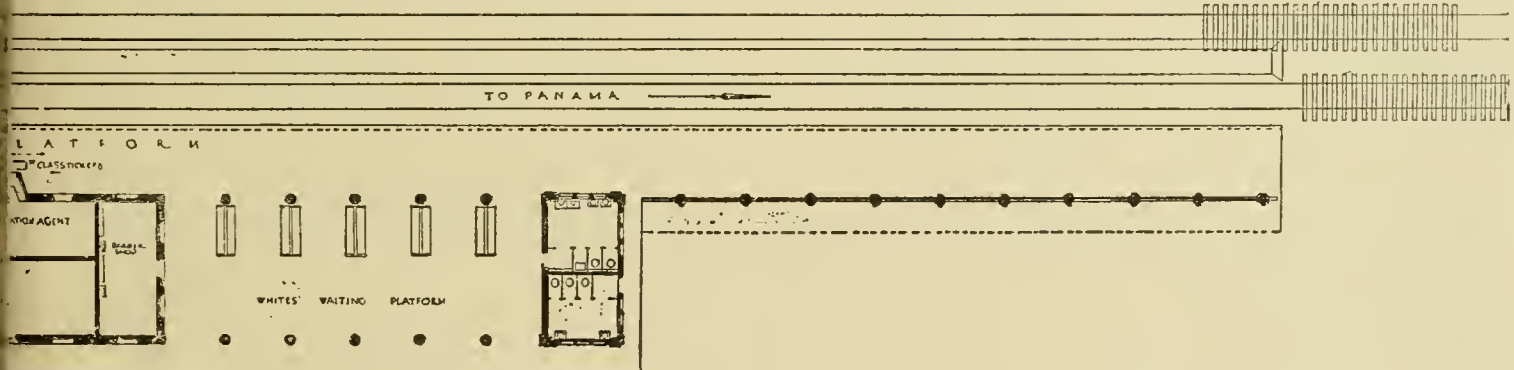
E. S. WAID,
Terminal Trainmaster.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., January 11, 1915.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Alfaro, Mrs. R. J. (pkg.)	Millington, S. F.
Arthur, Elizabeth	Moe, Einar
Auld, Mrs. George	Morgan, Mrs.
Christopher, Thaddeus	Morton, Frank
*Corrigan, Mrs. P. F.	Mulligan, J. E. (pkg.)
Croder, G. F.	Murphy, T.
Emerson, Mae	Norris, Chas. W.
Emery, O. M. Sergt., L. J.	Nugent, B. (2)
Emery, Mrs. Louis J. (2)	O'Hara, J. S. *



ON AND TRACKS.

and one will be made into a combined dining room and kitchen. Two of the Type 1 two-family quarters will be used for observation wards, one for male, and the other for female patients, the lower floor of each for whites, and the upper for colored. The lower floor of another of the two-family quarters will be converted into a laundry, and a ward for hydrotherapeutic treatments, with two dressing rooms, and the upper floor into a sewing room and storage for materials. These, with two cottages as quarters for the nurses, comprise all of the buildings to be erected on the north side of the road.

On the south side, there will be the main building, reconstructed from Type 5 quarters, with the lower floor divided into a clothes

which provides a penalty for such failure. In case of continued noncompliance with these instructions, the Health Department will be obliged to seek an infliction of the penalty.

Colored School at Mount Hope Closed.

The school for colored children at Mount Hope was discontinued on December 31, as the ground on which the building stood is in the oil tank reservation. The children, 14 in number, formerly attending school at this point, have been transferred to the school for colored children at Cristobal on the Mount Hope road.

New Mount Hope Labor Train Schedule.

THE PANAMA CANAL,
OFFICE OF TERMINAL TRAINMASTER,
COLON, R. P., January 6, 1915.

To all concerned—Following will be the schedule of

Emery, Master Louis	Parker, O. M. (pkg.)
Foreman, Clarence	Peterson, Mrs. Arthur
Gallivan, Mrs. James	Pierce, S. H.
Hanson, George *	Pierce, Mrs. S. H. (3)
Howe, Wm. F.	Roberts, Captain S. M.
Klemmer, Miss Sarah	Short, R. D.
Koontz, V. W.	Slade, Rhodes
Kottis, Nicholas	Smart, Emel F.
Kuller, B. F.	Spadheim, Miss Katy
Lefever, Mrs. John	Spalding, Walter J.
McCarty, W. S.	Stuart, M. A.
McConnell, Edward	Thomas, W. A.
McConnell, James (U.S.N.)	Trask, Willard H.
McSweeney, Thomas P.	Ward, John A.
Martin, Jack	Whittaker, Anthony
Miller, Jake (Inf.)	Wons, George
*Paper.	Zubalsky, Morris (Inf.)

Additions to Stock at Commissaries.

Kettles, 7½-qt., ea.....	2.85
Boilers, 1-qt., ea.....	1.00
Boilers, 2-qt., ea.....	1.30

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.
The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective January 14, 1915:

FRESH MEATS.	
MISCELLANEOUS.	
	Price.
Brains, calves' per pound	19
Kidneys, beef, per pound	13
Livers—Beef, per pound	13
Calf, each	65
half, each	33
Oysters, fresh, per pkt.	33
Steak—Hamburger, package	17
Hamburger, 20-pound containers, per pound	14
Sausage—Bologna, per pound	13
Frankfurter, per pound	13
Frankfurter, imported, tin	14
Lieberwurst, per pound	11
Pork, per pound	17
Sweetbread, beef, per pound	23
Eggs, fresh, per dozen	140
per 1/2 dozen	125
Bluefish, per pound	10
Halibut, fresh, per pound	7
Salmon, per pound	6
Yeast, per pound	31
per cake	2

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound	25
Chickens—Fancy, roasting, corn fed, per pound	24
Fowls, per pound	24
Fowls, light, per pound	21
Ducks, Western, per pound	25
Capons, per pound	30
Broilers, milk fed, per pound	29
Broilers, corn fed, per pound	27
Turkeys, per pound	26
Squabs, each	30
Partridges, per pair	1.30
Grouse, per pair	1.30
Pheasants, per pair	1.30

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound	43
Genuine Westphalia, per pound	50
Sugar cured, whole, per pound	20
Half, per pound	22
Sliced, per pound	28
Hocks, per pound	10
Butt end, per pound	12
Whole, boiled, per pound	30
Half boiled, per pound	32
Sliced, boiled, per pound	38
Hocks, boiled, per pound	10
Bacon—Breakfast, sliced, per pound	33
Whole piece, per pound	32
Ham, lunch, per pound	40
Pork, salt, family, per pound	14
Ox tongues, each	1.42
Pigs' feet, per pound	7
Tongues, per pound	22

DAIRY PRODUCTS.

Butter—Creamery, special, per pound	43
Sheffield Farms, extra fancy, per lb.	54
Cheese—Philadelphia cream, cake	9
Roquefort, per pound	41
Young America, per pound	21
Swiss, per pound	30
Edam, each	90
Edam, tin	29
Parmesan, per pound	38
Gouda, per pound	26
Snappy, per cake	9
Milk, Sheffield Farms, per quart	**15
Fermillac, bottle	**25
Ice cream, quart	125
1/2-gallon	150
Cream, Sheffield Farms, quart	**33
pint	**19
1/2 pint	**12

VEGETABLES.

Cauliflower, per pound	16
Beets, per pound	23
Brussels sprouts, per pound	16
Celery, per head	5
Cabbage, per pound	24
Carrots, per pound	24
Cucumbers, hothouse, per pound	17
Lettuce, per pound	4
Onions, per pound	24
Parsnips, per pound	33
Peppers, per pound	18
Potatoes, white, per pound	2
sweet, tropical, per pound	2
Turnips, per pound	2
Tomatoes, per pound	8
Squash, per pound	23

FRUITS.

Apples, per pound	3
Apples, fancy, per pound	6
Cranberries, fresh, per pound	6
Grapes, per pound	14

Grape fruit—American, each	Price.
Tropical, each	5
Lemons, per dozen	11
Limes, per 100	40
Oranges—American, each	23
Tropical, per dozen	9
Coconuts, each	5
Bananas, per bunch	38
Bananas, each	1
Apples, evaporated, per pound	16
Apricots, evaporated, per pound	16
Pears, evaporated, per pound	23
Tangerines, each	13
Figs, dried, per pound	17

* Indicates advance from preceding list.
** Indicates five cents allowed for return of bottle.
† Indicates reduction from preceding list.
‡ Sold only from commissaries, no orders taken for delivery.
§ Not less than 1/2 ham or 1/2 shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective January 9, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Sardines, "Queen Maud", tin	.10	.03
Formaldehyde, bot.	.42	.48
Oil, olive, Italian, tin	6.45	7.25
Garlic, lb.	.09	.11
Pimenton, tin	1.05	1.15
Bedspreads, ea.	1.25	1.10
Bedspreads, ea.	1.20	1.15
Flannellette, yd.	.10	.03
Serge, blue, yd.	2.05	1.90
Caps, men's, ea.	.43	.33
Belts, men's, ea.	.45	.41
Hooks, cup, doz.	.11	.09
Plates, No. 7881, ea.	1.40	1.45
Trunks, ea.	8.10	6.70

Additions to Stock.

Embroidery, insertion, yd.	.09
Embroidery, insertion, yd.	.11
Embroidery, all over, yd.	.59
Embroidery, flouncing, yd.	.62
Towels, T. B., 24 by 44-inch, ea.	.43
Towels, T. B., 29 by 40-inch, ea.	.77
Candy, stick, Powell's, tin	\$0.23
Egg, dessicated, tin	.42
Middy blouses, Bulgarian, ea.	1.15
Corsets, Bon Ton, low, ea.	2.45
Corsets, Bon Ton, medium	2.45
Hats, felt, Stetson, Pointer, ea.	3.15
Pumps, dull calf, T. S., pr.	3.75
Pumps, pat. calf, Liberty, pr.	3.75
Pans, 1 oached egg, ea.	.45
Pots, coffee, 1-qt., ea.	1.15
Pots, coffee, 2-qt., ea.	1.30
Pans, sauce, 1-qt., ea.	.22
Pans, sauce, 1-qt., ea.	.28
Pans, sauce, 1 1/2-qt., ea.	.33
Pans, sauce, 2 1/2-qt., ea.	.50
Pans, sauce, 3 qt., ea.	.63
Covers for sauce pans, ea.	.03
Covers for sauce pans, ea.	.10
Covers for sauce pans, ea.	.13
Covers for sauce pans, ea.	.16
Covers for sauce pans, ea.	.18
Covers for sauce pans, ea.	.23
Pans, sauce, Berlin, 1-qt., ea.	.26
Pans, sauce, Berlin, 4-qt., ea.	.97
Pans, sauce, Berlin, 6-qt., ea.	1.15
Kettles, 6 1/2-qt., ea.	2.55

Rainfall from January 1 to 9, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa	1.70	6	2 0
Balboa Heights	1.55	6	2 0
*Miraflores	1.20	5	1 6
Pedro Miguel .....	.71	5	1.02
Rio Grande .....	.16	5	.23
<i>Central Section—</i>			
Culebra .....	.67	5	1.02
*Camacho .....	.70	1	.36
Empire .....	.14	5	.35
Gambao .....	.99	6	1.33
*Juan Mina .....	.42	1	1.02
Alhajuela .....	.61	5	.74
*El Vigia .....	.19	1	.37
Frijoles	1.12	1	3 07
*Trinidad			
*Monte Lirio .....	.90	1	2.39
<i>Atlantic Section—</i>			
Gatun .....	.41	1	1.01
*Brazos Brook	1 25	1	2 07
Colon	1 05	1	2 41

*Standard rain gage—readings at 5 p. m. daily.
Automatic rain gage at unstarred stations—values midnight to midnight.

OFFICIAL CIRCULARS.

Annual Leave.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 4, 1915.

CIRCULAR No. 602-12:

1. If any annual leave granted an employe under the rules is sufficient to complete or extend beyond 10 months of his service year, he may be granted his cumulative leave also without reporting for duty from the annual leave.

2. If, after entering on leave, an employe's service is terminated, the amount of leave will be determined by Circular No. 602-8, and the leave will be commuted to a cash payment.

CHESTER HARDING,

Acting Governor.

Steam Engineers.

THE PANAMA CANAL,

EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., January 4, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Referring to the circular letter of December 19, 1914, relative to steam engineers on locomotive cranes, spreaders, unloaders, trackshifters, or pile drivers being gold roll men, the question has been raised whether it is the intention to replace aliens as fast as citizens of the United States competent to discharge these duties can be found. This question is answered in the affirmative, and heads of departments and divisions should make arrangements to place American citizens in these positions, provided the latter are competent to discharge the duties, giving special preference to competent steam engineers slated for discharge on account of reduction of force.

CHESTER HARDING,

Acting Governor.

Sale of Material.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 4, 1915.

CIRCULAR No. 630-3:

Effective at once, the following surcharge will be added on material sold from regular stock of the Supply Department to individuals and companies:

Fifteen per cent—To those entitled to cost prices as defined in Circular No. 659-1 of August 1, 1914, on material and supplies sold from storehouses.

Twenty-five per cent—To all other parties, on material and supplies sold from storehouses.

Fifty per cent—On explosives sold to those entitled to cost prices.

One hundred per cent—On explosives sold to all others. Packing, crating, handling, and shipping charges extra.

CHESTER HARDING,

Acting Governor.

Launch Tickets for Taboga.

THE PANAMA CANAL,

SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., January 11, 1915.

To all hotel stewards and district quartermasters—In the future launch tickets for trips between Balboa and Taboga will be sold at the following places only: Balboa dredge landing and Hotel Aspinwall, Taboga. Please have this circular posted on your bulletin boards.

F. H. SMITH,

Assistant Chief Quartermaster.

Proposals for Sale of Second-Hand Doors, Blinds, Sash, and Railing.

THE PANAMA CANAL,

OFFICE OF CHIEF QUARTERMASTER

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., January 29, 1915, and then opened for the purchase of any or all of a miscellaneous lot of second-hand doors, blinds, sash, and railing now stored at the dry dock store, Cristobal, C. Z. This material may be examined and full information obtained upon application to the storekeeper, dry dock store, Cristobal.

Proposals must be accompanied by certified check, postoffice money order, or cash for five per cent of the amount bid.

The Government reserves the right to reject any or all bids.

Bids should be marked "Proposals for purchase of doors, blinds, sash, and railing" and addressed to the Chief Quartermaster, Balboa Heights, C. Z.

Died.

MCGOWAN, ANNA—At Ancon Hospital on Wednesday, January 6, aged 24 years. Employed by the Panama Railroad Company. Residence on the Isthmus, Ancon.

SHIPPING INFORMATION.

February Weather Probabilities.

Based on the records at Colon and Ancon for the past seven and eight years, respectively, the following weather conditions may be expected to prevail at the Canal entrances during the month of February:

Winds—Fresh northerly dry season winds will continue throughout the month. There should be a slight increase in wind movement, as compared with January conditions. The average hourly velocity on the Atlantic side should be about 15 miles per hour. North and northeast winds will prevail. The maximum velocity may not be expected to exceed 35 miles per hour.

The prevailing winds on the Pacific side and over the interior will be from the northwest. The average velocity will be about 10 miles per hour, and the maximum velocity may not be expected to exceed 30 miles per hour.

Rain—Although February is one of the dry season months, occasional light showers may be expected, but no heavy rains are likely to occur during the month at either Canal entrance. The average February rainfall has been 1.47 inches at the Atlantic entrance, and 0.76 inch on the Pacific side.

Fogs—No fogs may be expected at either Canal entrance, although night and early morning fogs may occasionally form over the Culebra Cut section of the Canal where the average number of foggy nights during the month has been five. Most of these fogs are light, and, as practically all of them clear away before 8.30 a. m., they will not affect the navigation of the Canal under present operating conditions.

Temperature—Average air temperatures on the Isthmus change very little from month to month. The monthly mean shade temperature should be about 80° Fahrenheit on both coasts. On the Pacific side, the extreme maximum may not be expected to rise above 91° Fahrenheit, nor the minimum to fall below 65° Fahrenheit, while at the Atlantic entrance temperatures may not be expected to rise above 90° Fahrenheit, nor to fall below 70° Fahrenheit. The mean daily range in temperature is much greater on the Pacific side than at the Atlantic entrance, and greater in the dry season than in the rainy season. The February mean daily range is about seven degrees Fahrenheit on the Atlantic side, and 19° Fahrenheit at the Pacific entrance.

Barometric pressure—Barometric readings on the Isthmus are very uniform from day to day. Changes in pressure are slight, except for the regular well-marked diurnal fluctuations characteristic of tropic regions. For this reason, local barometric readings are of practically no value in forecasting weather conditions. The average February sealevel pressure should be about 29.89 inches. The maximum reading during the month may not be expected to exceed 30.05 inches, nor the minimum to fall below 29.70 inches.

Storms—No severe general storms may be expected during the month at either Canal entrance. Fair weather will prevail on both coasts, although the fresh northerly trade winds that blow on the Atlantic coast may at times produce a heavy swell and rough sea outside the breakwater. Fair weather, with smooth to moderate seas, may be expected at the Pacific entrance to the Canal.

Tides—Tidal fluctuations need not be considered in navigating the Atlantic entrance

to the Canal, as the average tidal range is less than one foot and the maximum range approximately two feet.

The average tidal range at the Pacific entrance is about 13 feet, while the maximum range may reach 20 feet. Panama (Balboa) tide predictions are given below:

JANUARY.				
DATE.	Time and height of high and low water.			
Wed., Jan. 13.....	1:00	7:28	13:49	19:51
Thurs., Jan. 14....	14 0	1 3	13 4	2 2
Fri., Jan. 15.....	2:07	8:27	14:51	20:50
Sat., Jan. 16.....	14 5	0 6	14 2	1 5
Sun., Jan. 17.....	3:06	9:21	15:45	21:44
Mon., Jan. 18.....	15 1	-0 1	15 0	0 9
Tues., Jan. 19.....	3:59	10:12	16:33	22:34
Wed., Jan. 20.....	15 5	-0 5	15 5	0 5
Thurs., Jan. 21....	4:47	10:59	17:18	23:22
Fri., Jan. 22.....	15 7	-0 7	15 8	0 4
Sat., Jan. 23.....	5:31	11:43	18:01	.....
Sun., Jan. 24.....	15 5	-0 5	15 7	.....
Mon., Jan. 25.....	0:06	6:14	12:25	18:41
Tues., Jan. 26.....	0 6	15 0	0 0	15 2
Wed., Jan. 27.....	0:50	6:55	13:05	19:30
Thurs., Jan. 28....	1 0	14 3	0 8	14 6
Fri., Jan. 29.....	1:28	7:35	13:47	19:58
Sat., Jan. 30.....	1 6	13 5	1 8	13 8
Sun., Jan. 31.....	2:16	8:17	14:30	20:39
Mon., Jan. 1.....	2 4	12 5	2 9	12 9
Tues., Jan. 2.....	3:03	9:03	15:18	21:24
Wed., Jan. 3.....	3 2	11 6	3 8	12 1
Thurs., Jan. 4.....	3:54	9:57	16:10	22:18
Fri., Jan. 5.....	3 9	10 9	4 6	11 5
Sat., Jan. 6.....	4:53	11:05	17:12	23:24
Sun., Jan. 7.....	4 3	10 5	5 1	11 2
Mon., Jan. 8.....	5:57	12:22	18:17	.....
Tues., Jan. 9.....	4 3	10 5	5 1	.....
Wed., Jan. 10.....	0:35	6:59	13:31	19:19
Thurs., Jan. 11....	1 4	3 9	11 0	4 6
Fri., Jan. 12.....	1:37	7:53	14:22	20:12
Sat., Jan. 13.....	1 9	3 2	11 8	4 0
Sun., Jan. 14.....	2:27	8:41	15:05	20:55
Mon., Jan. 15.....	12 6	2 4	12 7	3 1
Tues., Jan. 16.....	3:09	9:23	15:43	21:41
Wed., Jan. 17.....	13 4	1 5	13 6	2 2
Thurs., Jan. 18....	3:48	10:03	16:18	22:22
Fri., Jan. 19.....	14 2	0 7	14 5	1 3

FEBRUARY.				
DATE.	Time and height of high and low water.			
Mon., Feb. 1.....	4:26	10:40	16:52	23:02
Tues., Feb. 2.....	14 9	0 0	15 3	0 6
Wed., Feb. 3.....	5:05	11:20	17:28	23:42
Thurs., Feb. 4.....	15 3	-0 4	15 9	0 1
Fri., Feb. 5.....	5:40	11:57	18:04	.....
Sat., Feb. 6.....	15 5	-0 5	16 2	.....
Sun., Feb. 7.....	0:21	6:20	12:37	18:41
Mon., Feb. 8.....	-0 1	15 5	12 3	16 2
Tues., Feb. 9.....	1:05	7:01	13:18	19:23
Wed., Feb. 10.....	0 0	15 1	0 3	15 8
Thurs., Feb. 11....	1:50	7:46	14:06	20:08
Fri., Feb. 12.....	0 4	14 4	1 0	15 2
Sat., Feb. 13.....	2:41	8:37	14:59	21:01
Sun., Feb. 14.....	1 1	13 6	2 0	14 3
Mon., Feb. 15.....	3:40	9:40	16:01	22:07
Tues., Feb. 16.....	1 9	12 7	2 9	13 5
Wed., Feb. 17.....	4:47	10:58	17:14	23:27
Thurs., Feb. 18....	2 4	12 2	3 4	13 0
Fri., Feb. 19.....	6:02	12:25	18:31	.....
Sat., Feb. 20.....	2 5	12 2	3 4	.....
Sun., Feb. 21.....	0:51	7:14	13:43	19:41
Mon., Feb. 22.....	13 1	2 1	12 9	2 9
Tues., Feb. 23.....	2:04	8:16	14:46	20:43
Wed., Feb. 24.....	13 6	1 4	13 8	2 1
Thurs., Feb. 25....	3:03	9:10	15:37	21:34
Fri., Feb. 26.....	14 3	0 6	14 7	1 3
Sat., Feb. 27.....	3:52	9:58	16:21	22:21
Sun., Feb. 28.....	14 9	0 1	15 3	0 6
Mon., Feb. 29.....	4:35	10:40	17:01	23:04
Tues., Feb. 30.....	15 3	-0 2	15 7	0 3
Wed., Feb. 31.....	5:16	11:20	17:38	23:43
Thurs., Feb. 1.....	15 3	-0 1	15 7	0 3
Fri., Feb. 2.....	5:53	11:59	18:12	.....
Sat., Feb. 3.....	15 1	0 3	15 3	.....
Sun., Feb. 4.....	0:21	6:28	12:36	18:46
Mon., Feb. 5.....	0 6	14 5	0 9	14 7
Tues., Feb. 6.....	1:00	7:03	13:14	19:19
Wed., Feb. 7.....	1 2	13 8	1 8	14 0
Thurs., Feb. 8.....	1:39	7:38	13:53	19:53
Fri., Feb. 9.....	2 0	12 9	2 8	13 1
Sat., Feb. 10.....	2:20	8:16	14:35	20:30
Sun., Feb. 11.....	2 8	12 0	3 8	12 3
Mon., Feb. 12.....	3:07	9:01	15:24	21:17
Tues., Feb. 13.....	3 7	11 1	4 6	11 5
Wed., Feb. 14.....	4:03	10:04	16:25	22:23
Thurs., Feb. 15....	4 3	10 5	5 2	11 0
Fri., Feb. 16.....	5:10	11:27	17:35	23:47
Sat., Feb. 17.....	4 6	10 3	5 4	10 9

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find

the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Fuel and Supplies.

Deposits to cover tolls, or the purchase of supplies, may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.25 per barrel, reduced to 60° Fahrenheit.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa. Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the turning of the largest crank shafts or longest line shafts.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans, for all States. Due at New Orleans the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on a Saturday.

*Every Monday to New York, for all States, except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

*NOTE—The sailings on Monday, February 8, March 8, and April 5 will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will only be for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina South Carolina, Ohio, Indiana, Illinois, Michigan Wisconsin, North Dakota, South Dakota, Iowa, Minn

Sailings of Vessels in Regular Service With the Isthmus.

Regular service is maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every six days, direct; between Cristobal and New York by the United Fruit Company, sailings about twice a week; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

NEW YORK TO CRISTOBAL-COLON.		Sails.	Arrives.
Zacapa.....	U. F. C.	Jan. 6.....	Jan. 13
Allianca.....	P. R. R.	Jan. 7.....	Jan. 13
Calamares.....	U. F. C.	Jan. 9.....	Jan. 17
Carrillo.....	U. F. C.	Jan. 13.....	Jan. 20
Colon.....	P. R. R.	Jan. 14.....	Jan. 20

(Continued on page 204.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon January 10.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Jan. 4.....	<i>Palena</i>	Chilean.....	South American S.S. Co.....	Cristobal.....	Valparaiso.....	General mdse.....	979	3,639	2,537
Jan. 4.....	<i>Damara</i>	American.....	Luckenbach S.S. Co.....	New York.....	San Diego.....	General mdse.....	6,280	5,835	4,506
Jan. 4.....	<i>*Protes</i>	American.....	U. S. Navy.....	Norfolk.....	Honolulu.....	Coal.....	10,577	11,143	6,749
Jan. 4.....	<i>Ardanmor</i>	British.....	American-Australian S.S. Co.....	New York.....	Melbourne.....	General mdse.....	6,000	4,959	3,698
Jan. 4.....	<i>Francis Hanify</i>	American.....	Hanify S.S. Co.....	Norfolk.....	San Francisco.....	Coal.....	3,400	2,643	1,672
Jan. 7.....	<i>City of Corinth</i>	British.....	Ellerman Lines, Ltd.....	New York.....	Vladivostok.....	General mdse.....	8,450	6,582	4,887
Jan. 7.....	<i>Panama</i>	American.....	American-Hawaiian S.S. Co.....	New York.....	San Pedro.....	General mdse.....	5,934	6,937	4,760
Jan. 10.....	<i>Panama</i>	American.....	Panama R.R. S.S. Line.....	New York.....	Balboa.....	General mdse.....	1,042	5,866	4,222

*Collier. †Including rails, machinery, and lubricating oil.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Date	Vessel	Nationality	Line	From	For	Nature	Tons	CANAL TONNAGE	
								Gross	Net
Jan. 5.....	<i>Olson & Mahoney</i>	American.....	Olson & Mahoney.....	San Francisco.....	New York.....	Lumber.....	2,200	1,561	782
Jan. 6.....	<i>Advance</i>	American.....	Panama R.R. S.S. Line.....	Balboa.....	New York.....	General mdse.....	1,782	2,965	2,161
Jan. 6.....	<i>August</i>	Norwegian.....	Jacob Christenson.....	Antofagasta.....	Delaware Break'r.....	Nitrates.....	9,000	6,249	4,686
Jan. 6.....	<i>Buford</i>	American.....	U. S. transport.....	San Francisco.....	New York.....	General mdse.....	.....	4,834	3,532
Jan. 6.....	<i>Ohion</i>	American.....	American-Hawaiian S.S. Co.....	San Francisco.....	New York.....	General mdse.....	6,493	6,844	4,699
Jan. 7.....	<i>Dakotan</i>	American.....	American-Hawaiian S.S. Co.....	Honolulu.....	Delaware Break'r.....	Sugar.....	9,000	6,891	4,751
Jan. 7.....	<i>Unio</i>	British.....	Anglo-Saxon P&T Co.....	San Francisco.....	Salina Cruz.....	Oil.....	2,290	1,787	1,068
Jan. 7.....	<i>Vienna</i>	British.....	Gow Harrison & Co.....	Calita Buena.....	Colo.....	Nitrates.....	6,400	4,517	3,528
Jan. 8.....	<i>Hewick Hall</i>	American.....	New York & So. Amer. Line.....	New York.....	New Orleans.....	Nitrates and co, per	7,502	6,048	4,348
Jan. 8.....	<i>Oriana</i>	British.....	Pacific Steam Nav. Co.....	Talcahuano.....	Liverpool.....	General mdse.....	4,280	8,402	5,044
Jan. 9.....	<i>Usher</i>	British.....	Cann & Soa.....	Portland, Ore.....	Queenstown.....	Wheat.....	5,300	3,797	2,832

*With the Thirtieth U. S. Infantry on board, and equipment. †For orders.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
Jan. 12.....	<i>English Monarch</i>	Monarch S.S. Co.....	New York.
Jan. 12.....	<i>Saint Ursula</i>	Rankin Gilmour & Co., Ltd.	New York.
Jan. 12.....	<i>Charlton Hall</i>	N. Y. & So. Amer. S.S. Co.....	New York.
Jan. 12.....	<i>Nairnshire</i>	Scottishshire Line.....	New York.
Jan. 12.....	<i>Rhodesia</i>	East Asiatic S.S. Co.....	New York.
Jan. 12.....	<i>Strathallan</i>	Strathallan S.S. Co., Ltd.....	New York.
Jan. 12.....	<i>S. V. Luckenbach</i>	Luckenbach S.S. Line.....	New York.
Jan. 12.....	<i>Pacific</i>	Johnson Line.....	Stockholm.
Jan. 13.....	<i>Ataskan</i>	American-Hawaiian S.S. Co.....	New York.
Jan. 13.....	<i>Allianca</i>	Panama R.R. S.S. Line.....	New York.
Jan. 23.....	<i>Lompac</i>	Bear Creek Oil & Ship. Co.....	Newport News.

*Vessels which will pass through the Canal.

ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Jan. 3.....	<i>Bankdals</i>	Bank Line.....	Guayaquil.
Jan. 11.....	<i>Strathline</i>	Strathline S.S. Co.....	Seattle.
Jan. 11.....	<i>Arna</i>	Mar's Leaf Line.....	Seattle.
Jan. 11.....	<i>P. Christopherson</i>	Johnson Line.....	Tacoma.
Jan. 17.....	<i>Cordeia</i>	Union Oil Co.....	San Luis.
Jan. 17.....	<i>Washingtonian</i>	American-Hawaiian S.S. Co.....	Honolulu.
Jan. 20.....	<i>Discoverer</i>	Harris Line.....	San Francisco.
.....	<i>Salvador</i>	Salvador Ry. Co.....	Corinto.
.....	<i>Enlyn</i>	Luckenbach S.S. Line.....	San Luis.
.....	<i>Limori</i>	South American S.S. Co.....	Valparaiso.

PORT OF CRISTOBAL.

*ARRIVALS

Date	Vessel	Line	From
Jan. 5.....	<i>Braunton</i>	Tatem Steam Nav. Co.....	Cardiff.
Jan. 8.....	<i>†Brutus</i>	U. S. Navy.....	Key West.
Jan. 10.....	<i>Legazpi</i>	Cia Transatlantica de B.....	Barcelona.
Jan. 10.....	<i>Tagus</i>	R. M. S. P. Co.....	Southampton.
Jan. 10.....	<i>Fortuna</i>	Royal Dutch W. I. Mail.....	Amsterdam.

†Collier.

*DEPARTURES

Date	Vessel	Line	To
Jan. 5.....	<i>Braunton</i>	Tatem Steam Nav. Co.....	Kingston.
Jan. 6.....	<i>Nemesis</i>	Lindsay, Swan, Hunter Co.....	Kingston.
Jan. 6.....	<i>Falk</i>	Szeberg Line.....	Newport News.
Jan. 10.....	<i>Tagus</i>	R. M. S. P. Co.....	Kingston.

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
Jan. 14.....	<i>Venezuela</i>	Cie Gen. Transatlantica.....	St. Nazaire.
Jan. 15.....	<i>P. H. der Nederl.</i>	Royal Dutch W. I. Mail.....	Amsterdam.
Jan. 16.....	<i>Egda</i>	J. L. Mowinkel.....	Baltimore.

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
Jan. 12.....	<i>Legazpi</i>	Cia Transatlantica de B.....	Barcelona.
.....	<i>Brutus</i>	U. S. Navy.....	.....
.....	<i>Fortuna</i>	Royal Dutch W. I. Mail.....	Amsterdam.

Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS

Date	Vessel	Line	From
Jan. 4.....	<i>Pennsylvania</i>	Pacific Mail S.S. Co.....	San Francisco.
Jan. 11.....	<i>St. Helens</i>	W. R. Grace & Co.....	San Francisco.

*DEPARTURES

Date	Vessel	Line	To
Jan. 5.....	<i>Pachita</i>	Peruvian S.S. Co.....	Callao.
Jan. 8.....	<i>Manawi</i>	Pacific Steam Nav. Co.....	Guayaquil.
Jan. 12.....	<i>St. Helens</i>	W. R. Grace & Co.....	Guayaquil.

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
Jan. 13.....	<i>Ecuador</i>	Pacific Steam Nav. Co.....	Guayaquil.
Jan. 14.....	<i>Guatemala</i>	Pacific Steam Nav. Co.....	Callao.
Jan. 28.....	<i>San José</i>	Pacific Mail S.S. Co.....	San Francisco.

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
Jan. 13.....	<i>Pennsylvania</i>	Pacific Mail S.S. Co.....	San Francisco.

(Continued from page 203.)

Tenadores.....	U. F. C. Jan. 16.....	Jan. 24	Panama.....	P. R. R. Jan. 16.....	Jan. 22	Calamares.....	U. F. C. Feb. 22.....	Mar. 1
Almirante.....	U. F. C. Jan. 20.....	Jan. 27	Pastores.....	U. F. C. Jan. 18.....	Jan. 25	NEW ORLEANS TO CRISTOBAL-COLON.		
Advance.....	P. R. R. Jan. 21.....	Jan. 28	Zacapa.....	U. F. C. Jan. 21.....	Jan. 28	Heredia.....	U. F. C. Jan. 6.....	Jan. 13
Metapan.....	U. F. C. Jan. 23.....	Feb. 1	Allianca.....	P. R. R. Jan. 23.....	Jan. 29	Abangarez.....	U. F. C. Jan. 9.....	Jan. 14
Santa Marta.....	U. F. C. Jan. 27.....	Feb. 3	Calamares.....	U. F. C. Jan. 25.....	Feb. 1	Parismina.....	U. F. C. Jan. 13.....	Jan. 20
Panama.....	P. R. R. Jan. 28.....	Feb. 3	Carrillo.....	U. F. C. Jan. 28.....	Feb. 4	Atenas.....	U. F. C. Jan. 16.....	Jan. 21
Pastores.....	U. F. C. Jan. 30.....	Feb. 7	Colon.....	P. R. R. Jan. 30.....	Feb. 7	Cartago.....	U. F. C. Feb. 20.....	Feb. 27
Zacapa.....	U. F. C. Feb. 3.....	Feb. 10	Almirante.....	U. F. C. Feb. 4.....	Feb. 11	Turrialba.....	U. F. C. Feb. 23.....	Feb. 28
Allianca.....	P. R. R. Feb. 4.....	Feb. 10	Advance.....	P. R. R. Feb. 6.....	Feb. 13	CRISTOBAL-COLON TO NEW ORLEANS.		
Calamares.....	U. F. C. Feb. 6.....	Feb. 14	Metapan.....	U. F. C. Feb. 8.....	Feb. 16	Turrialba.....	U. F. C. Jan. 14.....	Jan. 19
Carrillo.....	U. F. C. Feb. 10.....	Feb. 17	Santa Marta.....	U. F. C. Feb. 11.....	Feb. 18	Heredia.....	U. F. C. Jan. 14.....	Jan. 21
Colon.....	P. R. R. Feb. 11.....	Feb. 17	Panama.....	P. R. R. Feb. 13.....	Feb. 19	Abangarez.....	U. F. C. Jan. 21.....	Jan. 26
CRISTOBAL-COLON TO NEW YORK.			Pastores.....	U. F. C. Feb. 15.....	Feb. 22	Parismina.....	U. F. C. Jan. 21.....	Jan. 26
Santa Marta.....	U. F. C. Jan. 14.....	Jan. 21	Zacapa.....	U. F. C. Feb. 18.....	Feb. 25	Atenas.....	U. F. C. Jan. 28.....	Feb. 2
			Allianca.....	P. R. R. Feb. 20.....	Feb. 26	Cartago.....	U. F. C. Jan. 28.....	Feb. 4



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

NOTES OF PROGRESS.

Ships Using Canal for the First Time.

A number of vessels used the Canal for the first time during the past week. Among these were the *Rhodesia* of the East Asiatic Steamship Company, from Danish and Swedish ports, via St. Thomas, for San Francisco, with a general cargo consisting in part of 213 tons of canned fish, 520 tons manure, 17 tons of safety matches, 277 tons of paper, 375 tons wood pulp, 203 tons flint pebbles, and 400 tons of exhibits for the Exposition; the *Baron Driesen* of the Northern Steamship Company, Limited, from Savannah, Ga., for Vladivostok, via Honolulu, with a general cargo, consisting largely of cotton and nitrates; the *Hesperos* of the Bruusgaard Kiosterud Dampskibs Akties, from St. Johns, N. B., via Norfolk, Va., for New Zealand, with 7,533 tons of wheat; the *Pedro Christopherson* of the Johnson Line, from Tocopilla, Chile, for Gothenburg, Sweden, with nitrates; the *Kazembe* of the Ellerman and Bucknell Lines, from New York for Vladivostok, with a general cargo for Siberian, Japanese, and Chinese ports; the *Stathallan* of the Strathallan Steamship Company, the *Stathline* of the Strathblane Steamship Company, the *Atna* of the African-Australian Line, in ballast, and the *Acajulla* of the Salvador Railway Company. The latter ship carried a considerable quantity of coffee, and from now on for several months, this article will probably form a considerable item in cargo shipments via the Canal. The *Baron Driesen* is the first ship sailing under the Russian flag to pass through the Canal.

Las Cascadas Plantation Operated by Supply Department.

The Las Cascadas plantation, acquired by the United States from the former owners through expropriation proceedings, has been turned over to the Supply Department under the direct supervision of the Chief Quartermaster. The plantation has an area of about 570 acres, and contains from 20,000 to 30,000 cacao trees, in addition to a number of rubber and coffee trees. The rubber and coffee are not regarded as a very tangible asset, but the cacao is being gathered as it matures,

4,284 pounds of green cacao having been collected during the month of December. It is shipped to New York for sale at the best price obtainable, which, due to the small European takings, is just now unusually low. Experiments are being made to determine the practicability of manufacturing chocolate and cocoa in the plant of the Depot Commissary at Cristobal.

A small force of employees is on duty at the plantation burning brush and attending to other details of its upkeep. A definite policy with reference to the maintenance of the plantation, together with the farms at Frijoles and other points, is now under consideration.

Extra Sailing of the "Ancon."

The steamship *Ancon*, which was withdrawn a short time ago from the Panama Railroad Steamship Line's New York-Cristobal service, is due to arrive at Cristobal the latter part of this week with a full cargo of cement for The Panama Canal. Inability to secure tonnage on other vessels, and the pressing need for the replenishment of the stock of cement on the Isthmus made the extra trip of the *Ancon* necessary. It is being operated on this run as a tramp steamer, and will not carry passengers either way.

Award for Native Beef Cattle.

Award has been tendered to F. E. Parraga of Colon for supplying 200 head of beef cattle at the price of \$35 per head, c. i. f., Colon. Under the specifications, the contractor agrees to supply healthy steers between two and six years of age, and of a weight between 900 and 1,400 pounds. Wild, lame, diseased, poorly nourished, or badly bruised animals will not be accepted. Before delivery is made the cattle are to be inspected by a representative of the Supply Department. The contractor has been requested to make bond in the sum of \$500 to insure compliance with the contract requirements.

Charging Storage Batteries for Employees.

The Electrical Division has received numerous requests from employees owning motorcycles, etc., to have their storage batteries charged at Cristobal, Gatun, and Balboa substations. In order to accommodate these employees, it has been decided to allow this work to be done under the following regulations:

Employees will submit application to the Electrical Engineer on Form 350-2, giving their name, license number of their machine, post-office address and substation (Cristobal, Gatun, or Balboa) at which they desire the charges to be made, and upon receipt of approved copy, which will be returned to the applicant, will place a security deposit of \$2 with the Collector. When the deposit has been received, a receipted copy of Form 350-2 will be returned to the applicant, and the substation at which charges are to be made

will be furnished with the name and license number of the employee. When leaving batteries at a substation to be charged, employees must see that they are tagged, showing the owner's name, license number, and charging current.

The cost of each charge will be 50 cents and bills will be rendered, based on monthly reports from the various substations. The security deposit remaining to the employee's credit will be refunded upon written notice that service is no longer desired.

Contract for Fuel Oil.

A contract was entered into with the Standard Oil Company of San Francisco on December 16 for approximately 450,000 barrels of fuel oil, the estimated requirements for The Panama Canal during the ensuing year. This oil is to be delivered at Balboa, as follows: In approximately 30,000-barrel lots at \$1.03 per barrel; in approximately 60,000-barrel lots at 92 cents a barrel, and in approximately 100,000-barrel lots at 88 cents a barrel. The Panama Canal may require delivery in any of the lots specified above.

Headquarters, United States Troops on Isthmus.

The headquarters of the United States troops in the Panama Canal Zone have been temporarily located on the second floor of the old administration building at Ancon. The post-office address of the Commanding General and Staff is Ancon, C. Z., and the Commanding General's telephone number is 256.

School Consolidation.

Effective February 15, the schools at Culebra and Las Cascadas will be discontinued, and a consolidated school will be established at Empire for the pupils of the first eight grades in the three settlements mentioned. This arrangement is in accordance with the permanent plan for school facilities at these points, and will require fewer teachers and will give better school advantages. The Canal Zone Government will bear the expense of the teachers and school supplies, but the regiments now stationed at Las Cascadas and Empire will be called upon to provide means of conveyance in carrying the children back and forth from school. The hours and other arrangements will conform to the wishes and convenience of those interested as far as possible.

Final Report of Women's War Relief Work.

Mrs. Katherine Barber, chairman of the women's war relief committee of the Canal Zone, has submitted her final report. It shows that the total cash received and disbursed was \$1,023.48, and the number of articles received and forwarded 8,293. The shipments from the Isthmus, two in number, were consigned to the London agency of the American National Red Cross Society; the first went forward on the Royal Mail steamer *Danube*, sailing November 3, 1914, and the

second, on the Royal Mail steamer *Tagus*, sailing November 17, 1914. The balance of cash on hand, amounting to \$851.23, was sent to Mrs. Leonard Wood, Governor's Island, New York, to be used in making purchases in the United States. This shipment was sent from New York City to London direct consigned in the same manner as the foregoing. A cash balance of \$170.75 accrued from contributions after this draft was mailed to New York, and acting on the suggestion of Mrs. Leonard Wood, the money was forwarded to the United States to be expended in the purchase of surgical instruments, dressings, etc. The expense in connection with the work of the committee only aggregated \$5.68, leaving the balance for the purpose in hand.

Red Cross Finances.

The financial statement of the Canal Zone Chapter, American National Red Cross, from October 1 to December 31, 1914, is, as follows:

RECEIPTS.	
Balance on hand October 1, 1914.	\$351.61
Oct. 8 Advance refunded	10.00
Oct. 27 Advance refunded	25.00
29 Donation of unexpended balance of the La Boca library reading room	23.70
Nov. 23 Donation, Broadway Theatre, Colón	75.00
Dec. 12 Donation, Ladies Missionary Auxiliary, Union Church	10.00
Proceeds of ball	1,407.87
Interest on deposit: October, \$5.98; November, \$6.75; December, \$6.38	19.11
Total receipts	\$5,152.49
DISBURSEMENTS.	
Oct. 8 Relief stranded American	25.00
15 Relief stranded American	10.00
22 Relief American woman and child	50.00
24 Relief stranded American	15.00
30 Stamps, expense of ball	8.00
Nov. 1 Relief stranded American	20.00
1 Stamps	1.00
4 Relief cured leper	10.00
7 Star and Herald, advertising ball	2.50
19 Relief stranded American	25.00
23 Mount Hope printing plant bill, expense of ball	16.38
Relief two stranded Americans	7.00
25 Relief American woman and children	100.00
28 European relief fund	1,000.00
30 Commissary supplies furnished, ball expense	1.92
Dec. 1 Relief stranded American	15.00
4 Relief Spanish woman	15.00
9 Mount Hope printing plant	68.59
Treasurer, National Red Cross, 188 memberships	94.00
Relief stranded American	20.00
18 Hotel Tivoli, expense of ball	88.70
21 Electrical Division, expense of ball	29.54
24 Relief of stranded American	20.00
30 Relief of American woman	15.00
31 Relief of stranded American	35.00
Total	\$1,692.63
Dec. 31 Balance on hand	3,459.86
	\$5,152.49

T. L. CLEAR,
Treasurer.

Approved:
C. A. McILVAINE,
Chairman.

Master of Steamship "Limari" Fined.

Two charges were filed against Capt. A. Selmar, master of the South American Steamship Company's steamer *Limari*, one for leaving the port of Balboa on December 8, without a pilot, and the other for leaving Balboa after sunset on the same date without proper permission. The case was tried in the District Court at Ancon on Saturday, December 16. The defendant was found guilty and fined \$100 on the charge of having left without a pilot, but sentence was suspended in the other case.

The purchase of a new pony Whitlock printing press, and a Hickok ruling machine, has been authorized for The Panama Canal printing plant at Mount Hope. The cylinder press equipment at this plant at present con-

sists of a pony Whitlock, formerly used by the Panama railroad, and two Babcock machines, a No. 5 and a No. 6 Optimus.

Reduced Rates for Army and Navy Men on U. F. Company's Lines.

The resident manager of the United Fruit Company has been advised from the home office that officers and enlisted men of the United States Army and Navy, stationed on

the Isthmus, together with their families, will be granted reduced rates for transportation on the company's steamships sailing to and from the Isthmus, under the same conditions as apply to employees of The Panama Canal.

The cable address of The Panama Canal on the Isthmus is "Isthmian, Balboa Heights;" in the United States, "Isthmian, Washington."

POLICE CENSUS OF THE ZONE.

Shows a Decrease in Population of 6,546 in Six Months.

A house-to-house canvass of the inhabitants of the Canal Zone was made by the Police and Fire Division between December 22, 1914, and January 1, 1915. The results, as printed below, show a total population of 31,160, as compared with a count of 37,706, similarly made between June 16 and 30, 1914, and with another count of 45,296, made between January 31 and February 10, 1914. The different canvasses show a steady de-

crease in the number of Zone inhabitants, with a concentration, particularly noticeable in the last count, near the Pacific entrance. Of the total, as shown by the last canvass, 7,395 were white male Americans, of whom 3,719 were employees of The Panama Canal or Panama railroad. The American women and children numbered 1,578 and 1,576, respectively. Of the others, there were 12,779 men, including 10,517 employees, 3,086 women, and 4,026 children. Employees residing outside of the Canal Zone were not included in the count. The figures in detail are, as follows:

BALBOA DISTRICT.

Location.	Americans.		All others.		Americans.		All others.		Total.
	Men.	Em- ployees.	Men.	Em- ployees.	Women.	Child- ren.	Women.	Child- ren.	
ANCON-BALBOA HEIGHTS.	750	750			326	327			1,403
Hotel Tivoli.	15	6	2		3	1	1		22
Labor camps.			177	177					178
San Miguel.	3	3	211	188			53	43	310
Ancon Hospital—									
Doctors.	14	14							14
Nurses.	4	4			55				59
Patients.	41	37	295	255	20	14	30	30	430
Attendants.			92	92			24		116
ANCON AS LUM—									
Doctors.	2	2							2
Nurses.	3	3			3				6
Patients.	9	1	157	54	1		102		269
Attendants.			15	15			10		25
BALBOA-EAST BALBOA.	778	766	14	14	158	150	8	12	1,120
Balboa Junction.	1	1	5	5	1	1	1	5	14
Labor camps.			50	50					50
Balboa road.			5	5			3	1	9
Chorrillo.			1	1			5	2	8
Petrolia.	5		3		1	2	3	5	19
Lo Boca—									
Married quarters and camps.	5	5	2,629	2,629	1		478	684	3,797
Balboa harbor.	32	32	189	189					221
Hills.			148				2		150
PALO SECO.	1	1	51	12	2	1	15	1	71
RADIO STATION.	6	6	1	1	2		1		10
QUARANTINE STATION.	2	2	16	16			1		19
NAOS ISLAND.	14	14	250	250					264
West of Canal—									
Farfan.			28				21	16	65
Arenal.			15				13	12	40
Cochinito.	1	1	3				3	5	12
Valensquilla.			15				9	10	34
Venado.			23				7	7	37
Campo Alegre.			25				19	23	67
Matutela.			7				4	4	15
Monte Oscuro.			8	1			4	8	20
Monte Bello.			11				10	20	41
Rural.	2	1	21				30	58	111
LAS SABANAS:									
Rural.	5	1	238				152	167	562
Pueblo Nuevo.			65				60	97	222
CORONAL.	483	483	79	79	200	198	35	38	1,033
Labor camps.			445	445					445
Rural district.			200	81			102	98	400
PEDRO MIGUEL.	185	185	29	29	108	113	19	23	477
Labor camps.			250	250			23	26	299
Rural district.	1		3						4
GAMBOA STOCKADE.	7	7	12	12			4	2	25
EAST SIDE OF CANAL.	5	5	62	57	1	1	14	23	106
PARAISO.	288	288	265	255	76	84	171	233	1,117
Spanish Town.			263	224			119	86	473
Jamaica Town.			316	285			179	159	654
Labor camps.			330	330					330
Floating equipment.	25	25	206	206					231
WEST SIDE OF CANAL:									
Culebra.	113	111	43	43	112	119	3	4	394
Rio Grande.			217	199			97	96	410
Enterprise.			85	85			11	22	118
Cowpens.			79	41			39	49	167
West Culebra.	4	4	259	173			154	113	530
Golden Green.			287	212			167	111	565
Empire.	15	13	87	30	4	7	64	56	233
Lirio camp.			62	62			64	104	230
Cerro camp.			100	100			70	111	281
Camacho.			77	33			38	33	148
Martiniño camp.	1	1	57	56	1	1	60	50	170
Los Coscodas.	3	3							3
Bas Obispo.			28	28			12	7	47
Total	2,972	2,775	9,616	7,260	1,075	1,019	2,515	2,654	18,702

(Continued on Page 207.)

(Continued from Page 206)
CRISTOBAL DISTRICT.

Location.	Americans.		All others.		Americans.		All others.		Total.
	Men.	Em- ployes.	Men.	Em- ployes.	Women.	Child- ren.	Women.	Child- ren.	
EAST SIDE OF CANAL:									
Gamboa (north side).....	12	12	64	64	7	7	13	17	120
Floating equipment.....	9	9	48	48					57
Darien.....	9	9	85	85	1	1	1		97
Frijoles.....	4	4	74	48	1	4	35	41	159
Monte Lirio.....	4	4	65	39	1	1	39	34	144
Gatun.....	234	234			177	210			621
Labor camps.....			376	376			49	66	491
New Gatun.....			1,012	789			508	458	1,978
Boca Mindi.....			25				19	20	64
Puerto Escondido.....			30				10	9	49
Majagual.....			76	5			53	46	1,175
Coco Solo.....			27	26					27
Mount Hope.....	10	9	344	176	4	12	192	174	736
Cristobal.....	623	622	26	26	193	229	1	2	1,074
Folks' River.....	14	9	398	328	11	6	267	340	1,036
Camp Bierd.....	29	29	850	850	7	10	43	96	1,035
Rural—									
Between Cristobal-Balboa police line and north shore of Gatun Lake.....									
Between north shore of Gatun Lake and Caribbean Sea.....	1	1	126	21	1	1	49	59	235
WEST SIDE OF CANAL:									
Toro Point.....	2	2	361	361			6		369
Bracho.....			26	4			7	8	41
Rural—Between Cristobal-Balboa police line and Caribbean Sea.....			2	2			1	2	5
Total.....	951	944	4,015	3,248	403	480	1,292	1,372	8,513
SOLDIERS:									
Fort Grant.....	373				4	3			380
Empire.....	1,054				49	31			1,134
Las Cascadas.....	1,845				39	37			1,921
Fort Sherman.....	340				4	3			347
Fort Randolph.....	11								11
Total.....	3,623				96	74			3,793
PRISONERS:									
Penitentiary.....	2	59							61
Zone.....	2	89							91
Total.....	4	148							152

RECAPITULATION.

BALBOA DISTRICT.....	2,923	2,775	8,616	7,269	1,075	1,019	2,515	2,654	18,702
CRISTOBAL DISTRICT.....	951	914	4,015	3,248	403	480	1,292	1,372	8,513
SOLDIERS.....	3,623				96	74			3,793
PRISONERS.....	4		148						152
Total.....	7,401	3,719	12,779	10,517	1,574	1,573	3,807	4,026	31,160

An analysis of the above in so far as it relates to the loss or gain by sections, between the last canvass and the one of June 16-30, is given below:

SECTION.	June 16 -30	Dec. 22 -Jan. 1	Gain	Loss
Vicinity of Pacific entrance.....	7,660	9,180	1,520	
Las Sabanas.....	608	784	176	
Corozal and vicinity	2,415	1,878		537
Pedro Miguel and vi- cinity.....	888	780		108
Paraiso and vicinity	2,601	2,805	204	
Culebra and vicinity	3,153	2,184		969
Empire to and inc. Bas Obispo.....	5,611	1,112		4,499
East side Canal— Paraiso to Gatun.....	978	708		270
Gatun and vicinity.....	5,157	3,090		2,067
Cristobal and vi- cinity.....	6,388	4,846		1,542
Military reservations	2,247	3,793	1,546	
Total.....	37,706	31,160	3,446	9,992
Net loss.....				6,546

The greatest population that the Canal Zone has had at any one time since the American occupation was that shown by the census of 1912—61,279. Since then there has been a steady decrease, which will probably continue until the population is reduced to actual employees of The Panama Canal and the Panama railroad on the permanent basis, and persons in the military service of the United States. As the work of depopulating the Zone has progressed, the inhabitants either removed to the terminal cities, or left the Isthmus altogether. The net emigration from the Isthmus between July 1, 1913 and January 1, 1915 amounts to 21,732. This, with the present population of the Zone—31,160, accounts

for 52,838 of the number of Zone inhabitants in 1912—61,279. The remainder may be said to represent, at least in part, the increase in population in the terminal cities. The changes in population in the Zone and in the cities of Panama and Colon, as shown by the various censuses and canvasses made since 1903 are, as follows:

PERIOD.	Canal Zone	Panama	Colon
1904.....	9,742	20,262	7,214
1908.....	50,003		
1911.....		37,705	17,748
1912.....	61,279		
1914 (1).....	45,296	60,000	27,831
1914 (2).....	37,706		
1914 (3).....	31,160		

The present population of the Canal Zone and the cities of Panama and Colon, based upon the above figures, is about 120,000.

Sale of Notarial Seals.

The following recommendation relative to the sale of notarial seals, made by the Chief Quartermaster, has been approved:

"The notarial seals used by the notaries public in the Zone are the property of The Panama Canal. We have received a number of requests for the purchase of these seals, and, inasmuch, as they cannot be used by any one else, and have practically no scrap value, it is recommended that a blanket price of 50 cents each be placed on these seals, to be sold to the holder at the expiration of his commission, or upon termination of his service, if he so desires."

JOINT LAND COMMISSION.

Awards.

Award No. 71, docket No. 8, January 8, 1915—In the matter of the claim of Pioquinto Olivares, et al, for the lands known as Palos Diferentes.—An award is hereby made against the United States, in favor of the persons hereinafter named, and in the amounts hereinafter specified, in the total sum of \$4,707.72, United States currency, for all rights, title, claims, and all interests of whatever nature they may have possessed or now possess in that portion of the lands of Palos Diferentes, situate in the Canal Zone, west of Empire, along the Canal Zone boundary, as is more specifically shown on Isthmian Canal Commission map No. 3812, submitted in evidence by the attorneys for the United States at the trial of this claim.

To Pioquinto Olivares, undivided one-fourth interest, \$1,176.93; to Rafaela Olivares, undivided one-fourth interest, \$1,176.93; to Julia Olivares, undivided one-fourth interest, \$1,176.93; to Pioquinto Olivares, as guardian of Hezekiah Mosquero, and Rojilio Mosquero, minor heirs of Gertrudis Olivares de Mosquero, deceased, undivided one-fourth interest, \$1,176.93. Total, \$4,707.72.

This award shall be paid to the claimants herein named, in the amounts specified, on or before the 8th day of February, 1915, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Award No. 72, docket No. 13, January 8, 1915—In the matter of the claim of Mrs. O. B. Grout, for land and improvements at Puerto Escondido, Canal Zone.—Under date of March 27, 1913, the claimant, Mrs. O. P. Grout, filed with the commission her claim for damages for certain land and improvements thereon, located at Puerto Escondido. Subsequently, there were filed with the commission intervening claims, as to the land only, by the following:

Doc. No. Claimant.
1543 Catalina V. de Cowan, Carlota Cowan de Irisarri, and Rita Cowan.

2673 Desire Lamiralle and Apostol Trivolich.

2884 Sabina Recuero de Quinzada.

3063 Romano Emiliani.

3088 Romano Emiliani.

3113 Alexis Stonewall Mendez, on behalf of himself and as the surviving partner of the unliquidated co-partnership of Mendez and Cowan.

At the public hearing of the claim, the claimant in person and by her attorney, requested, in view of the filing of these several intervening claims as to the title of the land, that her claim at that time be heard as to the improvements only, and that her claim as to the land be taken up at a later date when her claim for the land and the claims of all the intervenors may be consolidated and heard together. All parties consented to this arrangement, in which the commission concurred and agreed to announce a date for the hearing later. The hearing was, therefore, proceeded with on the basis of improvements only; and an award is hereby made against the United States, in favor of Mrs. O. B. Grout, in the sum of \$2,000, United States currency, for all rights, claims, and other interests in growing crops, fruit trees, buildings, machinery, and all other improvements which the said Mrs. Grout may possess or may have possessed at Puerto Escondido, Canal Zone.

This award shall be paid to the aforesaid claimant, in the amount specified, on or before the 8th day of February, 1915, and if payment or tender of payment is not made on or before that date, this award shall thereafter bear interest at the rate of six per centum per annum until paid.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Supplemental Opinion.

Supplemental opinion No. 164, on motion to reconsider, docket No. 1884, December 21, 1914—In the matter of the claim of Antonio Enseñat, for property located in Empire—On the 28th day of October, 1914, Messrs. Feuille and Williams, attorneys for the United States, filed their motion asking a reconsideration of the decision of the Joint Land Commission, holding that the claim of Antonio Enseñat is within the jurisdiction of said commission under and by virtue of the Treaty between the Government of the United States and the Government of the Republic of Panama, ratified on the 20th day of February, 1904.

In this motion many reasons are set forth why that decision should be set aside or modified, but, upon the hearing of said motion it was conceded by the attorneys for the Government of the United States that a single question is presented, and that all other alleged causes for modification of the original opinion are waived and withdrawn.

The only question, therefore, now before the com-

mission is, whether the Panama Railroad Company's lands have been expropriated by the United States, and, if so, when did the act of expropriation take place, and whether such act of expropriation terminated the lease of the claimant with said railroad company.

In the original opinion the commission held that the Executive Order issued by the President of the United States on the 5th day of December, 1912, as fully set out in the opinion, expropriated the lands of the Panama Railroad Company, and the lease then existing between said company and the claimant was thereby terminated or expropriated.

Counsel for the United States in an able and ingenious argument, with many citations of authorities, challenge the ruling in the original opinion on the ground that the Executive Order of the President did not amount to an actual taking, but simply empowered the Chairman of the Isthmian Canal Commission to take possession of any part or parcel of land within the Canal Zone at will, and that expropriation did not occur until the Chairman had performed some affirmative act toward taking such possession, or had actually taken physical possession of such lands.

Messrs. Hinckley and Ganson, Oscar Teran and Harmond Arias, in a strong and able argument, citing numerous authorities, sought to sustain the original opinion of the commission.

Upon request of the commission, the attorneys on both sides later submitted very able and exhaustive briefs with numerous additional authorities from text writers and decisions of the many courts of the United States.

To discuss all these authorities would extend this supplemental opinion beyond our desire. We may state, however, that the decisions cited by both sides are based upon the statutes of the various States of the Union and upon Acts of Congress, all of which laws were framed for particular purposes and in language quite dissimilar, and most of them bearing only a slight degree of analogy, to the case in hand.

As this decision must rest upon the provision of the Treaty between the high contracting parties and the Act of Congress, approved August 24, 1912, and the President's Executive Order above referred to, but little help can be derived from many of the decisions cited. However, two of these cases are in point and for them the commission is under obligations to counsel.

In the case of *Benedict vs. City of New York*, et al, Federal Reporter, Volume 98, Page 789, which was a condemnation proceeding by the city of New York, in which the question arose as to when the lands were actually taken by the city, on Page 792, the learned judge, in pronouncing the opinion, uses the following language:

"The lands were taken when the commissioners of appraisal filed their oaths of office. They were taken at that time, because, by the terms of Section 10 the city then acquired the right to occupy them in perpetuity, subject, of course, to a condemnation proceeding. Until then the purpose to appropriate them was merely a tentative one, and the proceeding might never culminate in an actual appropriation. Until then there was no statutory act indicative of a final intention by the city to acquire lands."

From the language of this opinion it appears that to constitute an actual taking by a sovereign of lands under the right of eminent domain, there must be first a law prescribing the manner of taking, and, second, there must be a statutory act indicating a final intention to acquire the lands.

In the case of *Delafeld vs. City of Pittsburgh*, Federal Reporter, Volume 109, Page 577, likewise a proceeding in condemnation by a city under a statute, the court says:

"The ordinance here declares and enacts that 'The said city does hereby elect and resolve to take, use, and appropriate the said real estate and land for the purpose aforesaid.' In terms, it is a present appropriation under the statute of 1887. * * * To all intents and purposes the ordinance amounts to an actual appropriation. It derives the proprietor of his beneficial ownership."

In this case, the same necessary requirements to constitute a present taking under the law of eminent domain are apparent, as in the first case cited. Here, there was first a law prescribing the mode of taking, and, second, an act in conformity to a statute indicative of a final intention to acquire the land.

It will be observed that no actual, physical, or tangible possession is necessary to a taking by the sovereign, but it is the acquired right of the sovereign to occupy immediately in perpetuity the lands desired, that constitutes the actual taking under the authorities cited.

In the first case, we find the declaration by the court that the lands were taken when the commissioners of appraisal filed their oaths of office. They were taken at that time, because by the terms of Section 10 the city then acquired the right to occupy them in perpetuity.

In the second case cited, the court says that the ordinance of the city declaring the election and resolution to take, use, and appropriate certain real estate for specific purposes is in terms a present taking; that to

all intents and purposes the ordinance amounts to an actual appropriation and derives the proprietor of his beneficial ownership.

Justice McReynolds, while Attorney General of the United States, in an opinion rendered January 22, 1913, in the case of *Encarnación Rangil, et al*, for injunction involving the title to land in the District of Empire, within the Canal Zone, after quoting said Section 3 of The Panama Canal Act and the said Executive Order of the President, as quoted in the original opinion, says:

"This declaration of the President, issued under authority of an Act of Congress, undoubtedly fixes the law for the Judiciary of the Canal Zone, to the extent of making it unnecessary to consider whether the particular land in question was needed for the maintenance, etc., of the Canal, or not. It amounts to a condemnation of all the lands in the Canal Zone under the power of eminent domain."

By said Act of Congress, approved August 24, 1912, the power of appropriating all the lands and lands under water within the Canal Zone was conferred upon the President of the United States, and the manner of acquiring said lands was prescribed.

By said Executive Order of the President of December 5, 1912, there was a statutory act not only indicating a final intention by the Government of acquiring these lands, but there appeared a final order peremptorily directing the Chairman of the Isthmian Canal Commission to take such lands.

All the essential requirements under the authorities cited to an actual taking of the lands of the Panama Railroad Company by the Government of the United States on the 5th day of December, 1912, then existed, and, therefore, said lands were then and thereby expropriated.

It will hardly be contended that, after the issuing of the President's Executive Order, the owner of private lands within the Canal Zone had the power to convey such lands at will, with the right to the grantee to hold and occupy such land in perpetuity. Hence, if that right was taken away from the owner of such private land, then his proprietary right, his absolute ownership, was taken from him, his title to the land was extinguished, expropriated, and to him remained nothing more than a claim for the value of the land taken.

Lewis on Eminent Domain, Volume 1, Third Edition, Section 65, Page 56, says:

"It may be laid down as a general proposition, based upon the nature of property itself, that, whenever the lawful rights of an individual to the possession, use, or enjoyment of his land are in any degree abridged or destroyed by reason of the exercise of the power of eminent domain, his property is *protanto*, taken, and he is entitled to compensation."

Hence, we must conclude that the land of the Panama Railroad Company occupied by Mr. Enseñat was expropriated, actually taken, by the Government of the United States at the time the President issued the Executive Order of December 5, 1912, as stated in the original opinion.

If it is true that by the Executive Order of the President of December 5, 1912, the title and right to occupy, of the lessor, the Panama Railroad Company, was taken away and appropriated by the United States, it must follow that the same Executive Order of the President terminated the lease of the claimant. That doctrine is declared in Article 2016 of the Civil Code of the Canal Zone, which reads, as follows:

"The right of the lessor over the thing leased having been extinguished through a cause beyond his control, the lease shall expire, even before the expiration of the term stipulated for its duration."

The lands being expropriated by the United States, the leasehold of claimant was accordingly terminated thereby, as provided by Article 2016 cited above. His claim for damages, if he has sustained any thereby, must be against the United States as the expropriating government.

The doctrine of the liability of the expropriator to the lessee, is elementary, as well as statutory.

In the American and English Encyclopedia of Law, Volume 10, Page 1,194, Subdivision F, we read:

"Tenants and lessees are entitled to such compensation as will correspond to their interest in the leased premises when part or all of the tract has been taken, and payment to the landlord, where a tenant is in possession, does not discharge the liability of the expropriator to the tenant."

The commission being of the opinion that the original decision is sustained by the weight of the authorities, and is correct, adheres thereto and overrules the motion to reconsider.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Addition to Stock at Commissary.

Pans, frying, 7-inch, ea.	46
Pans, frying, 8 1/2-inch, ea.	63
Biggins, coffee, 1-qt., ea.	2.10
Biggins, coffee, 2-qt., ea.	2.25
Coolers, water, ea.	3.75
Drill, Blue, 28-inch, yd.	23

OFFICIAL CIRCULARS.

Acting Auditor.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z. January 13, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective January 14, 1915, Mr. Ad. Faure will act as Auditor, The Panama Canal, during the absence from the Isthmus of Mr. H. A. Smith.

CHESTER HARDING,
Acting Governor.

Acting Chief, Police and Fire Division.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z. January 18, 1915.

To all concerned—During the absence on leave, beginning today, of Capt. C. W. Barber, U. S. A., Capt. H. D. Mitchell, U. S. A., will act as Chief, Police and Fire Division.

CHESTER HARDING,
Acting Governor.

Rules Concerning Care and Operation of Locomotive Cranes, Etc.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z. January 12, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

The rules contained in the pamphlet for the care and operation of locomotive cranes, spreaders, unbalers, trackshifters, and piledrivers, is published for the information and guidance of all concerned. It is desired that a copy of this pamphlet be placed in the hands of every one who may have use for it in connection with his work.

A small supply is sent you herewith and additional copies will be furnished upon application to this office. Any copies for which you have no use, should be returned to the Executive office.

CHESTER HARDING,
Acting Governor.

Use of Chagres River Washed Gravel.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z. January 15, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

The attention of all concerned is directed to the desirability of using Chagres River washed gravel, from which the sand has been separated by screening, in lieu of Ancon rock, in all cases where it is practicable to do so; and it is requested that steps be taken to substitute Chagres River gravel for Ancon rock at once. All orders for this gravel should be placed with the Panama railroad, the same as for the Chagres River sand and run-of-bank gravel.

CHESTER HARDING,
Acting Governor.

Surplus White Oak Lumber at Balboa Store.

THE PANAMA CANAL,
SUPPLY DEPARTMENT.

BALBOA HEIGHTS, C. Z. January 16, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

We have on hand at the Balboa storehouse approximately 500,000 feet, B. M., of white oak lumber, three by nine inches by 10 feet 3 1/2 inches, which was ordered for use in repairs to Ligerwood cars in the breakwater service. Due to the fact that considerably fewer cars are being used in this service than was originally anticipated, a large quantity of this material is considered surplus.

It is requested that departments and divisions requisition this material wherever it is practicable to use it.

WM. R. GROVE,
Chief Quartermaster.

Surveying Instruments.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z. January 6, 1915.

CIRCULAR No. 631-4:

1. *Stock of instruments.*—Engineers' transits and levels will not, in future, be turned over to the Supply Department for any purpose, except on approved survey. A stock of serviceable instruments will be maintained at the Administration Building, under the custody of the Assistant Engineer of Surveys, and when additional instruments are desired, form P. C. 299 will be submitted in the usual manner, showing instrument to be transferred from the Executive Secretary, who will be the accountable official for this stock.

2. *Surplus or unserviceable instruments.*—When instruments become surplus or unserviceable, they will be shipped to the instrument repair shop, with letter of advice to the Superintendent of the Mechanical Division, with copy to the Surveying Officer and Assistant Engineer of Surveys, giving reason for sending

Instrument to shops. On receipt of such instruments at the instrument repair shop, the Superintendent of the Mechanical Division will make report to the division sending instrument in, with copy to the Surveying Officer and Assistant Engineer of Surveys, showing condition, cost of repairs; also, recommendation as to disposition, and on receipt of this report, the Surveying Officer will make final recommendation as to disposition, after conferring with the division to whom assigned, and the Assistant Engineer of Surveys.

CHESTER HARDING,
Acting Governor.

Price of Chagres River Sand and Gravel.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 16, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective January 1, 1915, sand, wash gravel, and run-of-bank gravel procured from the Gamboa plant will be priced at 65 cents per cubic yard.

CHESTER HARDING,
Acting Governor.

Cost of Loading Ancon Rock, Etc.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 13, 1915.

Effective January 1, 1915, the various departments and divisions will be charged with the cost of loading Ancon rock, screenings, and Chame sand, in addition to the invoiced price of the material.

CHESTER HARDING,
Acting Governor.

Supplement No. 3 to List of Nonexpendable Property Published with Circular No. 655-1.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,

BALBOA HEIGHTS, C. Z., December 30, 1914.

HEADS OF DEPARTMENTS AND DIVISIONS AND ACCOUNTABLE OFFICIALS:

The following changes and additions to the list of nonexpendable property, and instructions, are published for guidance of all concerned:

CHANGES.

- Page 1. Bits, carvas; add "Except money."
- Page 2. Bars, parallel; add E
- Page 3. Belts, lineman's safety, straps for; eliminate, carry as "Straps, safety, lineman's"
- Page 7. Cases, drinking cup; eliminate, carry as "Holders, drinking cup"
- Page 13. Dishes, platinum; add E
- Page 15. Gasometers for oxygen and acetylene; add E
- Page 25. Old-man; eliminate, carry as "Posts, drilling"
- Page 28. Racks, coat and hat; add E
- Page 28. Racks, hat stand; eliminate, carry as "Stands, coat and hat rack"
- Page 29. Racks, stationery; eliminate, carry as "Cases, stationery"
- Page 29. Registers, time and punch, automatic; add E
- Page 35. Traps, animal; add "Except rat traps"
- Pages 37-38. An item of property is nonexpendable whether it is from American or old French stock. The heading "Old French nonexpendable property" should be eliminated and items shown in proper order.

ADDITIONS.

- Apparel, wearing
- E Attachments, tapping
- Bags, punching
- Belts, cartridge
- Blowpipes
- Boxes, pastry
- Boxes, mitre
- Breakers, ice
- Buckets, agate, enamel and fibre
- E Buckets, crane
- Buttons, pilot's
- Cans, waste
- E Carts, hose
- E Cases, desk, stationery
- Chains, tire, automobile
- E Compasses, beam
- Corers and peelers
- Curtains, bath, rubber
- Devices, cap, pilot's
- Flashlights, electric, pocket
- E Furnaces, galvanizing
- Gavels
- Haversacks
- Hoes, scuffle
- Holders, dictionary
- Holsters, club
- Hooks, shave
- E Implements, farm
- E Instruments, band
- Keys, switch

- E Ladies, foundry
- E Lockers, stove
- E Machines, cleaning, vacuum
- E Machines, commutator, truing
- E Machines, cornice, brake
- E Machines, cylinder boring
- E Machines, dictaphone
- E Machines, road, reversible
- E Machines, roll bending
- E Machines, sawing, bench
- E Machines, tube cutting
- E Machines, washing
- E Machines, wood trimming
- Markers, stitch
- E Outfits, diving
- Fens, ruling
- E Pots, galvanizing
- Reels, payout
- E Registers, cash
- Scrapers, cable
- Scutchers
- Seals, impression
- E Shot, putting
- Stands, inkwell
- Stands, music
- E Steelyards
- Straps, haversack
- Targets, range to 1
- Tongs, timber and tie
- Tools, corner
- Tools, knurling
- E Torches, cutting, oxy acetylene
- E Trestles, drafting board
- E Trucks, baggage, barrow, burro, platform, under-slung, and wagon
- E Trucks, concrete block handling
- Tubes, stomach (veterinary)
- Twistors, police, chain
- Weights (standard test sets)
- Wigs

ITEMS TO BE CONSIDERED EXPENDABLE.

- Alpargatos
- Animals, purchased for laboratory experiments
- Annunciators
- Apparatus, alum mixing, for filtering plants
- Apparatus, hypochlorite dosing, for filtering plants
- Awnings
- Bags, money
- Balls, tennis
- Barrels, except those returnable to contractors
- Bells, school
- Bells, fog
- Bells, ship
- Benchies, barrack
- Binders, blueprint
- Binders, loose-leaf, for records
- Bits, for Star drills
- Blackboards, sectional
- Boards, bulletin
- Boxes, dynamite, cap
- Brackets, fire hose
- Cells, bug counting
- Dusters, feather
- Gauges, watt-hour
- Gauges, pressure recording
- Harness, harness
- Locks, mail pouch
- Machines, towing
- Racks, newspaper
- Shades, window
- Shields, crasing
- Signs
- Tripods for surveyor's instruments
- Tubes, X-ray
- Tables, filter operating
- Tubes, blueprint

INSTRUCTIONS FOR ACCOUNTABLE OFFICIALS.

When items, which have previously been considered expendable, are listed as nonexpendable, accountable officials will make a complete and correct count of all such items in their custody, charge same to the proper responsible official, and prepare invoices covering items to be taken up on the property records. The numbers of accounts to receive credit will be shown on all copies, and the signed original and one copy forwarded to the Auditor.

Except when specifically authorized to do so, storekeepers will in no case sign foremen's orders for other officials.

A new form (A-221) of "Certificate of charges on pay roll covering property lost, destroyed, or damaged through neglect or carelessness of responsible person" is now carried in stock. When a charge is to be divided among several persons, a list of such persons showing metal check and pay numbers may be attached to this form, instead of preparing separate certificates for each person.

Officials who are accountable for Panama railroad, commissary, Canal Zone Government, or Y. M. C. A. property must maintain a separate record of such prop-

erty. This property was not paid for from Panama Canal funds and cannot be included in Panama Canal records. Any invoices covering transfer of any property of these classes must bear some notation to indicate its ownership.

Approved: H. A. A. SMITH,
Auditor, Panama Canal.
CHESTER HARDING,
Acting Governor.

Forwarding Data Concerning Aids to Navigation, Etc.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 5, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

In future, when data concerning changes in aids to navigation, hydrography, sailing directions, etc., are prepared and forwarded to the Hydrographic Office, duplicates will be forwarded to the Coast and Geodetic Survey Office at the same time.

CHESTER HARDING,
Acting Governor.

Revision of Labor Train Schedule.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 11, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

It is desired to revise the labor train schedule with a view to eliminating some of the trains. As a preliminary to further discussion of the question, please advise the superintendent of the Panama railroad what labor trains are necessary for your work.

C. A. McILVAINE,
Executive Secretary.

Rendition of Bills.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,

BALBOA HEIGHTS, C. Z., January 14, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

In rendering bills against other departments of the United States Government, settlement for which is to be made by transfer of appropriations, they should be prepared against the proper department and not against the individual officer making the request or ordering the material. For instance, bills rendered against the Quartermaster of the Coast Artillery Corps should be headed, as follows:

"War Department,
C/o Quartermaster, C. A. C.,
Cristobal, C. Z."

Bills rendered for supplies or services furnished Lieutenant Crenshaw, who is in charge of Radio Station, should read:

"Navy Department,
C/o Lieut. Crenshaw,
Radio Station,
Carien, C. Z."

This same rule should also be observed in billing against the Republic of Panama and the Panama Railroad Company.

Please see that bills are so rendered in the future.

AD. FAUKE,
Acting Auditor.

Closing of New Gatun Station.

PANAMA RAILROAD COMPANY,
OFFICE OF THE MASTER OF TRANSPORTATION,

BALBOA HEIGHTS, C. Z., January 18, 1914.

NOTICE NO. 7:

All concerned—Effective with the close of business, Saturday, January 30, 1915, New Gatun station will be closed and passenger trains will cease making stops at that station.

Please be governed accordingly.

Approved: S. W. HEALD,
C. H. MOISETT,
Superintendent.

Appointment of Quartermaster, U. S. Troops on the Isthmus.

HEADQUARTERS, UNITED STATES TROOPS,
PANAMA CANAL ZONE,
January 11, 1915.

GENERAL ORDERS No. 2.

Pursuant to telegraphic authority from the Commanding General, Eastern Department, dated January 9, 1915, Maj. Bertram T. Clayton, Quartermaster Corps, is appointed and announced as Quartermaster of the United States troops, Panama Canal Zone.

He will proceed to Ancon and there take station. The travel directed is necessary in the military service.

By order of Brigadier General Edwards,
JOSEPH A. MARMON,
First Lieutenant, 25th Infantry, A. D. C.,
Acting Adjutant.

COMMISSARY DEPARTMENT.

Correction of Item in Price Book.

THE PANAMA CANAL,

SUPPLY DEPARTMENT.

CRISTOBAL, C. Z., January 15, 1915.

To all concerned—Referring to price change No. 615, effective January 16:

Item of "Pants, white duck," given on Page 202 of Price Book, S. N. 9997, should read "Suit, white duck".

BENJ. L. JACOBSON,
Depot Commissary.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective January 21, 1915:

FRESH MEATS.

Prices of fresh meats unchanged. Additions are, as follows:

MISCELLANEOUS.

	Price.
Tongue, beef, native, each	90
Brains, calves' per pound	19
Kidneys, beef, per pound	13
Livers—Beef, per pound	13
Calf, each	65
half, each	33
Oysters, fresh, per pkt.	130
Steak—Hamburger, package	17
Hamburger, 20-pound containers, per pound	14
Sausage—Bologna, per pound	13
Frankfurter, per pound	13
Frankfurter, imported, tin	14
Lieberwurst, per pound	11
Pork, per pound	17
Sweetbread, beef, per pound	23
Eggs, fresh, per dozen	51
per 1 dozen	26
Bluefish, per pound	10
Halibut, fresh, per pound	8
Salmon, per pound	6
Yeast, per pound	31
per cake	2

CURED AND PICKLED MEATS.

Beef, corned, No. 1, per pound	18
Beef, corned, No. 2, per pound	15
Ham—Real York and Cumberland, per pound	43
Genuine Westphalia, per pound	50
Sugar cured, whole, per pound	20
Half, per pound	22
Sliced, per pound	28
Hocks, per pound	10
Whole, boiled, per pound	30
Half boiled, per pound	32
Sliced, boiled, per pound	38
Hocks, boiled, per pound	10
Bacon—Breakfast, sliced, per pound	33
Whole piece, per pound	32
Ham, lunch, per pound	40
Pork, salt, family, per pound	14
Ox tongues, each	1.42
Pigs' feet, per pound	7
Tongues, per pound	22

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound	25
Chickens—Fancy, roasting, corn fed, per pound	24
Fowls, per pound	24
Fowls, light, per pound	21
Ducks, Western, per pound	25
Capons, per pound	30
Broilers, milk fed, per pound	29
Broilers, corn fed, per pound	27
Turkeys, per pound	28
Squabs, each	30
Partridges, per pair	1.30
Grouse, per pair	1.30
Pheasants, per pair	1.30

DAIRY PRODUCTS.

Butter—Creamery, special, per pound	43
Sheffield Farms, extra fancy, per lb.	54
Cheese—Philadelphia cream, cake	9
Roquefort, per pound	41
Young America, per pound	21
Swiss, per pound	30
Edam, each	90
Edam, tin	29
Parmesan, per pound	38
Gouda, per pound	26
Snappy, per cake	9
Milk, Sheffield, per quart	**15
Fermillac, bottle	**25
Ice cream, quart	125
1-gallon	150
Cream, Sheffield Farms, quart	**33
pint	**19
1 pint	**12

VEGETABLES.

Cauliflower, per pound	16
Beets, per pound	24
Brussels sprouts, per pound	*24
Celery, per head	*7

Cabbage, per pound	Price.
Carrots, per pound	12
Cucumbers, hothouse, per pound	11
Lettuce, per pound	*5
Onions, per pound	24
Parsnips, per pound	13
Peppers, per pound	18
Potatoes, white, per pound	2
sweet, tropical, per pound	2
Turnips, per pound	2
Tomatoes, per pound	16
Squash, per pound	24

FRUITS.

Apples, per pound	3
Apples, fancy, per pound	6
Cranberries, fresh, per pound	6
Grapes, per pound	14
Grape fruit—American, each	5
Tropical, each	34
Lemons, per dozen	19
Limes, per 100	*60
Oranges—American, each	24
Tropical, per dozen	9
Coconuts, each	5
Bananas, per bunch	38
Bananas, each	4
Apples, evaporated, per pound	16
Apricots, evaporated, per pound	16
Pears, evaporated, per pound	23
Tangerines, each	14
Figs, dried, per pound	17

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective January 14, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Flour, rye, lb.	.03	.044
Flour, graham, lb.	.03	.034
Hominy, tin	.13	.11
Cocoa, all other brands, tin	.68	.90
Cocoa, all other brands, lb.	.12	.15
Apples, tin	.11	.09
Apples, tin	.35	.27
Apricots, tin	.13	.16
Lard, tin	.80	.76
Hamburger steak, tin	.17	.21
Hamburger steak, tin	.09	.11
Oil, cottonseed, tin	4.10	4.20
Vinegar, cider, gal	.22	.16
Gherkins, sweet, Heinz, bot	.22	.34
Gherkins, sour, Heinz, bot	.21	.29
Olives, Spanish, keg	2.45	2.70
Pickles, dill, Heinz, tin	.17	.14
Peas, split, lb.	.06	.08
Rice, Carolina, lb.	.08	.07
Sugar, granulated, sack	.30	.32
Sugar, powdered, tin	.17	.20
Tomatoes, tin	.30	.26
Sponges, ea.	.73	.50
Napkins, damask, ea.	.54	.60
Aprons, coverall, ea.	.39	.42
Aprons, coverall, ea.	.44	.39
Hats, mens, felt, ea.	1.10	1.40
Suit, white duck, ea.	5.60	6.00
Salt, butter, ea.	.17	.14
Dishes, butter, ea.	8.10	7.70
Trunks, ea.	.10	.08
Milk, condensed, Red Butterfly, tin		.08

Additions to Stock.

Mackerel, soused, American, tin	.15
Chow Chow, American, bot	.10
Pepper, black, tin	.24
Pepper, white, tin	.36
Voile, Hedsor, yd.	.21
Voile, dashed, yd.	.18
Bath robes, mens, Terry, ea	3.00
Shoes, ladies, G. M. Blu, oxford, pr.	2.65
Pumps, ladies, pateot, pr.	2.65
Pumps, ladies, G. M., pr.	2.65
Pumps, ladies, white canvas, pr.	2.15

Examinations by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, January 27, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day

of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

By direction of the chairman of the board.

F. M. NIXON,

Recorder, Board of Local Inspectors.

Sale of Cattle at Hospital Farm.

THE PANAMA CANAL,

SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., January 13, 1915.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., January 26, 1915, and then opened, for the purchase of a lot of 31 cows and two bulls. These animals may be seen upon application to the superintendent, hospital farm, Corozal, C. Z. Bids must be for the entire lot of animals, but delivery may be taken of four or five at a time, at intervals to be determined upon between the successful bidder and the superintendent, Ancon Hospital, payment to be made to the superintendent, Ancon Hospital, for each lot of cattle as delivered.

Bids must be accompanied by certified check, cash, or post-office money order for five per cent of the amount bid, which will be returned upon rejection of bid. In the case of the successful bidder, the five per cent deposit will be held and applied as the last five per cent remaining due on the purchase price.

The Government reserves the right to accept or reject any or all bids. Bids should be marked "Proposal for purchase of cattle, hospital farm" and addressed to the Chief Quartermaster, Balboa Heights, Canal Zone.

W. R. GROVE,

Chief Quartermaster.

Rainfall from January 1 to 16 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>			
Balboa Heights	1.55	6	2 02
Balboa	1.70	6	2 04
*Miraflores	1.20	5	1 60
Pedro Miguel	.71	5	1 02
Rio Grande	.16	5	.29
<i>Central Section—</i>			
Culebra	.67	5	1.93
*Camacho	.20	1	.36
Empire	.14	5	.35
Gan.boa	.99	6	1.53
*Juan Mina	.42	1	1.02
Alhajuela	.64	5	.74
*El Vigia	.19	1	.37
Frijoles	1.12	1	3.29
*Trinidad			
*Monte Lirio	.90	1	2.39
<i>Atlantic Section—</i>			
Gatun	.44	1	1.38
*Brazos Brook	1.25	1	2.44
Colon	1.05	1	2.64

*Standard rain gage—readings at 5 p. m. daily. Automatic rain gage at unstarred stations—values mi. night to midnight.

†Total for period ending January 9 should be .93, instead of 1.02, as published previously.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, January 16, 1915. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gatun Lake.	Miraflores Lake.	
Sun., Jan. 10	127.40	92.95	87.00	86.99	53.70
Mon., Jan. 11	127.30	92.93	87.06	87.00	53.65
Tues., Jan. 12	127.25	92.75	87.05	87.04	53.85
Wed., Jan. 13	127.25	92.73	87.05	87.02	53.94
Thurs., Jan. 14	127.25	92.62	87.09	87.01	53.89
Fri., Jan. 15	127.25	92.62	87.05	87.02	54.08
Sat., Jan. 16	127.20	92.59	87.02	86.98	53.94
Height of low water to nearest foot	125.0	91.0			

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next six weeks are given in the following table:

JANUARY.

DATE.	Time and height of high and low water.			
Wed., Jan. 20.....	0:50	6:55	13:05	19:30
Thurs., Jan. 21....	1:0	14.3	0.8	14.6
Fri., Jan. 22.....	1:28	7:35	13:47	19:58
Sat., Jan. 23.....	1.6	13.5	1.8	13.8
Sun., Jan. 24.....	2:16	8:17	14:30	20:39
Mon., Jan. 25.....	2.4	12.5	2.9	12.9
Tues., Jan. 26.....	3:03	9:03	15:18	21:24
Wed., Jan. 27.....	3.2	11.6	3.8	12.1
Thurs., Jan. 28.....	3:54	9:57	16:10	22:18
Fri., Jan. 29.....	3.9	10.9	4.6	11.5
Sat., Jan. 30.....	4:53	11:05	17:12	23:24
Sun., Jan. 31.....	4.3	10.5	5.1	11.2
Mon., Jan. 25.....	5:57	12:22	18:17	.....
Tues., Jan. 26.....	4.3	10.5	5.1	.....
Wed., Jan. 27.....	0:35	6:59	13:31	19:19
Thurs., Jan. 28.....	11.4	3.9	11.0	4.6
Fri., Jan. 29.....	1:37	7:53	14:22	20:12
Sat., Jan. 30.....	11.9	3.2	11.8	4.0
Sun., Jan. 31.....	2:27	8:41	15:05	20:55
Mon., Feb. 1.....	12.6	2.4	12.7	3.1
Tues., Feb. 2.....	3:09	9:23	15:43	21:41
Wed., Feb. 3.....	13.4	1.5	13.6	2.2
Thurs., Feb. 4.....	3:48	10:03	16:18	22:22
Fri., Feb. 5.....	14.2	0.7	14.5	1.3

FEBRUARY.

DATE.	Time and height of high and low water.			
Mon., Feb. 1.....	4:26	10:40	16:52	23:02
Tues., Feb. 2.....	14.9	0.0	15.3	0.6
Wed., Feb. 3.....	5:05	11:20	17:28	23:42
Thurs., Feb. 4.....	15.3	-0.4	15.9	0.1
Fri., Feb. 5.....	5:40	11:57	18:04	.....
Sat., Feb. 6.....	15.5	-0.5	16.2	.....
Sun., Feb. 7.....	0:21	6:20	12:37	18:41
Mon., Feb. 8.....	-0.1	15.5	-0.3	16.2
Tues., Feb. 9.....	1:05	7:01	13:18	19:23
Wed., Feb. 10.....	0.0	15.1	0.3	15.8
Thurs., Feb. 11.....	1:50	7:46	14:06	20:08
Fri., Feb. 12.....	0.4	14.4	1.0	15.2
Sat., Feb. 13.....	2:41	8:37	14:59	21:01
Sun., Feb. 14.....	1.1	13.6	2.0	14.3
Mon., Feb. 15.....	3:40	9:40	16:01	22:07
Tues., Feb. 16.....	1.9	12.7	2.9	13.5
Wed., Feb. 17.....	4:47	10:58	17:14	23:27
Thurs., Feb. 18.....	2.4	12.2	3.4	13.0
Fri., Feb. 19.....	6:02	12:25	18:31	.....
Sat., Feb. 20.....	2.5	12.2	3.4	.....
Sun., Feb. 21.....	0:51	7:14	13:43	19:41
Mon., Feb. 22.....	13.1	2.1	12.9	2.9
Tues., Feb. 23.....	2:04	8:16	14:46	20:43
Wed., Feb. 24.....	13.6	1.4	13.8	2.1
Thurs., Feb. 25.....	3:03	9:10	15:37	21:34
Fri., Feb. 26.....	14.3	0.6	14.7	1.3
Sat., Feb. 27.....	3:52	9:58	16:21	22:21
Sun., Feb. 28.....	14.9	0.1	15.3	0.6
Mon., Feb. 29.....	4:35	10:40	17:01	23:04
Tues., Feb. 30.....	15.3	-0.2	15.7	0.3
Wed., Feb. 31.....	5:16	11:20	17:38	23:43
Thurs., Feb. 1.....	15.3	-0.1	15.7	0.3
Fri., Feb. 2.....	5:53	11:59	18:12	.....
Sat., Feb. 3.....	15.1	0.3	15.3	.....
Sun., Feb. 4.....	0:21	6:28	12:36	18:46
Mon., Feb. 5.....	0.6	14.5	0.9	14.7
Tues., Feb. 6.....	1:00	7:03	13:14	19:19
Wed., Feb. 7.....	1.2	13.8	1.8	14.0
Thurs., Feb. 8.....	1:39	7:38	13:53	19:53
Fri., Feb. 9.....	2.0	12.9	2.8	13.1
Sat., Feb. 10.....	2:20	8:16	14:35	20:30
Sun., Feb. 11.....	2.8	12.0	3.8	12.3
Mon., Feb. 12.....	3:07	9:01	15:24	21:17
Tues., Feb. 13.....	3.7	11.1	4.6	11.5
Wed., Feb. 14.....	4:03	10:04	16:25	22:23
Thurs., Feb. 15.....	4.3	10.5	5.2	11.0
Fri., Feb. 16.....	5:10	11:27	17:35	23:47
Sat., Feb. 17.....	4.6	10.3	5.4	10.9
Sun., Feb. 18.....	6:19	12:49	18:44	.....
Mon., Feb. 19.....	4.3	10.7	4.9	.....
Tues., Feb. 20.....	1:01	7:19	13:49	19:43
Wed., Feb. 21.....	11.4	3.6	11.6	4.0
Thurs., Feb. 22.....	1:58	8:10	14:33	20:32
Fri., Feb. 23.....	12.3	2.6	12.8	2.9
Sat., Feb. 24.....	2:43	8:54	15:11	21:15
Sun., Feb. 25.....	13.4	1.5	14.0	1.7

MARCH.

DATE.	Time and height of high and low water.			
Mon., March 1.....	3:24	9:35	15:43	21:57
Tues., March 2.....	14.4	0.5	15.1	0.5
Wed., March 3.....	4:03	10:14	16:24	22:36
Thurs., March 4.....	15.3	-0.3	16.1	-0.4
Fri., March 5.....	4:41	10:52	17:01	23:18
Sat., March 6.....	15.9	-0.8	16.7	-1.0

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean

low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies, may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired, or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case the vessel has a known representative on the Isthmus in care of such representative.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans, for all States. Due at New Orleans the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

*Every Monday to New York, for all States, except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE.—The sailings on February 8, March 8, and April 5 will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will only be for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and Northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7.10 a. m., connects with the despatches for the four sailings mentioned above.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., January 18, 1915.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Alexander, Joseph G.	Greene, Alfred
Bernachina, Miss M.	Harris, Miss H. A.
*Brannen, John D.	Hart, Harry C.
Burg, W.	*Houser, Elect Sergeant
Calloway, Wm. D.	Keeling, J. R.
*Carvalho, C. R.	Koch, L.
*Cheney, F. W.	Leconte, Cleafford
Coughlin, Miss Mary	Leggett, James M. (2)
*Cornet, Nicholas	*McAleer, Mrs. Emmet
Craven, Hugh	*McCane, W. R.
Crum, James Wesley	Merrick, James
*Finerty, Mrs.	Miner, Mrs. Violet S.
DeForce, C.	Park, Arthur
Donaldson, Mrs. Letticia	Pullig, S.
Dunn, P. F.	Rawlins, Leopold
Elenis, Angel	*Rex, Frank
*Ford, J. H., Major	Trower, Mrs. L. M. (2)
*Gallagher, W. F.	*Webster, Leigh H.
Gayer, Wm. C.	White, Miss Grace
Godleush, John	Winter, August A.
Gonzales, José Arrura	*Zimmer, Mrs. Jacob
*Paper.	

Sailings of Vessels in Regular Service With the Isthmus.

Regular service is maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every six days, direct; between Cristobal and New York by the United Fruit Company sailings about twice a week; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

	Sails.	Arrives.
NEW YORK TO CRISTOBAL-COLON.		
Carrillo.....	U. F. C. Jan.	13....Jan. 20
Colon.....	P. R. R. Jan.	14....Jan. 20
Tenadores.....	U. F. C. Jan.	16....Jan. 24
Almirante.....	U. F. C. Jan.	20....Jan. 27
Advance.....	P. R. R. Jan.	21....Jan. 28
Metapan.....	U. F. C. Jan.	23....Feb. 1
Santa Marta.....	U. F. C. Jan.	27....Feb. 3

(Continued on page 212.)

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death.
Campbell, Ziekel.....	32816	Jamaica.....	Paraiso.....	.....	Jan 12, 1915
George, Louis.....	4046	Martinique.....	Colon.....	P. R. R.	Jan. 9, 1915
Hoit, Oliver.....	51370	Barbados.....	Colon.....	Terminal Con...	Jan. 12, 1915.
Joseph, Paul.....	52400	Martinique.....	Gatun.....	Opr. & Mtee...	Jan. 14, 1915.
Mendez, James.....	34958	Jamaica.....	Paraiso.....	Opr. & Mtee...	Jan. 14, 1915.

Insane Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of commitment
John Ford.....	62003	Barbados.....	Panama.....	Fortifications...	Jan. 13.
Charles E. Kendall.....	45	U. S. A.....	Ancon.....	Accounting Dept	Jan. 14.

The estates of these deceased and insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon January 17.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Jan. 13....	S. V. Luckenbach...	American...	Luckenbach S.S. Co.	New York	San Francisco	General mdse.	3,050	3,859	2,632
Jan. 14....	Atlantic	American	Emery S.S. Line	Poston	San Pedro	General mdse.	4,500	5,421	3,811
Jan. 14....	Rkolesia	Danish	East Asiatic S.S. Co.	St. Thomas	San Francisco	General mdse.	3,000	4,592	3,311
Jan. 15....	Alaskan	American	American-Pacifiac S.S. Co.	New York	San Diego	General mdse.	11,300	8,746	6,388
Jan. 16....	Allianca	American	Panama Railroad S.S. Line	New York	Balboa	General mdse.	1,359	4,120	2,670
Jan. 16....	Lewis K. Thulow	American	Sudden & Christenson	Poston	San Francisco	*Coal	4,248	3,441	2,444
Jan. 17....	Baron Driesen	Russian	Northern S.S. Co., Ltd.	Savannah	Vladivostok	†General mdse.	5,566	4,765	3,650
Jan. 17....	Hesperos	Norwegian	Brunsgaard K. P. Akties	St. Johns, N. B.	New Zealand	Wheat	7,533	5,678	4,214
Jan. 17....	Kozmbe	British	Ellerman & Bucknall	New York	Vladivostok	General mdse.	4,000	5,560	4,032
Jan. 17....	Santa Cecilia	American	W. R. Grace & Co.	New York	San Pedro	General mdse.	7,000	6,748	4,464
Jan. 17....	Lyra	American	Luckenbach S.S. Line	New York	San Pedro	†General mdse.	6,500	4,708	3,637

*For United States Government. †Including 4,541 tons cotton and nitrate. ‡Including 100 tons of powder and 30 drums glycerine for United States Government.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Jan. 11....	Chitre	Panamian	Republic of Panama	Balboa	Cristobal	Ballast		141	56
Jan. 11....	Arna	Norwegian	Maple Leaf Line	Seattle	Avonmouth	General mdse.	7,200	6,253	4,693
Jan. 11....	P. Christopherson	Swedish	Johanson Line	Tacopilla	Gotlenburg	Nitrates	5,700	5,136	3,874
Jan. 11....	Pankdal	British	Bank Line	Guayaquil	Galveston	Ballast		4,832	3,627
Jan. 12....	Strathlane	British	Strathlane S.S. Co., Ltd.	Seattle	London	General mdse.	6,700	4,651	3,428
Jan. 12....	Crofton Hall	American	N. Y. & So. American Line	Valparaiso	Baltimore	General mdse.	7,324	6,626	4,946
Jan. 13....	Panama	American	Panama Railroad S.S. Line	Balboa	New York	General mdse.	2,271	5,766	4,222
Jan. 14....	Acajula	British	Salvador Ry. Co.	Salina Cruz	Colon	General mdse.	649	1,219	627
Jan. 14....	Limari	Chilean	South American S.S. Co.	Valparaiso	Cristobal	General mdse.	1,842	3,631	2,421
Jan. 14....	Evelyn	American	Luckenbach S.S. Co.	San Francisco	New York	General mdse.	3,500	3,393	2,319
Jan. 15....	Ecuador	British	Pacific Steam Navigation Co.	Guayaquil	Colon	General mdse.	1,405	1,439	2,131
Jan. 15....	Pleades	American	Luckenbach S.S. Co.	San Francisco	New York	General mdse.	4,100	4,147	3,255
Jan. 15....	Strathallan	British	Strathallan S.S. Co., Ltd.	Portland, Ore.	*Newport News	Wheat	6,445	4,680	3,407
Jan. 16....	Jutlandia	Danish	Fast Asiatic S.S. Co.	Seattle	Copenhagen	General mdse.	6,500	5,371	3,951
Jan. 17....	Aina	Norwegian	African-Australian Line	Brisbane	Galveston	Ballast		6,012	4,516
Jan. 17....	Lord Antrim	British	Irish S. I. owners' Co.	Valparaiso	New York	†General products	6,400	4,645	3,294

*For orders. †Including sugar, nitrates, and copper.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
Jan. 17....	Pacific	Johnson Line	Copenhagen
Jan. 19....	Honolulu	American-Hawaiian S. S. Co.	New York
Jan. 20....	Kentuckian	American-Hawaiian S. S. Co.	New York
Jan. 20....	Hurry Luckenbach	Luckenbach S. S. Co.	New York
Jan. 20....	Saint Ursula	Rarikin, Gilmore & Co., Ltd.	New York
Jan. 20....	Nairnshire	Scottish Line	New York
Jan. 20....	English Monarch	Monarch S. S. Co., Ltd.	New York
Jan. 20....	Charlton Hall	N. Y. & So. American S.S. Co.	New York
Jan. 20....	Colon	Panama Railroad S. S. Line	New York

ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Jan. 17....	Washingtonian	American-Hawaiian S.S. Co.	Honolulu
Jan. 18....	La Habra	Union O. I. Co.	Talara, Peru
Jan. 18....	Auchencrag	Auchin Line	Cruz Grande, Chile
Jan. 19....	L'Esperance	Harrison Line	San Francisco
Jan. 23....	Lompac	Union Oil Co.	Newport News
Jan. 24....	Chimu	W. R. Grace & Co.	Chile
Jan. 28....	Salvador	Salvador Ry. Co.	Central America

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
Jan. 13....	Peter Hamre	S. Tonnien S.S. Co.	Port Morant, Ja.
Jan. 14....	Venezuela	Cie Gen. Transatlantique	St. Nazaire
Jan. 14....	P. F. Hendrik	Royal Dutch W. I. Mail	Amsterdam
Jan. 15....	Fagus	R. M. S. P.	Jamaica
Jan. 15....	Edga	J. L. Mowinkel	Baltimore

*DEPARTURES.

Date	Vessel	Line	To
Jan. 12....	Legazpi	Cia Transatlantica de B.	Barcelona
Jan. 13....	Peter Hamre	S. Tonnien S.S. Co.	New York
Jan. 14....	Fortuna	Royal Dutch W. I. Mail	Puerto Barrios
Jan. 15....	Brutus	U. S. Navy	Vera Cruz
Jan. 15....	P. F. Hendrik	Royal Dutch W. I. Mail	Haiti

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
Jan. 18....	Dronning Olga	Seeborg Line	Mobila
Jan. 18....	Alexandrian	Leyland Line	Liverpool

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
Jan. 18....	Fagus	R. M. S. P.	Southampton
Jan. 20....	Venezuela	Cie Gen. Transatlantique	St. Nazaire

*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Date	Vessel	Line	From
Jan. 10....	St. Helens	W. R. Grace & Co.	San Francisco
Jan. 12....	Capt. A. F. Lucas	Standard Oil Co.	Richmond, Cal.
Jan. 12....	O. U. barge No. 93	Standard Oil Co.	Richmond, Cal.
Jan. 12....	Jamaica	Pacific Steam Nav. Co.	Tumaco
Jan. 14....	Guatemala	Pacific Steam Nav. Co.	Callao
Jan. 14....	Mantoro	Peruvian S.S. Co.	Callao

*DEPARTURES.

Date	Vessel	Line	To
Jan. 13....	Pennsylvania	Pacific Mail S.S. Co.	San Francisco
Jan. 15....	Capt. A. F. Lucas	Standard Oil Co.	Richmond Cal.
Jan. 15....	O. U. barge No. 93	Standard Oil Co.	Richmond, Cal.
Jan. 15....	St. Helens	W. R. Grace & Co.	Guayaquil

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
Jan. 17....	San José	Pacific Mail S.S. Co.	San Francisco
Feb. 6....	Newport	Pacific Mail S.S. Co.	San Francisco

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
Jan. 21....	Guatemala	Pacific Steam Nav. Co.	Callao
Jan. 21....	Jamaica	Pacific Steam Nav. Co.	Callao

(Continued from page 211.)

Panama	P. R. R.	Jan. 28	Feb. 3	Calamares	U. F. C.	Jan. 25	Feb. 1	NEW ORLEANS TO CRISTOBAL-COLON.	
Pastores	U. F. C.	Jan. 30	Feb. 7	Carrillo	U. F. C.	Jan. 28	Feb. 4	Parismioa	U. F. C.
Zacapa	U. F. C.	Feb. 3	Feb. 10	Colon	P. R. R.	Jan. 30	Feb. 7	Atenas	U. F. C.
Allianca	P. R. R.	Feb. 4	Feb. 10	Almirante	U. F. C.	Feb. 4	Feb. 11	Cartago	U. F. C.
Calamares	U. F. C.	Feb. 6	Feb. 14	Advance	P. R. R.	Feb. 6	Feb. 13	Turrialba	U. F. C.
Carrillo	U. F. C.	Feb. 10	Feb. 17	Metapan	U. F. C.	Feb. 8	Feb. 16	Heredia	U. F. C.
Colon	P. R. R.	Feb. 11	Feb. 17	Santa Marta	U. F. C.	Feb. 11	Feb. 18	Abangarez	U. F. C.
Tenadores	U. F. C.	Feb. 13	Feb. 21	Panama	P. R. R.	Feb. 11	Feb. 19	CRISTOBAL-COLON TO NEW ORLEANS.	
Almirante	U. F. C.	Feb. 17	Feb. 24	Pastores	U. F. C.	Feb. 15	Feb. 22	Abangarez	U. F. C.
Advance	P. R. R.	Feb. 18	Feb. 25	Zacapa	U. F. C.	Feb. 18	Feb. 25	Parismioa	U. F. C.
CRISTOBAL-COLON TO NEW YORK.				Allianca	P. R. R.	Feb. 20	Feb. 26	Atenas	U. F. C.
Zacapa	U. F. C.	Jan. 21	Jan. 28	Calamares	U. F. C.	Feb. 22	Mar. 1	Cartago	U. F. C.
Allianca	P. R. R.	Jan. 23	Jan. 29	Carrillo	U. F. C.	Feb. 25	Mar. 4	Turrialba	U. F. C.
				Colon	P. R. R.	Feb. 27	Mar. 5	Heredia	U. F. C.
				Tenadores	U. F. C.	Mar. 1	Mar. 8		

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, JANUARY 27, 1915.

No. 23.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions: Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

NOTES OF PROGRESS.

New Railroad Station at Corozal.

A new railroad station at Corozal has been authorized, to be located probably a little north of the present train shed, between it and the commissary. In design it will resemble the station now under construction at Balboa, although the main building, containing the ticket office, etc., will have a roof continuous with the platform roof, instead of projecting above as it does in the Balboa station. The Corozal structure will be 185 feet long, including the waiting platform, and 35 feet wide. The main part will be 42 feet long, and 20 feet wide. In addition, there will be an uncovered concrete platform extending for a distance of 200 feet at the south end of the station for the use of first-class passengers. Toilets will be provided, one at each end of the station. The estimated cost of the improvements is \$10,000.

New Medical Storehouse at Ancon Occupied.

The new reinforced concrete medical storehouse at Ancon has been completed and turned over to the Health Department. The stock of supplies in the storehouse at Colon Hospital has been transferred to the new location, and will be consolidated with the stock kept hitherto at Ancon Hospital, so that, in future, all issues will be made, as required, from this storehouse. The new building contains a large general stock room, equipped with ample shelving; a dry room, to be provided with an electric heater, for the storage of surgical instruments and other articles that are subject to deterioration from dampness; a survey room, where material and supplies no longer useful will be held pending action by the Surveying Officer; a built-in refrigerator for the storing of such drugs as must be kept at a low temperature, and an office. Detached from the main building is an annex, where alcohol, ether, collodion, and other highly inflammable materials are to be stored. The force at the new storehouse consists of four employees on the gold roll and five on the silver roll, with the former medical storekeeper at Colon Hospital, Mr. John J. Moran, in charge. The storehouse at Colon, a large

2-story wooden building, is being dismantled, and will be taken to Balboa, where it will be reerected for use of the Quartermaster's Department, as a mattress factory, furniture repair shop, etc.

New P. R. R. Time Table.

A new passenger train time table will go into effect on the Panama railroad on Sunday, January 31. The new schedule provides for night trains out of Panama and Colon on Saturdays and Sundays. The Saturday night train out of Panama will leave at 11.30, and out of Colon at 11.35; the Sunday night train out of Panama will leave at 9.25, and out of Colon at 9.30. The leaving time of the day passenger trains out of either terminal remains unchanged, with the exception of No. 7, which will leave Colon at 5.10 p. m., instead of 5.05 as at present. Important changes have been made tending to an improvement in the service on the Las Cascadas branch. The Gatun shuttle train will be discontinued, and the station at New Gatun will be closed.

Lockage of Small Boats.

The lock pilots, through the lock superintendents, have been authorized to make an examination and report their recommendations, before any small boat with passengers is allowed to enter the lock chambers, and if, in their opinion, there is any danger, the passengers should be directed to disembark, while the boat is being locked through. In this connection it might be well to call attention to the fact that the Canal regulations prescribe that whether with or without passengers, if there is liability of danger, a small boat can be refused lockage.

Swimming at Pedro Miguel Lock.

An area in Miraflores Lake, immediately east of the east wing wall at the south end of Pedro Miguel Lock, has been set aside for the use of the swimmers in Pedro Miguel village. The water in this locality varies in depth from six to 10 feet, is not greatly affected by the lock currents within the limits that will ordinarily be used by swimmers, and is entirely out of the way of Canal traffic. A float will be installed for the convenience of the swimmers, which will be equipped with lights, so that at night its position may be located by any one passing the point in launches or other small craft.

Shipping Notes.

The steamship *Kroonland* of the International Mercantile Marine Company is due at Cristobal about February 1, and will pass through the Canal, as part of the itinerary of its cruise, if conditions are favorable at that time. The *Kroonland* draws 30 feet of water, and will be the largest vessel to transit the Canal to date.

The steamship *Great Northern* of the Great

Northern Steamship Company is reported to have left Philadelphia on January 27, and is due at the Isthmus about February 3. This vessel carries both passengers and freight and begins a new regular monthly service between the east and the west coasts of the United States.

Among the vessels making the transit of the Canal during the past week was the *John Ena*, a four masted barkentine, having a length of 313 feet, beam 48 feet, and draft 22 feet, owned by the A. P. Lontgen Company of Philadelphia. It is bound from Philadelphia for Kobe, Japan, with a cargo of 11,686 cases of refined petroleum, and 306 barrels of wax. It made the passage of the Canal on January 22, in tow of Canal tugs in relays. It carries a crew of 31 men.

The steamship *Capac* of the New York and Pacific Steamship Company made the transit of the Canal from Balboa to Cristobal on January 21. This vessel, when it arrives at its port of destination, New York, will have entirely circumnavigated South America on this trip. It came through the Strait of Magellan, discharging cargo on the way down the east coast of South America, and picked up a return cargo of ores, etc., at Tocopilla, Antofagasta, Caleta Buena, and other Chilean ports.

As showing the diversity of cargo moving from the west to the east coast of the United States through the Canal, that of the steamer *Santa Clara*, which was locked through on January 22, is interesting. It included 250 tons of fish, 6,000 cases of apples, 3,000 cases of celery, 3,000,000 feet of lumber, 600 tons of lead, 900 tons copper and scrap copper, 50 tons old rubber, 50 tons scrap metal, 40 tons empty bottles, 600 tons oil cake, etc.

Operation of Gamboa Sand and Gravel Plant.

The committee, consisting of H. D. Hinman for the Division of Terminal Construction, W. G. Comber, Resident Engineer of the Dredging Division, and C. H. Motsett, Superintendent of the Panama railroad, appointed to look into the Chagres River sand and gravel service, has submitted its report and recommendations.

It was found that the plant operated by the Dredging Division at Gamboa produces one cubic yard of sand for every two cubic yards of washed gravel, and that the barges are now able to deliver to the unloading cranes from 500 to 1,000 cubic yards of washed sand a day, depending upon conditions. The committee believed that this amount will be ample for Canal purposes, but until a sufficient quantity has been accumulated in storage, it was recommended that no sales of sand be made to individuals and companies. The quantity of sand now produced is con-

sidered excellent, and there is but little mud in it.

It was recommended that the present handling methods be continued, *i. e.*, the Dredging Division to excavate the sand and gravel and deliver it alongside the wharf at Gamboa, and the Panama railroad to attend to the unloading and make all deliveries as required. It was further recommended that departments and divisions notify the Panama railroad of their requirements at least two days in advance, and that the railroad, in turn, convey this information to the Dredging Division. It was agreed that the output of sand should be kept at as high a figure as possible, in order that a surplus may be accumulated in the storage pile near Miraflores Locks.

It was further recommended that run-of-bank gravel be used wherever possible, in order to hold the sand requirements to a maximum of 600 cubic yards a day, and that Chagres River sand be used only in the construction of buildings already designed, in cases where the design was based on the assumption that rock and sand concrete was to be used, and that future buildings should be designed with a view to using run-of-bank gravel concrete.

It was recommended that no plans be made at the present time for resuming sand dredging at Punta Chame, and that the amount of this sand still in storage, about 3,000 cubic yards, be conserved, issues to be made only when absolutely necessary, with no sales whatever to outside parties. Owing to the present light demand for washed gravel, it was suggested that departments and divisions, now using Ancon rock with sand, substitute washed gravel for the rock.

The report of the committee was adopted, and its recommendations approved.

Regulations Governing Visits to Generating Stations and Substations.

On account of the danger to human life involved in exposed electrical apparatus at high potentials in the generating stations and substations of the Electrical Division, entrance into these stations and substations by all persons, except officials of The Panama Canal and employees of the Electrical Division, is hereby forbidden, unless prior permission is obtained from the office of the Electrical Engineer. In all cases, whether employees of the Electrical Division or other persons who have obtained permission are involved, the switchboard operator on duty must be consulted immediately upon entering the building, and before any inspecting or sightseeing is attempted. Except in the case of employees of the Electrical Division, who are thoroughly familiar with the equipment, visitors will not be allowed to enter any room containing high tension apparatus (2200 volts or over), unless accompanied by a switchboard operator or other employee who is thoroughly familiar with the equipment. Umbrellas, walking sticks, and similar articles must be deposited with the operator on duty upon entering the building.

W. H. ROSE,
Electrical Engineer.

BALBOA HEIGHTS, C. Z.,
January 15, 1915.

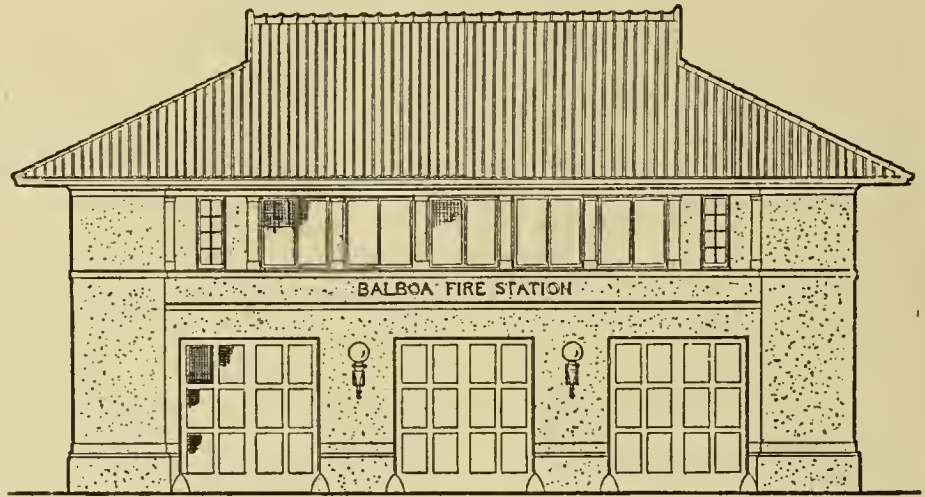
The residents of Majagual, a native town in the Canal Zone, east of Mount Hope, have been given an additional extension of time of 30 days, or until February 13, in which to vacate the village.

BALBOA FIRE STATION.

New Permanent Structure Completed—Was Occupied on January 11.

Situated on the west side of Balboa Plaza and conveniently located in the permanent townsite, is the new Balboa fire station, the only reinforced concrete structure of its kind in the Canal Zone. It is designed in harmony

with a loggia above on the second floor, seven feet by 29 feet six inches, forming a veranda for the second-story dormitory. The first floor ceiling is 12 feet nine inches high in the clear, and is planned to accommodate three automobile fire engines and two horses, if necessary. A concrete stair connects with the second story, and two brass poles pro-



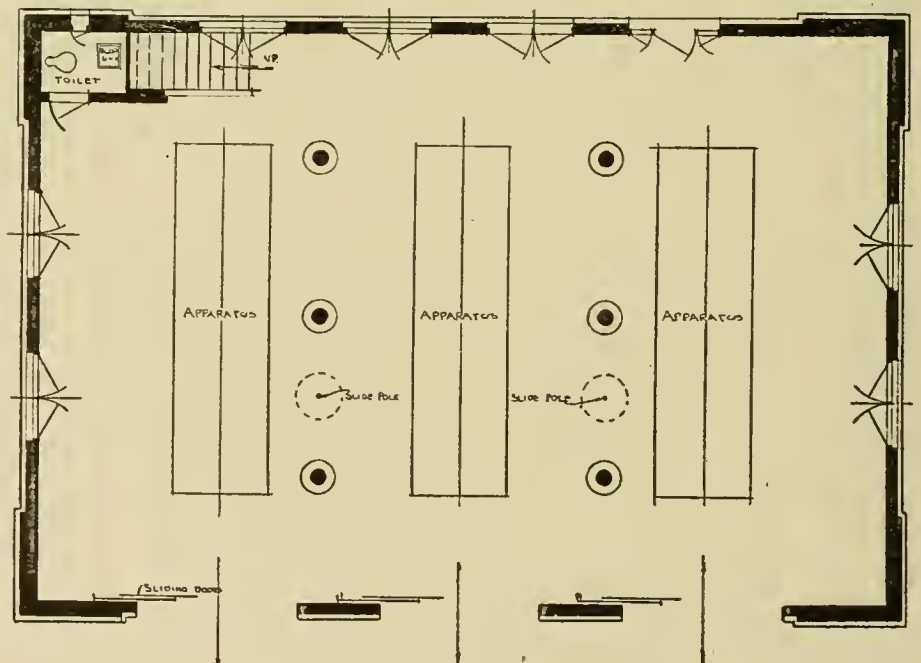
FRONT ELEVATION, NEW BALBOA FIRE STATION.

with the surrounding buildings, such as the Administration Building, and the concrete quarters on the nearby Prado.

The building is two stories high, 37 feet eight inches by 55 feet eight inches in plan, and has a total area of 2,096 square feet. It is constructed of hollow 8-inch cement blocks, with stucco finish, and poured concrete beams and floor slabs five inches thick. The roof is constructed of wood rafters, supporting Spanish tile, laid on sheathing, with a moulded

vide means for rapid descent for the firemen when called out. There are six 12-inch round columns in the center, with moulded caps and wheel guards, to support the second floor beams.

On the second floor there is a reading room 19 feet six inches by 23 feet six inches in size, and a dormitory 29 feet six inches by 27 feet six inches, furnishing sleeping accommodations for 12 men. Off from the veranda, in front of the building, is the chief's dormitory, and



FIRST FLOOR PLAN, BALBOA FIRE STATION.

wood cornice and paneled soffit; the millwork throughout the building is of cypress, with a mahogany finish in the interior of the building.

The façade faces Balboa Plaza, and has three large openings for the fire apparatus,

a storage and battery room, each seven feet six inches by 11 feet. There is a locker room, 10 feet one inch by 13 feet, in the rear of the second floor; also, a toilet and showers, accessible from both the reading room and dormitory.

The new station was put in service at 9.30 a. m., on Monday, January 11, with a captain, lieutenant, and five men in charge; also, a wireman and lineman. At present the equipment consists of a 90 horse-power Webb motor combination pump and hose car with a very complete equipment of tools for fire fighting.

In February, a 90-horsepower hose car is expected and its installation will necessitate an addition of five men to the force at this station.

The building is equipped with the latest devices of electric fire alarm system. A battery room contains a generating plant, storage

batteries, repair parts, etc. A switchboard and repeater is also being installed. Alarm gongs have been placed in the lavatory, the dormitory, and apparatus floor. Wires have been placed underground in the duct lines. A total of 30 noninterfering street fire alarm boxes will be distributed in the district extending from the Balboa docks to Corozal; also, numerous auxiliary boxes are placed in important buildings. In addition, telephones are placed on each floor. A very complete system of lighting with wall plugs and switches has also been installed.

Government Farms.

The Reclamation Service at Washington, D. C., announces the opening to entry of a number of desirable farm units in several western states. Employees in the Canal Zone who contemplate an early return to the United States may obtain full information by writing the Statistician.

Attractive opportunities are offered for small colonies on several projects. The land is acquired under the homestead laws and 20 years' time is granted in which to make payment for water rights.

PANAMA RAILROAD COMPANY.

(PASSENGER TRAIN TIME TABLE NO. 21—IN EFFECT JANUARY 31, 1915.)

COLON-PANAMA MAIN LINE SERVICE.

SOUTHWARD.

STATIONS.	Miles from Colon	DAILY.								Daily except Sunday	Saturday only	SUNDAY ONLY.				Monday only
		31	3	33	5	35	37	39	7			51	53	11	55	
Leave.		A. M.	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	P. M.	P. M.	A. M.	
Colon.....	0		7.15		11.05				5.10		11.35			9.30		
Mount Hope.....	1.57		\$7.20		\$11.10				\$5.15		\$11.40			\$9.35		
Gatun.....	6.79		\$7.30		\$11.20				\$5.25		\$11.50			\$9.45		
Monte Lirio.....	14.43		\$7.45		\$11.35				\$5.40		\$12.06			\$10.00		
Frijoles.....	20.92		\$7.56		\$11.46				\$5.51		\$12.17			\$10.11		
Darien.....	25.27		\$7.56		\$11.53				\$5.53		\$12.24			\$10.18		
Gamboa.....	33.26		\$7.56		P. M.				\$5.53							
New Culebra.....	35.19		\$7.56		\$12.04				\$5.53		\$12.24			\$10.18		
Las Casca las.....	47.93	7.00		10.40		1.10	4.50	6.05		7.20		1.40	9.15		11.40	
Empire.....	45.64	\$7.05		\$10.45		\$1.15	\$1.55	\$6.10		\$7.25		\$1.45	\$9.20		\$11.45	
Culebra.....	44.65	\$7.10		\$10.50		\$1.20	\$5.00	\$5.14		\$7.30		\$1.50	\$9.25		\$11.50	
Paraiso.....	40.95	\$7.25		\$11.05		\$1.35	\$5.15	\$5.28		\$7.45		\$2.05	\$9.40		\$12.05	
Pedro Miguel.....	40.24	\$7.28	\$3.41	\$11.03	\$12.29	\$1.35	5.18	6.30	\$5.34	\$7.48	\$12.58	2.08	9.43	\$10.53	\$12.08	
Miraflores.....	42.35	\$7.34	\$3.50	\$11.14	\$12.35	\$1.44			\$5.40	\$7.54	1.04	2.14	9.49	10.59	12.14	
Corozal.....	44.24	\$7.39	\$3.54	\$11.19	\$12.39	\$1.49			\$5.44	\$7.59	\$1.09	\$2.19	\$9.54	\$11.04	\$12.19	
Balboa Heights.....	46.52	\$7.45	\$3.59	\$11.25	\$12.45	\$1.55			\$5.50	\$8.05	\$1.15	\$2.25	\$10.00	\$11.10	\$12.25	
Panama.....	47.61	7.50	9.05	11.30	12.50	2.00			6.55	8.10	1.20	2.30	10.05	11.15	12.30	
		A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	P. M.	P. M.	A. M.	
		31	3	33	5	35	37	39	7	41	9	51	53	11	55	
		DAILY.								Daily except Sunday	Saturday only	SUNDAY ONLY.				Monday only

NORTHWARD.

STATIONS.	Miles from Colon	Mixed Daily	DAILY.								Saturday only	SUNDAY ONLY.			
			30	4	32	6	31	36	8	33	40	10	52	12	54
Leave.		A. M.	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	P. M.	P. M.	
Panama.....	47.61	4.50	7.10	8.30	11.00	12.10	3.05	\$5.05				11.35	12.40	9.25	10.40
Balboa Heights.....	46.52	\$4.55	\$7.15	\$8.35	\$11.05	\$12.15	\$3.10	\$5.10				\$11.35	\$12.45	\$9.30	\$10.45
Corozal.....	44.24	\$5.02	\$7.21	\$3.41	\$11.12	\$12.21	\$3.16	\$5.16				\$11.41	\$12.51	\$9.35	\$10.51
Miraflores Lock.....	42.35	\$5.07	\$7.26	\$3.46	\$11.16	\$12.26	\$3.21	\$5.21				\$11.45	\$12.55	9.41	10.55
Pedro Miguel.....	40.24	\$5.19	\$7.33	\$3.53	\$11.23	\$12.33	\$3.28	\$5.28	5.33	6.45	\$11.53	\$1.03	\$9.43	\$11.03	
Paraiso.....	40.95	\$5.22		\$3.55		\$12.36	\$3.31		\$5.35	\$5.43		\$1.05		\$11.06	
Culebra.....	44.65	\$5.55		\$2.10		\$12.50	\$3.45		\$5.50	\$7.00		\$1.19		\$11.19	
Empire.....	45.64	\$5.28		\$2.15		\$12.55	\$3.50		\$5.55	\$7.07		\$1.24		\$11.24	
Las Casca las.....	47.93	6.35		9.20		1.00	3.55		6.00	7.12		1.29		11.29	
New Culebra.....	35.19		\$7.45		\$11.35			\$5.40				\$12.06		10.01	
Gamboa.....	30.26		\$7.55		\$11.45			\$5.50				\$12.16		\$10.11	
Darien.....	25.27		\$3.07		\$11.57			\$6.02				\$12.28		\$10.22	
Frijoles.....	20.92		\$3.14		\$12.01			\$6.09				\$12.34		\$10.29	
Monte Lirio.....	14.48		\$3.25		\$12.15			\$6.20				\$12.45		\$10.40	
Gatun.....	6.79		\$3.40		\$12.30			\$6.35				\$1.00		\$10.55	
Mount Hope.....	1.57		\$3.50		\$12.40			\$6.45				\$1.10		\$11.05	
Colon.....	0		8.55		12.45			6.50				1.15		11.10	
		A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	P. M.	P. M.	
		30	4	32	6	31	36	8	33	40	10	52	12	54	
		Mixed Daily	DAILY.								Saturday only	SUNDAY ONLY.			

8 Stop. 1 Flag stop.

Nos. 3, 5, 7, 9, and 11 connect at Pedro Miguel Junction with Nos. 32, 34, 40, 52, and 54, respectively, for Las Cascadas branch. No. 8 connects with No. 33 at Pedro Miguel Junction for Las Cascadas branch. Nos. 31, 33, 37, 39, and 53 from Las Cascadas branch connect at Pedro Miguel Junction with Nos. 4, 6, 8, 7, and 12. Passengers using main line trains destined for stations on Las Cascadas branch will change cars at Pedro Miguel Junction. No. 4 will stop at commissary crossing, Cristobal, daily, except Saturdays and Sundays.

C. A. C. POST BUILDINGS.

Group of 15, Including Headquarters, under Erection on Balboa Dump.

Fifteen buildings are under construction on Balboa dump by forces of the Constructing Quartermaster, for use of the Coast Artillery Corps. They are, as follows:

Headquarters building.

One 1-family field officer's dwelling.

Three 2-family quarters for married commissioned captains.

Two 4-family quarters for married or unmarried commissioned lieutenants.

Three 4-family quarters for noncommissioned officers.

Four barracks for privates.

One stable.

These buildings are all constructed of reinforced concrete columns and beams. All exterior walls are composed of hollow blocks, and stuccoed, except the barracks and stable, which are of poured concrete, with rubbed surface. All roofs are of red Spanish tile, except the stable, which has a flat concrete slab roof. About one-half of the floor construction is wooden joists, the remainder concrete slabs. Interior partitions are generally 2 by 4-inch studs, metal lathed and plastered, although hollow blocks, poured concrete, and a special form of 4-inch partition, consisting

and may be utilized for storage, trunk space, and dry closet, contains eight principal rooms on the first and second floors. Opening off from the 10 foot wide central stair hall on the first floor, and running entirely through the house from front to rear, is the living room on the left and the dining room on the right. The living room, occupying the entire left end of the house, is as large as the combined dining room, kitchen, pantry, and entry, which balance it on the left. Openings, 12 feet wide, without doors, from the hall into the living room, and from the hall into the dining room, practically make one room of nearly all the first floor. On the second floor are five bedrooms opening off the hall, two fully equipped bathrooms, and several individual closets. One bedroom and bath are *en suite*.

The noncommissioned officers' quarters, 30 feet six inches by 75 feet six inches in plan, which are sectioned to themselves, contain no basement or servants' quarters. On the single floor of each are a living room, dining room, two bedrooms, kitchen, bathroom, and one general closet.

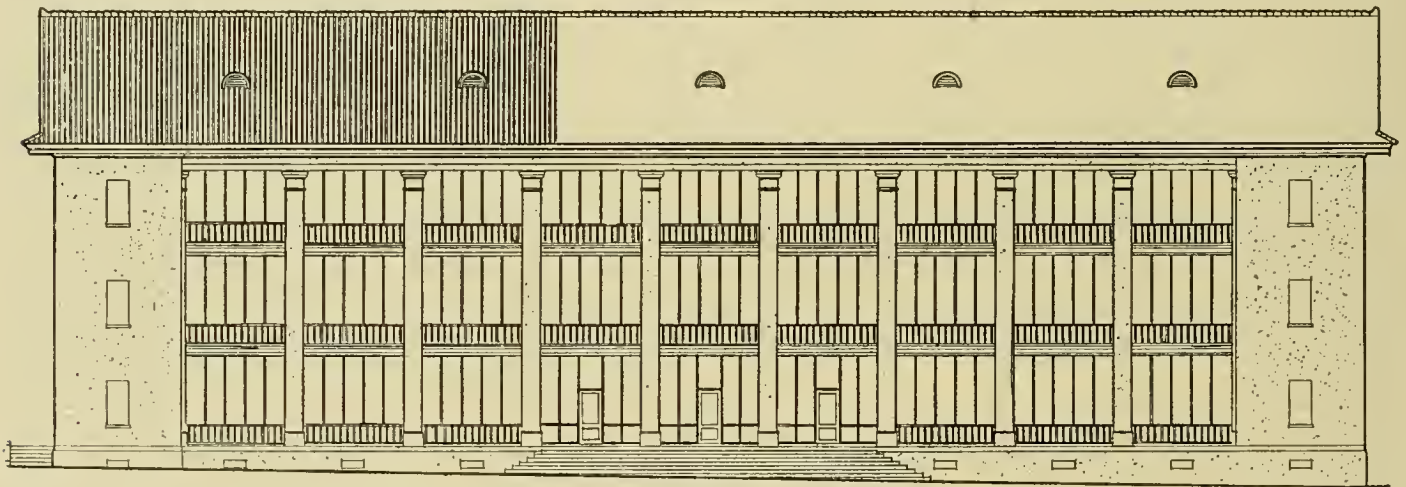
BARRACKS.

The barracks, 66 feet six inches by 126 feet in plan, with a wing in the rear, 22 by 27 feet in plan, are two stories high, with 2-story porches running the length of the building

the first floor the post exchange and lunch room occupy one end of the building, and a separate side entrance has been arranged for this unit. All other rooms on the first floor, *i. e.*, general stores, guard room, prisoners space, dispensary group, band mess, and various minor accessory rooms will be reached from the porches. Continuous stairs at either end of each porch from the first to the third floors provide ample and convenient access to the several floors. On the second floor the reading and amusement rooms occupy one end of the building, and the band dormitory the other, while in the intervening portion will be the general offices of the post, *i. e.*, Quartermaster, Quartermaster's clerks, Fort Commander, Artillery Engineer and Ordnance Officer and clerks, Sergeant Major, file room, Adjutant, Commanding Officer, and a Summary and General Court. The principal feature of the third floor will be the assembly hall, with a capacity for seating 600 people comfortably. This hall will be provided with an operator's booth for moving pictures, and a spacious stage with dressing rooms and toilet adjoining. A large band practice room, and several noncommissioned officers' rooms will occupy the remainder of this floor.

STABLE.

The stable contains harness room, feed



FRONT ELEVATION, HEADQUARTERS BUILDING, COAST ARTILLERY CORPS.

of plaster on expanded metal, stiffened with 1-inch channels, also occur.

QUARTERS FOR COMMISSIONED AND NON-COMMISSIONED OFFICERS.

All of the quarters are of the type of design of the permanent quarters at Balboa, the 4-family commissioned officers' quarters, 36 by 90 feet in plan, having been built from the same plans as the quarters on Balboa Prado. The 2-family captains' quarters, 35 feet four inches by 65 feet in plan, are similar to the 2-family type on Balboa Heights, but with an additional length of 12 feet, which provides two additional bedrooms, making four in all, for each of the two families.

The Field Officer's individual dwelling, 37 feet six inches by 45 feet in plan, is similar in design to the two and 4-family commissioned officers' quarters, with high basement, where, as in all the types above mentioned, the servants are quartered, but it is distinguished from them by having dormers, and the ends of the house are gabled instead of hipped. The dwelling, besides the high basement and the unfinished attic, which is reached by a stair

both front and back. The ground floor contains, on one end, the kitchen, its store room, and a dormitory for three cooks; and on the other end, extending the whole width of the building, is the dry room. Between these are located a dormitory for 12 men, a large store room and office, a room for a noncommissioned officer, and one for the first sergeant. The toilet and baths, and a barber shop and tailor shop, are located in a wing separated from the building by the rear porch. The second story is one large dormitory accommodating about 100 men in one room. The toilets are in the second story of the wing in the rear, opening on the back porch.

HEADQUARTERS BUILDING.

The Headquarters Building, whose center line is coincident with the center of the Parade, will be a 3-story structure, 177 feet long and 60 feet wide, with porches extending along the entire length of the building, front and rear. In the rear, a 3-story extension, 17 by 20 feet, provides space for a barber shop and toilet rooms on the first floor, and toilets and showers on the second and third floors. On

room, and stalls for 20 horses, but it is planned so that an extension can be built to it doubling its capacity.

Hotel Aspinwall Notes.

An index of the increasing popularity of the Hotel Aspinwall at Taboga is shown by the fact that during the month of December the meals served there aggregated 1,590, while in January, up to the 20th of the month, the number had reached 2,531. It is estimated that by the end of the month fully 3,000 meals will have been served. Reservations for rooms at the hotel are being received steadily from employees who expect to take their annual leave in February.

Arrangements are under way whereby guests at the hotel can have their laundry attended to at Ancon, and forwarded to them without any effort on their part, further than to deposit a commissary book at the laundry from which the cost of laundering only will be deducted. Those making a stay of a week or more at the hotel will find this a decided convenience.

CANAL WORK IN DECEMBER.

Monthly Report of the Acting Governor to the Secretary of War.

BALBOA HEIGHTS, C. Z., January 18, 1915.
The Honorable the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of operations on the Isthmus for the month of December, 1914:

Department of Operation and Maintenance.

Lock operation and maintenance—All fender chains required have been received, excepting a section for Miraflores Locks, and the installation of all chains, with the exception of six at Miraflores, has been completed. The floating caisson underwent final tests satisfactorily and was accepted. Practically all of the material required for the telephone systems at the locks was received during the month. The work of grading dams and backfill at Pedro Miguel and Miraflores was continued. One hundred lockages were made at Gatun, 103 at Pedro Miguel, and 101 at Miraflores. The first night lockage was accomplished on December 7 at Pedro Miguel and Miraflores Locks.

Electrical—The output of the power plants was, as follows:

Gatun hydroelectric station, 619,200 kilowatt hours; Miraflores steam station, 1,984,795 kilowatt hours; Balboa power plant, 3,839 kilowatt hours. The output of the Balboa air compressor plant was 272,340,755 cubic feet of free air compressed to 105 pounds. The Gatun and Cristobal substations were completed, tested, and put in service; and all electrical load hitherto carried by the Miraflores steam station was transferred to the Gatun hydroelectric station. The entire transmission line from Cristobal to Balboa, with the exception of the west side between Gatun and Miraflores, was placed in service. Electrical construction work on the substation for the high power naval radio station at Darien, and for the substation at Gamboa for the new permanent pumping plant of the Division of Municipal Engineering, was commenced. Work on underground conduit systems, and in various new buildings, was continued during the month.

Municipal engineering—In addition to the work incident to maintenance, operation, and repairs, work was in progress on the following items of construction: New water supply for Toro Point; seawall for the Panama railroad at Folks River; Atlantic and Pacific fuel oil handling plants, with oil pipe lines; 300,000-gallon concrete reservoir at Gatun; water and sewer systems, and roads, for the Coast Artillery post on Balboa dump; locks repair shop and office building at Miraflores Locks; concrete arch bridge leading to Miraflores spillway wall, and work in connection with the Balboa townsite. The work around the Administration Building was continued, and included the grading of the hill, sodding the grounds, and the construction of the concrete steps on the south side of the building. Construction work on the new Panama water-works was continued. The excavation of the Gamboa-Miraflores pipe line trench was finished by the contractor, and the installation of valves on the main was in progress.

Meteorology and hydrography—Rainfall was below normal, except on the Pacific side. The deficiencies were greatest in the Atlantic section, where the rainfall amounted to only about 50 per cent of the December normal.

Monthly totals range from 2.25 inches at Alhajuela to 10.39 inches at Caño station on Gatun Lake. The maximum precipitation recorded in any one day was 2.22 inches at Colon on December 12. The estimated rainfall over the Chagres River basin figures 42 per cent below normal—5.65 inches against a 14-year average of 9.80 inches. This estimated average is probably low, as heavy rains fell far up the watershed, producing freshets in the river at times when only light rainfall was recorded at any of the stations in the Canal Zone or vicinity. The total yield for Gatun Lake was 29 per cent below the 7-year December normal; Alhajuela was 24 per cent and Gatun Lake watershed 31 per cent below the 25-year December normal.

Division of Terminal Construction.

PACIFIC TERMINALS.

Shops—Work performed in connection with the construction of the permanent shops included that in connection with the dry kilns in building No. 10, and a temporary roadway around building No. 10, to gain access to the office building.

Dry dock—Hand excavation was employed at the north wall of the dry dock, and 3,783 cubic yards of rock were excavated from the site. As a result of changes made in the concrete mixing plant the yardage of concrete placed per day was materially increased, a total of 15,250 cubic yards being placed during the month.

Coaling plant—The fill supporting the wall along the west end of the coal pocket was practically completed and work was commenced on the excavation for the supporting piers for the berm crane runways. A total of 373 cubic yards of concrete was placed for berm crane piers, tracks, walls, etc.

Quay wall and pier—One thousand and sixty-five lineal feet of piling were driven for the construction of trestle and for supporting caissons. One hundred and six caissons have been started, 17 remaining to be placed. Work progressed satisfactorily on the construction of the superstructure, which consists of steel beams and girders with reinforced concrete slabs. In this work, 587,158 pounds of fixed steel, reinforcing rails, and girders were placed; and 661 cubic yards of concrete and 1,472 square yards of paving bricks were placed in the floor. The work performed on Pier No. 1 included painting and cleaning up the remainder of the exposed fixed iron.

Fuel oil plant—Construction work on the oil berth progressed satisfactorily. Nine caissons have been started, five of which were sunk to rock during the month. Work was handicapped somewhat on account of the leakage of water. The work of connecting up the oil and water landings was performed by the Division of Municipal Engineering.

Sosa Hill quarry—Excavation amounted to 79,598 cubic yards, all of which were classified as rock.

ATLANTIC TERMINALS.

East breakwater—In the construction of the trestle for the fill 50,298 lineal feet of piles were driven; the double trestle was extended 798 feet, and 1,596 lineal feet of track were laid. The total fill in place at the close of the month was 348,868 cubic yards.

Coaling plant—Difficulty was experienced on account of the settlement of parts of the unloader wharf trestle, necessitating the driving of a few additional bents of piles to insure safety of the trestle. The filling of caissons for the south 500 feet of the reloader wharf was

practically completed, and 26 caissons on the unloader side were filled, leaving 28 caissons remaining to complete the south 500 feet of wharf.

Floating cranes—The *Ajax* was offered for test on December 1. During the test the back portion of the jib collapsed, wrecking the jib. The *Hercules* was offered for test on December 10, but test was refused until the cause of failure of the *Ajax* has been determined and any doubtful member suitably reinforced.

Division of Canal Transportation.

Ninety-nine vessels passed through the Canal in December; 57 northbound and 42 southbound. Collections for tolls amounted to \$398,111.49; for pilotage \$2,452; for tug services \$150; for launch service \$103.50; for service of deck hands, etc. \$984; and for miscellaneous (maps, charts, etc.) \$48.80, or a total of \$401,848.79.

Eighteen vessels were measured and 81 inspected to see that their certificates conformed to the rules.

The new signal station opposite Empire was completed. The new mooring stations at Empire and Gamboa were completed and put in service.

Dredging Division.

The total dredge excavation for the month, including earth, rock, gravel and sand, was 1,227,675 cubic yards, as follows:

	Cu. Yds.
Miraflores locks to the sea.....	75,205
Balboa inner harbor.....	331,636
Culebra Cut.....	514,932
Sea to Gatun Locks.....	118,800
Approach channel.....	37,800
Inner harbor, Cristobal.....	68,400
Chagres River gravel and sand.....	27,600
Breakwater, Limon Bay.....	32,411
Breakwater harbor, Limon Bay.....	20,891
Total.....	1,227,675

The hydraulic grader was engaged during the month in grading the Canal banks and digging draining ditches.

The destruction of water hyacinths progressed; 22,556 square yards of plants were poisoned, and 1,080 square yards pulled and piled on the bank. No new beds were discovered during the month.

Mechanical Division.

In general, the character of the work of the division was about the same as that for the previous month. A further reduction in the volume of work resulted in a net decrease of 12 gold roll employees.

Shop orders authorized during the month numbered 867; those left over from the previous month 384; those completed during the month 843, and those carried forward into January 408. The output of the foundry was 108,283 pounds of iron, 52,564 pounds of steel, and 6,493 pounds of brass. Hostling was done on 5,495 pieces of equipment. Shop repairs were made on 1,449 cars, and field repairs on 6,153.

The operation of the floating cranes *Ajax* and *Hercules* was assigned to the division, and a tentative organization, based on a combined wrecking organization for the entire work, was approved.

The work of placing the fuel oil plants in operation, and of operating them until such time as it is deemed desirable to turn them over to the Supply Department, was assigned to the division.

Building Division.

The principal operations of this division during the month were, as follows: The last of the 28 four-family and seven of the nine 2-family houses at Balboa were completed. The

plastering and carpentry work in the two remaining 2-family houses was let by contract. The new fire station at Balboa was completed, with the exception of some of the hardware, which has not been received on the Isthmus. Work was begun during the month on the Balboa oil storehouse, and the locks office building at Miraflores. The removal of buildings for the insane asylum at Corozal was begun during the month. The removal of the buildings on Culebra Island, formerly used as a quarantine station, was completed, and the buildings are now in the process of erection, to serve the same purpose, on Balboa dump. Satisfactory progress was made on the buildings for the Army near Fort Amador, and the remodeling and repair of buildings at Culebra was begun during the month.

Supply Department.

The force report for the last Wednesday in December showed a total of 25,171 employes of The Panama Canal and Panama railroad, of whom 3,701 were white Americans, and 21,470 were laborers. Of the latter, approximately 422 were Europeans and the remainder West Indian negroes. The total force was reduced 1,022; Americans 217, laborers 805.

The occupants of Government quarters numbered 6,966 white Americans, of whom 3,863 were men, 1,547 women, and 1,556 children; 8,436 West Indians, of whom 5,518 were men, 1,236 women, and 1,682 children.

The value of material received during the month was \$563,283.17. It came forward in 32 steamers; the total weight of the cargo, exclusive of lumber and piles, was 10,048 tons. Some of the principal items were 1,711,299 feet, B. M., lumber for stock and the Mechanical Division, 61,615 lineal feet of piles, and 133,905 bags of Portland cement.

Health Department.

General—No case of yellow fever, smallpox or plague originated on or was brought to the Isthmus during the month. Forty-six deaths occurred in the Canal Zone. The death rate for disease for the Canal Zone, based upon a population of 36,862, was 12.37, as compared with 12.66 for the preceding month, and 15.05 for the corresponding month of last year.

Employes—The health of employes continued good during the month. The number of names on the rolls for the preceding month was 36,224. On this basis, the admissions to hospitals and quarters, 1,000, gave a rate of 331.27 per thousand, as compared with 298.93 for the preceding month, and 494.71 for the corresponding month of last year. The admission rates to hospitals for all diseases were: Whites 359.15, blacks 171.93, Europeans 424.47, Americans 270.32. The admission rates to hospitals and quarters for malaria were: Whites 171.96, blacks 41.03, Europeans 206.50, Americans 163.87. The total number of deaths from all causes was 19. Of these, 11 died from disease, or 3.64 per thousand, as compared with 1.61 for the preceding month, and 5.24 for the corresponding month of last year. There were no deaths from disease among white employes.

Accounting Department.

The cash balance in Canal construction appropriations on December 31 was \$15,101,903.22; in the fortification appropriations \$4,135,283.08. The pay rolls for December, exclusive of Army quarters, storehouses, fortifications, etc., amounted to \$950,098.56,

and the fortification roll amounted to \$61,758.52. Payments by the Disbursing Clerk in Washington amounted to \$1,040,458.51; by the Paymaster on the Isthmus \$1,400,691.74. Collections on the Isthmus amounted to \$1,043,316.13, of which \$458,181.96 were repaid to appropriations, \$186,550.91 were trust funds, and \$398,583.26 were covered into the Treasury as miscellaneous receipts. Of the miscellaneous receipts, \$398,111.49 were collected on account of tolls, as compared with \$349,382.15 for November. Deposits in the amount of \$132,329.30 were made with the Assistant Treasurer, to be applied in the payment of tolls and other charges. Canal Zone revenue collections and miscellaneous funds received amounted to \$210,460.29, and disbursements under the same heading to \$311,587.16.

Executive Department.

DIVISION OF CIVIL AFFAIRS.

Customs service—At the port of Balboa, 76 vessels entered and 79 cleared; at Cristobal, 114 vessels entered and 109 cleared.

Administration of estates—During the month of December, 14 estates were received and 26 were settled. The total cash received in estates during the month amounted to \$401.35; the total value of estates closed during the month was \$2,011.96. On December 31, there were 27 estates in course of settlement.

Licenses and taxes—Two hundred and ninety-three licenses were issued during December. Of this number, 33 were for automobiles and motorcycles, 15 for bicycles, 25 for hunting and keeping or carrying firearms, and 220 for peddling foodstuffs.

Postal service—Postmasters remitted on account of stamp sales, second-class collections, and postage due collections \$9,175.41. The money order business aggregated \$337,812.43. The fees collected thereon amounted to \$1,259.25. Of the total value of money orders issued, \$103,005 represents the value of deposit orders issued without fee. Deposit orders to the value of \$67,895, and postal savings certificates to the value of \$78,024 were paid. Balance of postal savings deposits on hand, represented by the unpaid certificates and deposit money orders, aggregated \$697,796, as compared with \$740,710 at the close of the previous month. The rental of lock boxes for the quarter beginning January 1, 1915 yielded \$965.50, and there is every indication that the annual revenue from this

source will be not less than \$4,000.

POLICE AND FIRE DIVISION.

Three hundred and eighty-four arrests were made during the month. Of these, 365 were males and 19 were females. Sixty-two convicts were confined in the penitentiary at the close of the month. Eleven persons were deported. Of this number, eight were convicts who had completed their sentences in the penitentiary.

Nine fires occurred during the month. The damage to Panama Canal and Panama railroad property was \$86.

COURTS.

In the District Court eight civil, 33 probate and 59 criminal cases were settled; 10 civil, 35 probate, and 27 criminal cases were filed; and 110 cases of all kinds were pending at the end of the month. In the Magistrates' courts 32 civil and 369 criminal cases were tried.

DIVISION OF SCHOOLS.

The total enrollment of the Canal Zone schools for the month was 1,321 for the white schools and 1,148 for the colored schools. In the white schools the net enrollment was 1,165, the average number belonging 1,015, and the average daily attendance 985.7; in the colored schools the net enrollment was 1,092, the average number belonging 892, and the average daily attendance 768.2.

Panama Railroad.

Cargo handled at the Colon and Balboa agencies aggregated 128,988 tons, 12,297 tons of which represent shipments made through the Canal in steamers of the Panama Railroad Steamship Line, as follows:

	Tons.
From New York to Balboa	2,089
From Colon to Balboa	1,895
Total	3,984
From Balboa to New York	5,607
From Balboa to Colon	2,706
Total	8,313
Grand total	12,297

Trestle work on the new terminal dock at Cristobal was 85 per cent completed; steel cylinders 49 per cent completed; excavation in cylinders 20 per cent completed and five per cent of the total amount of concrete required was placed in the cylinders.

The bridge across the French canal was completed and put in service on December 16.

Respectfully,

CHESTER HARDING,

Acting Governor.

Deceased Employes.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death.
William Johnson	Montserrat	Las Cascadas	10th Infantry	Dec. 24, 1914.

Insane Employes.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of commitment
George Downes	50759	Barbados	Colon	Mechanical Div.	Jan. 16, 1915.

The estates of these deceased and insane employes of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,

Administrator of Estates.

JOINT LAND COMMISSION.

Awards.

Award No. 73, docket Nos. 84 and 84-1, January 13, 1915—In the matter of the claim of Geo. B. Jones and F. E. Frink, for property located near Las Cascadas—On April 1, 1913, Geo. B. Jones filed with the commission a claim in the amount of \$12,400, United States currency, covering some 100 hectares of land, more or less, said to be located midway between Las Cascadas and Empire, Canal Zone, abutting the public highway, and known as the James Nelson Farm, and certain improvements thereon.

Subsequently, on June 22, 1914, there was filed with the commission through Messrs. Fairman, MacIntyre, and Enderton, claimants' attorneys, an amended statement of claim, naming Geo. B. Jones and F. E. Frink as joint claimants, which claim was assigned docket No. 84-1. This claim came on for public hearing before the commission on January 12, 1915, and from the evidence adduced at the hearing the commission is of the opinion that the claimants are without title to the land in question, and that portion of the claim is, therefore, dismissed without prejudice to the rightful owners thereof. As to the improvements which were on said lands, however, an award is hereby made against the United States, in favor of Geo. B. Jones and F. E. Frink, for all right, title, and interest which the said Geo. B. Jones and F. E. Frink may now possess or may have possessed in all fruit trees, growing crops, buildings, and all other improvements of whatever nature on the land described in the aforesaid claim, said to have been known as the James Nelson Farm, in the amount of \$1,743, United States currency.

This award shall be paid to the aforesaid claimants, in the amount specified, on or before the 13th day of February, 1915, and if payment or tender of payment is not made on or before that date, this award shall thereafter bear interest at the rate of six per centum per annum until paid.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rules of Dismissal.

Rule of dismissal No. 163, docket No. 143, January 8, 1915—In the matter of the claim of Marius Ceran, for property known as Pita Rita.—The claim of Marius Ceran filed with the commission April 10, 1913, for damages to the extent of \$50,000 covering property known as Pita Rita, said to contain 1,000 hectares, and to be in its entirety an alluvial gold mine, about two hectares, however, said to have been cultivated in bananas, rubber, and annual crops, is hereby dismissed for the reason that the evidence submitted does not justify an award being made.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of dismissal No. 165, docket No. 64—In the matter of the claim of Domingo Matos.—With reference to the claim of Domingo Matos the evidence before the commission is that the United States has made settlement with this claimant for his houses and other improvements located at Cerro Sierpe and Salt Valley.

In view of the settlement made, this claim calls for no further action by this commission, and it is accordingly dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of dismissal No. 165, docket numbers as shown, January 13, 1915—In the matter of sundry claims.—With reference to the following claims the evidence before the commission is that they have made settlement with the United States:

Claimant. Docket No.
Alvear, Josefa Maria (Alvarez Josefa Maria Diez) 229
Mucay (Moncoca) S. S. 1,342
Pinel, Pachito (Francisca) Salasala 127
Kibera, Enrique 229

In view of the above settlements no further action is necessary by this commission, and the foregoing claims are therefore dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rules.

Rule No. 158, docket No. 1095, January 2, 1915—In the matter of the claim of Anibal Moran for property located in Gargona—Rule in correction of typographical error in tax number in rule of dismissal already announced.

Under rule of dismissal No. 82 of September 16, 1913, the claim of Anibal Moran, docket No. 1095, for house tax No. 875, in Topacea (Gargona), was dismissed.

The tax number in said rule of dismissal was erroneously shown, and said rule of dismissal, in so far as relates to said claim of Anibal Moran, docket No.

1095, is hereby amended to read tax No. 876.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule No. 167, docket No. 1,734, January 14, 1915—In the matter of the claim of Mrs. Paula Julio C., for property at Las Cascadas—Under date of June 6, 1914, Mrs. Paula Julio C. filed with the commission her claim for damages said to have been caused by the United States, or its agents, to certain property at Las Cascadas.

Subsequently, on December 14, 1914, the claimant, by letter of that date, requested that her claim be dismissed for the reason that she had effected settlement with representatives of the United States Government for all her property within the Canal Zone.

The request of the claimant was granted and this formal rule dismissing the claim is entered, in order that it may be properly stricken from the trial docket.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule No. 168, docket No. 2523, January 14, 1915—In the matter of the claim of Henry Seymour, for property at Empire.—Under date of November 9, 1914, Henry Seymour filed with the commission his claim for damages said to have been caused by the United States, or its agents, to certain property at Empire.

Subsequently, on December 18, 1914, the claimant, by letter of that date, requested that this claim be dismissed.

The request of the claimant was granted, and this formal rule dismissing the claim is entered, in order that it may be properly stricken from the trial docket.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule 169, docket No. 1939, January 14, 1915—In the matter of the claim of J. L. Flowers, for property at Empire.—Under date of October 24, 1914, J. L. Flowers filed with the commission his claim for damages said to have been caused by the United States, or its agents, to certain property at Empire.

Subsequently, on December 22, 1914, the claimant, by letter of that date, requested that his claim be dismissed.

The request of the claimant was granted, and this formal rule dismissing the claim is entered, in order that it may be properly stricken from the trial docket.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rainfall from January 1 to 23, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Inches</i>		<i>Inches</i>
Balboa	1 70	6	2 22
Balboa Heights	1 55	6	2 09
Miraflores	1 20	5	1 67
Pedro Miguel	71	5	1 03
Rio Grande	25	21	57
<i>Central Section—</i>			
Culebra	67	5	1 13
*Camacho	20	1	46
Empire	31	21	67
Gambua	90	6	1 74
*Jun Min	42	1	1 06
Almiqui	64	5	86
*El Vigia	19	1	39
Frijoles	1 12	1	3 63
*Trinidad	90	1	2 54
*Monte Lirio			
<i>Atlantic Section—</i>			
Guatun	44	1	1 65
*Braza Brook	1 23	1	2 92
Colon	1 05	1	3 34

*Standard rain gauge—readings at 5 p. m. daily.

Automatic rain gauge at unstaffed stations—values midnight to midnight.

Family Quarters.

Applications for married quarters on file on December 3 were as follows:

DISTRICT.	List No. 1.	List No. 2
Ancon	27 (13)	354 (08)
Ancon Hospital	3 (3)	8
Corozal	1	135 (25)
Cristobal		125 (23)
Guatun		51
Paraiso		184 (14)
Total	31 (16)	1 857 (170)

NOTE—The figures in parentheses show the number of applicants already occupying regular or nonhouse-keeping family quarters at stations other than those at which applications are filed.

OFFICIAL CIRCULARS.

Promotion.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 19, 1915.

CIRCULAR No. 613-7:

1. The Executive Order of December 28, 1914, amends Civil Service Rule XI, Paragraph 2, by the addition of the following clause:

(f) No employee shall be promoted during probation, except upon approval of the Commission previously obtained.

2. This order applies to all appointments under The Panama Canal made through original certification by the Civil Service Commission. The first six months' service is considered the probationary period. This order does not apply to transfers from other departments in the classified service, or to reemployments, provided the probationary period had been completed under the previous service.

CHESTER HARDING,
Acting Governor.

Gangwayman.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 15, 1915.

CIRCULAR No. 666-3:

The rate of 15 cents per hour for "Gangwayman," Panama railroad, is hereby established.

CHESTER HARDING,
Acting Governor.

Ordinance Relating to Vaccination.

THE PANAMA CANAL,
BOARD OF HEALTH OF THE CANAL ZONE.

Be it ordained by the Board of Health of the Canal Zone:

Section 1. Every person living in the Canal Zone who has not been successfully vaccinated within five years, or who has not had an attack of smallpox (which facts shall be determined by the Chief Health Officer) shall submit to vaccination to the satisfaction of that officer, unless, in his opinion, the person is not a fit subject for vaccination; and it shall be the duty of every person having the care, custody, or control of any minor or other individual over three months of age, to cause such minor or other individual to be promptly and effectively vaccinated. Certificates of successful vaccination will be issued by the Chief Health Officer, or by other persons designated by him. Vaccination will be done gratis.

Section 2. Any person failing or refusing to comply with the provisions of this ordinance shall be deemed guilty of a misdemeanor.

Section 3. This ordinance shall take effect 30 days from and after its approval by the Governor of The Panama Canal.

The foregoing ordinance was duly adopted at a meeting of the Board of Health of the Canal Zone held at Balboa Heights, C. Z., on the 25th day of December, 1914.

P. M. ASHBURN,
Secretary of the Board of Health.

Approved on the 16th day of January, 1915.

CHESTER HARDING,
Acting Governor, Panama Canal.

Forwarding Applications for Leave of Absence.

THE PANAMA CANAL,

OFFICE OF EXECUTIVE SECRETARY.

All concerned—It is requested that as far as possible, applications for leave of absence be forwarded to this office from 20 to 30 days before effective date of leave desired. Applications for leave should not, however, be forwarded more than 30 days prior to effective date of leave.

C. A. McILVAINE,
Executive Secretary.

Discontinuing Shuttle Trains 21 and 22.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., January 21, 1915.

All concerned—I have to advise for your information that, effective with the new time table on January 31, 1915, shuttle trains Nos. 21 and 22 will be discontinued.

C. H. MOSELEY,
Superintendent.

Federal Income Tax.

Notice to all concerned—The Auditor, Panama Canal, Balboa Heights, has received copies of Form 1040-Revised, on which all employees of The Panama Canal and Panama railroad having a net income of \$3,000, or over, for the year 1914, shall make their return to the Collector of Internal Revenue at Baltimore, Maryland.

A copy of this form will be mailed to any individual

requesting the same, which must be filed out and filed with the Collector at Baltimore, Md., on or before March 1, 1915.

The penalty for failure to have this return in the hands of the Collector of Internal Revenue on or before March 1, 1915, is \$20 to \$1,000.

AD. FAURE,
Acting Auditor, Panama Canal.

Judge Advocate, U. S. Troops, Panama Canal Zone.
HEADQUARTERS, UNITED STATES TROOPS.
PANAMA CANAL ZONE,
ANCON, C. Z., January 21, 1915.

GENERAL ORDERS No. 3.

1. Major Herbert A. White, Judge Advocate, having reported, is announced as Judge Advocate, United States Troops, Panama Canal Zone, with station at Ancon, C. Z.

2. Major Herbert A. White, Judge Advocate, is appointed and announced as Acting Adjutant, United States Troops, Panama Canal Zone.

By command of Brigadier General Edwards:
JOSEPH A. MARMON,
First Lieut., 25th Infantry, A. D. C.,
Acting Adjutant.

Official:

JOSEPH A. MARMON,
First Lieut., 25th Infantry, A. D. C.,
Acting Adjutant.

Proposals for Moving Houses—Corozal.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., February 2, 1915, and then opened, for moving intact, one Type 18, one Type 5, one Type 1, and three Type 17 houses at Corozal. Details of locations and further information may be obtained upon application to the office of the Constructing Quartermaster, Room 263, Balboa Heights.

Separate bids must be submitted covering each house, but one bidder may bid on all houses.

Bids must be accompanied by cash, certified check, or post-office money order for five per cent of the amount bid.

Bids should be marked "Proposal for moving houses, Corozal," and addressed to the Chief Quartermaster, Balboa Heights, C. Z.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, January 23, 1915. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gatun Lake.	Miraflores Lake.	
Sun., Jan. 17.....	127 10	92 52.87	01 86 98	53.92	
Mon., Jan. 18.....	127 10	92 46.87	06 86 99	53.80	
Tues., Jan. 19.....	126 95	92 40.87	04 86 99	53.80	
Wed., Jan. 20.....	126 90	92 37.87	05 86 98	53.70	
Thurs., Jan. 21.....	126 80	92 30.87	05 87 00	53.71	
Fri., Jan. 22.....	126 80	92 27.87	06 87 01	53.80	
Sat., Jan. 23.....	126 95	92 37.87	04 87 02	53.75	
Height of low water to nearest foot....	125 0	91 0			

Misdirected Letters.

BALBOA HEIGHTS, C. Z., January 25, 1915.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon request of the addressee:

Downing, J. S.	Morrissey, Captain Wm.
Fellows, E.	Perce, W. T.
File, Mrs. T. L.	Sargent, C. C.
Fisher, Allen D.	Thomas, Luther
Fox, Alvin	Wentworth, Fred P.
Grouzis, George	Wilson, Mrs. E. W.

* McLachland, Lieut. J. D.

Forces of the Division of Terminal Construction will take over the work of drilling holes at Sosa Hill quarry after January 31. This work was let to a private contractor several weeks ago, but it has been found more economical to perform it with the Canal force.

COMMISSARY DEPARTMENT.

Monthly Inventory.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER,
BALBOA HEIGHTS, C. Z., January 25, 1915.
All concerned—The usual monthly inventory of the Commissary Department will be taken on Sunday, January 31, 1915. The commissaries will be open for business at 10 a. m. on Monday, February 1.

An audited inventory will be taken of Ancon, Corozal, and Cristobal commissaries. Only the grocery and cold storage departments of these commissaries will be open at 10 a. m., on Monday, February 1, the other departments remaining closed until inventory is completed.

WM. R. GROVE,
Chief Quartermaster.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective January 28, 1915:

FRESH MEATS.

Prices of fresh meats unchanged.

	Price.
MISCELLANEOUS.	
Tongue, beef, native, each.....	90
Brains, calves' per pound.....	19
Kidneys, beef, per pound.....	13
Livers—Beef, per pound.....	13
Calves, each.....	65
Oysters, fresh, per pkt.....	30
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	13
Frankfurter, per pound.....	13
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	11
Pork, per pound.....	17
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	*55
per 1 dozen.....	*28
Bluefish, per pound.....	10
Halibut, fresh, per pound.....	8
Salmon, per pound.....	6
Yeast, per pound.....	31
per cake.....	2
CURED AND PICKLED MEATS.	
Beef, corned, No. 1, per pound.....	18
Beef, corned, No. 2, per pound.....	15
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	20
Half, per pound.....	22
Sliced, per pound.....	28
Hocks, per pound.....	10
Whole, boiled, per pound.....	30
Half boiled, per pound.....	32
Sliced, boiled, per pound.....	38
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	33
Whole piece, per pound.....	32
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, each.....	1.42
Pigs' feet, per pound.....	7
Tongues, per pound.....	22
POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound	25
Chickens—Fancy, roasting, corn fed, per pound	24
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	30
Broilers, milk fed, per pound.....	29
Broilers, corn fed, per pound.....	27
Turkeys, per pound.....	28
Squabs, each.....	30
Geese, 10 to 14 pounds, per lb.....	23
DAIRY PRODUCTS.	
Butter—Creamery, special, per pound.....	43
Sheffield Farms, extra fancy, per lb.....	54
Cheese—Philadelphia cream, cake.....	9
Requefort, per pound.....	41
Young America, per pound.....	21
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield, per quart.....	**15
Fermeilac, bottle.....	**25
Ice cream, quart.....	125
1-gallon.....	150
Cream, Sheffield Farms, quart.....	**33
pint.....	**19
1/2 pint.....	**12
VEGETABLES.	
Beets, per pound.....	21

	Price.
Brussels sprouts, per pound.....	122
Celery, per head.....	7
Cabbage, per pound.....	2
Carrots, per pound.....	2
Lettuce, per pound.....	5
Onions, per pound.....	23
Parsnips, per pound.....	3
Peppers, per pound.....	18
Potatoes, white, per pound.....	2
sweet, tropical, per pound.....	2
Turnips, per pound.....	2
Tomatoes, per pound.....	*11
Squash, per pound.....	21

FRUITS.

Apples, per pound.....	3
Apples, fancy, per pound.....	6
Cranberries, fresh, per pound.....	6
Grapes, per pound.....	14
Grape fruit—American, each.....	5
Tropical, each.....	31
Lemons, per dozen.....	9
Oranges—American, each.....	21
Tropical, per dozen.....	9
Coconuts, each.....	5
Bananas, per bunch.....	38
Bananas, each.....	1
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	16
Pears, evaporated, per pound.....	23
Tangerines, each.....	11

* Indicates advance from preceding list.

** Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective January 23, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Chocolate crest nougatines, tin.....	\$0.30	\$0.20
Cocoa, Van Houten, tin.....	.36	.40
Cocoa, Van Houten, tin.....	.80	.76
Apples, dehydrated, tin.....	.82	.74
Oil, pure, salad, tin.....	.55	.47
Sara, Grandpa's, cake.....	.04	.05
Starch, laundry, lb.....	.04	.03
Muslin, unbleached, yd.....	.10	.08
Envelopes, box.....	.62	.53
Shirts, khaki, ea.....	.83	.88
Coffee mills, ea.....	.65	.50
Bean pots, 1-qt., ea.....	.15	.12
Water coils, 4-gal., ea.....	1.75	1.50
Cup hooks, 2-inch, doz.....	.16	.20
Bird cages, ea.....	.74	.95
Flour, lb.....	.031	.041
Flour, graham, lb.....	.031	.041
Flour, rye, lb.....	.041	.051
Roast beef, tin.....	.20	.34
Pure salad oil, tin.....	1.00	.80
Bed springs, ea.....	4.65	4.80

Additions to Stock.

Powder, baking, Reliable, tin.....	\$0.06
Flour, Gold Medal, 7-lb. sack.....	.55
Paraffine sandwich paper, roll.....	.02
Beans, string, tin.....	.49
Corn, sugar, tin.....	.51
Sauerkraut, 5-gal. keg.....	1.50
Peas, early June, tin.....	.42
Coats, Palm Beach, ea.....	3.30
Pans, omelet, aluminum, ea.....	1.40
Plates, cake, C 4772, ea.....	.39
Bean pots, 1-pt., ea.....	.12
Bean pots, 1-qt., ea.....	.16
Bean pots, 2-qt., ea.....	.20
Bottles, bird cage, ea.....	.04

Proposals for Plastering Army Buildings on Balboa Dump.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., February 13, 1915, and then opened, for furnishing the necessary labor to completely finish the plastering in the Headquarters Building, one noncommissioned officers' quarters, and the Field Officer's house, now being erected on Balboa dump for the United States Army.

Separate bids must be submitted for each building, but one bidder may bid on all three houses.

Specifications may be obtained upon application to Room 263, Balboa Heights.

Bids must be accompanied by cash, certified check, or post-office money order for five per cent of the amount bid.

The Government reserves the right to reject any or all bids.

Bids should be marked "Proposal for plastering Army buildings on Balboa dump," and addressed to the Chief Quartermaster, Balboa Heights, C. Z.

SHIPPING INFORMATION.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans, for all States. Due at New Orleans the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Adronce*, which is due there on Saturday.

*Every Monday to New York, for all States, except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE.—The sailings on February 8, March 8, and April 5 will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will only be for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and Northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7.10 a. m., connects with the despatches for the four sailings mentioned above.

Tide Predictions.

Panama tide predictions for the next five weeks are given in the following table:

JANUARY.

DATE.	Time and height of high and low water.			
Wed., Jan. 27.....	0:35	6:59	13:31	19:19
	11:4	3 9	11 0	4 6
Thurs., Jan. 28.....	1:37	7:53	14:22	20:12
	11 9	3 2	11 8	4 0
Fri., Jan. 29.....	2:27	8:41	15:05	20:55
	12 6	2 4	12 7	3 1
Sat., Jan. 30.....	3:09	9:23	15:43	21:41
	13 4	1 5	13 6	2 2
Sun., Jan. 31.....	3:48	10:03	16:18	22:22
	14 2	0 7	14 5	1 3

FEBRUARY.

DATE.	Time and height of high and low water.			
Mon., Feb. 1.....	4:26	10:40	16:52	23:02
	14 9	0 0	15 3	0 6
Tues., Feb. 2.....	5:05	11:20	17:28	23:42
	15 3	-0 4	15 9	0 1
Wed., Feb. 3.....	5:40	11:57	18:04	.....
	15 5	-0 5	16 2	.....
Thurs., Feb. 4.....	6:21	12:37	18:41	.....
	-0 1	15 5	-0 3	16 2
Fri., Feb. 5.....	1:05	7:01	13:18	19:23
	0 0	15 1	0 3	15 8
Sat., Feb. 6.....	1:50	7:46	14:06	20:08
	0 4	14 4	1 0	15 2
Sun., Feb. 7.....	2:41	8:37	14:59	21:01
	1 1	13 6	2 0	14 3
Mon., Feb. 8.....	3:40	9:40	16:01	22:07
	1 9	12 7	2 9	13 5
Tues., Feb. 9.....	4:47	10:58	17:14	23:27
	2 4	12 2	3 4	13 0
Wed., Feb. 10.....	6:02	12:25	18:31	.....
	2 5	12 2	3 4	.....
Thurs., Feb. 11.....	6:51	7:14	13:43	19:41
	13 1	2 1	12 9	2 9
Fri., Feb. 12.....	2:04	8:16	14:46	20:43
	13 6	1 4	13 8	2 1
Sat., Feb. 13.....	3:03	9:10	15:37	21:34
	14 3	0 6	14 7	1 3
Sun., Feb. 14.....	3:52	9:58	16:21	22:21
	14 9	0 1	15 3	0 6
Mon., Feb. 15.....	4:35	10:40	17:01	23:04
	15 3	-0 2	15 7	0 3
Tues., Feb. 16.....	5:16	11:20	17:38	23:43
	15 3	-0 1	15 7	0 3
Wed., Feb. 17.....	5:53	11:59	18:12	.....
	15 1	0 3	15 3	.....
Thurs., Feb. 18.....	6:21	6:28	12:36	18:46
	0 6	14 5	0 9	14 7
Fri., Feb. 19.....	1:00	7:03	13:14	19:19
	1 2	13 8	1 8	14 0
Sat., Feb. 20.....	1:39	7:38	13:53	19:53
	2 0	12 9	2 8	13 1
Sun., Feb. 21.....	2:20	8:16	14:35	20:30
	2 8	12 0	3 8	12 3
Mon., Feb. 22.....	3:07	9:01	15:24	21:17
	3 7	11 1	4 6	11 5
Tues., Feb. 23.....	4:03	10:04	16:25	22:23
	4 3	10 5	5 2	11 0
Wed., Feb. 24.....	5:10	11:27	17:35	23:47
	4 6	10 3	5 4	10 9
Thurs., Feb. 25.....	6:19	12:49	18:44	.....
	4 3	10 7	4 9	.....
Fri., Feb. 26.....	1:01	7:19	13:49	19:43
	11 4	3 6	11 6	4 0
Sat., Feb. 27.....	1:58	8:10	14:33	20:32
	12 3	2 6	12 8	2 9
Sun., Feb. 28.....	2:43	8:54	15:11	21:15
	13 4	1 5	14 0	1 7

MARCH.

DATE.	Time and height of high and low water.			
Mon., March 1.....	3:24	9:35	15:48	21:57
	14 4	0 5	15 1	0 5
Tues., March 2.....	4:03	10:14	16:24	22:36
	15 3	-0 3	16 1	-0 4
Wed., March 3.....	4:41	10:52	17:01	23:18
	15 9	-0 8	16 7	-1 0

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies, may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1 25 per barrel, reduced to 60° Fahrenheit.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa. Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment in ward is \$1 per day.

Application for supplies, or for services, should be made to the captain of the port, Cristobal or Balboa. Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired, or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case the vessel has a known representative on the Isthmus in care of such representative.

The cable address of The Panama Canal on the Isth-

mus is "Isthmian, Balboa Heights," in the United States, "Isthmian, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS THROUGH THE CANAL.

Approximately regular services between the Atlantic and the Pacific seaboard from Boston, New York, Philadelphia, and Baltimore, occasionally Charleston and New Orleans, to San Pedro, San Francisco, Portland, and Puget Sound, and return, are maintained by the American-Hawaiian Steamship Company, with a sailing each way about every five days; the Luckenbach Steamship Company, with a sailing each way about every 10 days; Sudden and Christensen, approximately fortnightly; the Atlantic and Pacific Steamship Company, about every three weeks; and the Boston and Pacific Line, and the Arrow Line, each sending a vessel each way about once a month.

Between the east coast of the United States and the west coast of South America, fortnightly services are maintained by the Merchants' Line and by the New York and South America Line; the West Coast Line has sailings each way about every four weeks.

Between the west coast of the United States, with connections to lower British Columbia and Europe, the following lines are in service: The Harrison-Direct Line, monthly; the Maple Leaf Line, about every six weeks; the East Asiatic Company, monthly, and the Johnson Line, every six or seven weeks.

The Pacific Steam Navigation Company is operating approximately a monthly service around South America from Liverpool, by way of the Canal.

The American-Australian Line has been sending vessels through the Canal about fortnightly from New York to ports in Australia and New Zealand.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail Steam Packet Company maintains approximately a fortnightly service between Colon and England, via Cartagena, Puerto Colombia, Trinidad, and Barbados. Its service to New York, via Kingston, has been temporarily discontinued.

The Compagnie Generale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Santander.

The Italian Steam Navigation Company, "La Veduggia," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compania Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Punta Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessel sails from Genoa on the 8th day of each month.

Regular service is maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing about every six days, direct; between Cristobal and New York by the United Fruit Company sailings about twice a week; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

	Sails.	Arrives.
NEW YORK TO CRISTOBAL-COLON.		
Advance.....	P. R. R. Jan. 21.....	Jan. 28
Metapan.....	U. F. C. Jan. 23.....	Feb. 1
Santa Marta.....	U. F. C. Jan. 27.....	Feb. 3
Panama.....	P. R. R. Jan. 28.....	Feb. 3
Pastores.....	U. F. C. Jan. 30.....	Feb. 7
Zacapa.....	U. F. C. Feb. 3.....	Feb. 10
Allianca.....	P. R. R. Feb. 4.....	Feb. 10
Calamares.....	U. F. C. Feb. 6.....	Feb. 14
Carrillo.....	U. F. C. Feb. 10.....	Feb. 17
Colon.....	P. R. R. Feb. 11.....	Feb. 17
Tenadores.....	U. F. C. Feb. 13.....	Feb. 21
Almirante.....	U. F. C. Feb. 17.....	Feb. 24
Advance.....	P. R. R. Feb. 18.....	Feb. 25
Metapan.....	U. F. C. Feb. 20.....	Mar. 1
Santa Marta.....	U. F. C. Feb. 24.....	Mar. 3
Panama.....	P. R. R. Feb. 25.....	Mar. 3
Pastores.....	U. F. C. Feb. 27.....	Mar. 7

(Continued on page 222.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon January 24)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARCO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Jan. 19.	Limari.	Chilean.	South American S.S. Co.	Cristobal.	Valparaiso.	General mdse.	1,100	3,631	2,421
Jan. 19.	Acajulla.	British.	Salvador Ry. Co.	Cristobal.	Salina Cruz.	General mdse.	15	1,219	627
Jan. 19.	Proteuslaus.	British.	Ocean Steamship Co.	Kingston.	*Lai ana.	Coal, fuel oil, etc.	7,100	9,781	7,148
Jan. 19.	Honolulu.	American.	American Hawaiian S.S. Co.	New York.	Los Angeles.	General mdse.	6,000	7,661	5,475
Jan. 19.	Pacific.	Swedish.	Johansen Line.	Copenhagen.	San Francisco.	General mdse.	11,100	5,137	3,832
Jan. 21.	Kentuckian.	American.	American Hawaiian S.S. Co.	New York.	California.	General mdse.	8,262	6,878	4,675
Jan. 22.	Alencus.	American.	U. S. Navy.	Norfolk.	Honolulu.	Coal and coke.	10,470	11,143	6,749
Jan. 22.	Charlton Hall.	American.	New York & South Amer. Line.	New York.	Puertoventura.	General mdse.	6,600	5,593	4,217
Jan. 22.	Braynton.	British.	Tatem Steamship Co.	London.	*Lai ana.	Coal.	5,619	5,149	3,622
Jan. 22.	Chincha.	American.	W. R. Grace & Co.	New York.	Peru and Chile.	General mdse.	8,000	6,429	4,623
Jan. 22.	John L. No.	American.	A. I. Loring Co.	Philadelphia.	Kelce.	Case, oil, etc.	4,400	2,665	2,609
Jan. 24.	Harry Luckenbach.	American.	Luckenbach S.S. Co.	New York.	California.	General mdse.	3,500	3,001	2,047
Jan. 24.	Colon.	American.	P. R. S. S. Line.	New York.	Pallua.	General mdse.	300	5,866	4,222
Jan. 24.	Euador.	British.	Pacific Steam Nav. Co.	Colon.	Guayaquil.	General mdse.	1,600	1,439	2,131

*For orders. †Discharge cargo at Cristobal and Balboa. ‡Collier.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Jan. 18.	La Habra.	Norwegian.	Union Oil Co.	Talara, Peru.	London.	Cil and benzine.	8,597	7,018	5,088
Jan. 18.	Washingtonian.	American.	American Hawaiian S.S. Co.	Honolulu.	L. Ch. Freshwater.	Sugar, etc.	8,521	6,844	4,699
Jan. 18.	Auchenrag.	British.	Auchin S.S. Line.	Cruz Grande, Chile.	Philadelphia.	Iron ore.	6,250	4,554	3,505
Jan. 19.	Discoverer.	British.	Jarrison Line.	San Francisco.	London.	General mdse.	7,200	6,200	4,320
Jan. 20.	Cairnhill.	British.	Nacbeth & Co.	San Francisco.	Liverpool.	Barley.	7,315	5,534	4,069
Jan. 20.	Louis Luckenbach.	American.	Luckenbach S.S. Co.	San Francisco.	New York.	Lumber, etc.	2,665	4,599	3,492
Jan. 20.	Alliana.	American.	P. R. S. S. Line.	Philadelphia.	New York.	General mdse.	2,393	4,120	2,670
Jan. 21.	Craigina.	British.	Eggart, Luller, & Grier.	San Francisco.	London.	Parley, etc.	5,766	4,459	3,406
Jan. 21.	Chethesk.	British.	Andrew Fair & Co.	Tacoma.	Newport News.	Wheat.	5,791	4,773	3,565
Jan. 21.	Capac.	British.	New York & Pacific S.S. Co.	Chilken ports.	New York.	General mdse.	4,070	3,221	2,206
Jan. 22.	Santa Clara.	American.	V. F. Grace & Co.	Portland, Ore.	New York.	Lumber, etc.	6,500	6,748	4,492

* Came from New York by way of the Strait of Magellan.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
Jan. 25.	Lompoc.	Bear Creek Oil & Ship Co.	Newport News.
Jan. 25.	Aoyuna.	China Nat. Steam Nav. Co.	Kingston.
Jan. 26.	Pionia.	A. L. O. K. Co.	New York.
Jan. 27.	Saint Ursula.	Kanlin Gilmour & Co. Ltd.	Copenhagen.
Jan. 27.	Nainshire.	Scottish S.S. Line.	New York.
Jan. 27.	English Monarch.	Monarch S.S. Co., Ltd.	New York.
Jan. 27.	Silene.	Italian Nav. Co.	Port Arthur, Tex.
Jan. 27.	Claster Hall.	C. G. L. B. & Co. Ltd.	New York.
Jan. 27.	Santa Kosulio.	Isthmian S.S. Co. Ltd.	New York.
Jan. 27.	Melania.	Anglo-Saxon Pet. Co.	Port Arthur, Tex.
Jan. 27.	Towani.	American Hawaiian S.S. Co.	New York.
Jan. 28.	Advance.	P. R. S. S. Line.	New York.
Jan. 30.	Mila.	Anglo-Saxon Pet. Co. Ltd.	Port Arthur, Tex.
Feb. 1.	Kyoonland.	Int. Merc. Marine Co.	New York.
Feb. 3.	Great Northern.	Gt. Northern S.S. Co.	Philadelphia.

ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Jan. 24.	Oliver J. Olson.	W. R. Grace & Co.	Tocopilla.
Jan. 25.	Copenhagen.	Glenn & Co.	Valparaiso.
Jan. 26.	St. Leonards.	Brit. & Foreign S.S. Co.	Antofagasta.
Jan. 27.	Huasco.	South American S.S. Co.	Valparaiso.
Jan. 27.	Chimu.	W. R. Grace & Co.	Chile.
Jan. 27.	Aina Free.	London & Pac. Pet. Co.	Callao.
Jan. 27.	Ortega.	Pacific Steam Nav. Co.	Cent. America
Jan. 28.	Salvador.	Salvador Ry. Co.	

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
Jan. 20.	Alexandrian.	Leyland Line.	Liverpool.
Jan. 22.	Ancon.	P. R. S. S. Line.	New York.

*DEPARTURES.

Date	Vessel	Line	To
Jan. 18.	Tagus.	R. M. S. P. Co.	Southampton.
Jan. 20.	Unionia.	Cie Gen. Transatlantique.	St. Nazaire.
Jan. 23.	Alexandrian.	Leyland Line.	Galveston.

*EXPECTED ARRIVALS.

Jan. 26.	Pronning Cliza.	Seeberg Line.	Nobile.
Jan. 26.	Haiti.	Cie Gen. Transatlantique.	Bordeaux.
Jan. 27.	Chiswick.	Earn Line.	Norfolk.
Jan. 30.	Trent.	R. M. S. P. Co.	Southampton.
Jan. 31.	Savio.	La Veloce.	Genoa.

*EXPECTED DEPARTURES.

Jan. 29.	Haiti.	Cie Gen. Transatlantique.	Bordeaux.
Feb. 2.	Trent.	R. M. S. P. Co.	Southampton.
Feb. 3.	Savio.	La Veloce.	Genoa.

*Other than vessels passing through the Canal. United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Jan. 19.	San José.	Pacific Mail S.S. Co.	San Francisco.
Jan. 21.	Cordelia.	Union Oil Co.	San Francisco.
Jan. 24.	Baja California.	A. Lindvig.	San Francisco.

*DEPARTURES.

Jan. 18.	Montoro.	Peruvian S.S. Co.	Callao.
Jan. 23.	Quilpe.	Pacific Steam Nav. Co.	Guayaquil.
Jan. 23.	Quilpe.	Pacific Steam Nav. Co.	Callao.
Jan. 23.	Cordelia.	Union Oil Co.	San Francisco.
Jan. 25.	Baja California.	A. Lindvig.	Callao.

*EXPECTED ARRIVALS.

Feb. 6.	Newport.	Pacific Mail S.S. Co.	San Francisco.
	Pachitea.	Peruvian S.S. Co.	Callao.

*EXPECTED DEPARTURES.

Jan. 27.	San José.	Pacific Mail S.S. Co.	San Francisco.
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(Continued from page 221.)

CRISTOBAL-COLON TO NEW YORK.

Carrillo.	U. F. C.	Jan. 28.	Feb. 4.
Colon.	P. R. R.	Jan. 30.	Feb. 7.
Almirante.	U. F. C.	Feb. 4.	Feb. 11.
Advance.	P. R. R.	Feb. 6.	Feb. 13.
Metapan.	U. F. C.	Feb. 8.	Feb. 16.
Santa Marta.	U. F. C.	Feb. 11.	Feb. 18.
Panama.	P. R. R.	Feb. 13.	Feb. 19.
Pastores.	U. F. C.	Feb. 15.	Feb. 22.
Zacana.	U. F. C.	Feb. 18.	Feb. 25.

Allianza.	P. R. R.	Feb. 20.	Feb. 26.
Colanares.	U. F. C.	Feb. 22.	Mar. 1.
Carrillo.	U. F. C.	Feb. 25.	Mar. 4.
Colon.	P. R. R.	Feb. 27.	Mar. 5.
Tenadores.	U. F. C.	Mar. 1.	Mar. 8.
Almirante.	U. F. C.	Mar. 4.	Mar. 11.
Advance.	P. R. R.	Mar. 6.	Mar. 13.
Metapan.	U. F. C.	Mar. 8.	Mar. 16.

NEW ORLEANS TO CRISTOBAL-COLON.

Turrialba.	U. F. C.	Jan. 23.	Jan. 28.
Heredia.	U. F. C.	Jan. 27.	Feb. 3.

CRISTOBAL-COLON TO NEW ORLEANS.

Atenas.	U. F. C.	Jan. 28.	Feb. 2.
Certago.	U. F. C.	Jan. 28.	Feb. 4.
Turrialba.	U. F. C.	Feb. 4.	Feb. 9.
Heredia.	U. F. C.	Feb. 4.	Feb. 11.
Abangarez.	U. F. C.	Feb. 11.	Feb. 16.
Parimiana.	U. F. C.	Feb. 11.	Feb. 18.

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, FEBRUARY 3, 1915.

No. 24.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions, Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Darien Station Receiving Messages from Wide Area.

Since the recent completion of the second of the three 600-foot steel towers for the high power radio station at Darien, temporary receiving antennae have been rigged between these towers and receiving tests are being conducted. Messages are received from Arlington, near Washington, D. C., and from San Francisco without difficulty.

No messages have been transmitted from the Darien station. The transmitting apparatus and power plant have been installed complete, but the substation through which the power is to be supplied with electricity from the 44,000-volt transisthmian line has not been completed.

Night Pilot Service at Atlantic Entrance.

On account of the increased traffic through the Canal and to assure the safety of vessels approaching the Atlantic entrance at night, a special pilot has been detailed by the captain of the port of Cristobal to be on duty all through the night, and a night signalman has been stationed in the lookout tower on top of the Hotel Washington. Upon the approach of a vessel at night, the night pilot is summoned and goes out in his launch beyond the breakwaters to bring the vessel through to the quiet anchorage inside the breakwaters. This is especially desirable at this season of the year, when the heavy seas may be dangerous to vessels anchored outside the breakwaters.

In addition to bringing vessels in at night, the night pilot is of service to vessels going out from the Atlantic entrance after six in the evening, either from Gatun Locks or after having taken on supplies at Cristobal.

First Cargo of Oil for New Handling Plants.

The first cargo of fuel oil to be supplied to The Panama Canal under the 1915 contract with the Standard Oil Company of California arrived at Balboa on January 12. It contained 59,979 barrels. The oil was pumped into the Government fuel oil storage tanks Nos. 3 and 4 and is being delivered by the new Government handling plant to the Pana-

ma Canal tanks as far north as Paraiso.

Award of contract for supplying oil to the Government plant at the Atlantic entrance to the Canal has not been made.

"Kroonland" Is Largest Vessel Through the Canal.

The passenger steamship *Kroonland*, which passed through the Canal from the Atlantic to the Pacific on Tuesday, February 2, is the largest vessel to have used the Canal to date, and is the one which has paid the most tolls. The *Kroonland* is 560 feet long between perpendiculars by 60.2 feet in the beam and, at the time of passage through the Canal, was drawing 29.2 feet of water. Her gross tonnage, in Canal measurement, is 13,075 and her net tonnage 8,233; her tolls were, accordingly, \$9,879.60.

The *Kroonland*, which belongs to the Red Star Line of the International Mercantile Marine and flies the American flag, is under charter for a tour around South America with a party of business men, and their families, from the United States. She carries 270 through passengers, in addition to eight local passengers who disembarked at Colon, but no cargo. The cruise started from New York and touched at Havana and Kingston, on the way to Colon; the next port of call after leaving the Canal will be Callao, beyond which the vessel will proceed down the west coast of South America, through the Strait of Magellan, and up the east coast, with stops at important ports.

Great Northern Carries 560 Passengers Through Canal.

Five hundred and sixty passengers, bound from Philadelphia to San Francisco, by way of San Diego and Los Angeles, were taken through the Canal on the steamship *Great Northern*, which arrived at Colon at 7 a. m., Tuesday, February 2, and began the passage of the Canal at 12.25 p. m. of the same day. In addition, the vessel is carrying a crew of 239 men and a cargo of 1,269 tons of general merchandise.

The *Great Northern* was recently completed at the yards of William Cramp and Sons, Philadelphia, and this is her maiden voyage. She belongs to the Great Northern Pacific Steamship Company and is to be operated in coastwise service between San Francisco and Portland, Ore., with way stops at Astoria. The vessel is 509 feet long between perpendiculars, 63 feet in the beam, and has a Canal tonnage of 10,863 tons and 6,435 tons net.

Diesel Engine Oil for Sale at Balboa.

The Union Oil Company, with offices at Balboa, received 37,000 barrels of Diesel engine fuel oil at its Balboa storage plant on January 23. The shipment arrived on the steamship *Cordelia* and came from the refinery at Oleum, California. It is available for sale to vessels at the rate of 45 shillings per ton of seven barrels. Deliveries can be made as fast as 2,000 barrels an hour.

SAILING SHIPS USE CANAL.

New Route Offers Advantages to Them as Well as to Steam Vessels.

Prior to the opening of the Canal, it was widely assumed that the new route would not be used by sailing vessels. Following this assumption, there has been very little discussion of the relations of the Canal to sailing traffic.

Since the opening of the Canal it has been used by four sailing vessels, one of which has passed through it twice. Two of the vessels, the prison ship *Success* and the pleasure yacht *Athene*, were not engaged in commercial service. The schooner *Zeta* and the barkentine *John Eta* passed through laden, and may be regarded as typical of this traffic. A fifth sailing vessel, the barkentine *Dirigo*, of about the size of the *John Eta*, arrived at Colon on Tuesday, February 2, and is now on its way through the Canal.

The *Zeta* is a wooden 3-masted schooner, 132 feet long, 32 feet in the beam, and 12 feet deep. She is registered at 335 net tons, Lloyd's measurement, and at 313 net tons, Canal measurement. Her expenses in transiting the Canal were: Tolls, \$520.80; tug service, \$150; total, \$670.80. The vessel was carrying 600 tons of lumber, her expenses in passing through the Canal amounted to \$1.118 per ton of cargo.

The *John Eta* is a 4-masted steel barkentine, 313 feet long, 48 feet in the beam, and 25 deep. The registered net tonnage of this vessel is 2,706; the Canal measurement rates it at 2,609 net tons. Expenses for going through the Canal were: Tolls, \$3,130.80; tug service, \$302.15; total, \$3,432.95. On a cargo of 4,400 tons, of petroleum and wax, the total expenses prorate at 78 cents per ton.

To date, under conditions of average loading, the tolls on laden steam vessels have been equivalent to approximately 75 cents per ton of cargo carried.

From the foregoing instances it is seen that sailing vessels can be handled through the Canal economically, as far as the actual passage of the Canal is concerned. A factor of greater importance, admitting of less certainty in its determination, is the relative time which it will take a sailing vessel to reach the Isthmus, and its ultimate destination, in comparison with the passage over the longer alternative routes, around the Horn or the Cape of Good Hope.

On the Atlantic side, according to sailing directions, the time of transit of an average sailing vessel between New York and the Isthmus may be approximated at 20 days. The time from the English Channel to the Isthmus is reckoned as 30 days for a yearly average; the homeward voyage to Europe is taken at 40 days. Limon Bay is easily accessible to sailing vessels at all times of the year, and vessels may generally expect a fair wind for entering.

On the Pacific side, vessels may generally expect a fair wind off shore on departing from the Isthmus, light from May to November, and somewhat stronger from December to April. Vessels entering the Gulf of Panama will almost invariably encounter head winds, often very light, and find difficulty in beating up to the Canal. Off shore on the Pacific side the regular trades may not be expected until several hundred miles off shore. Sailing directions should be freely consulted by all sailing masters, particularly in regard to the wind and currents on the Pacific side. If due notice be given, tugs may be obtained from the Canal authorities.

The average time of a sailing vessel from Panama to San Francisco is considered to be between 37 and 40 days; for the return, about 31 days from April to October, and 26 days from October to April.

Accordingly, the time of transit of a vessel from New York to San Francisco may be reckoned generally at 60 days, including a day in the Canal. The return trip should consume about 57 days in the winter months, and 62 in the summer season. The generally accepted average time for sailing vessels to go from New York to San Francisco, around Cape Horn, is 140 days; the return voyage requires from 110 to 115 days. On this basis, the normal time for a round trip between the two ports by way of the Canal may be rated at 120 days; by way of the Horn, about 250 days.

The extent to which sailing vessels will use the Canal will be dependent on many conditions in the shipping world, but it appears that under normal conditions the Canal route is favorable to them. For instance, on the voyage from New York to San Francisco, under average conditions a vessel might be expected to save 80 days at sea. Shipowners state that a vessel of 2,000 tons net may be operated at sea at a cost of \$75 per day. The charges for passing such a vessel through the Canal would approximate \$2,700. If these charges be subtracted from the saving of 80 days at sea, at \$75 per day, or \$6,000, the net saving to the operator would be \$3,300.

In the case of such a vessel, the saving of 36 days at sea would cover its Canal expenses. Between this period and the normal expectation of saving by way of the Canal, 80 days, is a leeway of 44 days. That is, if the operator used the Canal and then had his vessel arrive 44 days late, as compared to the normal voyage over the route, he would still "break even." If the vessel arrived 30 days late over the normal time, he would be benefited to the extent of 14 days at sea which, at \$75 per day, is equivalent to \$1,050.

Ships Passing Through the Canal "In Quarantine."

The following circular letter has been issued by the Chief Quarantine Officer to the masters of steamships and the agents of steamship companies:

"Your attention is invited to the following with reference to ships passing through the Panama Canal 'In quarantine':

"Permission for passage through 'In quarantine' shall only be granted with the approval of the Chief Health Officer. A quarantine officer, and one or more quarantine guards, when in the judgment of the Chief Quarantine Officer such will be sufficient, shall board the vessel for passage through 'In quarantine', and accompany it through the Canal. Their

duty shall be to prevent unauthorized communication, and see to the proper execution of the prescribed sanitary and quarantine regulations during the passage of the Canal.

"The charge against each ship passing through the Canal 'In quarantine' is authorized at the rate of \$40 for the services of each quarantine guard, and \$50 for the services of each quarantine officer.

"The revised quarantine laws and regulations are now being printed, and your office will be advised as to its provisions in due time."

Joint Land Commission Calendar.

The following is a calendar of cases set for hearing during the week ending February 6, 1915:

Monday, February 1—Docket 341, Venado Plantations Company.

WILLIAM TAYLOR, Secretary.

On recommendation of the Health Officer of Colon-Cristobal, a trial will be made of

oiling the streets in one or two blocks in the city of Colon, as a substitute for street sprinkling.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, January 30, 1915. All heights are in feet above mean sea level:

DAY AND DATE.	STATIONS.				
	Vigla	Alhajuela	Gatun Lake.	Gatun Lake.	Miraflores Lake.
Sun., Jan 24.....	126 85	92 30 47	118 07	03	53 90
Mon., Jan 25.....	126 75	92 20 87	118 07	03	53 95
Tues., Jan 26.....	126 75	92 13 87	06 87	03	53 90
Wed., Jan 27.....	126 65	92 04 87	05 87	06	53 87
Thurs., Jan 28.....	126 69	92 04 87	10 6	99	53 87
Fri., Jan 29.....	126 60	91 99 87	04 87	00	54 42
Sat., Jan 30.....	126 55	91 94 87	05 87	00	53 93
Height of low water to nearest foot.....	125 0	91 0			

CANAL EXCAVATION TO JANUARY 1, 1915.

By French companies.....		78,146,960
French excavation useful to present Canal.....		29,908,000
By Americans—		
Dry excavation.....	130,265,720	
Dredges.....	98,832,653	
Total.....		229,098,373
May 1 to December 31, 1904.....	243,472	
January 1 to December 31, 1905.....	1,791,227	
January 1 to December 31, 1906.....	4,942,477	
January 1 to December 31, 1907.....	15,765,290	
January 1 to December 31, 1908.....	37,116,735	
January 1 to December 31, 1909.....	35,096,166	
January 1 to December 31, 1910.....	31,437,677	
January 1 to December 31, 1911.....	31,603,899	
January 1 to December 31, 1912.....	30,269,349	
January 1 to December 31, 1913.....	27,177,960	
January 1 to November 30, 1914.....	13,640,551	

TOTALS BY SECTIONS AND AMOUNT TO BE EXCAVATED.

SECTIONS.	Amount excavated.	Remaining to be excavated.
Atlantic—		
Dry excavation.....	Cu. yds. 8,865,841	Cu. yds. 21,136
Wet excavation.....	41,950,432	2,567,478
Total.....	50,816,273	2,588,614
Central—		
Chagres section.....	12,945,824	251,000
Culebra section.....	105,738,139	2,095,681
Total.....	118,683,963	2,346,681
Pacific—		
Dry excavation.....	11,292,517	4,811,519
Wet excavation.....	48,305,920	
Total.....	59,598,537	4,811,519
Grand total.....	229,098,373	9,746,814

Deceased Employees.

Name.	Check No.	Native of	Is'hmian Residence	Employed by	Date of death
Chase, Herman.....	3225	Barbados.....	Corozal.....	Balboa Ter.....	Jan. 24, 1915.
Good, Reginald.....	92439	Jamaica.....	New Gatun.....	P. R. R.....	Jan. 27, 1915.
Rouse, Gilbert.....	34315	Barbados.....	Panama.....	Supply Dept.....	Jan. 21, 1915.
Sterling, Augustus.....	92777	Jamaica.....	Gatun Green.....	P. R. R.....	Jan. 28, 1915.
Terry, Geo. E.....	3931	U. S. A.....	Balboa.....	Supply Dept.....	Jan. 24, 1915.
Larris, James.....	48638	Barbados.....	Panama.....		Jan. 8, 1915.

Insane Employees.

Name.	Check No.	Native of	Is'hmian Residence	Employed by	Date of commitment
Polson, Enos.....	33902	Jamaica.....	Panama.....	M. E. D.....	Dec. 7, 1914.

The estates of these deceased and insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 323, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

EXECUTIVE ORDERS.

Conditions of Employment.

By virtue of the authority vested in me, it is hereby ordered:

1. Pursuant to the provision contained in Paragraph 17 of the Executive Order of February 2, 1914, fixing the conditions of employment governing employees of The Panama Canal and the Panama Railroad Company on the Isthmus of Panama, a charge will be made for rent, fuel, and electric current on and after March 1, 1915.

RENT.

2. Rental will be based on a percentage of the value of the quarters occupied, the rate per centum to be the same for all quarters, and the value of the quarters to be appraised by the Governor of The Panama Canal. The amount to be collected should be sufficient to defray the cost of maintenance of the quarters and grounds, maintenance and renewal of furniture, collection and disposal of garbage, and, for bachelor quarters, janitor service. No charge will be made for water.

FUEL.

3. Fuel will be sold to employes at cost delivered at quarters.

ELECTRIC CURRENT.

4. The charge for electric current will be based on the cost of the current delivered to the quarters. When practicable, the current used will be measured by meters; otherwise a charge will be made for each lamp or other device installed.

5. Where employes for the good of the service are required to live in certain designated quarters, one-half the rental will be remitted.

6. When an officer of the Army or Navy is detailed for duty with The Panama Canal, and the amount of extra compensation of the position he occupies over and above his official salary as an officer of the Army or Navy is not sufficient to cover his rent, he will not be charged for rent, but will receive no extra compensation.

7. The Governor of The Panama Canal is charged with the duty of issuing such instructions as may be necessary to carry out this Order and to fix and change from time to time, if necessary, the rates and charges herein outlined, subject to the general instructions provided.

8. The free use of quarters, free fuel, and free electric current are not, under the conditions of employment now governing, a vested or contract right of employes but revocable privileges, which it has been considered advisable to continue until the permanent force was organized. The revocation of these privileges shall not be made the basis for increasing salaries or wages or otherwise increasing compensation.

WOODROW WILSON.

THE WHITE HOUSE,
January 15, 1915.
[No. 2120.]

Amending the Civil Service Rules.

Section 2 of Rule X is hereby revoked and the following promulgated in lieu thereof:

2. No person appointed without competitive examination to a position classified at the time of such appointment, and no person serving in an unclassified position, or in a position named in Schedule A or Schedule B, not appointed by competitive examination or by transfer or promotion from a competitive position,

shall be transferred to a competitive position except as hereinafter provided in this rule and in Schedule A.

This amendment is promulgated upon the recommendation of the Civil Service Commission to make a definite prohibition upon the transfer of a person appointed through noncompetitive examination under Schedule B, and to indicate that there are exceptions from the general provisions of the section in other sections of the rules.

Section 12 of Rule X is hereby revoked and the following promulgated in lieu thereof:

12. A citizen of the United States in the service of The Panama Canal on or before January 1, 1915, in an excepted position other than that of clerk paying not more than \$75 in gold per month may be transferred without examination to a position in the competitive classified service, provide:

(a) This section shall not apply to a person appointed to a competitive position in accordance with the civil service rules, his transfer to be governed by the general provisions of the rules.

(b) This section shall not apply to a person appointed without examination to perform the duties of clerk of any grade, bookkeeper, stenographer, typewriter, surgeon, physician, trained nurse, or draftsman.

(c) He must have rendered at least two years' service in a position above the grade of mere unskilled laborer in the service of The Panama Canal or of the Panama railroad by transfer from the Canal.

(d) He may be transferred to a position of no higher grade requiring similar qualifications or to a position of a lower grade for which he is qualified.

(e) He must be specially recommended by the Governor of The Panama Canal by reason of efficient service and satisfactory conduct.

(f) If separated from the service the requisition for transfer must be made within three years from the date of separation, and if he has been separated more than one year evidence of continuing good character and efficiency may be required.

This order is promulgated upon the recommendation of the Secretary of War, the Governor of The Panama Canal, and the Civil Service Commission. It supersedes the Executive Order of February 18, 1913, relating to the transfer of artisans from the service of The Panama Canal, which, by Executive Order of June 15, 1914, was included in Section 12 of Rule X.

The effect of this Order is to confer eligibility for transfer, subject to proper restrictions, upon employes of The Panama Canal who have rendered two years' satisfactory service in excepted positions and who have not had full opportunity for examination. Employes appointed through competitive examination and artisans only have been eligible for transfer, the force of engineers, foremen, trainmen, and other persons not regarded as artisans, not being eligible.

WOODROW WILSON.

THE WHITE HOUSE,
January 19, 1915.
[No. 2121.]

Amending Sections 1 and 2 of the Executive Order of April 15, 1913, Entitled "An Execu-

tive Order to Provide Maritime Quarantine Regulations for the Canal Zone and the Harbors of the Cities of Panama and Colon, Republic of Panama."

By virtue of the authority vested in me, I hereby establish the following Order for the Canal Zone:

I. That the first paragraph of Section I of the above mentioned Executive Order is hereby amended to read, as follows:

BILLS OF HEALTH.

"Section I—Masters of vessels clearing from any foreign port or from any port in the possessions or other dependencies of the United States for a port in the Canal Zone or for the ports of Panama or Colon, Republic of Panama, or for passage through the Panama Canal, must obtain an original bill of health in duplicate from the officer or officers authorized by the quarantine laws and regulations of the United States to sign such certificates for vessels entering the ports of the United States. The following form is prescribed for such bills of health:"

11. That the first paragraph of Section 2, of the above mentioned Executive Order is hereby amended to read, as follows:

"Section 2—Vessels clearing from any foreign port or from any port in the possessions or other dependencies of the United States for a port in the Canal Zone or for the ports of Panama or Colon, Republic of Panama, or for passage through the Panama Canal, and entering or calling at intermediate ports, must procure at all said ports a supplemental bill of health in duplicate from the officer or officers authorized by the quarantine laws and regulations of the United States to sign such certificates for vessels entering the ports of the United States. If a quarantinable disease has appeared on board the vessel after leaving the original port of departure, or other circumstances presumably render the vessel infected, the supplemental bill of health should be withheld until such sanitary measures have been taken as are necessary. The following form is prescribed for supplemental bills of health:"

111. This amendment shall take effect from and after the date upon which the Panama Canal is officially and formally opened for use and operation, by Proclamation of the President of the United States.

WOODROW WILSON.

THE WHITE HOUSE,
January 11, 1915.
[No. 2118.]

Popular Excursion Through the Canal.

An excursion through the Canal on the steamship *Panama* is offered by the Panama Railroad Company on Sunday, February 7, at a round trip fare of \$3 for adults and \$1.50 for children under 12 years of age.

Special train connections, leaving Panama at 6.40 a. m. and Las Cascadas at 6.25 a. m., will convey the passengers to Pier 11, Cristobal, from which the *Panama* will sail directly after arrival of train. The vessel will reach Balboa in time for dinner at the Hotel Tivoli.

The fare includes all transportation, by rail and water, and lunch at noon on the steamer.

CANAL MEDAL LIST.

Below is a list of American employes of The Panama Canal and Panama Railroad Company who have completed two years of continuous service on the Isthmus during the 12 months ending December 31, 1914, and are in consequence entitled to a Canal medal. The date shown opposite each name is that from which medal service is computed.

The list is now published in order that it may be carefully checked by those interested. Any omissions, errors in spelling of names, or in the dates from which service is reckoned, should be promptly reported to the Executive Office for correction.

The heads of divisions are requested to check carefully their lists of American employes on the silver roll, and to report any omissions on the lists to the Executive Office.

The bar lists for both Panama Canal and Panama railroad employes will appear in a later issue.

Name.	Service Began.	Address of ex-employee.	Name.	Service Began.	Address of ex-employee.
Cooke, F. H.	1912-1914		Mahoney, Katherine M.	Apr. 20	
Thurgood, George C.	Jan. 2		Webb, Incius D.	Apr. 20	
Ball, Elbert F.	Jan. 3		Schott, Anna E.	Apr. 26	201 E. Second St., Duluth, Minn.
Gaillard, D. P.	Jan. 4	c/o Mrs. Katherine Gaillard, c/o Major F. C. Boggs, Mills Building, Washington, D. C.	Taylor, Alvah S.	Apr. 26	247 Cherry St., Dunmore, Pa.
Jones, Poyner J.	Jan. 4		Barnhouse, Samuel D.	Apr. 27	
Inman, Benjamin L.	Jan. 4		Holstein, Otto A.	Apr. 27	
Inman, Phil.	Jan. 4		Carlozzi, Charles D.	May 1	
Lewis, John K.	Jan. 4		Clarke, Richard.	May 2	c/o Washington Office, Panama Canal.
Lewis, Willard J.	Jan. 4		Simons, Algie W.	May 2	c/o Mrs. Mary L. Simons, First St. & Center Ave., Hoboken, Pa.
Sage, Clarence O.	Jan. 4		Wasserman, Solomon S.	May 2	55 Seventh Street, New York City.
Rohr, Fred.	Jan. 8		Welsh, James.	May 6	Cristobal, C. Z.
Johnson, George.	Jan. 8		Bevington, Harry F.	May 7	
Smith, Harris C.	Jan. 9	527 N. 35th St., W. Philadelphia, Pa.	Fowler, George S.	May 8	
Norris, Ray N.	Jan. 10		Jensen, Frank.	May 8	
DeYoung, John T.	Jan. 11		Hofer, Andreas.	May 9	
McCormick, William J.	Jan. 11		Braithwaite, William W.	May 10	
Riley, Eugene.	Jan. 11		Carroll, Robert W.	May 10	
Donnelly, Peter.	Jan. 15		Frasch, Frederick D.	May 10	
Barnes, Russell.	Jan. 16		Gill, Joseph H.	May 10	
Kudson, Josephine A.	Jan. 17		Parker, F. W.	May 10	
Ragan, Charles W.	Jan. 20	G. D. No. 1, Independence, Mo.	Roy, Morris J.	May 10	
Dildine, Florence M.	Jan. 21		Tweed, Ula W.	May 10	
Frank, John J.	Jan. 24	123 Ross St., Batavia, N. Y.	Utz, Joseph W.	May 10	
Ortman, Leo A.	Jan. 24		Crandall, Walter M.	May 16	
Johnson, Alfred.	Jan. 27		Dye, Ira W.	May 16	
Pritchett, Otis A.	Jan. 27		Jump, Charles H.	May 16	
Stine, Charles W.	Jan. 28	c/o S. Ditzler, Auburn, Pa.	Kiess, William F.	May 16	
Lindstrom, William.	Jan. 29		Koch, William.	May 16	124 Cumberland St., Brooklyn, N. Y.
Dustheimer, Clarence C.	Jan. 30	Box 564, Port Richmond, Cal.	Koronski, Royal A.	May 16	
Armitage, William R.	Feb. 1		Russell, Charles B.	May 16	
Ellsworth, Charles B.	Feb. 2	Wallace, Duplin County, N. C.	Syphrett, Earl F.	May 16	
Fuller, Martin L.	Feb. 2	1922 9th Ave., Huntington, W. Va.	Cook, George F.	May 21	
DeLaMater, William W.	Feb. 3		Nussbaum, Edmund E.	May 21	Apple Creek, Ohio.
Donovan, Andrew J.	Feb. 3		Basim, Besse I.	May 23	
Smith, Frank W.	Feb. 3		Reese, Frank L.	May 23	222 Highland St., Dubois, Pa.
Christy, L. A.	Feb. 6	c/o Christy Bros., Vista Hermosa Plantations, Santa Fe, Isle of Pines.	Bates, August B.	May 27	331 Crestwood Ave., Akron, Ohio.
Welter, Theodore.	Feb. 7		Collings, Roy T.	May 27	
Scott, Milton J.	Feb. 8	2604 Philip St., New Orleans, La.	DeBaun, Albert T., Jr.	May 27	
Campos, Moses.	Feb. 9		Jackson, Howard A.	May 27	210 Randolph St., Charleston, W. Va.
Hamel, Will J.	Feb. 9	c/o R. W. Hawthorne, Highland Hall Apartments, Birmingham, Ala.	McClure, Alexander E.	May 27	
Bubley, Harry.	Feb. 9	Washingtonboro, Lancaster Co., Pa.	McDaid, John A.	May 27	
Muska, Stephen.	Feb. 9		Obee, Floyd P.	May 27	
Richmond, Samuel L.	Feb. 9		Parker, Kathleen.	May 27	
Hilly, Charles R.	Feb. 10		Frank, Fred.	June 1	
Murphy, Guy.	Feb. 10		Doyle, Albert P. E.	June 2	Walden, N. Y.
Currie, Robert.	Feb. 15		Hall, R. Kenneth.	June 2	
Buckley, Edward J.	Feb. 16		Hansli, Alfred J.	June 2	
Detour, Agnes G.	Feb. 16	Hinsdale, N. H.	Hawley, James P.	June 2	
Griffin, Elizabeth.	Feb. 16		Leonard Emerson D.	June 2	
Hodges, Frederick H.	Feb. 16		Curtis, Paul C.	June 4	
Holbrook, Alfred E.	Feb. 16		Brown, Warren H.	June 6	
Polack, Robert S.	Feb. 16	Old South Building, Boston, Mass.	Erbe, Ernst A.	June 6	
Sherrit, Nye B.	Feb. 16		Johnson, John.	June 6	
Wendzinski, Vincent.	Feb. 16		Patterson, Blanche V.	June 7	
Enright, Bryan W.	Feb. 17	Muncie, Kans.	Zink, Raymond L.	June 8	
Barnes, Graham W.	Feb. 21		Haralson, John L.	June 10	c/o Gen. Dely., San Francisco, Cal.
Howe, William R.	Feb. 21		Morah, Lawrence G.	June 10	
Meyer, Andrew.	Feb. 21	1310 Alcatraz Ave., Berkeley, Cal.	Davis, William L.	June 12	
DeForce, Clifton.	Feb. 22	Lincoln Place, Pa.	Schmeck, Henry P.	June 12	
Peterson, Carl E.	Feb. 22		Beck, Charles E.	June 14	
Rogers, Thomas J., Jr.	Feb. 23		Morehead, Harrie H.	June 14	
Spangler, Henry E.	Feb. 27		Kayser, William H.	June 15	
Mosteller, Anna.	Mar. 1		Haven, Rutherford C.	June 17	
Wilson, Guss.	Mar. 1	Ancon, C. Z.	Bowen, Vellie S.	June 21	
Little, James W.	Mar. 2	Fernandina, Fla.	Byrne, William S.	June 21	755 Salem St., Malden, Mass., c/o F. O. Stuart.
Reeve, John W.	Mar. 4		Cline, Elbert P.	June 21	
Gaston, Cornelius A.	Mar. 5	Fairhope, Ala.	Margeson, Albert N.	June 21	
Hubbard, Wallace E.	Mar. 6		Mitten, Charles E.	June 21	
Smith, David O.	Mar. 6	1342 Girard St., N.W., Washington, D. C.	Jasmer, Max P.	June 25	
Pace, Levin M.	Mar. 7		Houk, Floyd A.	June 27	209 N. 13th St., Griffin, Ga.
Paulsen, Alfred.	Mar. 8		Ison, Walter H.	June 27	
Simms, George B.	Mar. 11		Cohn, August M. F.	July 4	
Clark, Harry A.	Mar. 12	9 Brent St., Dorchester, Mass.	Holleran, Francis E.	July 4	
Fox, Amos W.	Mar. 12	Corsica, Pa.	Lillycrop, Rufus A.	July 4	528 Hamilton St., Harrison, N. J.
Edmonds, Mary.	Mar. 19		McGarvey, Edward E.	July 4	
Parker, William G.	Mar. 21	1494 N. Regal St., Spokane, Wash.	Rosenbaum, Louis.	July 4	
Duff, Clinton A.	Mar. 22		Carr, Andrew B.	July 5	
Owen, Gilbert B.	Mar. 22		Vickery, Arthur W.	July 5	East Radford, Va.
Kilfoile, Charles A.	Mar. 23		Howe, Dan D.	July 6	
Woolford, Francis W.	Mar. 25	1413 Garfield Ave., Kansas City, Mo.	Linder, Frances.	July 6	
Parker, Foster T.	Mar. 31		McGladdey, Thomas.	July 6	
Sexton, Ralph E.	Mar. 31	227 S. Chapel St., Alhambra, Cal.	Whiston, Thomas.	July 9	3345 Clearfield St., Schuylkill, Philadelphia, Pa.
Cooper, Thomas D.	Apr. 1		Baucom, William H.	July 10	
Dobson, John.	Apr. 1	5810 39th Ave., S. E., Portland, Ore.	Burnham, George W.	July 10	
Ramsay, Eula A.	Apr. 1	P. O. Box 12, Sheffield, Ala.	Forstrom, Fredric.	July 10	
Kelly, Francis M.	Apr. 2	425 E. Redgate Ave., Norfolk, Va.	Shires, Ralph A.	July 10	
Crosscup, Frank A.	Apr. 3		Trickey, Charles L.	July 10	
McDonald, Elbert C.	Apr. 8		McCoy, James G.	July 11	
Staeb, Mary A.	Apr. 8		Brown, Leon J.	July 12	166 N. Center St., Orange, N. J.
Acher, Albert H.	Apr. 20	Balboa Heights, C. Z.	Buehler, George H.	July 16	
			Coil, Andrew W.	July 16	
			McLaughlin, Harry C.	July 16	

Name.	Service Began.	Address of ex-employee.	Name.	Service Began.	Address of ex-employee.
Niland, Marietta.....	July 16		Smither, Howard K.....	Oct. 1	
Test, Mary I.....	July 16		Spicer, Edna M.....	Oct. 1	
Welch, Ada L.....	July 16		Drennan, Richard P.....	Oct. 2	
Eagleson, Walter V.....	July 17		Morris, Herbert G.....	Oct. 3	
Scotfield, W. L.....	July 17		Halsan, Charles J.....	Oct. 4	
Battle, Walter W.....	July 18		Brailey, James E.....	Oct. 5	
Hix, Ivan E.....	July 18		Charters, Alfred R. R.....	Oct. 5	
Plummer, John T.....	July 18		Whitver, Delmore.....	Oct. 5	
Strauss, J. R.....	July 21		Foley, Thomas.....	Oct. 6	
Barab, Max.....	July 22		Moore, John C.....	Oct. 6	
Ickes, Floyd W.....	July 22	Quimby, Mich.	Gough, George R.....	Oct. 9	
Wechsler, M. Nathaniel.....	July 22		Luginbuhl, Peter C.....	Oct. 9	
Feuille, Fred.....	July 24		DeLong, Charles C.....	Oct. 10	
Malone, Grover.....	July 24		Gray, Lester D.....	Oct. 10	
Stone, H. L.....	July 24		Mills, Robert S.....	Oct. 10	
Harrold, William H.....	July 26		Acker, Percy E.....	Oct. 11	
Schandler, L. A.....	July 26		Atkinson, Oliver.....	Oct. 11	
Cohen, Maurice K.....	July 29		Hollingsworth, George R.....	Oct. 11	
Jennings, John D.....	July 29		Kiger, Pearl R.....	Oct. 11	
Kummerlows, Oskar W.....	July 29		Mackey, Emanuel C.....	Oct. 11	
Plummer, Raymond P.....	Aug. 3		Rankin, William P.....	Oct. 11	17 Hubbard St., Pittsburgh, Pa.
Ryan, Edward J.....	Aug. 3		Reisner, Walj A.....	Oct. 11	1305 Market St., Philadelphia, Pa.
Smith, Roland S.....	Aug. 3		Welch, George R.....	Oct. 11	
Weimer, John L.....	Aug. 3	56 Edly St., San Francisco, Cal.	Barr, George D.....	Oct. 15	
Marjoribanks, William.....	Aug. 8	5 Lexington Ave., Albany, N. Y.	Goulet, Arthur W.....	Oct. 15	
Balling, George A.....	Aug. 9		Hand, Russell R.....	Oct. 15	
Dunham, George R.....	Aug. 9		Hattendorf, Harry T.....	Oct. 15	
Holeck, Julia L.....	Aug. 9		Howe, Herbert G.....	Oct. 15	
Vickers, Hayes B.....	Aug. 9		Sinclair, George T.....	Oct. 15	
Anderson, William R.....	Aug. 13		Schutt, George H.....	Oct. 15	
Schroeter, Otto H.....	Aug. 13	83 Ocean Ave., New London, Conn.	Montanye, Thomas B.....	Oct. 16	
Belcher, William W.....	Aug. 15		Berkey, Frank E.....	Oct. 18	
Schuback, Adolph O.....	Aug. 15	Rural Route No. 4, Fennville, Mich.	Bower, Charles A.....	Oct. 18	
Walker, Bow R.....	Aug. 15		Bryan, Lawson H.....	Oct. 18	
LeRoy, George.....	Aug. 17	c/o Gen. Dely., Antofagasta, Chile.	Courtney, John P.....	Oct. 19	
Violette, Frank J., Jr.....	Aug. 19	Corozal, C. Z.	Wright, Walter J.....	Oct. 19	
Wond, Oscar T.....	Aug. 21		Bowman, Kathryn.....	Oct. 21	
Barker, Arthur J.....	Aug. 22		Hoby, Harry P.....	Oct. 21	
Bryce, Michael.....	Aug. 22		McGuinnis, Hugh F.....	Oct. 21	
Hall, Arthur.....	Aug. 22		Ogden, Merton M.....	Oct. 21	
Johnson, Chester B.....	Aug. 22		Parker, Harley V.....	Oct. 21	
Tarflinger, George T.....	Aug. 22		Hull, William X.....	Oct. 22	
Townsend, Charles A.....	Aug. 22		Endom, Percy M.....	Oct. 24	
Casanova, Charles M.....	Aug. 24		Perrott, William.....	Oct. 26	
Fuller, Raymond A.....	Aug. 24	1737 Kentucky Ave., Joplin, Mo.	Orewiler, Lewis H.....	Oct. 27	
McCahill, Lee.....	Aug. 24	46 Stewart St., San Francisco, Cal.	Hogan, Winton I.....	Oct. 31	713 Arledge St., Hattiesburg, Miss.
Parvia, C. Walter.....	Aug. 24		Gedese, Mary M.....	Nov. 1	
Plummer, O. M.....	Aug. 26		Turner, Lawrence C.....	Nov. 1	
Baxter, William O.....	Aug. 28		Bullard, Lester H.....	Nov. 4	Evansville, Wis.
Brinkerhoff, George L.....	Aug. 28		Peterson, Arthur.....	Nov. 4	
Clough, Walter S.....	Aug. 28	c/o R. W. Roberts, Liberal Arts Palace, San Francisco, Cal.	Ross, J. A.....	Nov. 4	
			Batcher, Arien M., Jr.....	Nov. 6	c/o A. M. Butcher, Gatun, C. Z.
Degenaar, Albert W.....	Aug. 28		Westendorff, Henry A.....	Nov. 7	
Dewey, Harry E.....	Aug. 28		Cunningham, Harry A.....	Nov. 8	
Fields, Frank V.....	Aug. 28	21 Serrell Ave., Binghamton, N. Y.	Dunn, Joseph.....	Nov. 8	
Kennedy, John.....	Aug. 28		Myrick, Jesse C.....	Nov. 8	
Richardson, Thomas.....	Aug. 28		Shohan, Abraham.....	Nov. 8	
Smith, Peter S.....	Aug. 28		Weddle, James A.....	Nov. 8	
Woolworth, Porter T.....	Aug. 28		Barrett, Elizabeth.....	Nov. 11	
Hunter, John J.....	Aug. 29		Sundstrom, Fred J.....	Nov. 13	
Moore, Frank H.....	Aug. 29	147 Temple St., Fredonia, N. Y.	Ahorn, George C.....	Nov. 15	
Hansen, Carl J.....	Aug. 30		Davis, Homer C.....	Nov. 15	
Houser, William M.....	Aug. 30		Farrell, Patrick.....	Nov. 15	
Dreghorn, Matthew.....	Sept. 2		Hobson, Arthur J.....	Nov. 15	
Greenwood, Ira T.....	Sept. 2		Rowe, Harry S.....	Nov. 15	
Klaman, William H.....	Sept. 2	44 Oregon St., Wilkes-Barre, Pa.	MacKenzie, Alexander.....	Nov. 15	
Sawyer, Frank M.....	Sept. 2		Rose, Glen W.....	Nov. 15	
Seavey, Edward E.....	Sept. 2		Searle, W. W.....	Nov. 15	
Whitelhead, Richard H.....	Sept. 2		Thompson, James R.....	Nov. 15	Beaumont, Cal.
Gall, Louis.....	Sept. 3		Trachsel, Fredrick E.....	Nov. 15	
Miller, Albert C.....	Sept. 3		Caljwell, William E.....	Nov. 18	
Sperber, Morris.....	Sept. 3		Reinhof, Leland A.....	Nov. 18	
Cleary, Walter E.....	Sept. 4		Barton, Aldrich.....	Nov. 19	
Roberts, James M.....	Sept. 5		Frery, Henrietta R.....	Nov. 19	
Cain, Martin J.....	Sept. 9		Boos, Walter R.....	Nov. 20	
Curran, James F.....	Sept. 9		Jones, Leonard C.....	Nov. 20	
Frostholm, Marie H.....	Sept. 9		Melms, Emil A. R.....	Nov. 20	
Steele, F. Willard.....	Sept. 9		Rydel, Oscar W.....	Nov. 21	
Waterman, Bessie L.....	Sept. 9		Bracker, Charles J.....	Nov. 27	
Watson, David.....	Sept. 10		Braishaw, Percy B.....	Nov. 27	
Laughlin, Gerald F.....	Sept. 12		Joyce, Patrick R.....	Nov. 27	
Beyerlein, Arthur L.....	Sept. 12	1133 12th St., N. W., Washington, D. C.	Nock, Ivan F.....	Nov. 27	
Iardella, Mary A.....	Sept. 12		Van Brunt, Edmund S.....	Nov. 27	
Meade, Nellie M.....	Sept. 12		Baker, Elizabeth R.....	Dec. 2	
Van Deusen, Stewart A.....	Sept. 13		Beland, Arthur J.....	Dec. 2	
Meyers, George R.....	Sept. 14		Brogan, Anna M.....	Dec. 2	
Wheeler, Malcolm R.....	Sept. 14		Moore, Albert L.....	Dec. 2	
Campbell, John J.....	Sept. 17	254 Midwood St., Brooklyn, N. Y.	Robinson, Robert B.....	Dec. 2	
Mead, Charles E.....	Sept. 17		Schnake, Edward W.....	Dec. 2	
Page, Joseph A.....	Sept. 17		Swanson, Oscar R.....	Dec. 2	
Quick, Ray L.....	Sept. 17		Glick, Earl C.....	Dec. 3	
Middleton, Willis P.....	Sept. 18	426 W. Mill St., Ithaca, N. Y.	Silson, Louis A.....	Dec. 3	
Heald, Curtiss L.....	Sept. 19		Ivey, Samuel B.....	Dec. 5	
Gilbert, Earl T.....	Sept. 20		Taul, William M.....	Dec. 5	
Roberts, Charles W.....	Sept. 20		Chapman, Frank G.....	Dec. 7	
Van Valkenburgh, Lester D.....	Sept. 20		Justi, Joseph A.....	Dec. 7	
Rawson, Frank.....	Sept. 22		Bradley, Fred W.....	Dec. 9	
Cumming, John F.....	Sept. 24		Dickinson, Denton C.....	Dec. 9	
Tonne, Theodore P.....	Sept. 25		Jacobson, Hugo W.....	Dec. 9	
Elliot, Samuel S.....	Sept. 26		Healey, Louis.....	Dec. 9	
Heil, William J.....	Sept. 26		Sinawitz, William H.....	Dec. 9	
Holloway, William R.....	Sept. 26		Metzger, Fred J., Jr.....	Dec. 11	
O'Shea, Timothy P.....	Sept. 26		Davis, Samuel H.....	Dec. 12	
Weiss, Christopher.....	Sept. 26		Stube, Erwin H.....	Dec. 13	
Wilkes, Cecil R.....	Sept. 26		Bentley, George J.....	Dec. 15	
Deyo, John H.....	Sept. 28	12 James St., Binghamton, N. Y.	Sharp, Frederick B.....	Dec. 15	
Adler, Lawrence.....	Sept. 29		Osten, Samuel J.....	Dec. 17	
Carter, Charlotte.....	Oct. 1		Lawler, Thomas F.....	Dec. 18	
deCamp, Mallye A.....	Oct. 1	1608 W. 25th St., Minneapolis, Minn.	Ludlum, Joseph W., Jr.....	Dec. 19	
Johnston, Francis M.....	Oct. 1		Bullock, Oliver.....	Dec. 21	
Potts, Ida B.....	Oct. 1		Waters, Frank.....	Dec. 21	
Reed, Etta.....	Oct. 1		Ashford, Willard B.....	Dec. 26	
			McCartney, Robert.....	Dec. 26	

OFFICIAL CIRCULARS.

Charge for Pumping Oil.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 23, 1915.

CIRCULAR No. 694:

Effective this date, a charge of four cents per barrel will be made individuals and companies, for pumping oil through the plants of The Panama Canal at Balboa and Cristobal.

CHESTER HARDING,
Acting Governor.

Acting Paymaster.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 26, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Mr. Robert W. Glaw has been appointed Paymaster, The Panama Canal, effective February 1, 1915, to serve during the absence on leave from the Isthmus of Mr. John H. McLean.

CHESTER HARDING,
Acting Governor.

Commissary Books for Silver Employees.

THE PANAMA CANAL,
OFFICE OF EXECUTIVE SECRETARY,

BALBOA HEIGHTS, C. Z., January 25, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Your attention is invited to Circular No. 663-1, Paragraph 17, which reads, as follows:

"Commissary books of all denominations will be sold to silver employees for cash. Application will be made to foremen for an authorization card, form No. P.C.-478, which authorizes the sale of commissary books to the value of \$15. The foreman will complete the card, sign the same, and forward it to the time office for validation with the time books. The roll keeper will check the cards to ascertain if the applicants are employees, after which they will be validated by an issuing clerk and returned to the foreman for delivery."

It has been reported by the Auditor that the instructions contained in the above are not being complied with, resulting in much inconvenience to the employees. Please see that the instructions are complied with. No cards will be honored unless properly validated.

By direction of the Acting Governor.

C. A. McILVAINE,
Executive Secretary.

Gamboa Labor Train Not to Carry Employees After January 30.

PANAMA RAILROAD COMPANY,
OFFICE OF THE MASTER OF TRANSPORTATION.

BALBOA HEIGHTS, C. Z., January 26, 1915.

TRANSPORTATION PULLETIN No. 139:

All concerned—With the close of business Saturday, January 30, 1915, the Gamboa labor train, which leaves Panama at 5.45 a. m., will be discontinued as far as the handling of laborers is concerned and will tie up at Balboa on arrival at terminal.

Heads of divisions whose men have been using this train will please be governed accordingly.

S. W. HEALD,
Master of Transportation.

Oil Drums.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., January 25, 1915.

Heads of departments and divisions—The Supply Department desires to close up several old contracts for oils, etc., and in order to do so, all drums must be returned to the contractors at the earliest practicable date.

In order to know the exact status of the drums now on the Isthmus, you will have an inventory taken as of February 1, 1915, showing all drums on hand in your department or division.

The inventory should show, when practicable, not only the total number of drums on hand, but the C. Z. requisition number which is stenciled on each drum. Also as to whether drums are full or empty.

Such empty drums as are now on hand should be delivered at the earliest practicable date, as follows:

Pacific side, to storekeeper, Balboa.

Atlantic side, to oil house, Mount Hope depot (advising storekeeper, Balboa, of such shipments).

WM. R. GROVE,
Chief Quartermaster.

Approved:

CHESTER HARDING,
Acting Governor.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective February 4, 1915:

FRESH MEATS

Prices of fresh meats unchanged.

MISCELLANEOUS.

	Price.
Brains, calves', per pound	19
Kidneys, beef, per pound	13
Livers—Beef, per pound	13
Calf, each	65
half, each	65
Oysters, fresh, per pkt.	30
Steak—Hamburger, package	17
Hamburger, 20 pound containers, per pound	14
Sausage—Bologna, per pound	13
Frankfurter, per pound	13
Frankfurter, imported, tin	14
Lieberwurst, per pound	*13
Pork, per pound	17
Sweetbread, beef, per pound	23
Eggs, fresh, per dozen	149
per 3 dozen	125
Bluefish, per pound	*12
Halibut, fresh, per pound	8
Salmon, per pound	6
Yeast, per pound	31
per cake	2

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound	25
Chickens—Fancy, roasting, corn fed, per pound	24
Fowls, per pound	24
Fowls, light, per pound	24
Ducks, Western, per pound	25
Capons, per pound	30
Broilers, milk fed, per pound	29
Broilers, corn fed, per pound	27
Turkeys, per pound	28
Squabs, each	30
Geese, 10 to 14 pounds, per pound	23

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound	43
Genuine Westphalia, per pound	50
Sugar cured, whole, per pound	30
Half, per pound	20
Sliced, per pound	28
Hocks, per pound	10
Butt end, per pound	12
Whole, boiled, per pound	30
Half boiled, per pound	32
Sliced, boiled, per pound	38
Hocks, boiled, per pound	10
Bacon—Breakfast, sliced, per pound	33
Whole piece, per pound	32
Ham, lunch, per pound	40
Pork, salt, family, per pound	14
Ox tongues, 3 to 5 pounds, per pound	24
Pigs' feet, per pound	7
Tongues, per pound	22
Beef corned, No. 1, per pound	18
No. 2, per pound	15

DAIRY PRODUCTS.

Butter—Creamery, special, per pound	43
Sheffield Farms, extra fancy, per lb.	54
Cheese—Philadelphia cream, cake	9
Roquefort, per pound	41
Young America, per pound	21
Swiss, per pound	30
Edam, each	90
Edam, tin	29
Parmesan, per pound	38
Gouda, per pound	26
Snappy, per cake	9
Milk, Sheffield, per quart	**15
Fermeilac, bottle	**25
Ice cream, quart	15
1-gallon	150
Cream, Sheffield Farms, quart	**33
1 int.	**19
3/4 int.	**12

VEGETABLES.

Beets, per pound	*2
Brussels sprouts, per quart	*24
Celery, per head	7
Cabbage, per pound	2
Carrots, per pound	2
Cucumbers, hothouse, per pound	11
Lettuce, per pound	5
Onions, per pound	1
Parsnips, per pound	13
Peppers, per pound	18
Potatoes, white, per pound	2
sweet, tropical, per pound	2
Turnips, per pound	2
Tomatoes, per pound	*11
Squash, per pound	24

FRUITS.

Apples, per pound	3
Apples, fancy, per pound	6
Cranberries, fresh, per pound	6

Grapes, per pound	Price.
Grape fruit—American, each	14
Tropical, each	5
Lemons, per dozen	34
Limes, per 100	9
Oranges—American, each	150
Tropical, per dozen	24
Coconuts, each	9
Bananas, per bunch	5
Bananas, each	38
Apples, evaporated, per pound	16
Apricots, evaporated, per pound	16
Pears, evaporated, per pound	23
Tangerines, each	14
Figs, dried, per pound	17

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than 1/2 ham or 1/2 shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock, at the commissary stores became effective February 1, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Beef, extract, Armour's, jar	1.50	3.45
Cherries, maraschino, bot.	.55	.50
Paprika, bot.	.14	.10
Beds, ready, ea.	1.40	1.20
Sheets, 90" x 90", ea.	.90	.85
Shirts, wool, U. S. A., ea.	2.80	3.00
Colanders, 10", ea.	.22	.17
Hatchets, claw, ea.	.47	.50
Percolators, ea.	6.30	5.30
Percolators, ea.	6.05	7.00
Percolators, ea.	6.75	7.15

Additions to Stock.

Soda water, Schweppes, large bot.	.10
Soda water, Schweppes, small bot.	.05
Clips, collar, military, ea.	.03
Ratine, white, yd.	.01
Voile, dashed colored, yd.	.21
Pencils, Kohinor, HHHH, ea.	.09
Hats, felt, Army, ea.	1.30

For sale to pilots only:

Covers for pilot caps, ea.	.29
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Examinations by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, February 10, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the captain of the port of Cristobal on Friday, February 12, 1915, beginning at 9 a. m. Applicants should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.

F. M. NIXON,
Recorder, Board of Local Inspectors.

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next five weeks are given in the following table:

FEBRUARY.

DATE.	Time and height of high and low water.		
Wed., Feb. 3.....	5:40 15.5	11:57 -0.5	18:04 16.2
Thurs., Feb. 4.....	0:21 -0.1	6:20 15.5	12:37 -0.3
Fri., Feb. 5.....	1:05 2.0	7:01 14.4	13:18 0.3
Sat., Feb. 6.....	1:50 0.4	7:46 14.4	14:06 1.0
Sun., Feb. 7.....	2:41 1.1	8:37 13.6	14:59 2.0
Mon., Feb. 8.....	3:40 1.9	9:40 12.7	16:01 2.9
Tues., Feb. 9.....	4:47 2.4	10:58 12.2	17:14 3.4
Wed., Feb. 10.....	6:02 2.5	12:25 12.2	18:31 3.4
Thurs., Feb. 11.....	0:51 13.1	7:14 2.1	13:43 12.9
Fri., Feb. 12.....	2:04 13.6	8:16 1.4	14:46 13.8
Sat., Feb. 13.....	3:03 14.3	9:10 0.6	15:37 14.7
Sun., Feb. 14.....	3:52 14.9	9:58 0.1	16:21 15.3
Mon., Feb. 15.....	4:35 15.3	10:40 -0.2	17:01 15.7
Tues., Feb. 16.....	5:16 15.3	11:20 -0.1	17:38 15.7
Wed., Feb. 17.....	5:53 15.1	11:59 0.3	18:12 15.3
Thurs., Feb. 18.....	0:21 0.6	6:28 14.5	12:36 0.9
Fri., Feb. 19.....	1:00 1.2	7:03 13.8	13:14 1.8
Sat., Feb. 20.....	1:39 2.0	7:38 12.9	13:53 2.8
Sun., Feb. 21.....	2:20 2.8	8:16 12.0	14:35 3.8
Mon., Feb. 22.....	3:07 3.7	9:01 11.1	15:24 4.6
Tues., Feb. 23.....	4:03 4.3	10:04 10.5	16:25 5.2
Wed., Feb. 24.....	5:10 4.6	11:27 10.3	17:35 5.4
Thurs., Feb. 25.....	6:19 4.3	12:49 10.7	18:44 4.9
Fri., Feb. 26.....	1:01 11.4	7:19 3.6	13:49 11.6
Sat., Feb. 27.....	1:58 12.3	8:10 2.6	14:33 12.8
Sun., Feb. 28.....	2:43 13.4	8:54 1.5	15:11 14.0

MARCH.

DATE.	Time and height of high and low water.		
Mon., March 1.....	3:24 14.4	9:35 0.5	15:48 15.1
Tues., March 2.....	4:03 15.3	10:14 -0.3	16:24 16.1
Wed., March 3.....	4:41 15.0	10:52 -0.8	17:01 16.7
Thurs., March 4.....	5:20 16.2	11:34 -1.0	17:38 17.0
Fri., March 5.....	6:00 16.2	12:15 -0.7	18:18 16.9
Sat., March 6.....	0:41 -0.9	6:43 15.7	12:59 -0.1
Sun., March 7.....	1:27 -0.2	7:27 14.9	13:45 0.9
Mon., March 8.....	2:19 0.8	8:19 13.8	14:40 2.0
Tues., March 9.....	3:18 1.8	9:23 12.7	15:44 2.1
Wed., March 10.....	4:27 2.7	10:44 12.0	17:00 3.8

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used in Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3.47.

Mail Dispatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans, for all States. Due at New Orleans the following Tuesday.

Every Saturday to New York, for all states. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.*

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE.—The sailings on February 8, March 8, and April 5 will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will only be for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7.10 a. m., connects with the despatches for the three sailings mentioned above.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies, may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,330 to 1,600 barrels per hour. The present price is \$1.25 per barrel, reduced to 60° Fahrenheit. Diesel engine oil is for sale by the same company.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa. Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the turning of the largest crank shafts or longest line shafts.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment in ward is \$1 per day; for foreign seamen, \$1.50 per day.

The cable address of The Panama Canal on the Isthmus is "Isthmian, Balboa Heights;" in the United States, "Isthmian, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS THROUGH THE CANAL.

Approximately regular services between the Atlantic and the Pacific seaboard from Boston, New York, Philadelphia, and Baltimore, occasionally Charleston and New Orleans, to San Pedro, San Francisco, Portland, and Puget Sound, and return, are maintained by the American-Hawaiian Steamship Company, with a sailing each way about every five days; the Luckenbach Steamship Company, with a sailing each way about every 10 days; Sudden and Christensen, approximately fortnightly; the Atlantic and Pacific Steamship Company, about every three weeks; and the Boston and Pacific Line, and the Arrow Line, each sending a vessel each way about once a month.

Between the east coast of the United States and the west coast of South America, fortnightly services are maintained by the Merchants' Line and by the New York and South America Line; the West Coast Line has sailings each way about every four weeks.

Between the west coast of the United States, with connections to lower British Columbia, and Europe the following lines are in service: The Harrison-Deer Line, monthly; the Maple Leaf Line, about every six weeks; the East Asiatic Company, monthly, and the Johnson Line, every six or seven weeks.

The Pacific Steam Navigation Company is operating approximately a monthly service around South America from Liverpool, by way of the Canal.

The American-Australian Line has been sending vessels through the Canal about fortnightly from New York to ports in Australia and New Zealand.

PACIFIC COAST CONNECTIONS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amavala, La Union, La Libertad, Acapulco, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central America line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports abovementioned between Balboa and Ocos.

Grace and Company maintain a service with a vessel plying between San Francisco and Valparaiso, calling at way ports. It makes a round voyage about every 10 weeks.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Payta, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa for Valparaiso, calling at Paleta, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service between Colon and Southampton, making the following way ports: Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores, and Cherbourg. Its vessels all arrive at Colon on Sundays and sail on Tuesdays.

The Compagnie Generale Transatlantique operates a line, with 28-day sailing, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compania Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Caliz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday direct from Cristobal, and every Thursday from New York; between Colon and New York by the United Fruit Company, via Kingston, weekly; between Cristobal and New Orleans

(Continued on page 230.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon January 31.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Jan. 26	Lompoc	British	Bear Creek Oil & Ship Co.	Newport News	San Francisco	Ballast	794	7,488	5,335
Jan. 26	Moyune	British	China Mut. Steam Nav. Co.	Kingston	San Francisco	General cargo	1,600	5,088	3,665
Jan. 27	Fi nia	Danish	East Asiatic S. S. Co.	Copenhagen	San Francisco	Salt, general (a)	650	5,744	4,021
Jan. 27	Icwan	American	American-Hawaiian S. S. Co.	New York	Los Angeles	General cargo	4,453	6,819	4,668
Jan. 29	Silene	Dutch	Anglo-Saxon Petrol. Co.	Port Arthur	Tien Tsin	Illuminating oil (b)	918	3,907	2,787
Jan. 29	Maresfield	British	Woodfields Shipping Co.	New York	New Zealand	General cargo	6,535	5,049	3,754
Jan. 29	John A. Hooper	American	Sudden & Christenson	Norfolk	San Francisco	Coal	1,003	2,462	1,536
Jan. 31	Advance	American	Panama Railroad Co.	New York	Balboa	General cargo	6,500	2,965	2,161
Jan. 31	Santa Cruz	American	W. R. Grace & Co.	New York	Puget Sound	General cargo		5,427	3,751

(a) 1,000 tons salt. (b) 1,534,707 gallons.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Jan. 25	Oliner J. Olson	American	W. R. Grace & Co.	Tocopilla	New Orleans	Nitrates	2,106	2,207	1,483
Jan. 25	Copenhagen	British	Glenn & Co.	Valparaiso	New York	Nit's, silver ore (a)	7,080	5,029	3,760
Jan. 26	Saint Leonards	British	Brit. & Foreign S. S. Co.	Antofagasta	Genoa	Nitrates	6,850	5,070	3,688
Jan. 27	Ortega	British	Pacific Steam Nav. Co.	Valparaiso	Liverpool	General cargo (c)	5,077	8,306	4,960
Jan. 27	Huasco	Chilean	South American S. S. Co.	Talcahuano	Cristobal	General cargo	1,549	4,563	3,121
Jan. 28	Corozal	American	Emery S. S. Co.	Astoria, Ore.	New York	Lumber (b)	3,500	3,225	2,198
Jan. 28	Colon	American	Panama Railroad Co.	Balboa	New York	General cargo	3,153	5,866	4,222
Jan. 29	Salvador	British	Salvador R. R. Co.	Salina Cruz	Cristobal	Coffee, sugar, hides	868	1,190	692
Jan. 30	Manavi	British	Pacific Steam Nav. Co.	Guayaquil	Cristobal	Coffee, cocoa, rub.	874	1,205	745
Jan. 30	Leelanaw	American	Leelanaw S. S. Co.	San Francisco	Galveston	General cargo	800	2,166	1,416
Jan. 31	Kelbergen	Dutch	Furness Shipping Agency	San Francisco	Queenstown	Barley	7,325	5,320	3,858
Jan. 31	Chimu	British	W. R. Grace & Co.	Valparaiso	New York	Salt p'tr, wool, m'tl	6,951	4,925	3,725

(a) 1,059 tons silver ore. (b) 2,125,923 board feet. (c) Including 1,062 tons nitrates and 1,980 tons tin ore.

ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
Feb. 1	Texas	American-Hawaiian S. S. Co.	New York
Feb. 1	Carolyn	Luckenbach S. S. Co.	New York
Feb. 1	Milra	Anglo-Saxon Pet. Co.	Port Arthur
Feb. 1	Melania	Anglo-Saxon Pet. Co.	Port Arthur
Feb. 1	Santa Rosalia	Isthmian S. S. Co.	New York
Feb. 1	Kroontond	Hall Line	New York
Feb. 1	Great Northern	Inter. Mercantile Marine	New York
Feb. 5	Peninsular	Great Northern S. S. Co.	Philadelphia
Feb. 5	Peninsular	American-Hawaiian S. S. Co.	New York

ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Feb. 2	Morlanan	American-Hawaiian S. S. Co.	Los Angeles
Feb. 6	Arzuman	American-Hawaiian S. S. Co.	Hilo
	Oplund	W. R. Grace & Co.	Central America

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
Jan. 26	Haiti	Cie. Gen. Transatlantique	Bordeaux
Jan. 28	Dronning Olga	Seeberg S. S. Co.	Gulfport
Jan. 28	B. C. Pendleton	Seeberg S. S. Co.	New Orleans
Jan. 29	Vulcanus	Dutch Royal Mail	Cartagena
Jan. 29	Tordenskjold	Earn Line	Norfolk
Jan. 30	Chiswick	Earn Line	Norfolk
Jan. 30	Wegadesk	Earn Line	Norfolk
Jan. 30	Virginia	Yacht	La Guayra

*DEPARTURES.

Date	Vessel	Line	To
Jan. 28	Egda	J. I. Mowinkel	Manzanillo
Jan. 29	Haiti	Cie. Gen. Transatlantique	Bordeaux

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
Feb. 1	Ocland	Earn Line	Norfolk
Feb. 1	Trent	Royal Mail	Southampton
Feb. 1	Soroka	La Veloce	Genoa

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
Feb. 1	Tordenskjold	Farn Line	Unknown
Feb. 2	Trent	Royal Mail	Southampton
Feb. 2	Ortega	Pacific Steam Nav. Co.	Liverpool
Feb. 2	Maurici	Pacific Steam Nav. Co.	Limon

*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Date	Vessel	Line	From
Jan. 27	Chile	Pacific Steam Nav. Co.	Callao
Jan. 28	Pachitea	Peruvian S. S. Co.	Mollendo
Jan. 28	Newport	Pacific Mail S. S. Co.	San Francisco

*DEPARTURES.

Date	Vessel	Line	To
Jan. 27	Son José	Pacific Mail S. S. Co.	San Francisco
Jan. 31	Chile	Pacific Steam Nav. Co.	Callao

*EXPECTED ARRIVALS.

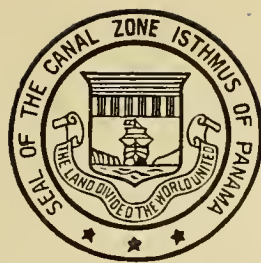
Date	Vessel	Line	From
Feb. 1	Pachitea	Peruvian S. S. Co.	Callao
Feb. 1	Newport	Pacific Mail S. S. Co.	San Francisco

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
Feb. 1	Pachitea	Peruvian S. S. Co.	Callao
Feb. 1	Newport	Pacific Mail S. S. Co.	San Francisco

*Other than vessels passing through the Canal.

(Continued from page 229.)				Metapan.....U. F. C..Feb. 20....Mar. 1				Tenadores.....U. F. C..Mar. 1....Mar. 8			
by the United Fruit Company, two vessels a week				Santa Marta.....U. F. C..Feb. 24....Mar. 3				Almirante.....U. F. C..Mar. 4....Mar. 11			
each way. Following are the sailings in the near future:				Panama.....P. R. R..Feb. 25....Mar. 3				Advance.....P. R. R..Mar. 6....Mar. 13			
Sails. Arrives.				Pastores.....U. F. C..Feb. 27....Mar. 7				Metapan.....U. F. C..Mar. 8....Mar. 16			
NEW YORK TO CRISTOBAL-COLON.				CRISTOBAL-COLON TO NEW YORK.				NEW ORLEANS TO CRISTOBAL-COLON.			
Santa Marta	U. F. C.	Jan. 27	Feb. 3	Almirante	U. F. C.	Feb. 4	Feb. 11	Heredia	U. F. C.	Jan. 27	Feb. 3
Panama	P. R. R.	Jan. 28	Feb. 3	Advance	P. R. R.	Feb. 6	Feb. 13	Abangarez	U. F. C.	Jan. 30	Feb. 4
Pastores	U. F. C.	Jan. 30	Feb. 7	Metapan	U. F. C.	Feb. 8	Feb. 16	Parismina	U. F. C.	Feb. 3	Feb. 10
Zacapa	U. F. C.	Feb. 3	Feb. 10	Santa Marta	U. F. C.	Feb. 11	Feb. 18	Atenas	U. F. C.	Feb. 6	Feb. 11
Allianca	P. R. R.	Feb. 4	Feb. 10	Panama	P. R. R.	Feb. 13	Feb. 19				
Calamares	U. F. C.	Feb. 6	Feb. 14	Pastores	U. F. C.	Feb. 15	Feb. 22	CRISTOBAL-COLON TO NEW ORLEANS.			
Carrillo	U. F. C.	Feb. 10	Feb. 17	Zacapa	U. F. C.	Feb. 18	Feb. 25	Cartago	U. F. C.	Jan. 28	Feb. 4
Coloa	P. R. R.	Feb. 11	Feb. 17	Allianca	P. R. R.	Feb. 20	Feb. 26	Turrialba	U. F. C.	Feb. 4	Feb. 9
Tenadores	U. F. C.	Feb. 13	Feb. 21	Calamares	U. F. C.	Feb. 22	Mar. 1	Heredia	U. F. C.	Feb. 4	Feb. 11
Almirante	U. F. C.	Feb. 17	Feb. 24	Carrillo	U. F. C.	Feb. 25	Mar. 4	Abangarez	U. F. C.	Feb. 11	Feb. 16
Advance	P. R. R.	Feb. 19	Feb. 25	Colon	P. R. R.	Feb. 27	Mar. 5	Parismina	U. F. C.	Feb. 11	Feb. 16



The Canal Record

Official publication of The Panama Canal

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the pay roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

NOTES OF PROGRESS.

Over \$2,000,000 in Tolls.

The collection of tolls on vessels using the Canal, which aggregated \$1,965,137.57 at the close of business on January 31, reached and passed the \$2,000,000 mark on February 2. On February 15 the Canal will have been opened six months.

Severe Norther in Limon Bay.

The most severe "norther" of recent years visited Limon Bay between the evening of Monday, February 8, and the morning of Wednesday, February 10. The heavy seas did considerable damage, of which the most important was the carrying away on Tuesday, of over 4,000 feet of trestle for the east breakwater which is being constructed from Coco Solo Point toward the Canal channel. Two piledrivers and a train of 21 Lidgerwood flat cars and their unloader were lost.

The damage done to the trestle and tracks during Monday night was such that on Tuesday every effort was made to bring to land the rolling stock on the trestle, to save it if the trestle should go out. During the afternoon, a portion of trestle between the cars and the shore gave way, leaving a force of 69 men marooned. They were rescued with considerable difficulty, by the dredge *Caribbean* and the tug *Polomac* of the United States Navy, using their lifeboats.

Two East Indian laborers, Auba Singh and Luran Singh, were drowned on Monday night by the capsizing of the boat in which they were at work alongside the east breakwater.

The 4-masted schooner *Blanche E. Pendleton*, chartered by the Seeborg Steamship Company, was swept on a reef near Coco Solo Point, at which place she had been discharging a cargo of piles for the breakwater construction. No other large vessels were injured. Throughout the greater part of the duration of the norther, heavy rain fell at Colon and vicinity.

The "Chitre" Exempted from Tolls.

The Panama government's steamship *Chitre*, which passed through the Canal on January 11, was exempted from the payment

of tolls, and is the only vessel to have gone through the Canal free. The exemption was made in conformance with Article XIX of the Treaty between the United States and the Republic of Panama, signed November 19, 1903. The Article provides, in part:

"The Government of the Republic of Panama shall have the right to transport over the Canal its vessels and its troops and munitions of war in such vessels at all times without paying charges of any kind."

The *Chitre* is 93 feet long by 21 feet in the beam and has a net Canal tonnage of 55. As it went through in ballast, the exemption saved the Republic of Panama \$40.32.

Formal Opening of Canal Postponed.

Official advice has been received from the Washington office of The Panama Canal that the President has directed that the formal opening of the Canal will be postponed, probably until sometime after the first of July, 1915.

Preparation of Rates for Rent, Current, and Fuel.

Pursuant to the recent Executive Order directing that charges be made for rent, fuel, and electric current for Canal quarters after March 1, the Acting Governor has appointed a committee, consisting of the Engineer of Terminal Construction, the Chief Quartermaster, and the Constructing Quartermaster, to prepare data upon which the charges may be based and to submit its report and recommendations about February 15.

The committee has been directed to place a valuation on all buildings of The Panama Canal occupied as quarters and to estimate the cost of maintenance of buildings and grounds, of repairing and renewing furniture, of disposing of garbage, and of janitor service for bachelors' quarters; to determine the method of charging for electric current and fuel; and to list the classes of employees, such as nurses, policemen, firemen, etc., who are required to occupy designated quarters for the good of the service and will be charged one-half of the regular rental.

Special Rate for Hauling Motorcycles.

For the benefit of motorcyclists, especially clubs which wish to make runs on both sides of the Isthmus, the Panama Railroad Company has authorized a special charge of \$1 for the transfer of a motorcycle between any two points of the line, with the provision that when a club wishes to ship a number of motorcycles at the same time notice shall be given 24 hours in advance. This allows the carriage of a motorcycle on a passenger train at considerably less than the regular express charges for equal weight.

Ward treatment of American seamen in The Panama Canal hospitals will be increased from \$1 to \$1.50 per day, effective July 1, 1915.

CANAL TRAFFIC IN JANUARY.

Cargo Passed 2,000,000-ton Mark—Analysis of Traffic by Routes.

Ninety-eight vessels passed through the Canal during the month of January, carrying a total of 448,957 tons of cargo. This was the first month since the opening of the Canal in which a gain in the number of vessels has not taken place, as 99 vessels went through the Canal during December. The quantity of cargo carried, however, leads all preceding months, though it is greater by only 156 tons than that carried through in November. Six of the 98 vessels did not carry cargo. The total cargo to February 1 was 2,192,856 tons.

Forty-four of the vessels were bound from the Atlantic to the Pacific, or westward, and 54 were bound eastward, from the Pacific to the Atlantic. Vessels passing in each direction, and cargo carried are shown for the months of operation in this table:

Month	Eastbound		Westbound		Total	
	Vessels	Cargo	Vessels	Cargo	Vessels	Cargo
Aug.	12	57,182	12	49,106	24	106,288
Sept.	30	186,776	27	135,261	57	322,037
Oct.	40	252,288	44	168,067	84	420,355
Nov.	33	242,291	54	206,510	92	448,801
Dec.	57	261,630	42	184,735	99	446,415
Jan.	54	240,875	44	203,082	98	448,957
Total	230	1,241,002	223	951,761	454	2,192,856

As distributed over the principal routes of trade over which the vessels using the Canal travel, the traffic for the month may be summarized, as follows:

Route.	No. Vessels	Cargo tonnage.
Coastwise, eastbound	15	69,878
Coastwise, westbound	21	102,600
U. S. Pacific coast to Europe	11	67,302
Europe to U. S. Pacific coast	4	6,494
South America to U. S. and Europe	23	112,695
U. S. and Europe to South America	6	13,215
U. S. Atlantic coast to Far East	7	34,194
Far East to U. S. Atlantic coast	.....	.....
Miscellaneous routings	5	4,509
Vessels without cargo	6	.....
Total	93	448,957

The distribution of traffic over these routes since the opening of the Canal, to February 1, has been:

Route.	No. Vessels	Cargo tonnage.
Coastwise, eastbound	89	461,328
Coastwise, westbound	102	455,830
U. S. Pacific coast to Europe	62	419,182
Europe to U. S. Pacific coast	14	52,226
South America to U. S. and Europe	60	343,637
U. S. and Europe to South America	27	123,043
U. S. Atlantic coast to Far East	43	263,538
Far East to U. S. Atlantic coast	2	14,500
Miscellaneous routings	13	60,572
Vessels without cargo	42	.....
Total	454	2,192,856

"Miscellaneous routings" for January included the *Hesperus*, carrying 7,533 tons of wheat from St. Johns, N. B., to New Zealand; the United States Navy colliers *Proteus* and *Nereus*, carrying 10,577 and 10,470 tons, respectively, of coal and coke from Norfolk to

Honolulu; and the commercial vessels *Protesilaus* and *Braunton*, carrying coal to undeclared destinations.

The net tonnage of vessels passing through the Canal during the month aggregated 356,120 tons. Tolls collected amounted to \$419,037.12, which is greater than the collections for any month previous. The collection of tolls to February 1 has been, as follows:

Period.	Amount.
Period to August 15, 1914.....	\$ 11,670.62
August 15 to August 31.....	84,401.80
September 1 to September 30.....	269,763.00
October 1 to October 31.....	378,039.12
November 1 to November 30.....	3,724,240
December 1 to December 31.....	411,895.44
January 1 to January 31, 1915.....	419,037.12
Total	\$1,966,37.57

Civil Service Examinations.

Examinations for the following-named positions are scheduled to be held, probably on March 28, 1915 (date to be left blank on application), at the Administration Building, Balboa Heights, C. Z.: Aid, Coast and Geodetic Survey; Assistant, Philippine service; Assistant Inspector of boilers and Assistant Inspector of hulls, Steamboat Inspection service; Copyist Topographic Draftsman, Departmental service; Junior Engineer Draftsman, Engineer Department at large; Topographic Draftsman, Departmental service; Forest Assistant, Forest service; Junior Chemist, Departmental service; Land law clerk; Local Inspector of boilers, Local Inspector of hulls, Steamboat Inspection service; Matron, Indian service; Pharmacist, Public Health service; Physician, all services except Panama Canal and Philippine services; Surveyor, Philippine service; Telegraph operator; Veterinarian, all services.

Application should be filed by March 5, 1915.

An examination for Guard, U. S. Penitentiary service, will be held, probably on March 21, 1915 (date to be left blank on application), at the same place as above. Applications should be filed for the examination of guard by February 26, 1915.

ISTHMIAN CIVIL SERVICE BOARD.

Increased Emigration in December.

Emigration from the Isthmus during December showed a considerable increase over the previous month, according to the records of the quarantine service. The total net emigration was 1,328, as compared with 537 for November, which brings the total net emigration through the terminal ports, since July 1, 1913, to 21,732, a number nearly equivalent to the silver force employed on the Canal at the present time, and over one-half of the total number of employees in the service in June, 1913.

The total number of persons embarking at the ports of Colon and Cristobal for foreign ports during December was 3,107, consisting of 1,164 cabin, and 1,943 steerage passengers. The total number of persons entering from foreign ports was 1,824, consisting of 1,312 cabin, and 482 steerage passengers. The excess of those who embarked over those who landed was 1,283. The number of steerage passengers landed was the lowest since the present exodus began, and the number of departures in this class was, considering the total, unusually large. The steerage arrivals from the United States, which rose to the high figure of 763 in November, decreased in December to the normal total of 37. From

Jamaica and the other West India islands the steerage arrivals totaled 235. Some increase may be expected in the steerage arrivals from this section in January, as it has been the custom by a part of the West Indian population to visit their former homes during the holiday season, returning to the Isthmus afterward. This custom, however, was not observed to the same extent as in previous years, when money was more plentiful. Only 15 persons arrived from Europe in steerage; Colombia furnished the largest number outside of the West India islands, 118; Cuba, 17, and Costa Rica 39, while 206 arrived from Bozas del Toro, and 241 from other towns on the Atlantic coast of the republic. Of the arrivals at Colon and Cristobal in this class, 1,223 were men, 417 were women, and 235 were children. The total number of persons

arriving in transit was 827, a small increase over November, but much less than in December for several years previous.

The number of persons arriving at the ports of Balboa and Panama from foreign ports in December was 535, consisting of 384 cabin, and 152 steerage passengers. The number of persons departing was 631, consisting of 531 cabin, and 100 steerage passengers. The excess of those who embarked over those who landed was 45. The number of persons arriving from the coast towns on the Pacific side was 1,069; departing, 1,911.

One hundred and six vessels arrived at the ports of Cristobal and Colon during December, and 62 at Balboa, a total of 168, as compared with a total of 174 for November. No disease of a quarantinable nature arrived at the terminal ports during the month.

LABOR FORCE AND QUARTERS IN DECEMBER.

The force report of December 23, 1914 shows the actual working force of The Panama Canal on that date to have been 21,599, of the Panama railroad 3,662, and of contractors 84, a total effective working force of 25,255. This is a decrease of 1,022, as compared with the statement of November 25. The gold force on the Canal, composed almost exclusively of white Americans, was 3,756, divided, as follows: The Panama Canal 3,333; Panama railroad 368, contractors 55, a decrease in the total gold force of 217, as compared with the preceding month. Detailed figures of the total force employed on the Isthmus, by departments and divisions, follow:

DEPARTMENT OR DIVISION	SILVER EMPLOYEES*											Total silver.	Total gold.	Grand total.	
	Artisans.					Laborers.									
	Monthly.	Special.	22 cents.	18 cents.	15 cents.	12 cents.	Special.	European 16 cents.	13 cents.	10 cents.	7 cents.				5 cents.
Operation and Main- tenance office & locks	88	...	27	155	215	57	7	1	58	233	1	3	872	178	1,050
Terminal Construct'n	533	...	4	193	523	132	120	150	497	554	6	24	2,801	323	3,124
Building Division	54	6	251	322	466	55	...	...	233	373	2	12	1,897	202	2,099
Electrical	54	7	23	49	89	75	...	...	8	16	...	...	321	150	471
Municipal Eng.	335	...	116	262	462	273	...	40	152	722	3	49	2,393	125	2,523
Dredging	1,671	1	6	13	46	13	...	12	91	73	...	3	1,931	303	2,237
Mechanical	149	13	73	111	540	433	...	10	41	13	9	6	1,571	775	2,346
Canal Transportation	102	...	...	...	...	...	...	...	...	...	...	...	102	42	144
Fortifications	101	...	57	133	322	53	188	2	215	240	...	9	1,329	103	1,432
General Construct'n	...	...	13	2	5	1	52	150	35	43	1	...	322	4	326
Total	3,051	27	625	1,317	2,704	1,155	367	333	1,333	2,377	22	11	13,547	2,205	15,752
Supply: main office	...	...	...	...	...	...	...	...	...	...	...	...	15	15	...
Commissary	636	...	4	8	12	11	247	11	...	113	16	...	1,101	175	1,277
Subsistence	478	...	2	1	...	...	...	...	...	...	...	...	432	25	507
Quartermaster	794	...	71	83	90	1	227	10	105	750	...	3	2,133	73	2,203
Accounting	15	...	...	...	...	...	...	...	...	...	...	...	16	206	222
Health	335	...	3	3	6	...	...	...	7	283	3	3	721	179	903
Executive	163	2	...	2	...	...	...	1	...	...	...	...	173	457	630
Panama railroad	350	71	75	193	295	310	551	17	514	832	2	20	3,274	363	3,662
Contractors	1	1	4	2	16	...	...	...	5	...	...	...	29	55	84
Grand total	5,951	101	7-6	1,614	3,123	1,510	1,332	422	2,914	4,375	43	17	21,492	3,756	25,255
Month previous	6,007	141	802	1,777	4,219	1,730	1,095	480	2,114	4,692	32	173	22,304	3,973	26,277
Changes	-49	-39	-16	-163	-126	-222	+287	-58	-100	-324	+4	+	-805	-217	-1,022

*The wages are stated in United States currency.

QUARTERS

A report of Canal and Panama railroad quarters occupied on December 31, follows:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Children	Men	Women	Children	Men	Women	Children
Balboa	767	158	150	225	11	28	1,563	477	576
Ancon	837	388	322	...	...	...	66	33	6
Corozal	489	200	193	78	...	...	465	53	55
Pedro Miguel	184	109	113	20	...	...	210	19	30
Paraiso	288	76	84	103	5	18	339	110	150
Culebra	146	116	110	6	7	12	484	232	374
Gamboua	16	8	8	...	...	...	107	29	18
Gatun	246	167	212	200	2	6	271	65	74
Cristobal	873	325	345	42	...	...	1,120	168	370
Toro Point	2	...	...	...	...	...	300	...	...
Total	3,551	1,547	1,556	671	25	64	5,518	1,236	1,632

(1) Includes 12 American negroes, 43 Asiatics, and three Panamanians on the gold roll. (2) Includes Sabana police station, Taboga Island, Naos Island, Culebra Island, and Palo Seco. (3) Includes Miraflores. (4) Includes one Asiatic. (5) Includes 47 Panamanians. (6) Includes Ensenada, Las Cascadas, and Bas Obispo. (7) Includes Colon Beach and Colon Hospital. (8) Includes 16 East Indians, 15 American citizens, and 9 Panamanians. Gold force of contractors (included above), 87 bachelors.

ACT OF CONGRESS.

An Act to authorize the Government Exhibit Board for the Panama-Pacific International Exposition to install any part or parts of the Government exhibit at the said exposition either in the exhibit palaces of the Panama-Pacific International Exposition Company or in the Government building at said exposition.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Government Exhibit Board, created by the sundry civil Act approved June 23, 1913, is hereby authorized to install, display, and maintain any part or parts of the exhibit of the United States Government at the Panama-Pacific International Exposition in the exhibit palaces provided by the Panama-Pacific International Exposition Company or in the Government building provided for in the sundry civil Act approved August 1, 1914, as the said Government Exhibit Board may determine.

Approved, January 11, 1915.

Joint Land Commission Calendar.

The following is a calendar of cases set for hearing for the weeks ending February 20 and 27:

Monday, February 15—Docket 295, Hurtado family; *Wednesday, February 17*, Docket 297, Victorino Fierro; Docket 299, Francisco Canpos; Docket 302, José F. Gutierrez; Docket 319, Manuel Gonzalez; *Thursday, February 18*, Docket 321, Crisó Teodoro; Docket 426, William Reed; Docket 327, Alexander McLean; Docket 336, José Maria Lasso; *Friday, February 19*, Docket 257, Asby H. Bethancourt; docket 259, Juan Gris; *Monday, February 22*, Docket 403, John McGregor; *Thursday, February 25*, Docket 340, Wm. Keyes; Docket 401, Manuel Jacome; Docket 407, Peter Modis (Moore); Docket 429, Antonio Rodriguez; Docket 436, Santana Melendez; Docket 447, Daniel Barela; Docket 433, José Monte; Docket 441, Juan R. Rodriguez.

WILLIAM TAYLOR, Secretary.

Second Month's Prizes Awarded for Care of Houses at La Boca.

The committee on improvements at La Boca has announced the following distribution of prizes for the best kept houses in the La Boca silver settlement for the month of January:

Prize of \$5 for the best kept and neatest one-story building, without plumbing, to house No. 582.

Prize of \$5 for the best kept and neatest one-story house, with plumbing, to house No. 607.

Prize of \$5 for the best kept and neatest two-story house, without plumbing, to house No. 635.

Prize of \$5 for the best kept and neatest two-story house, with plumbing, to house No. 581.

Prize of 16 2/3 per cent rent reduction for the best kept and neatest house, with unscreened porches, to house No. 653.

Houses Nos. 582, 635, 581, and 653 also won the prizes for the month of December. There was an improvement in the general conditions over the previous month, and it was somewhat difficult for the inspectors to arrive at a decision in making the awards, as the conditions in a number of the houses were about equal. In February, it is planned to make more frequent inspections, and from

the report of each, obtain an average on which to base the awards.

Canal Excavation in December.

The following is a detailed statement of Canal excavation during the month of December:

ATLANTIC SECTION.

LOCALITY.	"Work" excavation.	"Plant" excavation.	Total.
Dry excavation—	Cu. Yds.	Cu. Yds.	Cu. Yds.
Terminals	1,112	.....	1,112
Wet excavation—			
Atlantic entrance	118,800	.....	118,800
Terminals	63,400	.....	68,400
Total Atlantic Section	188,312	.....	188,312

CENTRAL SECTION.

LOCALITY.	"Work" excavation.	"Plant" excavation.	Total.
Dry excavation—	Cu. Yds.	Cu. Yds.	Cu. Yds.
Terminals	512,921	.....	512,921
Wet excavation—			
Atlantic entrance	118,800	.....	118,800
Terminals	63,400	.....	68,400
Total Central Section	512,921	.....	512,921

PACIFIC SECTION.

LOCALITY.	"Work" excavation.	"Plant" excavation.	Total.
Dry excavation—	Cu. Yds.	Cu. Yds.	Cu. Yds.
Pacific terminals	9,335	.....	9,335
Wet excavation—			
Pacific entrance	75,205	.....	75,205
Pacific terminals	331,636	.....	331,636
Total wet excavation.	406,841	.....	406,841
Total Pacific Section	416,176	.....	416,176

TOTAL CANAL EXCAVATION.

Dry excavation	10,147
Wet excavation	1,106,962
Total	1,117,109

Stages of the Chigres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chigres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, February 5, 1915. All heights are in feet above mean sealevel:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gatun Lake.	Miraflores Lake.	
Sat., Jan. 31	126.55	91.90	87.02	86.97	54.07
Mon., Feb. 1	126.53	91.87	87.01	87.01	54.00
Tues., Feb. 2	126.53	91.83	87.04	86.99	53.93
Wed., Feb. 3	126.45	91.81	87.01	86.99	53.89
Thurs., Feb. 4	126.45	91.80	87.01	86.98	53.95
Fri., Feb. 5	126.40	91.78	86.99	86.97	54.02
Sat., Feb. 6	126.35	91.77	87.01	86.99	54.05
Heights of low water to nearest foot	125.0	91.0			

Task Rates for Sosa Hill Drilling.

The following task rates have been adopted for the drilling in the Sosa Hill quarry: Four cents per lineal foot for the men operating drills, and three cents per lineal foot for the helpers on drills. The men on the drills and the helpers may be employed on mucking at the rate of 10 cents an hour when there is no drilling or their services are required elsewhere.

Rainfall from January 1 to 31, 1915, Inclusive.

STATIONS.	Maximum one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Bilboa	1.70	6	2.23
Bilboa Heights	1.55	6	2.12
*Miraflores	1.20	5	1.67
Pedro Miguel . . . . .	.71	5	1.03
Rio Grande . . . . .	.25	21	.57
<i>Central Section—</i>			
Culebra . . . . .	.67	5	1.33
*Camacho . . . . .	.20	1	.61
Empire . . . . .	.31	21	.67
Gatun . . . . .	.99	6	1.74
*Juan Mina . . . . .	.12	1	1.06
Alhajuela . . . . .	.64	5	.86
*El Vigia . . . . .	.19	1	.39
Frijoles	1.12	1	3.63
*Trinidad . . . . .	.90	1	2.54
*Monte Lirio			
<i>Atlantic Section—</i>			
Gatun . . . . .	.44	1	1.80
*Brazos Brook	1.25	1	2.96
Colon	1.05	1	3.41

*Standard rain gage—readings at 5 p. m. daily.
Automatic rain gage at unstarred stations—values midnight to midnight.

Rainfall from February 1 to 6, 1915, Inclusive.

STATIONS.	Ins.	Date.	Ins.
<i>Pacific Section—</i>			
Bilboa . . . . .	.15	2	.16
Bilboa Heights . . . . .	.54	2	.54
*Miraflores . . . . .	.01	6	.01
Pedro Miguel . . . . .	.04	6	.04
Rio Grande . . . . .	.30	6	.30
<i>Central Section—</i>			
Culebra . . . . .	.06	6	.06
*Camacho . . . . .	.23	6	.23
Empire . . . . .	.17	6	.17
Gatun . . . . .	.11	6	.11
*Juan Mina			
Alhajuela			
*El Vigia	1.30	6	1.30
Frijoles			
*Trinidad . . . . .	.25	6	.25
*Monte Lirio			
<i>Atlantic Section—</i>			
Gatun . . . . .	.93	6	1.02
*Brazos Brook . . . . .	.26	3	.26
Colon . . . . .	.31	6	.49

*Standard rain gage—readings at 5 p. m. daily.
Automatic rain gage at unstarred stations—values midnight to midnight.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Wilson, Charles	54363	Janina	Cristobal	Supply Dept.	Feb. 3, 1915.
Wilson, Leonard	23141	St. Vincent	Panama	Ordering Div.	Feb. 4, 1915.

Insane Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of commitment
Semper, John E.	37231	Montserrat	Culebra	Supply Dept.	Feb. 3, 1915.

The estates of these deceased and insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates

The heads of divisions are requested to check carefully their lists of American employes on the silver roll, and, if the names of any such employes are omitted on the attached list, to report the same to the Executive Office.

FIRST SERVICE BARS.			Name.			Service began.			Name.			Service began.			Name.			Service began.			Name.			Service began.					
1912-1914.			Name.			Service began.			Name.			Service began.			Name.			Service began.			Name.			Service began.					
Butler, Edward D.	Jan.	3	Humphrey, Louis L.	Mar.	30	Ball, Freeman N.	June	11	Jarboe, Grover C.	Sept.	13	Howard, Eugene T.	Nov.	22	MacArthur, John	Nov.	22	Singley, Sidney F.	Nov.	22	Hogan, Charles W.	Nov.	23	Lyons, Michael F.	Nov.	23	McCain, Fay R.	Nov.	24
Northcutt, Mrs. Katharine	Jan.	3	Smith, Milton A.	Mar.	30	Davenport, William H.	June	11	Coleman, Albert J.	Sept.	15	Violetta, Frank W.	Sept.	15	Ingram, Ira M.	Sept.	16	Oaken, George P.	Sept.	16	Allen, Sidney G.	Sept.	17	Woods, George S.	Sept.	17	Casey, Thomas L.	Sept.	20
Page, T. L.	Jan.	5	Friton, Emily	Mar.	31	Trowbridge, Lafayette	June	11	Barnes, Earlbert E.	Sept.	16	Hart, Harry T.	Sept.	16	Higley, Homer L.	Sept.	16	Ferguson, John L.	Sept.	23	Sealey, John H.	Sept.	23	Twitchell, James N.	Sept.	26	Duffy, John J.	Sept.	29
Geyer, John H.	Jan.	6	Irwin, Joseph C., Jr.	Apr.	1	Hansen, Olof P.	June	12	Hammer, Theron V.	June	13	Moore, Judson K.	June	13	Evans, Charles H.	June	14	Graham, George T.	June	15	Baxter, George A.	June	16	Everson, Hans.	June	16	Conkerton, Charles	June	18
Moore, A. I.	Jan.	6	Kopf, W. A. J.	Apr.	1	Moore, Judson K.	June	13	Moore, Judson K.	June	13	Evans, Charles H.	June	14	Graham, George T.	June	15	Baxter, George A.	June	16	Everson, Hans.	June	16	Conkerton, Charles	June	18	Hoeker, George	June	18
Mueller, Charles	Jan.	6	Peters, Robert M.	Apr.	1	Evans, Charles H.	June	14	Graham, George T.	June	15	Baxter, George A.	June	16	Everson, Hans.	June	16	Conkerton, Charles	June	18	Hoeker, George	June	18	McCann, Will R.	June	18	Kicky, Richard	June	19
Wills, Hugh E.	Jan.	8	Pfeiffer, Henry	Apr.	1	Graham, George T.	June	15	Baxter, George A.	June	16	Everson, Hans.	June	16	Conkerton, Charles	June	18	Hoeker, George	June	18	McCann, Will R.	June	18	Kicky, Richard	June	19	McCarthy, Jerome F.	June	19
Flynn, Andrew	Jan.	10	Skallill, Patrick	Apr.	2	Baxter, George A.	June	16	Everson, Hans.	June	16	Conkerton, Charles	June	18	Hoeker, George	June	18	McCann, Will R.	June	18	Kicky, Richard	June	19	McCarthy, Jerome F.	June	19	Weber, Charles C.	June	19
Purtell, John J.	Jan.	10	Thompson, Clark G.	Apr.	2	Everson, Hans.	June	16	Conkerton, Charles	June	18	Hoeker, George	June	18	McCann, Will R.	June	18	Kicky, Richard	June	19	McCarthy, Jerome F.	June	19	Weber, Charles C.	June	19	Edwall, Theodore M.	June	21
Tuley, Willard P.	Jan.	10	Grobe, G. E.	Apr.	4	Conkerton, Charles	June	18	Hoeker, George	June	18	McCann, Will R.	June	18	Kicky, Richard	June	19	McCarthy, Jerome F.	June	19	Weber, Charles C.	June	19	Edwall, Theodore M.	June	21	Jarvis, Frank N.	June	23
Cook, Oscar	Jan.	12	Hanson, Charles A.	Apr.	5	Hoeker, George	June	18	McCann, Will R.	June	18	Kicky, Richard	June	19	McCarthy, Jerome F.	June	19	Weber, Charles C.	June	19	Edwall, Theodore M.	June	21	Jarvis, Frank N.	June	23	White, Dennis P.	June	23
Boggs, Max R.	Jan.	13	Foster, John	Apr.	6	McCann, Will R.	June	18	Kicky, Richard	June	19	McCarthy, Jerome F.	June	19	Weber, Charles C.	June	19	Edwall, Theodore M.	June	21	Jarvis, Frank N.	June	23	White, Dennis P.	June	23	Jenny, Frank	June	24
Hersh, Walter L.	Jan.	15	Hatten, Frank W.	Apr.	6	Kicky, Richard	June	19	McCarthy, Jerome F.	June	19	Weber, Charles C.	June	19	Edwall, Theodore M.	June	21	Jarvis, Frank N.	June	23	White, Dennis P.	June	23	Jenny, Frank	June	24	Smith, Penny	June	24
Van Fleet, Wilfred H.	Jan.	15	King, Sam	Apr.	6	McCarthy, Jerome F.	June	19	Weber, Charles C.	June	19	Edwall, Theodore M.	June	21	Jarvis, Frank N.	June	23	White, Dennis P.	June	23	Jenny, Frank	June	24	Smith, Penny	June	24	Milgram, Nikola V.	June	25
Cooper, Fred W.	Jan.	16	Underwood, Edw. H.	Apr.	6	Weber, Charles C.	June	19	Edwall, Theodore M.	June	21	Jarvis, Frank N.	June	23	White, Dennis P.	June	23	Jenny, Frank	June	24	Smith, Penny	June	24	Milgram, Nikola V.	June	25	Mar, William	June	25
Harvey, Walter S.	Jan.	16	Harris, John I.	Apr.	7	Edwall, Theodore M.	June	21	Jarvis, Frank N.	June	23	White, Dennis P.	June	23	Jenny, Frank	June	24	Smith, Penny	June	24	Milgram, Nikola V.	June	25	Mar, William	June	25	Conroy, Joseph T.	June	27
Kent, George D.	Jan.	16	Wait, W. W.	Apr.	7	Jarvis, Frank N.	June	23	White, Dennis P.	June	23	Jenny, Frank	June	24	Smith, Penny	June	24	Milgram, Nikola V.	June	25	Mar, William	June	25	Conroy, Joseph T.	June	27	Mills, Roscoe L.	June	27
Kett David	Jan.	16	English, James C.	Apr.	7	White, Dennis P.	June	23	Jenny, Frank	June	24	Smith, Penny	June	24	Milgram, Nikola V.	June	25	Mar, William	June	25	Conroy, Joseph T.	June	27	Mills, Roscoe L.	June	27	Porter, Edward G.	June	27
Wang, Frank H.	Jan.	16	Carter, Robert H.	Apr.	12	Jenny, Frank	June	24	Smith, Penny	June	24	Milgram, Nikola V.	June	25	Mar, William	June	25	Conroy, Joseph T.	June	27	Mills, Roscoe L.	June	27	Porter, Edward G.	June	27	Smith, George B.	June	28
Ward, George B.	Jan.	16	Fay, John	Apr.	12	Smith, Penny	June	24	Milgram, Nikola V.	June	25	Mar, William	June	25	Conroy, Joseph T.	June	27	Mills, Roscoe L.	June	27	Porter, Edward G.	June	27	Smith, George B.	June	28	Sherrard, Thomas W.	June	28
Garnett, Russell	Jan.	18	Hartsough, George H.	Apr.	12	Milgram, Nikola V.	June	25	Mar, William	June	25	Conroy, Joseph T.	June	27	Mills, Roscoe L.	June	27	Porter, Edward G.	June	27	Smith, George B.	June	28	Sherrard, Thomas W.	June	28	Armstrong, Benjamin A.	June	30
Elmore, Charles M.	Jan.	20	Pruner, Fred K.	Apr.	13	Mar, William	June	25	Conroy, Joseph T.	June	27	Mills, Roscoe L.	June	27	Porter, Edward G.	June	27	Smith, George B.	June	28	Sherrard, Thomas W.	June	28	Armstrong, Benjamin A.	June	30	Hanson, John T.	June	30
White, Clyde E.	Jan.	20	Verner, Samuel P.	Apr.	13	Conroy, Joseph T.	June	27	Mills, Roscoe L.	June	27	Porter, Edward G.	June	27	Smith, George B.	June	28	Sherrard, Thomas W.	June	28	Armstrong, Benjamin A.	June	30	Hanson, John T.	June	30	Jansson, Charles	June	30
Greene, Walter T.	Jan.	21	Watson, Burl	Apr.	13	Mills, Roscoe L.	June	27	Porter, Edward G.	June	27	Smith, George B.	June	28	Sherrard, Thomas W.	June	28	Armstrong, Benjamin A.	June	30	Hanson, John T.	June	30	Jansson, Charles	June	30	Keough, John M.	June	30
Le Sasser, Charles	Jan.	21	Nicholls, Mary P.	Apr.	14	Porter, Edward G.	June	27	Smith, George B.	June	28	Sherrard, Thomas W.	June	28	Armstrong, Benjamin A.	June	30	Hanson, John T.	June	30	Jansson, Charles	June	30	Keough, John M.	June	30	Mitchell, John A.	June	30
Day J. M.	Jan.	22	Berglund, Nils G.	Apr.	16	Smith, George B.	June	28	Sherrard, Thomas W.	June	28	Armstrong, Benjamin A.	June	30	Hanson, John T.	June	30	Jansson, Charles	June	30	Keough, John M.	June	30	Mitchell, John A.	June	30	Lux, Samuel L.	July	1
Beattie, Donald S.	Jan.	24	Cleveland, George F.	Apr.	18	Sherrard, Thomas W.	June	28	Armstrong, Benjamin A.	June	30	Hanson, John T.	June	30	Jansson, Charles	June	30	Keough, John M.	June	30	Mitchell, John A.	June	30	Lux, Samuel L.	July	1	Teague, Robert C.	July	5
Bartholomew, Herbert	Jan.	27	Dickson, Alfred B.	Apr.	18	Armstrong, Benjamin A.	June	30	Hanson, John T.	June	30	Jansson, Charles	June	30	Keough, John M.	June	30	Mitchell, John A.	June	30	Lux, Samuel L.	July	1	Teague, Robert C.	July	5	Anderson, Daniel	July	7
Ragsdale, Harry C.	Jan.	28	Lithgow, Richard P.	Apr.	18	Hanson, John T.	June	30	Jansson, Charles	June	30	Keough, John M.	June	30	Mitchell, John A.	June	30	Lux, Samuel L.	July	1	Teague, Robert C.	July	5	Anderson, Daniel	July	7	Briggs, Ray M.	July	7
Seteire, William N.	Jan.	29	Sargent, E. M.	Apr.	18	Jansson, Charles	June	30	Keough, John M.	June	30	Mitchell, John A.	June	30	Lux, Samuel L.	July	1	Teague, Robert C.	July	5	Anderson, Daniel	July	7	Briggs, Ray M.	July	7	Bucadey, Donald	July	7
Marr, Harry	Feb.	1	Scullen, Edward F.	Apr.	18	Keough, John M.	June	30	Mitchell, John A.	June	30	Lux, Samuel L.	July	1	Teague, Robert C.	July	5	Anderson, Daniel	July	7	Briggs, Ray M.	July	7	Bucadey, Donald	July	7	Cone, Percy S.	July	7
O Kane, William	Feb.	2	Thomas, Hugh M.	Apr.	18	Mitchell, John A.	June	30	Lux, Samuel L.	July	1	Teague, Robert C.	July	5	Anderson, Daniel	July	7	Briggs, Ray M.	July	7	Bucadey, Donald	July	7	Cone, Percy S.	July	7	Jasper, Grover R.	July	7
Alligood, John	Feb.	3	Cousins, William, Jr.	Apr.	19	Lux, Samuel L.	July	1	Teague, Robert C.	July	5	Anderson, Daniel	July	7	Briggs, Ray M.	July	7	Bucadey, Donald	July	7	Cone, Percy S.	July	7	Jasper, Grover R.	July	7	Patterson, George	July	7
Currier, Frederick R.	Feb.	3	Briggs, Charles B.	Apr.	20	Teague, Robert C.	July	5	Anderson, Daniel	July	7	Briggs, Ray M.	July	7	Bucadey, Donald	July	7	Cone, Percy S.	July	7	Jasper, Grover R.	July	7	Patterson, George	July	7	Born, William	July	11
Fenton, George D.	Feb.	3	James, William H.	Apr.	21	Anderson, Daniel	July	7	Briggs, Ray M.	July	7	Bucadey, Donald	July	7	Cone, Percy S.	July	7	Jasper, Grover R.	July	7	Patterson, George	July	7	Born, William	July	11	Berdeau, Ray W.	July	13
Regan, Ralph H.	Feb.	3	Maxwell, W. H.	Apr.	21	Briggs, Ray M.	July	7	Bucadey, Donald	July	7	Cone, Percy S.	July	7	Jasper, Grover R.	July	7	Patterson, George	July	7	Born, William	July	11	Berdeau, Ray W.	July	13	Foster, Stephen E.	July	13
St. Clair, Albert	Feb.	4	Woodward, M. Elizabeth	Apr.	21	Bucadey, Donald	July	7	Cone, Percy S.	July	7	Jasper, Grover R.	July	7	Patterson, George	July	7	Born, William	July	11	Berdeau, Ray W.	July	13	Foster, Stephen E.	July	13	Markey, James F.	July	13
Carcaud, Stephen	Feb.	7	Conway, James J.	Apr.	22	Cone, Percy S.	July	7	Jasper, Grover R.	July	7	Patterson, George	July	7	Born, William	July	11	Berdeau, Ray W.	July	13	Foster, Stephen E.	July	13	Markey, James F.	July	13	Riebe, Burton	July	14
Cook, James E.	Feb.	9	Carter, Edward H.	Apr.	24	Jasper, Grover R.	July	7	Patterson, George	July	7	Born, William	July	11	Berdeau, Ray W.	July	13	Foster, Stephen E.	July	13	Markey, James F.	July	13	Riebe, Burton	July	14	Gardner, William C.	July	16
Dunn, Martin J.	Feb.	9	Hunter, R. B.	Apr.	24	Patterson, George	July	7	Born, William	July	11	Berdeau, Ray W.	July	13	Foster, Stephen E.	July	13	Markey, James F.	July	13	Riebe, Burton	July	14	Gardner, William C.	July	16	Kelly, William E.	July	16
Gabriel, John A.	Feb.	9	Kitts, Joseph A.	Apr.	24	Born, William	July	11	Berdeau, Ray W.	July	13	Foster, Stephen E.	July	13	Markey, James F.	July	13	Riebe, Burton	July	14	Gardner, William C.	July	16	Kelly, William E.	July	16	Berger, Elizabeth B.	July	19
Reinhold, Ernest M.	Feb.	9	Brackle, Charles	Apr.	26	Berdeau, Ray W.	July	13	Foster, Stephen E.	July	13	Markey, James F.	July	13	Riebe, Burton	July	14	Gardner, William C.	July	16	Kelly, William E.	July	16	Berger, Elizabeth B.	July	19	Carr, Byro T.	July	19
Crafts, Lorenzo H.	Feb.	10	Koch, Sigurd O.	Apr.	26	Foster, Stephen E.	July	13	Markey, James F.	July	13	Riebe, Burton	July	14	Gardner, William C.	July	16	Kelly, William E.	July	16	Berger, Elizabeth B.	July	19	Carr, Byro T.	July	19	Dobs, J. Gilbert C.	July	19
Natt, Oscar	Feb.	10	Hess, B. F.	Apr.	29	Markey, James F.	July	13	Riebe, Burton	July	14	Gardner, William C.	July	16	Kelly, William E.	July	16	Berger, Elizabeth B.	July	19	Carr, Byro T.	July	19	Dobs, J. Gilbert C.	July	19	Holmell, Victor R.	July	19
Adams, H. C.	Feb.	11	Shearer, Ella J.	Apr.	30	Riebe, Burton	July	14	Gardner, William C.	July	16	Kelly, William E.	July	16	Berger, Elizabeth B.	July	19	Carr, Byro T.	July	19	Dobs, J. Gilbert C.	July	19	Holmell, Victor R.	July	19	Lucas, Howard M.	July	19
Curtis, Joe	Feb.	11	Burford, Earl L.	May	4	Gardner, William C.	July	16	Kelly, William E.	July	16	Berger, Elizabeth B.	July	19	Carr, Byro T.	July	19	Dobs, J. Gilbert C.	July	19	Holmell, Victor R.	July	19	Lucas, Howard M.	July	19	Miligan, James A.	July	20
Mills, Frank	Feb.	11	Shalberry, Herbert T.	May	5	Kelly, William E.	July	16	Berger, Elizabeth B.	July	19	Carr, Byro T.	July	19	Dobs, J. Gilbert C.	July	19	Holmell, Victor R.	July	19	Lucas, Howard M.	July	19	Miligan, James A.	July	20	Morry Augustus B.	July	21
Walsh, William H.	Feb.	11	Lokerson, A. C.	May	5	Berger, Elizabeth B.	July	19	Carr, Byro T.	July	19	Dobs, J. Gilbert C.	July	19	Holmell, Victor R.	July	19	Lucas, Howard M.	July	19	Miligan, James A.	July	20	Morry Augustus B.	July	21	Watkins, Sidney E.	July	21
Weaver, Edward R.	Feb.	11	Ansberry, James F.	May	6	Carr, Byro T.	July	19	Dobs, J. Gilbert C.	July	19	Holmell, Victor R.	July	19	Lucas, Howard M.	July	19	Miligan, James A.	July	20	Morry Augustus B.	July	21	Watkins, Sidney E.	July	21	Grace, John T.	July	22
Rees, Thomas	Feb.	12	Truer, F. L.	May	6	Dobs, J. Gilbert C.	July	19	Holmell, Victor R.	July	19	Lucas, Howard M.	July	19	Miligan, James A.	July	20	Morry Augustus B.	July	21	Watkins, Sidney E.	July	21	Grace, John T.	July	22	Draa, Thomas J.	July	22
Wanson, George H.	Feb.	12	Kellam, Maria L.	May	7	Holmell, Victor R.	July	19	Lucas, Howard M.	July	19	Miligan, James A.	July	20	Morry Augustus B.	July	21	Watkins, Sidney E.	July	21	Grace, John T.	July	22	Draa, Thomas J.	July	22	Singer, Henry H.	July	24
Kozerski, Leon A.	Feb.	14	Morris, Harry	May	7	Lucas, Howard																							

Name.	Service began.	Name.	Service began.	Name.	Service began.	Name.	Service began.	Name.	Service began.
Barney, James E.	Feb. 13	McTucker, E.	May 27	Williams, Charles	Oct. 4	Keeler, T. L.	Mar. 17	Martin, James E.	Aug. 29
Burns, Lee	Feb. 13	Pratt, Milo C.	May 31	Cox, Richard R.	Oct. 5	Murray, J. J.	Mar. 22	Wilde, Abner P.	Aug. 29
Grasley, Louis M.	Feb. 13	Williams, Joseph D.	May 31	Weiser, Josef	Oct. 5	Kimball, Melvin J.	Mar. 23	Bissell, W. J.	Sept. 4
Teese, Joseph W.	Feb. 13	Greene, Jay L.	June 2	Davis, Evan D.	Oct. 7	Butler, J. E.	Mar. 26	Church, S.	Sept. 4
Dougherty, Frank F.	Feb. 14	Husen, Claude J.	June 2	Abernethy, William G.	Oct. 8	Brady, Clyde	Mar. 31	Dombrowsky, Alexander	Sept. 4
Moore, Joseph	Feb. 14	Bailey, Cecil C.	June 5	Gletcher, Cecil G.	Oct. 8	Mattooth, A.	Apr. 1	er.	Sept. 4
Anderson, Francis G.	Feb. 17	Campbell, John J.	June 5	Stroff, August	Oct. 8	Reeder, Dennis F.	Apr. 8	Gilliam, Mace H.	Sept. 4
Fulton, Ernest E.	Feb. 17	Hesli, Thomas E.	June 5	Smyth, C. J.	Oct. 8	Martin, William M.	Apr. 10	Jorgensen, Einar L.	Sept. 4
Calthurst, Percy	Feb. 19	Sedwick, Harry F.	June 5	Widlock, F. O.	Oct. 8	Lewis, Fitz J.	Apr. 11	McCombs, William B.	Sept. 4
Mohrman, Harry	Feb. 19	Weiss, John	June 5	Bliss, Charles A.	Oct. 11	Hart, Henry A.	Apr. 12	Orr, E. F.	Sept. 4
Williams, Charles	Feb. 19	Winegar, O. E.	June 5	Clark, George	Oct. 12	Blace, Arthur O.	Apr. 16	Per Lee, Charles A.	Sept. 4
Brooks, Herbert	Feb. 21	Austria, Louis D.	June 6	Brittner, Cyrus C.	Oct. 13	Feristrom, T. O.	Apr. 17	Survey, Wesley M.	Sept. 4
Bruck, Harry W.	Feb. 21	Grant, H. P.	June 6	Lee, Basso E.	Oct. 14	Watson, George W.	Apr. 18	Veen, James T.	Sept. 4
McConaughy, Harvey	Feb. 21	Hutchings, Robert W.	June 6	McGrath, John T.	Oct. 14	Albrecht, John E.	Apr. 21	Besse, H. Theodore	Sept. 5
Newcomb, Howard S.	Feb. 21	Cecil, Clyde	June 8	O'Keefe, Thomas F.	Oct. 16	Mahoney, Patrick J.	Apr. 21	Illia, John D.	Sept. 6
Woolfolk, Thomas R.	Feb. 23	Dryden, George A.	June 10	McGray, Grace E.	Oct. 19	Reed, Edward L.	Apr. 21	Jones, Annie L.	Sept. 5
O'Connor, William F.	Feb. 23	Hurey, David W.	June 10	Fredrickson, Frederic P.	Oct. 20	Siggins, Michael	Apr. 21	Stevens, Masters B.	Sept. 5
Schwalenberg, Martin A.	Feb. 23	MacGregor, Lloyd M.	June 10	Coyner, Arthur	Oct. 21	Coaner, Frank W.	Apr. 26	Warner, John F.	Sept. 5
Huck, Francis E., Jr.	Mar. 2	Shepherd, Victor	June 12	Amos, James L.	Oct. 23	Krueger, Charles J.	Apr. 26	Luckey, John J.	Sept. 8
Padden, John E.	Mar. 2	Lord, Charles G.	June 14	Smith, Henderson C.	Oct. 23	Van Fleet, Minnie	May 2	Rutherford, William T.	Sept. 8
Watson, Lulu M.	Mar. 2	Mitchell, George W.	June 14	Hilton, Albert C.	Oct. 23	Chandler, Earl H.	May 4	Shaw, C. A.	Sept. 8
Conwell, Varney T.	Mar. 3	Naylor, Michael J.	June 14	Collins, Howard S.	Oct. 30	Ecedahl, Olof	May 5	Strotz, Charles M.	Sept. 8
Whiteman, E. S.	Mar. 3	Peamari, Charles W.	June 14	Carroll, Fausio F.	Nov. 2	Sneibley, Firmer H.	May 7	Trask, H. R.	Sept. 10
Wurdeemann, Herman	Mar. 4	Stanner, John T.	June 14	Jrr, William T.	Nov. 2	Campbell, George	May 10	Walraven, Francis W.	Sept. 11
Foust, Samuel M.	Mar. 5	Sullivan, Bernard	June 14	Chethan, William B.	Nov. 4	Dorsey, William	May 11	Lewis, Charles L.	Sept. 13
Scoffern, R. F.	Mar. 6	Frampton, Charles M.	June 17	Therapist, Theodore	Nov. 5	Mears, F.	May 11	Lingle, George S.	Sept. 13
Adams, Roger H.	Mar. 7	Shearer, Samuel G.	June 17	Carlow, William H.	Nov. 9	Montgomery, Henry	May 11	Pinney, Aurelian H.	Sept. 13
Durning, William J.	Mar. 7	Deavors, John C.	June 18	Huffman, Edward W.	Nov. 10	Roberts, Frank R.	May 11	Humphrey, Walter J.	Sept. 13
Hollowell, Cooper	Mar. 10	Foley, Arthur E.	June 19	Steiner, George W.	Nov. 10	Taylor, Willoughby M.	May 11	Coffey, N. E.	Sept. 16
Parnelee, Edward H.	Mar. 12	McGeachy, Alexander	June 19	Vakins, Frank S.	Nov. 13	Wilkhram, Clarence A.	May 11	Barnes, William I.	Sept. 17
Kimberly, William T.	Mar. 13	Mahony, Joseph	June 19	McKay, John	Nov. 18	Bola, John	May 15	Bridges, Harry L.	Sept. 17
Driver, John B.	Mar. 14	Sasse, Harry O.	June 19	Roberts, George	Nov. 18	Davies, Richard M.	May 15	Foster, William F.	Sept. 17
Grant, L. P.	Mar. 14	Strobel, Louis	June 19	Collins, John O.	Nov. 21	Hartley, Edwin B.	May 15	Willson, James C.	Sept. 20
Hoffman, C. D.	Mar. 14	Shoup, Vernon	June 20	Daniels, Jessie E.	Nov. 23	Brown, Daniel C.	May 21	Delano, Fred E.	Sept. 21
McCarthy, J. S.	Mar. 14	Labat, John	June 21	Emery, Edward L.	Nov. 23	Bryant, J. H.	May 21	Carter, William	Sept. 23
McKeever, Bernard E.	Mar. 14	Sweet, Arthur J.	June 25	Lohmann, Ervin O.	Nov. 23	Gayer, William C.	May 21	Nielsen, C. L.	Sept. 28
Wright, George F.	Mar. 14	Cucuel, Leo M.	June 30	Fraser, Alexander M.	Nov. 29	Lowe, George	May 21	Nolan, Matthew	Sept. 28
Betterley, William J.	Mar. 15	Johnson, Charles F.	June 30	Love, William	Nov. 29	Richmond, Vena E.	May 21	Pickett, Ira W.	Sept. 28
Albert, John L.	Mar. 18	Sanders, Bruce G.	June 30	Sanger, Victor	Dec. 4	Earhart, Troy W.	May 26	Saediker, Randolph E.	Sept. 28
Sylvester, Olin K.	Mar. 18	Smith, Jesse T.	June 30	McQueen, Philip O.	Dec. 6	Kemp, James	May 26	Craig, James G.	Oct. 2
Walsh, John J.	Mar. 18	Randolph, Joseph H.	July 2	Van Broeklin, Arthur C.	Dec. 8	Luther, Arthur T.	May 26	Murphy, Zan	Oct. 2
Conrad, Herman	Mar. 19	Slattery, Richard	July 2	Boggs, Edward M.	Dec. 8	McClinton, Joseph L.	May 26	Owen, Brady R.	Oct. 2
Neal, Horace C.	Mar. 21	Mays, James A.	July 4	Wimer, William H., Jr.	Dec. 10	McCormick, Joseph	May 26	Roche, Paul E.	Oct. 2
Wilson, Frank E.	Mar. 21	Gillen, John A.	July 6	Christ, John S.	Dec. 12	Stewart, Malcolm	May 26	Walker, R. B.	Oct. 2
Morton, George D.	Mar. 27	Marlin, Joseph	July 6	Wilson, William H.	Dec. 12	Bruener, Jasper H.	May 31	Sprouse, Frances P.	Oct. 9
Davidson, Edward H.	Mar. 30	Tuttle, Pearl J.	July 6	Langworthy, John	Dec. 15	Julien, Clark	May 31	Andrews, R. F.	Oct. 14
Hart, R. W.	Mar. 30	Francis, John W.	July 7	Patterson, J. A.	Dec. 16	Kane, John H.	May 31	Hyde, William H.	Oct. 14
Lee, Dan	Mar. 30	West, Charles S.	July 8	Walker, Patrick	Dec. 17	Keefe, Philip B.	May 31	Peterson, Julius M.	Oct. 14
Vickery, William J.	Mar. 30	Williams, John H.	July 8	LaSera, Tony	Dec. 18	Gallagher, William P.	June 5	Readle, W. H.	Oct. 16
Crawford, William H.	Apr. 1	Gray, John	July 9	McAdam, Harry C.	Dec. 18	Lawlor, William A.	June 5	Beetham, Charles H.	Oct. 17
Willett, Henry E.	Apr. 1	Wagner, Jake	July 9	Cooper, Hal B.	Dec. 20	Slayback, E.	June 8	Byram, Fred B.	Oct. 18
Ernst, W. A.	Apr. 2	Corahwaite, Hmner G.	July 13	Johnson, M. W.	Dec. 20	Chute, Frank E.	June 9	Erdman, Daniel J.	Oct. 18
McCallum, George D.	Apr. 2	Hardis, Huga J.	July 13	Davis, Clarence E.	Dec. 22	Cosgrove, James	June 9	Quinby, Benjamin C.	Oct. 19
Spencer, George E.	Apr. 2	Huff, Mercer B.	July 13	Graeme, Andrew	Dec. 22	Morley, John F.	June 9	Casper, James F.	Oct. 19
Angel, Joseph	Apr. 3	Stollmack, Abraham I.	July 13	Keene, Raymond F.	Dec. 22	Nevius, Chester E.	June 9	Perkitt, Charles L.	Oct. 21
Barth, Frank G.	Apr. 3	Hodges, H. F.	July 15	Bartholmew, Annie M.	Dec. 26	Wolverton, David R.	June 9	Perkins, Samuel M.	Oct. 21
Doby, Walter F.	Apr. 3	Knight, William O.	July 15	Fomon, Harry L.	Dec. 29	Young, Thomas H.	June 9	Ploessel, Emanuel M.	Oct. 21
Kelly, Maria J.	Apr. 3	Valentine, Amelia J.	July 15	Flood, Arthur	Dec. 29	Wilson, Matthew	June 14	Viall, H. H.	Oct. 21
Weir, James E.	Apr. 3	Walker, John A.	July 15	Loken, Harold O.	Dec. 29	Jury, Frank J.	June 15	Durand, Louis A.	Oct. 22
Graff, Jacob	Apr. 10	Thatcher, Roland C.	July 16			Loulan, James A.	June 15	Azima, Michael C.	Oct. 24
Powell, Travis L.	Apr. 11	Mullane, Denis E.	July 18			Richmond, John	June 15	Chambers, William R.	Oct. 24
Gunnert, M. T.	Apr. 11	King, C. J.	July 20			Robinson, R. R.	June 15	Dickinson, William E.	Oct. 24
Heald, S. W.	Apr. 13	Barth, George H.	July 23			Granberry, O. E.	June 17	Griffin, John J.	Oct. 24
Winquist, Charles	Apr. 13	Kotalic, John J.	July 23			O'neallia, Ruth	June 19	Myers, Forrest J.	Oct. 24
Kemp, John W.	Apr. 15	Hills, Fred C.	July 24			Darling, George	June 20	Swain, Bernie E.	Oct. 24
Days, Joseph M.	Apr. 16	Mann, C. H.	July 24			French, Marvin L.	June 20	Taylor, Richard G.	Oct. 24
Fullinwider, Rolla A.	Apr. 16	Bliss, George H.	July 25			Luce, R. H.	June 20	Halligan, Thomas	Oct. 26
Groat, Elid E.	Apr. 18	Ramey, William	July 27			Dickinson, Albert M.	June 24	Marsh, William H.	Oct. 26
Hardy, Ernest	Apr. 18	Allen, George B.	July 29			Fennell, B. M.	June 24	Rankin, Alvin H.	Oct. 26
Hugulings, Sydney P.	Apr. 18	Louis, William U.	July 29			McNamara, Gordon G.	June 24	Seeb, John F.	Oct. 26
Ledden, Mary E.	Apr. 20	Schonfeld, Benjamin A.	July 29			Smith, Julian C.	June 24	Graham, John	Oct. 30
Sahrstein, Benjamin	Apr. 20	Allen, Everett W.	July 31			Kennedy, Arthur W.	June 25	Graham, William F.	Oct. 30
Goulstone, Arthur J.	Apr. 21	Dundas, Harry	Aug. 1			Macintosh, Joseph	June 30	Erdman, Roger S.	Nov. 2
Shivers, Mary G.	Apr. 21	McGowan, William H.	Aug. 4			Westburg, John E.	June 30	Pendry, Charles A.	Nov. 2
Frahm, August	Apr. 22	Pettit, John R.	Aug. 4			Phillips, Jack	July 2	Piper, William T.	Nov. 2
Landers, James W.	Apr. 23	Conner, John	Aug. 10			Deneen, Jack	July 4	Watkins, William	Nov. 2
Blair, C. A.	Apr. 24	Peters, Claude	Aug. 10			Wheeler, John W.	July 9	Strobridge, F. L.	Nov. 4
Gibson, James	Apr. 24	Mello, Robert	Aug. 18			Peterson, Walter	July 9	Speicher, John	Nov. 5
Marsh, Joseph S.	Apr. 24	Brandt, Delia W.	Aug. 18			Brasney, Madison F.	July 10	Viberg, George L.	Nov. 11
Hall, William F.	Apr. 25	McMillan, William P.	Aug. 18			Gilbert, James J.	July 10	Dorsom, Frank	Nov. 12
Gribbon, Henry C.	Apr. 26	Thompson, Robert C.	Aug. 18			Stochiner, Edward L.	July 11	Goodenow, A. B.	Nov. 12
Gave, Genevieve	Apr. 27	Dagley, Farrell H.	Aug. 20			Griley, G. L.	July 13	McNeal, George A.	Nov. 12
Grier, Charles L.	Apr. 27	Thomas, Charles E.	Aug. 22			Brown, George	July 14	Scribner, D. W.	Nov. 12
Marks, George S.	Apr. 27	Duncan, Arthur	Aug. 23			Conley, R. S.	July 14	Petioletti, Lauritz	Nov. 16
Bardelson, Samuel	Apr. 29	McColley, Curtis C.	Aug. 28			Conley, W. H.	July 14	Taylor, William D.	Nov. 16
Burrow, Bardon C.	Apr. 29	Jerry, Edward N.	Aug. 29			Hughes, William E.	July 14	Fey, William L.	Nov. 19
Miltimore, William J.	Apr. 29	Teall, Gilbert E.	Aug. 29			James, William McC.	July 14	Fox, Maurice W.	Nov. 20
St. John, Smith W.	Apr. 29	Graff, George V.	Aug. 30			Beard, Frederick S.	July 19	Nims, Willard W.	Nov. 20
Barrows, Charles B.	May 1	Thompson, James D.	Sept. 1			Brown, Warren J.	July 19	Rutledge, Richard B.	Nov. 20
Boggs, Julian C.	May 1	Falk, Leopold	Sept. 2			Thomas, Trevor	July 19	Smith, Lewis A.	Nov. 20
DuJaney, Tobe	May 2	Vingling, George A.	Sept. 2			Keefe, John H.	July 20	Stoddard, Richard J.	Nov. 20
Morgan, Robert P.	May 5	Boyd, Allen S.	Sept. 3			Smith, LeRoy	July 25	Turner, Edward K.	Nov. 20
Spencer, James G.	May 5	Dickson, Thomas H.	Sept. 3			Webster, Lewis	July 25	Hoagland, Richard C.	Nov. 23
Teimer, Richard	May 5	Hull, Robert H.	Sept. 5			White, James	July 25	Burdge, Leroy E.	Nov. 26
Kelly, John F.	May 7	Reynolds, T. M.	Sept. 5			Hunter, Abel A.	July 30	Burmester, Edward A.	Nov. 26
Sala, Francis L.	May 8	Sins, Charles A.	Sept. 8			Persons, Charles L.	July 30	Oeyo, Daniel B.	Nov. 26
Braw, Fred J.	May 10	French, Robert V., Jr.	Sept. 9			Slater, Arthur A.	Aug. 2	Ewing, Ora M.	Nov. 26
Butler, John S.	May 10	Cuoco, Nicholas J.	Sept. 10			Brown, Mrs. Peter B.	Aug. 5	Johannes, Guy	Nov. 26
Morton, Frederick E.	May 10	Saphir, Volanti	Sept. 14			Bath, Charles H.	Aug. 9	Moffat, David H.	Nov. 26
Withrow, Robert E.	May 10	Roberts, R. W.	Sept. 15			Miller, John B., Jr.	Aug. 9	Kirby, Jeremiah F.	Nov. 27
Johnson August	May 14	Klein, G. M.	Sept. 17			Million, George	Aug. 9	White, Hugh J.	Nov. 29
McLeod, John A.	May 15	Bushman, Harry	Sept. 18			Sminerville, Robert	Aug. 9	Calvit, Stephen	Nov. 30
Reimann, Richard	May 15	Coveleski, Joseph P.	Sept. 18			Thompson, Charles W.	Aug. 11	Fields, John B.	Nov. 30
Bates, Lewis B.	May 16	Cleat, Thomas L.	Sept. 21			Hollowell, F.	Aug. 13	McPeake, John C.	Nov. 30
Russell, Stacey C.	May 16	*Ott, C. A.	Sept. 22			Ramsey, George W. P.	Aug. 13	Meacham, Fred	Nov. 30
Pfisterer, August	May 18	Doyle, Andrew	Sept. 23			Driscoll, Michael J.	Aug. 14	Duey, William J.	Dec. 3
MacFarlane, James	May 19	Briganc, George D.	Sept. 24			Shigley, L. M.	Aug. 14	Hunter, George	Dec. 5
Casey, Will B.	May 20	Hanrahan, T. J.	Sept. 24			Brown, Walter G.	Aug. 17	Marstrand, Otto T.	Dec. 5
Hunderlach, Edward A.	May 20	Albert, James T.	Sept. 27			Mack, Frank	Aug. 18	Ward, William H., Jr.	Dec. 5
Ewing, Johnson C.	May 21	Decker, James H.	Sept. 27			Parmer, Frank S.	Aug. 18	Witmer, William H.	Dec. 9
Killen, Patrick J.	May 21	Kratz, A. B.	Sept. 27			Rounsevell, Guy K.	Aug. 18	Butler, William H.	Dec. 10
Callahan, William J.	May 25	Jordan, Francis E.	Sept. 28			Falkner, G. E.	Aug. 24	Carson, George B.	Dec. 10
Callahan, William V.	May 25	Patheior, John A.	Sept. 29			Montgomery, James A.	Aug. 24	Lee, C. W.	Dec. 10
LeMire, George B.	May 25	Hausser, Ernest	Oct. 4			Tone, Beverly B.	Aug. 24	Brown, Robert H.	Dec. 11
Moore, Sidney	May 25	Korsan, Albert	Oct. 4			Bliefeld, Wm.	Aug. 27	Arthur, Robert T.	Dec. 11
McElroy, A. D.	May 26	Reiley, Herbert J.	Oct. 4			Howe, Herbert H.	Aug. 29	Kerruish, William L.	Dec. 13

*Medal—Ott, Claude

THIRD SERVICE BARS.
1912-14.

Russell, William G.	Jan. 1
Andrews, Isaac H.	Jan. 6
Small, William H.	Jan. 7
Heiarich, Amandus	Jan. 13
Tannehill, John W.	Jan. 13
Arthur, A.	Jan. 15
Jones, Christopher G.	Jan. 15
Woodside, James	Jan. 16
Holleman, Marshall S.	Jan. 19
Albin, Walter	Jan. 20
Johnson, Nelson R.	Jan. 20
*Miles, L. E.	Jan. 22
McGigan, Joseph J.	Jan. 23
Hammond, Robert S.	Jan. 24
Luedtke, Charles L.	Jan. 25
Gallier, Edward L.	Jan. 26
Stevens, George H.	Feb. 1
Thornton, E. B.	Feb. 1
Wiggins, Charles	Feb. 4
McCallough, Archie.	Feb. 5
Vandeburgh, C. L.	Feb. 5
Whitehead, Wilbur W.	Feb. 5
Fisher, Allen D.	Feb. 9
Poole, Bernell C.	Feb. 9
Roesner, William E.	Feb. 9
Vahlquist, Oscar.	Feb. 9
Carprow, James M.	Feb. 12
Clisbee, F. A.	Feb. 13
Daly, Charles C.	Feb. 15
Thompson, Thomas C.	Feb. 15
*Henderson, P. H.	Feb. 17
Kuller, Benjamin F.	Feb. 21
O'Leary, Joseph.	Feb. 21
Waters, Albert V.	Feb. 21
Allyn, John C.	Feb. 22
Bentley, Enoch A.	Feb. 22
Farrell, Fred F.	Feb. 22
Ferguson, Robert M.	Feb. 22
Johnson, William F.	Feb. 22
Sabner, Charles	Feb. 22
Barton, Robert C.	Feb. 26
Cook, Charles B.	Feb. 26
Hill, William G.	Feb. 26
Taber, John A.	Mar. 2
Harrison, T. William.	Mar. 6
La Rock, Herbert.	Mar. 6
Raymond, F.	Mar. 8
Grier, Samuel, Jr.	Mar. 10
McKenna, Roy M.	Mar. 12
Dohrmann, Henry W.	Mar. 17
Fechtig, Alexander C.	Mar. 17

Name.	Service began.	Name.	Service began.	Name.	Service began.	Name.	Service began.	Name.	Service began.
Poultney, Charles.....	Dec. 14	Newbold, W. R., Jr.....	Dec. 29	Jussen, A. S.....	May 4	McDonald, Donald E.....	July 13	Glaw, Robert W.....	Oct. 18
Hartwig, A. H.....	Dec. 15	*Medal—Miles, Lloyd E.....		Mendes, A. S.....	May 4	Lundisheff, Alexander A.....	July 15	Moyre, Frank E.....	Oct. 21
Raymond, Vincent G.....	Dec. 16	†Medal—Henderson, Percy.....		Northrop, C. W.....	May 4	Turaer, Anna R.....	July 19	Torbert, William A.....	Oct. 25
Healey, Edward B.....	Dec. 19	†Medal—Raymond, Vincent.....		Schuber, J. B.....	May 4	Batters, Charles M.....	July 26	Doahue, Daniel F.....	Nov. 1
Poyle, Ransome.....	Dec. 19	FOURTH SERVICE BARS.		Wardlaw, R. H.....	May 4	Reilly, John J.....	July 26	Parker, Charles L.....	Nov. 1
Tate, George M.....	Dec. 19	1912-14.		Warren, J. C.....	May 4	Boyd, Oscar S.....	Aug. 9	Riwe, Harley.....	Nov. 1
Ford, Walter G.....	Dec. 21	Anderson, Henry.....	May 4	Nichols, A. B.....	May 31	DuBois, Louis E.....	Aug. 16	Priul, Mary.....	Nov. 8
Gaeb, Harry J.....	Dec. 21	Bergin, R. W.....	May 4	Wells, George M.....	June 8	Kiernan, John C.....	Aug. 29	Lauglin, R. E.....	Nov. 28
Burch, James L.....	Dec. 22	Chester, W. C.....	May 4	Wright, Daniel E.....	June 8	Hammer, Charles D.....	Sept. 10	Dennis, Durward W.....	Dec. 1
Alexander, Burchard B.....	Dec. 24	Connolly, M. B.....	May 4	Nunn, N.....	July 1	Parker, Charles.....	Sept. 12	Bleakley, C. L.....	Dec. 6
Seeger, Joseph.....	Dec. 27	Davis, John.....	May 4	Richardson, Gibbon O.....	July 9	Meech, Marietta L.....	Sept. 14	Kirk, Joseph S.....	Dec. 20
Chidester, Walter S.....	Dec. 28	Gilbert, William.....	May 4	Herrick, Alfred B.....	July 13	Herr, Max.....	Sept. 27	Blette, William.....	Dec. 27

OFFICIAL CIRCULARS.

Surcharge at Balboa Shops.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., February 4, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective February 1, 1915, the surcharge to be added by Balboa shops to direct labor charges is increased from 55 to 60 per cent.

CHESTER HARDING,
Acting Governor.

Rates for Charging Storage Batteries.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 22, 1915.

CIRCULAR No. 676-2:

1. The following rates are established for charging small storage batteries for gasoline launches, motorcycles, automobiles, etc., for Departments and Divisions of The Panama Canal, employees, and individuals and companies:

(a) For departments and divisions of The Panama Canal and employees, 50 cents per charge.

(b) For individuals and companies, \$1 per charge.

2. The Electrical Division will prepare the necessary facilities for charging batteries at Cristobal, Gatun, and Balboa substations. Batteries left at any of these stations for charging should be tagged with the name of the owner, license number of launch, motorcycle, or automobile in the case of employees, and individuals and companies, and with the charging current required. Employees desiring this service should submit application on form P.C. 353-2, in order that the necessary approval may be obtained, and required deposit of \$2 made with the Collector. Individuals and companies should submit application on form P.C. 437, and a deposit to be fixed by the Auditor of The Panama Canal will be made with the Collector after notification that the application has been approved. The application should contain information as to the approximate number of charges that will be required per month, in order that the amount of the deposit may be fixed. Monthly bills will be rendered in all cases. When service is no longer desired, written notification should be sent to the Electrical Engineer and deposit or remaining balance thereof will be refunded. Departments and divisions should issue a blanket work request on the Electrical Division to cover this service for each fiscal year, unless such blanket work request covering small electrical jobs has already been issued.

CHESTER HARDING,
Acting Governor.

Reimbursement for Lodging.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 23, 1915.

CIRCULAR No. 658-1:

1. Reimbursement to employees of The Panama Canal and the Panama Railroad Company for lodging at the Tivoli and Washington hotels, made necessary by official business, will be limited to the employees' rate for the lowest priced rooms available.

2. Claim for reimbursement at a higher rate will be allowed only when accompanied by a certificate of the manager that on the date on which room was furnished no lower priced room was available.

CHESTER HARDING,
Acting Governor.

Telephone Installation, Removal, Changes, and Rental.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., January 5, 1915.

CIRCULAR No. 650-1:

Circular No. 650 is hereby amended, as follows:
1. The subscriber for telephones of Class A and Class B shall pay for installation and all changes of telephone, and in the event the subscriber moves or wishes to discontinue such service for any reason he shall notify the Superintendent of Telephones and Signals in writing.

2. Charge for rental shall begin with date of installation, and shall continue until written notice to remove telephone is received by the Superintendent of Telephones and Signals.

3. No deduction shall be made for vacation periods.

4. Requests for installation or change of telephone will be made to the Superintendent of Telephones and Signals, who will advise estimated cost. Subscriber will then signify his approval for work to proceed.

CHESTER HARDING,
Acting Governor.

Disbursement of Funds.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., February 4, 1915.

CIRCULAR No. 695:

1. Effective February 1, 1915, Panama railroad pay receipts will only be cashed by the paymaster at Balboa Heights and his representative at Cristobal (Colombia), and by station agents from Corozal to Mount Hope inclusive.

2. Effective March 1, 1915, Panama railroad pay receipts will only be cashed by the paymaster at Balboa Heights and his representative at Cristobal (Colombia).

3. The commissary cashier at Cristobal is authorized to redeem hotel and commissary books only in connection with refunds of deposits.

4. All Panama railroad station agents are authorized to redeem mileage books and tickets when accompanied by proper authority from the railroad agent.

5. Agents may pay accounts payable when especially requested to do so by the paymaster.

CHESTER HARDING,
Acting Governor.

Stock of White Paint, Flat, At Balboa Storehouse.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., February 8, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

There is on hand at the Balboa storehouse about 1,400 gallons of white paint, flat. This material was left over from the construction of the permanent quarters and can be used on interior work by adding white zinc and oil to give it body.

It is requested that whenever practicable, departments and divisions requiring white paint call for this material on their requisitions until this stock is reduced.

W. R. GROVE,
Chief Quartermaster.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., February 8, 1915.

The following insufficiently addressed letters originating in the United States and its possessions have been received at the office of the Director of Posts, and may be procured upon requests of the addressees:

Barker, Captain	Littlesold, Carl Wm.
Borden, Elmer F. (2)	Messiah, Tony
Brisco, P.	Naylor, Michael J.
Chills, Wm. W.	Petersen, Albert
Connell, C. W.	Ribble, Herbert
Emerson, Mac	Ronquist, Herman
Fraser, Janet	Russell, Mrs. J. D.
George, Robert D.	Singer, Julius
Harris, Miss H. A.	Spydlis, Mrs. G. Z.
Johnson, Joe	Wilson, Miss S. E.
Jones, E. M.	Wilson, W. C.
Kincaid, E. H.	Young, B. (Nurse)
	Kincaid, Miss Nell

LETTERS UNCALLED FOR FEBRUARY 1.

Baptist, James John	McKay, Jorge L.
Barton, A. M.	Miggard, Henry
Brownell, Vernal C.	Moran, Casimiro
Bustillas, Chas.	Mazzy, Mrs. G. F.
Cullett, Paul	Nygent, Bill
Dagure, Miss Xenia E.	Pierce, Mrs. S. H. (2)
Handley, Roy	Redd, W. T.
Hart, Cecil	Rees, Thos. (2)
Heary, Charlie	Smith, Marian
Jordan, J. F.	Snyder, Miss Virginia
Kiley, Richard	Sowell, Elmore
McDermott, Hugh	Vcaza, Pedro

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective February 11, 1915:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....		9
Shoulder, trimmed, per pound.....		12
Leg (8 to 10 pounds), per pound.....		19
Short cut, chops, per pound.....		23
Shoulder, chops, per pound.....		14
Lamb—Stewing, per pound.....		12
Shoulder, trimmed, per pound.....		15
Leg (5 to 8 pounds), per pound.....		24
Chops, per pound.....		29
Chops, shoulder, per pound.....		18
Veal—Stewing, per pound.....		12
Shoulder, for roasting (not under 4 pounds), per pound.....		15
Chops, shoulder, per pound.....		20
Chops, per pound.....		30
Loins for roasting, per pound.....		30
Cutlets, per pound.....		36
Beef—Suet, per pound, special.....		03
Soup, per pound, special.....		7
Steak, bones, per pound, special.....		21
Steak, per pound, special.....		12
Plate, per pound, special.....		11
Corned, No. 1, per pound.....		18
Corned, No. 2, per pound.....		15
Chuck roast, special, (1 lbs. and over), per pound.....		11
Chuck roast, native (3 lbs. and over), per pound.....		12
Rib roast, second cut (not under 3½ pounds), special, per pound.....		16
Rib roast, second cut (not under 3½ pounds), choice, per pound.....		24
Rib roast, second cut, native (3½ pounds and over), per pound.....		15
Rib roast, first cut (not under 3 pounds), special, per pound.....		19
Rib roast, first cut (not under 3 pounds), choice, per pound.....		27
Rib roast, first cut, native (3 pounds and over), per pound.....		18
Pot roast, special, per pound.....		20
choice, per pound.....		28
native.....		19
Rump roast, special, per pound.....		20
choice, per pound.....		28
native.....		19
Porterhouse roast, special, per pound.....		22
choice, per pound.....		31
native, per pound.....		21
Steak, chuck, special, per pound.....		13
native, per pound.....		12
Round, bottom, special, per pound.....		13
choice, per pound.....		19
native, per pound.....		12
Round, top, special, per pound.....		15
choice, per pound.....		22
native, per pound.....		14
Sirloin, special, per pound.....		20
Sirloin, choice, per pound.....		28
Sirloin, native, per pound.....		19
Sirloin, choice cut, special, per pound.....		23
Sirloin, choice cut, choice, per pound.....		32
Sirloin, choice cut, native, per lb.....		22
Rump, special, per pound.....		20
choice, per pound.....		28
native, per pound.....		19
Porterhouse (not less than 1½ pounds), special, per pound.....		23
Porterhouse (not less than 1½ pounds), choice, per pound.....		34
Porterhouse, (1½ pounds and over), native, per pound.....		22
Porterhouse, short, Delmonico special, per pound.....		20
Porterhouse, short, Delmonico choice, per pound.....		28
Porterhouse, short, native, per lb.....		19
Tenderloin, Western, special, per pound.....		35
Tenderloin, Western, choice, per pound.....		46

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next four weeks are given in the following table:

FEBRUARY.

DATE.	Time and height of high and low water.		
Wed., Feb. 10	6:02	12:25	18:31
	2 5	12 2	3 4
Thurs., Feb. 11....	0:51	7:14	13:43
	13 1	2 1	12 9
Fri., Feb. 12....	2:04	8:16	14:46
	13 6	1 4	13 8
Sat., Feb. 13....	3:03	9:10	15:37
	14 3	0 6	14 7
Sun., Feb. 14....	3:52	9:58	16:21
	14 9	0 1	15 3
Mon., Feb. 15....	4:35	10:40	17:01
	15 3	-0 2	15 7
Tues., Feb. 16....	5:16	11:20	17:38
	15 3	-0 1	15 7
Wed., Feb. 17....	5:53	11:59	18:12
	15 1	0 3	15 3
Thurs., Feb. 18....	0:21	6:28	12:36
	0 6	14 5	0 8
Fri., Feb. 19....	1:00	7:03	13:14
	1 2	13 8	1 8
Sat., Feb. 20	1:37	7:38	13:53
	2 0	12 9	2 8
Sun., Feb. 21....	2:20	8:16	14:35
	2 8	12 0	3 8
Mon., Feb. 22....	3:07	9:01	15:24
	3 7	11 1	4 6
Tues., Feb. 23....	4:03	10:04	16:25
	4 3	10 5	5 2
Wed., Feb. 24....	5:10	11:27	17:35
	4 6	10 3	5 4
Thurs., Feb. 25....	6:19	12:49	18:44
	4 3	10 7	4 9
Fri., Feb. 26....	7:01	7:19	13:49
	11 4	3 6	11 6
Sat., Feb. 27	7:58	8:10	14:33
	12 3	2 6	12 8
Sun., Feb. 28....	2:43	8:54	15:11
	13 4	1 5	14 0

MARCH.

DATE.	Time and height of high and low water.		
Mon., March 1....	3:24	9:35	15:18
	14 4	0 5	15 1
Tues., March 2....	4:03	10:14	16:24
	15 3	-0 3	16 1
Wed., March 3....	4:41	10:52	17:01
	15 9	-0 8	16 7
Thurs., March 4....	5:20	11:34	17:38
	16 2	-1 0	17 0
Fri., March 5....	6:00	12:15	18:18
	16 2	-0 7	16 9
Sat., March 6....	0:41	6:43	12:59
	-0 9	15 7	-0 1
Sun., March 7....	1:27	7:27	13:45
	-0 2	14 9	0 9
Mon., March 8....	2:19	8:19	14:40
	0 8	13 8	2 0
Tues., March 9....	3:18	9:23	15:44
	1 8	12 7	2 1
Wed., March 10....	4:27	10:44	17:00
	2 7	12 0	3 8

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used in Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Mail Dispatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office.

Every Thursday to New Orleans, for all States. Due at New Orleans the following Tuesday.

Every Saturday to New York, for all states. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies, may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment in ward is \$1 per day; for foreign seamen, \$1.50 per day.

Application for supplies, or for services, should be made to the captain of the port, Cristobal or Balboa.

Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired; or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case the vessel has a known representative on the Isthmus, in care of such representative.

The cable address of The Panama Canal on the Isthmus is "Isthmian, Balboa Heights;" in the United States, "Isthmian, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus and "The Panama Canal, Washington D. C.," for delivery in the United States.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service between Colon and Southampton, making the following way ports: Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores, and Cherbourg. Its vessels all arrive at Colon on Sundays and sail on Tuesdays.

The Compagnie Generale Transatlantique operates a line, with 28-day sailing, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compania Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday direct from Cristobal, and every Thursday from New York; between Colon and New York by the United Fruit Company; via

(Continued on page 238.)

Price.

Tenderloin, Western, native, per lb.	33
Pork—Hams, fresh, per pound.....	23
Shoulders, fresh, per pound.....	19
Loin, chop, or roast, per pound.....	18
Pigs' feet, fresh, each.....	8
Pigs' head, fresh, whole.....	83
1 head.....	42
Sausage, home made, per pound.....	23

MISCELLANEOUS.

No changes in prices of poultry and game, dairy products, and miscellaneous.

VEGETABLES.

Beets, per pound.....	2
Brussels sprouts, per quart.....	†22
Celery, per head.....	7
Cabbage, per pound.....	2
Carrots, per pound.....	2
Cucumbers, hothouse, per pound.....	11
Lettuce, per pound.....	5
Onions, per pound.....	24
Parsnips, per pound.....	†3
Peppers, per pound.....	18
Potatoes, white, per pound.....	2
sweet, tropical, per pound.....	2
Turnips, per pound.....	2
Tomatoes, per pound.....	11
Squash, per pound.....	24
Yams, tropical, per pound.....	3

FRUITS.

Apples, per pound.....	3
Apples, fancy, per pound.....	6
Cranberries, fresh, per pound.....	6
Grapes, per pound.....	14
Grape fruit—American, each.....	5
Tropical, each.....	34
Lemons, per dozen.....	9
Limes, per 100.....	*61
Oranges—American, each.....	24
Tropical, per dozen.....	9
Cocoanuts, each.....	5
Bananas, per bunch.....	38
Bananas, each.....	4
Apples, evaporated, per pound.....	16
Apricots, evaporated, per pound.....	16
Pears, evaporated, per pound.....	23
Tangerines, each.....	14
Pineapples, Cuban, each.....	9

* Indicates advance from preceding list.

** Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than 1 ham or 1 shoulder of fresh pork will be sold.

Additions to Stock.

Tuna fish, tin.....	.14
Mi Gusto cigars.....	
Cubine's ea.....	.08
Carmichael ea.....	.06
Crest ea.....	.05
Conchar finos, ea.....	.04
Livos ea.....	.06
After 3 mer, ea.....	.03
Cloth, rehta, yd.....	.17
Cloth, merized, yd.....	.20
Voil, sewd, white, yd.....	.19
Suiting, flannel, yd.....	2.25
Suiting flannel, yd.....	2.45
Serge gray S 4508, yd.....	1.85
Serge, striped, E 17093, yd.....	2.00
Suits, bathing, men's, suit.....	2.23

Price Changes.

The following changes in prices of articles in stock, at the commissary stores became effective February 8, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Tea, E. B., tin.....	\$.71	.87
Ha Jlock, hindon, tin.....	.19	.22
Raisins, table, lb.....	.13	.19
Corned beef hash, tin.....	.28	.38
Hum puddling, American, tin.....	.37	.33
Angela water bot.....	.22	.28
Puffs, powder, ea.....	.25	.22
Suiting, costume, yd.....	2.10	1.85
Hats, men's water-proof, ea.....	.43	.33
Gauntlets, engineers', pr.....	.77	.85
Shoes, vii blo, pr.....	4.00	4.25
Shoes, black kid, pr.....	4.00	4.25
Bags, kit, hide, ea.....	15.75	15.25
Razors, Kropp, ea.....	1.00	1.05
Lifters, stove ea.....	.05	.04
M B S, door, ea.....	2.30	2.50
Candiates, Jacobs, tin.....	.37	.20
Marrons, glacé, cresca, tin.....	.31	.15
Toffee, McIntosh, tin.....	.14	.08

In THE CANAL RECORD of last week the price of soda water, Schwepes, small bottle, was published as 5 cents. It should have been 6 cents, which is the present price.

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon February 7.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Feb. 1.	Huasco	Chilean	South American S.S. Co.	Cristobal	Talcahuano	General cargo	1,000	4,763	3,121
Feb. 1.	Crown of Seville	British	Direct Line	Liverpool	San Francisco	General cargo	5,921	7,684	5,465
Feb. 1.	Texas	American	American-Hawaiian S.S. Co.	New York	San Pedro	General cargo	11,125	1,686	6,156
Feb. 1.	Pangan	Danish	East Asiatic S.S. Co.	Glasgow	San Francisco	Olive oil, wine	1,369	3,794	2,726
Feb. 1.	Olson & Mahoney	American	Olson & Mahoney	Norfolk	San Francisco	Coal	1,828	1,564	782
Feb. 2.	Kroonland	American	International Mercant. Marine	New York	Callao	No cargo (a)	1,269	13,075	8,233
Feb. 2.	Great Northern	American	Great Nor. Pac. S.S. Co.	Philadelphia	San Liego	General cargo	4,519	10,868	6,485
Feb. 2.	Siam	British	East Asiatic S.S. Co.	Cristobal	Callao	Machinery (b)	74	1,063	5,815
Feb. 3.	Carolin	American	Salvador R.R. Co.	New York	Central America	Sugar	4,300	3,125	2,322
Feb. 3.	Dirigo (c)	American	Luckenbach S.S. Co.	Philadelphia	San Liego	General cargo	4,550	3,062	2,816
Feb. 5.	Pennsylvanian	American	Sewall Line	New York	Los Angeles	Refined petroleum	6,266	6,819	4,663
Feb. 5.	Indra	British	American-Hawaiian S.S. Co.	New York	Vladivostok	General cargo	7,150	6,220	4,521
Feb. 7.	Panama	American	Indra Line	New York	Balboa	General midse.	2,652	5,66	4,222
Feb. 7.	Ituna	American	Panama Railroad Co.	Pavana	Los Angeles	Steam yacht	.....	177	85
Feb. 7.	Bolton Castle	British	F. Vogel	New York	Jai an, China	Mach., steel (b)	8,000	6,437	4,863
			Chambers & Co.						

(a) 270 passengers. (b) 709 tons cement. (c) Sailing vessel. (d) 5,000 tons fabricated steel, 2,200 tons railroad material.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Feb. 1.	Jean	American	Luckenbach S.S. Co.	San Francisco	New York	Fruit, general	3,400	3,309	2,368
Feb. 1.	Montoso	American	Sudden & Christenson	San Francisco	Philadelphia	General, lumber	4,000	3,224	2,206
Feb. 3.	Montanan	American	American-Hawaiian S.S. Co.	Los Angeles	Norfolk	General cargo	6,997	6,857	4,706
Feb. 4.	Peter H. Crowell	American	Sudden & Christenson	San Francisco	New York	Lumber (a)	5,600	3,345	2,360
Feb. 4.	Advance	American	Panama Railroad Co.	Balboa	New York	General cargo	500	2,965	2,161
Feb. 4.	Achibster	British	A. H. & E. Gunn	San Francisco	Norfolk, orders	Barley	6,588	4,871	3,514
Feb. 4.	Onwen	British	W. & C. T. Jones S.S. Co.	Pottland	Great Britain	Wheat	6,550	4,738	3,355
Feb. 6.	Beckenham	British	Watts, Watts & Co.	Cruz Grande	Philadelphia	Iron ore	7,000	4,983	3,508
Feb. 6.	St. Helens	American	W. R. Grace & Co.	Punta Arenas	New York	Coffee, sugar, hides	2,000	1,642	775
Feb. 6.	Arizona	American	American-Hawaiian S.S. Co.	Honolulu	Delaware Bkwr.	Sugar, general	11,347	8,759	6,576
Feb. 6.	Madawaska	British	Bank Line	Antofagasta	Gibraltar	Nitrates	6,800	5,422	4,149

(a) 2,485,000 feet.

ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
Feb. 8.	E. K. Vance	Nehalem S.S. Co.	San Francisco
Feb. 10.	T. Pagelund	Wilhelmsen S.S. Co.	Chile
Feb. 11.	Wm. Chatam	William Chatam Co.	San Francisco
Feb. 13.	Oregonian	American-Hawaiian S.S. Co.	San Francisco
Feb. 15.	Columbian	American-Hawaiian S.S. Co.	Hilo

ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Feb. 6.	Ekaterinoslat	Russian Volunteer Fleet	New York
Feb. 8.	Santa Rosalia	Isthmian S.S. Co.	New York
Feb. 8.	Manavi	Pacific Steam Nav. Co.	Limon
Feb. 10.	Mitra	Anglo Saxon Pet. Co.	Port Arthur
Feb. 12.	Mexican	American-Hawaiian S.S. Co.	New York

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
Feb. 1.	Savoia	La Veloce	Genoa
Feb. 1.	Trent	Royal Mail	Southampton
Feb. 2.	Oland	Earn Line	Norfolk
Feb. 4.	Oncida	Yacht	La Guayra
Feb. 6.	Chagres	Elders & Fyffes	Port Limon
Feb. 6.	Clifford Grange	Earn Line	Norfolk

*DEPARTURES.

Date	Vessel	Line	To
Feb. 1.	Tordenskjold	Earn Line	Nima Nima
Feb. 3.	Virginia	Yacht	Kingston
Feb. 3.	Trent	Royal Mail	Southampton
Feb. 4.	Wegadesk	Earn Line	Felton, Cuba
Feb. 4.	Vulcanus	Dutch Royal Mail	Puerto Barrios
Feb. 5.	Savoia	La Veloce	Genna
Feb. 6.	Chiswick	Earn Line	Daiquiri
Feb. 6.	Oland	Earn Line	Daiquiri
Feb. 6.	Chagres	Elders & Fyffes	Bristol Ja.

*EXPECTED ARRIVALS.

Feb. 9.	Legazpi	Transatlantic Co.	Barcelona
Feb. 11.	Chancellor	Harrison Line	Liverpool

*EXPECTED DEPARTURES.

Feb. 12.	Perou	Cie Gen Transatlantique	St. Nazaire
Feb. 12.	Legazpi	Transatlantic Co.	Barcelona

*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Feb. 7.	San Juan	Pac. Mail S.S. Co.	San Francisco
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*DEPARTURES.

Feb. 1.	Pachtea	Peruvian S.S. Co.	Callao
Feb. 6.	Newport	Pacific Mail S.S. Co.	San Francisco

*EXPECTED ARRIVALS

Feb. 10.	Mantaro	Peruvian S.S. Co.	Peru
Feb. 16.	Tampico	Union Oil Co.	San Francisco
Feb. 19.	Santa Rita	Union Oil Co.	Port San Luis

*EXPECTED DEPARTURES

Feb. 16.	San Juan	Pacific Mail S.S. Co.	San Francisco
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*Other than vessels passing through the Canal.

(Continued from page 237)

Kingston, weekly; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails.		Arrives.		CRISTOBAL-COLON TO NEW YORK.				CRISTOBAL-COLON TO NEW ORLEANS.			
NEW YORK TO CRISTOBAL-COLON.											
Zacapa.....	U. F. C. Feb. 3.....	Feb. 10		Santa Marta.....	U. F. C. Feb. 11.....	Feb. 18		Parismina.....	U. F. C. Feb. 3.....	Feb. 10	
Allianca.....	P. R. R. Feb. 4.....	Feb. 10		Panama.....	P. R. R. Feb. 13.....	Feb. 19		Atenas.....	U. F. C. Feb. 6.....	Feb. 11	
Calamares.....	U. F. C. Feb. 6.....	Feb. 14		Pastores.....	U. F. C. Feb. 15.....	Feb. 22		Cartago.....	U. F. C. Feb. 10.....	Feb. 17	
Carrillo.....	U. F. C. Feb. 10.....	Feb. 17		Zacapa.....	U. F. C. Feb. 18.....	Feb. 25		Turrialba.....	U. F. C. Feb. 13.....	Feb. 18	
Colon.....	P. R. R. Feb. 11.....	Feb. 17		Allianca.....	P. R. R. Feb. 20.....	Feb. 26		Heredia.....	U. F. C. Feb. 17.....	Feb. 24	
Tenadores.....	U. F. C. Feb. 13.....	Feb. 21		Calamares.....	U. F. C. Feb. 22.....	Mar. 1		CRISTOBAL-COLON TO NEW ORLEANS.			
Almirante.....	U. F. C. Feb. 17.....	Feb. 24		Carrillo.....	U. F. C. Feb. 25.....	Mar. 4		Abangarez.....	U. F. C. Feb. 11.....	Feb. 16	
Advance.....	P. R. R. Feb. 18.....	Feb. 25		Colon.....	P. R. R. Feb. 27.....	Mar. 5		Parismina.....	U. F. C. Feb. 11.....	Feb. 18	
				Tenadores.....	U. F. C. Mar. 1.....	Mar. 8		Atenas.....	U. F. C. Feb. 18.....	Feb. 25	
								Cartago.....	U. F. C. Feb. 18.....	Feb. 28	



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

NOTES OF PROGRESS.

Smallpox on the "Panama."

A case of smallpox was discovered on the Isthmus on Wednesday, February 10, in the person of one of the wireless operators on the steamship *Panama* of the Panama Railroad Steamship Line. Both operators were taken at once to the quarantine station at Balboa for isolation, the crew of the vessel were vaccinated, and general instructions were issued that all others who had been aboard the vessel since its departure from New York should report to district physicians for examination and possible vaccination. The vessel was fumigated, and sailed on its regular trip to New York on Saturday, February 13, taking the wireless operators of the steamship *Allianca*, which is in port. The case of smallpox did not originate on the Isthmus and no secondary cases have developed.

Grounding of "Blanche D. Pendleton."

The Board of Local Inspectors has begun an investigation of the grounding of the schooner *Blanche D. Pendleton* in Limon Bay on February 9, during the norther which was blowing on that and the following day, and of the damage sustained by the vessel.

The "Penrith Castle" Returns.

The steamship *Penrith Castle*, which passed through the Canal on February 10, on the way from Seattle to Liverpool, was returning from the Far East. On October 22-23 this vessel went through the Canal on the way from Galveston to Yokohama with a cargo of 3,270 tons of cotton, which was the first shipload of that staple to be sent through the Canal. From the Far East, she returned to Seattle, where she loaded with the following cargo, to be taken to Liverpool: 4,139 tons of wheat, 1,153 tons of lumber, 31 tons of canned salmon, 17 tons of grass seed, and 16 tons of brass scrap, a total of 5,361 tons.

It was estimated at the time that the *Penrith Castle* first passed through the Canal that the net saving to the owners by use of the Canal between Galveston and Yokohama was, at the rate of \$230 per day expense at sea, \$5,060. On the same basis, her saving of

approximately 23 days at sea between Seattle and Liverpool will mean a net economy of about \$1,188, after payment of tolls.

Notice to Mariners.

The following notice concerning the east breakwater, Colon harbor, has been issued by the Governor, as circular No. 613-11, under date of February 12, 1915:

"1. The seaward end of the trestle which was used in the construction of the east breakwater was carried away by heavy seas on February 9, 1915, and the two white lights, in a vertical line, which marked its seaward (western) end, were lost with it.

"2. Until the trestle can be reconstructed, these lights will be discontinued, but the gas buoy, showing a flashing white light, which was moored off the seaward end of the trestle, and which was moved from time to time as the trestle was extended, will remain in its present position, namely, in the prolongation of the axis of the east breakwater to seaward, and about 3,220 feet to the eastward of the seaward end of the west breakwater.

"3. Vessels are warned that the wreckage of the trestle, and parts of the uncompleted breakwater, most of which are submerged, are a danger to navigation, and they should not attempt to pass inshore to the eastward of the gas buoy, but keep between it and the end of the west breakwater."

Double Meal Service on United Fruit Company's Vessels.

The United Fruit Company has established a system on the vessels of its New York, Jamaica, Puerto Colombia service, which sail from Cristobal on Thursdays, by which passengers are given the choice between *a la carte* and *table d'hote* meal service. It is the intention of the company to maintain this double service until May 1, after which the steamers of its New York division will be operated with the *a la carte* restaurant service exclusively.

The fare from Colon to New York with meals is \$75, \$80, and \$85 per berth in a room without bath, according to location. For those using the *a la carte* service there is a reduction of \$17.50 from the rate with meals. To Panama Canal employees the rate with meals is \$56.25, with assignment to minimum priced rooms; without meals, \$43.15.

Checking Baggage from Panama the Night before Sailing.

For the convenience of employees, the baggage room of the Panama railroad station at Panama is kept open until 11 p. m., on days preceding sailings of Panama railroad vessels from Cristobal; that is, under the present schedule, the baggage room is open every Friday night, in connection with the regular

Saturday sailing. This is done so that those sailing may the more conveniently check their baggage through to New York and be done with it, and not have to bother with it on the day of sailing. It also expedites the handling of baggage and results in generally more satisfactory conditions than those likely to ensue if the checking of baggage is deferred to the last moment.

Americans Injured in Fight in Panama.

In a fight between United States soldiers, off duty, American civilians, and Panamanian policemen in the restricted district of the city of Panama on the night of February 13-14, about 25 soldiers and 25 civilian Americans and approximately as many Panamanians were wounded, and one Panamanian was killed. The soldiers were without arms. Twenty-three soldiers were removed to Ancon Hospital, two of them with serious injuries.

Immediately following the row, a patrol of American soldiers was placed in the district to prevent further outbreaks, and Panamanian and American officials began a joint investigation. This is still in progress. The American Minister is representing the interests of the United States. The American military authorities are making an investigation of all soldiers who were in any way connected with the affair and the Judge Advocate is cooperating with the American Minister.

Transfer to Civil Service in the United States.

In connection with Executive Order No. 2121, "Amending the Civil Service Rules," published in THE CANAL RECORD of February 3, by which the privilege of transfer to the classified service in the United States is extended to certain classes of employees of The Panama Canal not previously eligible to transfer, the Chief of the Washington Office has advised:

"As employees can now arrange for their transfer while still in the service, it would seem that the first move for an employee to make in attempting to secure a transfer would be to obtain from the Governor the recommendation required as to efficient service and satisfactory conduct. This recommendation could then be used by him in making application for transfer as evidence of his eligibility and of his satisfactory service on the Isthmus."

Special Train Service, Washington's Birthday.

In view of next Monday, February 22 (Washington's birthday) being a National holiday, thus bringing Sunday and a holiday together, for the benefit of those desiring to spend the week end at either end of the line, likewise those residing along the line and on the Atlantic side desiring to spend a short vacation at Taboga Island, the Panama

Railroad Company will operate a special passenger train service on that night, maintaining schedules of Sunday night trains Nos. 11, 12, and 54; No. 11 leaving Colon at 9.30 p. m., arriving at Panama at 11.15 p. m.; No. 12 leaving Panama at 9.25 p. m., arriving at Colon at 11.10 p. m.; No. 54 leaving Panama at 10.40 p. m., arriving at Las Cascadas at 11.29 p. m.

This extra service will also give those residing on the Las Cascadas line an opportunity to spend the evening in Panama, returning from Panama at 10.40 p. m.

C. H. MOTSETT,
Superintendent.

Examination for Levelmen and Transitmen.

On Sunday morning, March 14, 1915, at 9 o'clock, an examination for levelmen and transitmen will be held in the board room of the Administration Building, Balboa Heights, C. Z. A written and oral examination will be given between the hours of 9 a. m. and 1 p. m., the examination to test the applicant's qualifications for promotion from the position of "Rodman" to that of "Levelman" or from the position of "Levelman" to that of "Transitman."

All applicants for the examination should notify the Office Engineer, Balboa Heights, C. Z., on or before 12 m., March 10, 1915.

C. J. EMBREE, O. E. MALSBURY, A. W. WILSON, *Committee.*

Civil Service Examinations.

Examinations for the following-named positions are scheduled to be held, probably on April 18, 1915 (date to be left blank on application), at the Administration Building, Balboa Heights, C. Z.: Agricultural Inspector, Philippine service; Aid, Lighthouse service; Assistant Observer, Weather Bureau; Cadet Engineer, Cadet Officer, Lighthouse service; Civil Engineer and Draftsman; Copyist Ship Draftsman and Ship Draftsman, Navy Department; Mechanical Draftsman and Topographic Draftsman, Panama Canal service; Engineer, Indian service; Scientific Assistant, Department of Agriculture; Trained Nurse, Indian service; Wireman, Departmental service.

Applications should be filed by March 25, 1915.

An examination for Stenographer and Typewriter, Panama Canal service, is scheduled to be held, probably on April 25, 1915 (date to be left blank on application) at the same place as above. Applications should be filed by April 2, 1915.

ISTHMIAN CIVIL SERVICE BOARD.

Quarantine Work in January.

The net emigration from the Isthmus to foreign ports during the month of January was 804, as compared with 537 in November and 1,328 in January. This brings the total net emigration from the Isthmus since July 1, 1913, to 22,536.

During the month, a total of 1,626 persons arrived from coast towns in launches and small sailing craft, and 1,902 sailed for coast towns.

Further details of emigration and immigration and of the quarantine work connected therewith are presented in this consolidated report of quarantine transactions at the ports of Balboa-Panama and Colon-Cristobal during the month;

Number of persons vaccinated at ports of arrival because of compulsory vaccination law..... 463

Number of persons vaccinated at ports of departure or enroute because of compulsory vaccination law..... 1,326

Total number of persons vaccinated..... 1,789

Number of vessels fumigated on arrival..... 8

Number of vessels fumigated on departure..... 0

Total number of vessels fumigated..... 8

Number of crew examined..... 10,232

Number of passengers examined (including 320 U. S. troops)..... 3,887

Total number of persons examined..... 14,119

Number of persons held in quarantine at the detention houses to complete period of incubation of yellow fever and plague..... 263

Number of persons held in quarantine on board vessels to complete period of incubation of yellow fever and plague..... 1,246

Total number of persons held under observation..... 1,509

Total number of persons landed from foreign ports..... 2,974

Cabin..... 2,378

Steerage..... 596

Total number of persons embarked for foreign ports..... 3,777

Cabin..... 1,464

Steerage..... 2,313

Total number of persons landed..... 4,600

Less number for Pacific ports..... 139

..... 4,461

Total number of persons sailing..... 5,679

Total apparent decrease for month..... 1,218

Canal Excavation in January. ATLANTIC SECTION.

LOCALITY.	"Work" excavation.	"Plant" excavation.	Total.
Dry excavation—	Cu. Yds.	Cu. Yds.	Cu. Yds.
Terminals.....	2,070	.....	2,070
Wet excavation—			
Atlantic entrance.....	151,209	.....	151,209
Terminals.....	72,693	.....	72,693
Total Atlantic Section.	225,963	.....	225,963

CENTRAL SECTION.

Hydraulic excavation.....	.....	.....	.....
Dredging.....	604,187	.....	604,187
Total Central Section.	604,187	.....	604,187

PACIFIC SECTION.

Dry excavation—			
Pacific Terminals.....	13,852	.....	13,852
Wet excavation—			
Pacific entrance.....	32,511	.....	32,511
Pacific terminals.....	286,742	.....	286,742
Total wet excavation.	219,253	.....	219,253
Total Pacific Section.	333,105	.....	333,105

TOTAL CANAL EXCAVATION.

Dry excavation.....	15,922
Wet excavation.....	1,147,333
Total.....	1,163,255

CANAL EXCAVATION TO FEBRUARY 1, 1915.

By French companies.....	78,146,960
French excavation useful to present Canal.....	29,908,000
By Americans—	
Dry excavation.....	130,282,612
Dredges.....	99,979,386

Total.....	230,262,028
May 4 to December 31, 1904.....	243,472
January 1 to December 31, 1905.....	1,799,227
January 1 to December 31, 1906.....	4,948,497
January 1 to December 31, 1907.....	15,765,290
January 1 to December 31, 1908.....	37,116,735
January 1 to December 31, 1909.....	35,096,166
January 1 to December 31, 1910.....	31,437,677
January 1 to December 31, 1911.....	31,693,899
January 1 to December 31, 1912.....	30,269,349
January 1 to December 31, 1913.....	27,177,960
January 1 to December 31, 1914.....	13,640,501
January 1 to January 31, 1915.....	1,163,255

TOTALS BY SECTIONS AND AMOUNT TO BE EXCAVATED.

SECTIONS.	Amount excavated.	Remaining to be excavated.
Atlantic—		
Dry excavation.....	Cu. yds. 8,867,911	Cu. yds. 19,066
Wet excavation.....	42,174,325	2,343,585
Total.....	51,042,236	2,362,651
Central—		
Chagres section.....	12,945,824	251,000
Culebra section.....	106,342,326	1,491,494
Total.....	119,288,150	1,742,494
Pacific—		
Dry excavation.....	11,306,467	.....
Wet excavation.....	48,625,173	4,478,414
Total.....	59,931,642	4,478,414
Grand total.....	230,262,028	8,583,559

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Jeremie, Max.....	10114	Danish W. I....	Colon.....	Panama R. R....	Feb. 4, 1915.
Keith, Alexander.....	23105	Jamaica.....	Golden Green...	Dredging Div....	Feb. 5, 1915.
McDonald, John.....	94619	Jamaica.....	Colon.....	Panama R. R....	Feb. 11, 1915.
Sandiford, Chas.....	80908	Barbados.....	Panama.....	Panama R. R....	Feb. 5, 1915.

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

ACT OF CONGRESS.

An Act for the coinage of certain gold and silver coins in commemoration of the Panama-Pacific International Exposition, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Treasury shall cause to be coined at the United States mint at San Francisco not exceeding 3,000 gold coins of the denomination of \$50 each, 10,000 gold coins of the denomination of \$2.50 each, 25,000 gold coins of the denomination of \$1 each, and not exceeding 200,000 silver coins of the denomination of 50 cents each, all of legal weight and fineness; said coins to be struck in commemoration of the Panama-Pacific International Exposition. The words, devices, and designs upon said coins shall be determined and prescribed by the Secretary of the Treasury, and all provisions of law relative to the coinage and legal tender value of all other gold and silver coins shall be applicable to the coins issued under and in accordance with the provisions of this Act; and one-half of the issue of \$50 gold coins herein authorized shall be similar in shape to the octagonal \$50 gold pieces issued in California in 1851; and the entire issue of said \$50, \$2.50, and \$1 coins herein authorized shall be sold and delivered by the Secretary of the Treasury to the Panama-Pacific International Exposition Company at par, under rules and regulations and in amounts to be prescribed by him. The coinage shall be executed as soon as may be and the delivery of said coins to begin not later than the day of the opening of the exposition. Said 50-cent coins herein authorized shall be issued only upon the request of the Panama-Pacific International Exposition Company, and shall be delivered to it by the Secretary of the Treasury, at par, during the period when said Panama-Pacific International Exposition shall be officially open.

SEC. 2. That medals and diplomas, with appropriate devices, emblems, and inscriptions commemorative of said Panama-Pacific International Exposition and of the awards to be made to the exhibitors thereat, shall be prepared by the Secretary of the Treasury at the United States mint at Philadelphia and the Bureau of Engraving and Printing, said medals and diplomas to be delivered to said Panama-Pacific International Exposition Company subject to the provisions of Section 52 of the coinage Act of 1873 and upon payment of the cost of the material composing said medals or diplomas.

SEC. 3. That the 50-cent silver coins herein authorized may, in the discretion of the Secretary of the Treasury, be coined or finished and issued from the machinery to be installed as a part of the exhibit of the United States mint at said exposition, and for the purpose of maintaining the exhibit as an educative working exhibit at all times the coins so minted may be remelted and reminted. All of said 50-cent silver coins herein authorized not issued to and at the request of said Panama-Pacific International Exposition, whether the same are coined as a part of said working exhibit or coined at the mint in San Francisco, shall be remelted upon the official closing of said exposition. All provisions hereof in regard to the coinage, finishing, or issue of said 50-cent silver coins from machinery installed as

a part of the said exhibit shall be coined, finished, and issued under such regulations as the Secretary of the Treasury may prescribe, and the Secretary of the Treasury shall cause to be prepared a suitable souvenir medal (of such metal or composition of metals as he may prescribe), to be struck off by the machinery in said mint exhibit, and all of said medals shall be delivered to said Panama-Pacific International Exposition Company upon payment of the cost of the material composing the same, and all other souvenirs which may be coined, stamped, printed, or otherwise issued from any portion of the United States Government exhibit shall be delivered to said exposition company upon payment of the cost of the material composing said souvenirs, and said souvenir medals and other souvenirs shall be delivered to said Panama-Pacific International Exposition Company subject to such regulations as to disposition thereof as the Government exhibit board may prescribe. All provisions, whether penal or otherwise, of the laws prohibiting the counterfeiting or imitating of coins or securities of the United States shall apply to the medals, diplomas, and souvenirs provided for under Sections 2 and 3 of this Act.

SEC. 4. That the Secretary of the Treasury is hereby authorized to obtain suitable designs for the coins and medals herein authorized, and the sum of \$5,000, or so much thereof as may be necessary, is hereby appropriated, out of any money in the Treasury not otherwise appropriated, to defray the cost of said designs: *Provided*, That the Panama-Pacific International Exposition Company shall reimburse the Treasury Department for the amount thus expended.

Approved, January 16, 1915.

Notice to Mariners.

The following changes in some of the aids to navigation of the Canal have been directed, and their authorization was published in Circular No. 643-10:

BEACONS AND RANGE LIGHTS MARKING CANAL CHANNEL.

On or about February 15, 1915, the beacons marking the channel of Chagres Crossing, Culebra Cut, and the northern end of Balboa Reach and Miraflores Approach are to be established in pairs, one on each side of the channel, opposite each other.

This will require the establishment of certain new beacons, and changes in the position and numbering of others, as follows:

CHAGRES CROSSING.

Beacon No. 27. To be removed from its present position and established directly opposite beacon No. 28. Characteristic of the light to remain the same as at present, white flashing.

Beacon No. 29. To be established on the north side of the channel, about halfway between the Gamboa railroad station and front range light No. 25. Characteristic, white flashing.

Beacon No. 30. To be established on the south side of the channel, opposite beacon No. 29, at the turn at the entrance to Chagres Crossing near the point where the charts show gas buoy No. 90, which buoy has been discontinued. Characteristic, red flashing.

CULEBRA CUT.

All lights in Culebra Cut are fixed red on the west side, white on the east side.

The beacons will be changed, as follows:

Beacon No. 1. No change.

Beacon No. 2. No change.

Beacon No. 3. To be established opposite beacon No. 4.

Beacon No. 4. No change.

Beacon No. 5. Was formerly No. 3.

Beacon No. 6. No change.

Beacon No. 7. Was formerly No. 5.

Beacon No. 8. No change.

Beacon No. 9. Was formerly No. 7. Position to be changed to opposite beacon No. 10.

Beacon No. 10. No change.

Beacon No. 11. To be established opposite beacon No. 12.

Beacon No. 12. No change.

Beacon No. 13. Was formerly No. 9.

Beacon No. 14. No change.

Beacon No. 15. Was formerly No. 11.

Beacon No. 16. Position to be changed to opposite beacon No. 15.

Beacon No. 17. Was formerly No. 13.

Beacon No. 18. To be established opposite beacon No. 17.

Beacon No. 19. Was formerly No. 15.

Beacon No. 20. Was formerly No. 18.

Beacon No. 21. Was formerly No. 17. Position to be changed to opposite beacon No. 22.

Beacon No. 22. Was formerly No. 20.

Beacon No. 23. To be established opposite beacon No. 24.

Beacon No. 24. Was formerly No. 22.

Beacon No. 25. Was formerly No. 19.

Beacon No. 26. Was formerly No. 24.

Beacon No. 27. Was formerly No. 21.

Beacon No. 28. Was formerly No. 26. Position to be changed to opposite beacon No. 27.

Beacon No. 29. Was formerly No. 23.

Beacon No. 30. To be established opposite beacon No. 29.

Beacon No. 31. Was formerly No. 25.

Beacon No. 32. Was formerly No. 28.

Beacon No. 33. Was formerly No. 27.

Beacon No. 34. To be established opposite beacon No. 33.

Beacon No. 35. Was formerly No. 29.

Beacon No. 36. Was formerly No. 30.

Beacon No. 37. Was formerly No. 31.

Position to be changed to opposite beacon No. 38.

Beacon No. 38. Was formerly No. 32.

BALBOA REACH AND MIRAFLORES APPROACH.

Beacon No. 10. To be established opposite beacon No. 8. Characteristic, fixed white.

Beacon No. 12. To be established opposite beacon No. 11. Characteristic, fixed red.

Front range light, northbound, Balboa Reach, number to be changed from 12 to 13.

Rear range light, northbound, Balboa Reach, number to be changed from 13 to 14.

No change will be made in the characteristics of these range lights.

Laundry of Patrons at Hotel Aspinwall.

Hereafter guests of the Hotel Aspinwall may leave their laundry at the hotel for delivery to the Ancon laundry. The charge will be entered on hotel bill and collected at the hotel. Employees will be charged the laundry rate. Nonemployees will be charged rates posted in the office of the hotel.

RAINFALL AND LAKES, 1914.

Summary of Weather and Conditions in Canal Lakes.

The rainfall for the year 1914 along the Canal was lower throughout, except at Colon, than the average annual rainfall during the years of record. The distribution of the rainfall during the year, and its comparison with that of 1913 and with the annual average, are shown in the accompanying chart. At Juan Mina and El Vigia, points off from the line of the Canal but indicative of areas contributing to the Chagres River, the precipitation was also slightly above the annual average. At all other stations the fall was deficient.

The annual totals ranged from 64.48 inches at Balboa Heights to 132.7 inches at Colon. The dry season rainfall amounted to but six per cent of the annual total over the Pacific section; four per cent in the central section, and seven per cent in the Atlantic section.

March was the month of least rainfall in all sections. The rainiest months were: October in the Atlantic section, and that part of the central section north of the Chagres River; May in the southern part of the central section and northern part of the Pacific section; and November on the extreme Pacific coast.

The maximum 24-hour rainfall recorded during the year was 6.85 inches, at Gatun on August 12 and 13, most of which fell between the hours of 2 and 4 p. m. on August 12.

The minimum elevation of Gatun Lake during the year was 84.13 feet above sealevel, on January 6; the maximum was 87.07, from December 24 to 27; and the yearly mean was 85.26 feet.

The total rainfall and runoff over the watershed of Gatun Lake for the calendar year

1914, is shown in the following table:

	Mean Area sq. mi.	Rainfall inches	Runoff inches	Per- centage runoff.
Lake surface.....	164	92.03	92.03	100.00
Land area.....	1,156	101.76	56.09	55.19
Total watershed....	1,320	100.54	69.55	69.24

Further details of the hydrology of the lake for the year are summarized in this table:

	Million cubic ft.	Second feet.
Gatun spillway, waste.....	139,285	4416.7
Gatun spillway, leakage.....	574	18.2
Gatun Locks, lockage and tests....	2,501	79.3
Gatun Locks, leakage.....	151	4.8
Gatun hydroelectric plant.....	3,694	114.3
* Miguel Lock, lockage and tests....	2,631	85.0
* Pedro Miguel Lock, leakage.....	104	3.3
* Pumping at Cucaracha Slide.....	265	8.4
Brazos Brook reservoir.....	203	6.6
Pumping at Pedro Miguel.....	189	6.0
(a) Total outflow.....	149,562	4742.6
(b) Storage increase.....	12,154	385.4
(c) Net yield (a and b).....	161,716	5128.0
(d) Evaporation on lake (62.89").....	23,970	769.1
(e) Total yield (c and d).....	185,686	5888.1
(f) Rainfall on lake (92.03").....	35,040	1111.1
(g) Yield from land area (e and f)....	150,646	4777.0

*Into Miraflores Lake.

For Miraflores Lake, situated near the southern end of the Canal and draining a watershed situated almost entirely in the Pacific section, the minimum elevation was 32.49 feet above sealevel, on April 13; the maximum level was 54.40 feet, on November 16; and the yearly mean was 52.21. Rainfall

and runoff over its watershed were, as follows:

	Mean Area sq. mi.	Rainfall inches	Runoff inches	Per- centage runoff.
Lake surface.....	1.51	70.27	70.27	100.00
Land area.....	36.99	69.81	22.81	32.80
Total watershed....	38.50	69.80	24.82	35.60

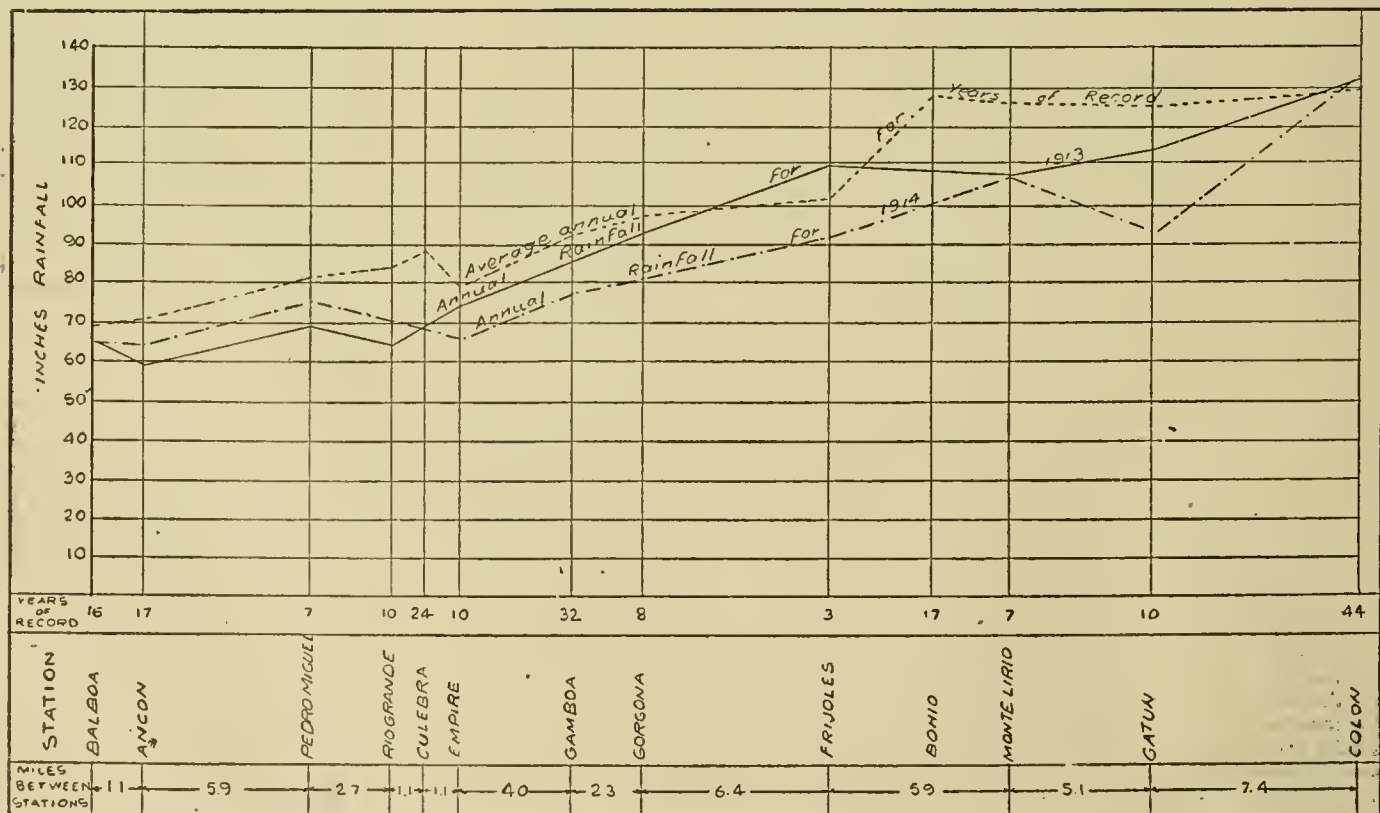
Further details of the hydrology of Miraflores Lake during the year are given below:

	Million cubic feet	Second feet
Miraflores spillway, waste.....	1,710.8	54.22
Miraflores spillway, leakage.....	544.7	17.27
Miraflores Locks, lockage and tests....	2,167.2	68.72
Miraflores Locks, leakage.....	135.7	4.31
Miraflores filter plant.....	259.9	8.24
Miraflores power plant.....	293.8	9.31
(a) Total outflow.....	5,112.1	162.10
(*) Total inflow from Gatun L....	3,241.6	102.79
(b) Storage.....	153.5	4.86
(c) Net yield ((a, *, and b).....	2,025.8	64.23
(d) Evaporation, lake (57.67").....	198.2	6.28
(e) Total yield (c and d).....	2,227.6	70.64
(f) Rainfall on lake (70.27").....	252.1	8.00
(g) Yield from land area (e and f)....	1,975.5	62.64

Average air temperatures along the Canal for the year were slightly above normal. The relative humidity and daytime cloudiness were practically normal, while the wind movement for the year was generally above the average. Climatological data for the Atlantic and Pacific stations of Colon and Balboa are given below:

STATION.	Pressure (reduced to mean of 24 hours.)	Temperature.					Precipitation.			Wind.			
		Mean.	Maximum.	Date.	Minimum.	Date.	Mean relative humidity.	Total inches.	Station average.	Days of .01 inch or more.	Total movement (miles.)	Prevailing direction.	Max. velocity in (miles.)
Colon.....	29.856	80.8	91	Oct. 4	72	May 7	86	132.70	129.43	239	90,030	N	35
* Balboa Heights....	29.830	81.3	96	Mar. 28	65	Feb. 25	87	64.48	70.52	176	65,19.	N.W.	36

*Formerly Ancon.



* Station closed and moved to Balboa Heights, Oct. 1, 1914.

OFFICIAL CIRCULARS.

Shipments of Surveyed Material to Balboa Shops.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 11, 1915.
HEADS OF DEPARTMENTS AND DIVISIONS:

The superintendent of the Mechanical Division states that his division has experienced considerable difficulty in connection with surveyed material sent to Balboa shops, some of which is scrap, some for repairs, and some sent in for mechanical inspection and recommendation regarding disposition, without any notice whatever being given with reference to the disposition to be made of same.

It is requested that previous instructions covering the matter of furnishing shipping advices on all shipments be more strictly complied with in future, and that the Mechanical Division be furnished complete information by shippers regarding approved disposition of shipments being made to them.

GEO. W. GOETHALS,
Governor, The Panama Canal,
President, Panama Railroad Co.

Chief of Police and Fire Division.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., February 5, 1915.

CIRCULAR No. 661-13:

Effective this date, Capt. Harry D. Mitchell, U. S. A., is appointed Chief of the Police and Fire Division, vice Capt. Charles W. Barber, U. S. A., relieved from duty with The Panama Canal.

CHESTER HARDING,
Acting Governor.

Sale of Public Property to Officials.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., February 6, 1915.

CIRCULAR No. 630-4:

Public property which has been condemned, or the sale price of which has been reduced as the result of a survey or inspection, will not be purchased by any official who was responsible therefor at the time of the condemnation or reduction in price, nor by any official who bore any part in any such condemnation or reduction.

CHESTER HARDING,
Acting Governor, The Panama Canal,
Second Vice President, Panama Railroad Company.

Correction in Pamphlet.

THE PANAMA CANAL,
OFFICE OF EXECUTIVE SECRETARY,

BALBOA HEIGHTS, C. Z., February 9, 1915.

To all concerned—The word "lever," appearing in the first line of Paragraph 49, page 15, of the pamphlet entitled "Rules for the Care and Operation of Locomotive Cranes, Spreaders, Unloaders, Trackshifters, and Piledrivers," should be corrected to read "cables."

C. A. McILVAINE,
Executive Secretary.

Gang Passes.

THE PANAMA RAILROAD COMPANY,

OFFICE OF THE MASTER OF TRANSPORTATION,

BALBOA HEIGHTS, C. Z., February 8, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Foremen and subforemen in charge of gangs traveling on gang passes are again causing us a great deal of inconvenience on account of allowing their men to string out through all of the second-class coaches and not being on hand to identify such men when required by the collectors.

Men riding on gang passes should ride in the rear second-class coach and should be accompanied by their foreman or subforeman, who will identify the men upon request of the collector. These instructions were issued sometime ago but same are not being complied with and it naturally results in loss of revenue to the Panama railroad, as laborers who are not entitled to free transportation simply state that they are traveling on gang passes and in most cases it is impossible to get men in charge to leave their seats to identify their men. Will you kindly issue the necessary instructions?

S. W. HEALD,
Master of Transportation.

District Dentist at Pedro Miguel.

The office of district dentist at Pedro Miguel, which has been vacant since the removal of Dr. Mitten to Balboa, has been filled by the appointment of Dr. R. G. Norfleet, who is now ready to receive patients.

CHAS. F. MASON,
Chief Health Officer.

Proposals for the Building, Erecting, and Removing of Forms for the Construction of the Concrete Decking for Wharves at the Pacific Terminals.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., February 20, 1915, and then opened, for furnishing the materials and performing the necessary labor in connection with building, erecting, and removing forms for the emplacement of concrete in the floors of Wharf D-E and 750 feet of the coal unloader wharf.

Bids may be submitted for either one or both of the wharves, and should be made, in either case, for a lump sum. In addition to this lump sum bid, bidders shall state the unit price per square foot of floor surface to cover any increases or decreases in quantities of areas of wharves as shown in the contract drawings.

Specifications and proposals may be obtained upon application to the Engineer of Terminal Construction, Balboa Heights, and contract plans may be looked over at his office or at the construction office at Balboa terminals.

Bids must be accompanied by bond or certified check for one thousand (\$1,000) dollars.

The Panama Canal reserves the right to reject any and all bids.

Bids should be marked "Proposal for building, erecting, and removing forms for wharves at the Pacific terminals", and addressed to the Chief Quartermaster, Balboa Heights, C. Z.

Federal Income Tax.

Notice to all concerned—The Auditor, Panama Canal, Balboa Heights, has received copies of Form 1040-Revised, on which all employees of The Panama Canal and Panama railroad having a net income of \$3,000, or over, for the year 1914, shall make their return to the Collector of Internal Revenue at Baltimore, Maryland.

A copy of this form will be mailed to any individual requesting the same, which must be filled out and filed with the Collector at Baltimore, Md., on or before March 1, 1915.

The penalty for failure to have this return in the hands of the Collector of Internal Revenue on or before March 1, 1915, is \$20 to \$1,000.

AD. FAURE,
Acting Auditor, Panama Canal.

Rainfall from February 1 to 13, 1915, Inclusive.

STATIONS.	In Maximum one day.	Date.	Total for period.
Pacific Section—			
Balboa.....	1.21	7	2.44
Balboa Heights.....	.93	7	2.75
*Miraflores.....	.38	9	.59
Pedro Miguel.....	.56	9	.74
Rio Grande.....	1.15	9	1.94
Central Section—			
Culebra.....	1.52	9	2.20
*Camacho.....	1.27	10	2.35
Empire.....	1.65	9	2.66
Gamboa.....	1.43	9	2.63
*Juan Mina.....	2.27	10	3.34
Alhajuela.....	1.30	9	2.41
*El Vigia.....	.82	9	2.18
Frijoles.....	1.45	9	4.93
*Trinidad.....	4.60	10	8.29
*Monte Lirio.....	2.60	10	6.27
Atlantic Section—			
Gatun.....	6.57	10	12.17
*Brazos Brook.....	6.18	10	13.53
Colon.....	7.12	10	11.99

*Standard rain gage—readings at 5 p. m. daily.

Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, February 13, 1915. All heights are in feet above mean sealevel:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Feb. 7.....	126.70	91.92	87.02	87.00	53.99
Mon., Feb. 8.....	126.75	92.12	87.04	87.00	52.89
Tues., Feb. 9.....	130.10	92.87	87.18	87.10	53.85
Wed., Feb. 10.....	135.85	98.90	87.19	87.20	53.91
Thurs., Feb. 11.....	137.40	100.10	87.05	87.04	54.02
Fri., Feb. 12.....	129.86	94.70	87.03	87.06	54.00
Sat., Feb. 13.....	129.95	94.79	87.12	87.09	54.08
Heights of low water to nearest foot.....	125.0	91.0			

JOINT LAND COMMISSION.

Rule of Dismissal.

Rule of dismissal No. 174, docket numbers as shown January 26, 1915, in the matter of sundry claims—With reference to the following claims, the evidence before the commission is that they have made settlement with the United States:

Claimant.	Docket No.	Tax No.	Date of payment.
Luis Marmol.....	442		10-26-14
Manuel Echeverria.....	1090		10-17-14
Elisia Guardia & Julia Bermudez.....	1099		1- 9-14
Esteban Zuniga.....	1117	74&75	12-19-14
Julio E. Amaris.....	1142		11-28-14
Pastor Perez.....	1152		11-28-14
Agustin Berrio.....	1167		11-30-14
Alexander (Andrew) McCoy.....	1183		12-19-14
Victorina Padilla.....	1197		9- 4-14
Salvador Cerezo.....	1201	683	8-15-14
Simion Galvez.....	1221		11- 9-14
Simion Galvez.....	1222		11- 9-14
Tomas Garcias (Garcia).....	1225		12-18-14
Fernando Gonzalez (Gonzalez).....	1233		12- 5-14
Andres Arvaez (Arbacz).....	1235		12- 7-14
Amelio Pinella (Aurelio Pinella).....	1237		12-12-14
Martin Cerezo.....	1248		10-26-14
Ana Cerezo (Ana Maria Cerezo).....	1250		11- 9-14
Bias Urena (Bias Urena Flores).....	1251		10-24-14
Mary (Maria) Smith.....	1275		10-21-14
Marie Amingo (Maria Eulogia Almengor).....	1334		10-25-14
Simon Johnson.....	1343		12- 9-14
Martin Torres.....	1355		12-14-14
Avelina Rodriguez.....	1413		12-14-14
Santiago Alarcon.....	1495		8-28-14
John Charles (Juan Carlos).....	1518	911	10- 2-14
Rita Nieto.....	1670		9- 3-14
Eliseo de la Hoz (Oz).....	1674	1596-A	4-14-14
Brigido Aldiano.....	1711		5-18-14
Juana Sarmiente.....	1717	1660	9- 1-14
Agustina Vasquez.....	1719	1672	8-10-14
Francisca G. Garcia.....	1723		6-27-14
Diego Vallejo.....	1728		9- 5-14
Valentin Segura.....	1729		12- 7-14
Ames Gordon.....	1771	1038	10-26-14
Pascual Canavaggio.....	1938	1226, 1180,	
		748	12-29-14
Julio Casimir (Jules).....	2424	912	4- 6-14

In view of the above settlements, no further action is necessary by the commission, and the foregoing claims are therefore dismissed.

FEDERICO ROYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Examinations by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, February 24, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the captain of the port of Cristobal on Friday, February 26, 1915, beginning at 9 a. m. Applicants should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.

F. M. NIXON,
Recorder, Board of Local Inspectors.

COMMISSARY DEPARTMENT.

Size of Loaf Reduced.

Owing to the high price of flour, it has become necessary to reduce the size of a loaf of bread. Effective February 16 and as long as the present price of flour continues, only 15½ ounces of dough, instead of 18 ounces of dough, will be used.

BENJ. L. JACOBSON,
Depot Commissary.

CRISTOBAL, C. Z., February 16, 1915.

Elastic Cotton Belts and Buckles.

THE PANAMA CANAL,
SUPPLY DEPARTMENT.

CRISTOBAL, C. Z., February 12, 1915.

BULLETIN No. 54:

To all storekeepers—Men's cotton elastic belts, stock number 9132, shown on page 188 of price book No. 9, have heretofore been sold in boxes containing two belts and one buckle. Effective at once, one belt and one buckle will be handled as stock number 9132, price 26 cents. The extra belt, without buckle, will be carried under stock number 11582 and sold for 11 cents each.

If you have in stock any boxes containing two belts and one buckle, separate them and take adjustment accordingly.

BENJ. L. JACOBSON,
Depot Commissary.

Small Stock of Dress Shirts.

THE PANAMA CANAL,
SUPPLY DEPARTMENT.

CRISTOBAL, C. Z., February 12, 1915.

BULLETIN No. 57:

To commissary storekeepers—We have received a small stock of thousand-plaited dress shirts, stock numbers 11583 and 11584.

The stock is not large enough to distribute to all stores.

Orders will be filled by wholesale dry goods section, for delivery the following morning.

BENJ. L. JACOBSON,
Depot Commissary.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective February 18, 1915:

FRESH MEATS.

Prices of fresh meats are same as those published last week.

MISCELLANEOUS.

	Price.
Brains, calves', per pound.....	12
Kidneys, beef, per pound.....	13
Livers—Beef, per pound.....	11
Calf, each.....	65
half, each.....	33
Oysters, fresh, per pkt.....	30
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	13
Frankfurter, per pound.....	13
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	10
Pork, per pound.....	17
Sweetbread, beef, per pound.....	23
Eggs, fresh, per dozen.....	†37
per ½ dozen.....	†19
Bluefish, per pound.....	†13
Halibut, fresh, per pound.....	8
Salmon, per pound.....	6
Yeast, per pound.....	31
per cake.....	2

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound..	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	20
Half, per pound.....	22
Sliced, per pound.....	28
Butt end, per pound.....	12
Whole, boiled, per pound.....	30
Half, boiled, per pound.....	32
Sliced, boiled, per pound.....	38
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	†29
Whole piece, per pound.....	†28
Ham, lunch, per pound.....	46
Pork, salt, family, per pound.....	14
Ox tongues (3 to 5 pounds), per pound.....	21
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound	*29
Chickens—Fancy, roasting, corn fed, per pound	24
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	*32
Broilers, milk fed, per pound.....	29
Broilers, corn fed, per pound.....	27
Turkeys, per pound.....	28
Geese, (10 to 14 pounds), per pound.....	23
Squabs, each.....	30
Partridges, each.....	1.00
Grouse, each.....	1.00
Pheasants, each.....	1.35
Mallard ducks, (2 to 2½ pounds), each.....	2.35

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	*48
Sheffield Farms, extra fancy, per lb.....	*58
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	21
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	33
Gouda, per pound.....	26
Snap, per cake.....	9
Milk, Sheffield, per quart.....	*15
Fermilac, bottle.....	*25
Ice cream, quart.....	†25
½ gallon.....	†50
Cream, Sheffield Farms, quart.....	*23
pint.....	*19
½ pint.....	*12

VEGETABLES.

Cauliflower, per pound.....	7
Beets, per pound.....	2
Celery, per head.....	7
Cabbage, per pound.....	2
Carrots, per pound.....	2
Lettuce, per pound.....	*6
Onions, per pound.....	†2
Parsley, per pound.....	9
Parsnips, per pound.....	3
Peppers, per pound.....	18
Potatoes, white, per pound.....	2
sweet, tropical, per pound.....	2
Spinach, per pound.....	8
Turnips, per pound.....	†1½
Tomatoes, per pound.....	11
Squash, per pound.....	2½

FRUITS.

Apples, per pound.....	†2½
Apples, fancy, per pound.....	†5
Cranberries, fresh, per pound.....	6
Grapes, per pound.....	14

Price.

Grape fruit—American, each.....	Price—5
Tropical, each.....	3½
Lemons, per dozen.....	9
Limes, per 100.....	64
Oranges—American, each.....	†2
Tropical, per dozen.....	*12
Coconuts, each.....	5
Bananas, per bunch.....	33
Bananas, each.....	½
Apples, evaporated, per pound.....	†11
Apricots, evaporated, per pound.....	†13
Pears, evaporated, per pound.....	23
Tangerines, each.....	†1½
Pineapples, Cuban, each.....	†7
Figs, dried, per pound.....	†17

* Indicates advance from preceding list.

*† Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries; no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork to be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective February 13, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Ham loaf, tin.....	.16	.13
Tabasco sauce, bot.....	.33	.24
Mace, ground, tin.....	.08	.11
Sponges, rubber, ea.....	.45	.53
Belts, men's, ea.....	.47	.44
Shirts, soft, ea.....	.70	.87
Night shirts, ea.....	.97	1.12
Bags, hand, ea.....	6.55	6.95
Dishes, soap, wall, ea.....	.07	.09
Plates, 1½, tin, ea.....	.02	.03
Pans, fry, ea.....	.12	.09
Pans, drip, ea.....	.20	.38
Pans, drip, ea.....	.06	.03
Freezers, 2-qt., ea.....	1.80	1.65
Hooks, towel, ea.....	.07	.09
Trunks, 36", ea.....	6.70	7.45
Clocks, alarm, ea.....	.94	1.00

Additions to Stock.

Flour, Buckwheat, ctn.....	.10
Puffed wheat, ctn.....	.09
Puffed rice, ctn.....	.14
Linen, damask, 72", yd.....	.73
Linen, damask, 72", yd.....	.91

SHIPPING INFORMATION.

March Weather Probabilities.

Based on the records at Colon and Ancon for the past seven and eight years, respectively, the following weather conditions may be expected to prevail at the Canal entrances during the month of March:

Winds—Fresh northerly dry season winds will continue throughout the month and there should be a slight increase in wind movement, compared with the February conditions. North and northeast winds will prevail at the Atlantic entrance to the Canal and an average hourly velocity of about 15 miles an hour may be expected. A maximum velocity of more than 36 miles an hour is not likely to occur.

The prevailing winds over the interior and on the Pacific side will be from the northwest. An average hourly velocity of about 11 miles can be expected. Probabilities of a maximum wind velocity of more than 30 miles are slight.

Rain—No heavy rains are likely to occur during the month though light showers may be expected at both Atlantic and Pacific entrances. The average March rainfall on the Atlantic side has been 1.63 inches, and 0.71 inches on the Pacific side. The average number of days on which 0.01 inch of rain fell has been 15 and two, respectively.

Fogs—No fogs are likely to occur at either Canal entrance, although night and early morning fogs may occasionally form over the Culebra Cut section of the Canal. The average number of foggy nights at this place has been four, though most of these have been light and practically all of them have cleared away before 8.30 a. m. They will not affect the navigation of the Canal under present operating conditions.

Temperature—An average air temperature of 80° Fahrenheit in the shade may be expected on the Atlantic side, while an average temperature of 82° Fahrenheit will probably occur at the Pacific entrance. The temperature is not likely to rise above 88° Fahrenheit, nor fall below 67° Fahrenheit at the Atlantic entrance, but a maximum temperature of 96° Fahrenheit and a minimum temperature of 65° Fahrenheit may occur at the Pacific entrance. The mean daily range in temperature is much greater on the Pacific than on the Atlantic side, the March mean daily range being seven degrees and 20 degrees, respectively.

Barometric pressure—Except for the well-marked diurnal change which is characteristic of tropical regions, changes in barometric pressure on the Isthmus are very slight and of practically no value in forecasting weather conditions. The average March sealevel pressure is 29.88 inches. A maximum pressure of over 30.03 inches and a minimum of less than 29.73 inches are not likely to occur at either Canal entrance.

Storms—Fair weather may be expected at both coasts and probabilities of any severe general storms are extremely remote although a rough sea and heavy swell may at times be produced outside the breakwater, at Colon, by the fresh northerly trade winds. Smooth to moderate seas may be expected at the Pacific entrance to the Canal.

Tides—Owing to the fact that the average tidal range is less than one foot and the maximum range approximately two feet, tidal fluctuations need not be considered in navigating the Atlantic entrance to the Canal.

The average tidal range at the Pacific entrance is about 13 feet, while a maximum range of 20 feet may occur. Panama (Balboa) tide predictions for the next five weeks are given below:

Tide Predictions.

Panama tide predictions for the next five weeks are given in the following table:

FEBRUARY.

DATE.	Time and height of high and low water.			
Wed., Feb. 17.....	5:53	11:59	18:12	.....
	15.1	0.3	15.3	
Thurs., Feb. 18.....	0:21	6:28	12:36	18:46
	0.6	14.5	0.8	14.7
Fri., Feb. 19.....	1:00	7:03	13:14	19:19
	1.2	13.8	1.8	14.0
Sat., Feb. 20.....	1:39	7:38	13:53	19:53
	2.0	12.9	2.8	13.1
Sun., Feb. 21.....	2:20	8:16	14:35	20:30
	2.8	12.0	3.8	12.3
Mon., Feb. 22.....	3:07	9:01	15:24	21:17
	3.7	11.1	4.6	11.5
Tues., Feb. 23.....	4:03	10:04	16:25	22:23
	4.3	10.5	5.2	11.0
Wed., Feb. 24.....	5:10	11:27	17:35	23:47
	4.6	10.3	5.4	10.9
Thurs., Feb. 25.....	6:19	12:49	18:44	.....
	4.3	10.7	4.9	.....
Fri., Feb. 26.....	1:01	7:19	13:49	19:43
	11.4	3.6	11.6	4.0
Sat., Feb. 27.....	1:58	8:10	14:33	20:32
	12.3	2.6	12.8	2.9
Sun., Feb. 28.....	2:43	8:54	15:11	21:15
	13.4	1.5	14.0	1.7

MARCH.

DATE.	Time and height of high and low water.			
Mon., March 1.....	3:24	9:35	15:48	21:57
	14.4	0.5	15.1	9.5
Tues., March 2.....	4:03	10:14	16:24	22:36
	15.3	-0.3	16.1	-0.4
Wed., March 3.....	4:41	10:52	17:01	23:18
	15.9	-0.8	16.7	-1.0
Thurs., March 4.....	5:20	11:34	17:38	23:58
	16.2	-1.0	17.0	-1.2
Fri., March 5.....	6:00	12:15	18:18	.....
	16.2	-0.7	16.9	.....
Sat., March 6.....	0:41	6:43	12:59	19:00
	-0.9	15.7	-0.1	16.3
Sun., March 7.....	1:27	7:27	13:45	19:46
	-0.2	14.9	0.9	15.3
Mon., March 8.....	2:19	8:19	14:30	20:41
	0.8	13.8	2.0	14.1
Tues., March 9.....	3:18	9:23	15:44	21:50
	1.8	12.7	2.1	13.0
Wed., March 10.....	4:27	10:44	17:00	23:16
	2.7	12.0	3.8	12.3
Thurs., March 11.....	5:45	12:16	18:20	.....
	3.0	12.0	3.8	.....
Fri., March 12.....	0:46	6:59	13:35	19:32
	12.4	2.7	12.7	3.1
Sat., March 13.....	1:58	8:01	14:34	20:30
	13.0	2.0	13.7	2.2
Sun., March 14.....	2:54	8:48	15:21	21:18
	13.8	1.3	14.5	1.4
Mon., March 15.....	3:39	9:37	16:01	22:01
	14.1	0.8	15.1	0.8
Tues., March 16.....	4:18	10:17	16:36	22:40
	14.8	0.5	15.4	0.4
Wed., March 17.....	4:53	10:56	17:09	23:16
	15.0	0.5	15.4	0.3
Thurs., Mar. 18.....	5:28	11:31	17:40	23:52
	14.8	0.8	15.1	0.5
Fri., March 19.....	6:00	12:07	18:12	.....
	14.5	1.3	14.6	.....
Sat., March 20.....	0:27	6:32	12:43	18:42
	1.0	13.9	2.0	14.0
Sun., March 21.....	1:04	7:05	13:19	19:14
	1.7	13.1	2.8	13.2
Mon., March 22.....	1:44	7:41	14:01	19:51
	2.6	12.3	3.7	12.4
Tues., March 23.....	2:29	8:24	14:48	20:34
	3.4	11.5	4.5	11.6
Wed., March 24.....	3:22	9:19	15:47	21:36
	4.1	10.8	5.1	11.0

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used in Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans the following Tuesday.

Every Saturday to New York, for all states. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

*Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE—The sailings on Monday, March 8 and April 5, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7:10 a. m., connects with the despatches for the two sailings mentioned above.

Annual Rainfall for Three Years.

STATIONS.	1912	1913	1914	Station Av.	Years of record	Rainy days '14
<i>Pacific Section—</i>						
Balboa.....	71.89	59.54	61.93	69.54	16	173
Balboa Heights.....	71.78	65.98	61.48	70.52	17	176
Miraflores.....	88.49	70.12	65.05	83.72	6	161
Pedro Miguel.....	75.71	69.65	75.47	81.33	7	167
Rio Grande.....	75.14	64.51	70.13	84.53	10	176
<i>Central Section—</i>						
Culebra.....	78.99	69.02	68.88	88.16	24	177
Camacho.....	77.98	73.79	70.86	79.07	8	161
Empire.....	74.56	74.78	66.93	79.05	10	178
Gambua.....	89.07	86.23	77.35	92.17	32	204
Juan Mina.....	83.24	77.13	93.19	88.76	4	207
Alhajuela.....	83.73	77.41	89.52	101.55	15	194
El Yagua.....	94.65	77.13	105.77	105.13	6	194
Frijoles.....	104.66	102.34	91.90	101.96	3	229
Trinidad.....	103.04	97.27	89.75	113.15	7	223
Monte Lirio.....	103.74	107.58	107.26	126.62	7	177
<i>Atlantic Section—</i>						
Gatun.....	111.83	112.81	92.18	125.51	10	246
Brazos Brook.....	124.65	133.89	121.75	136.73	8	250
Colon.....	117.59	131.22	132.70	129.43	44	239

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40, use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.75 per barrel, reduced to 60° Fahrenheit. Diesel engine oil is for sale by the same company, at 45 shillings per ton or seven barrels.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels

may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the turning of the largest crank shafts or longest line shafts.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment in ward is \$1 per day; for foreign seamen, \$1.50 per day.

Subsistence supplies, including a large stock of fresh meats, vegetables, canned groceries, fruits, bakery products, etc., are available for quick delivery at either terminal. Prices are generally lower than the retail prices in the United States, and compare favorably with prices in any part of the world.

The cable address of The Panama Canal on the Isthmus is 'Isthmian, Balboa Heights;' in the United States, 'Isthmian, Washington.'

Shipping people addressing The Panama Canal by mail, should address 'The Panama Canal, Balboa Heights, Canal Zone,' for delivery on the Isthmus, and 'The Panama Canal, Washington, D. C.,' for delivery in the United States.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS THROUGH THE CANAL.

Approximately regular services between the Atlantic and the Pacific seaboard from Boston, New York, Philadelphia, and Baltimore, occasionally Charleston and New Orleans, to San Pedro, San Francisco, Portland, and Puget Sound, and return, are maintained by the American-Hawaiian Steamship Company, with a sailing each way about every five days; the Luckenbach Steamship Company, with a sailing each way about every 10 days; Sudden and Christenson, approximately fortnightly; the Atlantic and Pacific Steamship Company, about every three weeks; and the Boston and Pacific Line, and the Arrow Line, each sending a vessel each way about once a month.

Between the east coast of the United States and the west coast of South America, fortnightly services are maintained by the Merchants' Line and by the New York and South America Line; the West Coast Line has sailings each way about every four weeks.

Between the west coast of the United States, with connections to lower British Columbia, and Europe the following lines are in service: The Harrison-Direct Line, monthly; the Maple Leaf Line, about every six weeks; the East Asiatic Company, monthly, and the Johnson Line, every six or seven weeks.

The Pacific Steam Navigation Company is operating approximately a monthly service around South America from Liverpool, by way of the Canal.

The American-Australian Line has been sending vessels through the Canal about fortnightly from New York to ports in Australia and New Zealand.

PACIFIC COAST CONNECTIONS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acajutla, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central America line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports abovementioned between Balboa and Ocos.

Grace & Company maintain a service with a vessel plying between San Francisco and Valparaiso, calling at way ports. It makes a round voyage about every 10 weeks.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Payta, Eten, Pucallpa, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa for Valparaiso, calling at Paita, Eten, Pucallpa, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10

(Continued on page 246.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon February 14.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Feb. 8....	<i>Ekaterinoslav</i>	Russian.....	Russian Volunteer Fleet.....	New York.....	Vladivostok (a)...	General cargo.....	4,089	6,853	4,675
Feb. 12....	<i>Manari</i>	British.....	Pacific Steam Nav. Co.....	Port Limon.....	Balboa.....	General cargo.....	286	1,205	745
Feb. 12....	<i>Clifford Grange</i>	British.....	Empire Transport Co.....	Cristobal.....	Cruz Grande.....	Ballast (b).....		5,188	3,861
Feb. 13....	<i>Mexican</i>	American.....	American-Hawaiian S. S. Co.....	New York.....	San Diego.....	General cargo.....	10,602	8,713	6,436
Feb. 13....	<i>Mitja</i>	British.....	Anglo-Saxon Petroleum Co.....	Port Arthur.....	Moji, Japan.....	Refined pet. (c).....	6,955	5,970	4,294

(a) Via Honolulu. (b) Had discharged cargo of coal from Norfolk at Cristobal. (c) 2,347,732 gallons.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Feb. 9....	<i>Highland Monarch</i>	British.....	Watts, Watts & Co.....	Cruz Grande.....	Philadelphia.....	Iron ore.....	5,850	4,202	3,109
Feb. 10....	<i>Devon City</i>	British.....	W. R. Smiths & Sons.....	Portland, Ore.....	England.....	Wheat.....	7,135	5,563	4,310
Feb. 10....	<i>Penrith Castle</i>	British.....	Lancashire Shipping Co.....	Seattle.....	Queensdown (a)...	General cargo.....	5,400	4,371	3,323
Feb. 10....	<i>Palena</i>	Chilean.....	South American S. S. Co.....	Valparaiso.....	Cristobal.....	General cargo.....	1,229	3,639	2,537
Feb. 11....	<i>William Chatham</i>	American.....	Loop Lumber Co.....	Calita Buena.....	Norfolk, Va.....	Nitrates.....	1,901	1,702	823
Feb. 11....	<i>Panama</i>	American.....	Panama Railroad Co.....	Balboa.....	New York.....	General cargo.....	2,767	5,866	4,222
Feb. 13....	<i>Strathleven</i>	British.....	Burrell & Son.....	Calita Buena.....	New Orleans.....	Nitrates.....	6,800	4,644	3,423
Feb. 13....	<i>Acajulla</i>	British.....	Salvador Railway Co.....	Salina Cruz.....	Cristobal.....	Coffee, lides.....	933	1,219	627
Feb. 14....	<i>Damara</i>	American.....	Luckenbach S. S. Co.....	San Francisco.....	New York.....	General cargo.....	4,500	5,835	4,506
Feb. 14....	<i>Quilpue</i>	British.....	Pacific Steam Nav. Co.....	Guayaquil.....	Cristobal.....	Cocoa, coffee, genl.	2,236		

(a) For orders.

ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
Feb. 10....	<i>Allianca</i>	Panama Railroad Co.....	New York.
Feb. 13....	<i>Saint Ursula</i>	American-Australian Line.....	New York.
Feb. 14....	<i>Greyferole</i>	American-Australian Line.....	New York.
Feb. 14....	<i>Volcra</i>	New York.	New York.
Feb. 15....	<i>Santa Rosalia</i>	Isthmian S. S. Co.....	New York.
Feb. 16....	<i>Ohioan</i>	American-Hawaiian S. S. Co.....	New York.

ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Feb. 14....	<i>Thode Fogelund</i>	W. R. Grace & Co.....	Tocopilla.
Feb. 14....	<i>Celia</i>	W. R. Grace & Co.....	Valparaiso.
Feb. 15....	<i>S. V. Luckenbach</i>	Luckenbach S. S. Co.....	Los Angeles.
Feb. 16....	<i>Oregonian</i>	American-Hawaiian S. S. Co.....	San Francisco.
Feb. 17....	<i>Columbian</i>	American-Hawaiian S. S. Co.....	Hilo.
Feb. 18....	<i>Hawaiian</i>	American-Hawaiian S. S. Co.....	Los Angeles.

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
Feb. 9....	<i>Wilhelmina</i>	Caribbean Transport Co.....	Bluefields.
Feb. 10....	<i>Perou</i>	Cie. Gen'ale Transatlantique	St. Nazaire.
Feb. 10....	<i>A. Lopez</i>	Transatlantic Co.....	Barcelona.
Feb. 12....	<i>Chancellor</i>	Harrison Line.....	Liverpool.
Feb. 13....	<i>Ebro</i>	Royal Mail.....	Southampton.

*DEPARTURES.

Date	Vessel	Line	To
Feb. 10....	<i>Tacoma</i>	United States Navy.....	Haiti.
Feb. 11....	<i>Oncida</i>	Yacht (E. C. Benedict.).....	Kingston.
Feb. 11....	<i>Droming Olga</i>	Seeborg S. S. Co.....	Cartagena.
Feb. 12....	<i>A. Lopez</i>	Transatlantic Co.....	Barcelona.
Feb. 13....	<i>Perou</i>	Cie. Gen'ale Transatlantique	St. Nazaire.
Feb. 14....	<i>Chancellor</i>	Harrison Line.....	Belize.

*EXPECTED ARRIVALS.

Feb. 28....	<i>Oranion</i>	Leyland Line.....	Liverpool.
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*EXPECTED DEPARTURES.

Feb. 16....	<i>Ebro</i>	Royal Mail.....	Southampton.
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*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Feb. 8....	<i>Ecuador</i>	Pacific Steam Nav. Co.....	Buena Ventura.
Feb. 11....	<i>Hualloga</i>	Peruvian S. S. Co.....	Peru.

*DEPARTURES.

Feb. 15....	<i>Hualloga</i>	Peruvian S. S. Co.....	Peru.
Feb. 16....	<i>San Juan</i>	Pacific Mail S. S. Co.....	San Francisco.

*EXPECTED ARRIVALS.

Feb. 16....	<i>Tampico</i>	Pacific Steam Nav. Co.....	San Francisco.
Feb. 17....	<i>Guatemala</i>	Union Oil Co.....	Callao.
Feb. 19....	<i>Santa Rita</i>	Union Oil Co.....	Port San Luis.
Feb. 21....	<i>City of Para</i>	Pacific Mail S. S. Co.....	San Francisco.

*EXPECTED DEPARTURES.

Feb. 15....	<i>Hualloga</i>	Peruvian S. S. Co.....	Peru.
Feb. 16....	<i>San Juan</i>	Pacific Mail S. S. Co.....	San Francisco.

*Other than vessels passing through the Canal.

(Continued from page 245.)

days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service between Colon and Southampton, making the following way ports: Antilla, Jamaica, Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores, and Cherbourg. Its vessels all arrive at Colon on Sundays and sail on Tuesdays.

The Compagnie Generale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, be-

tween Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compagnia Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal; and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailings via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails. Arrives.

NEW YORK TO CRISTOBAL-COLON.

Carrillo.....	U. F. C. Feb. 10....	Feb. 17
Colon.....	P. R. R. Feb. 11....	Feb. 17
Tenadores.....	U. F. C. Feb. 13....	Feb. 21
Almirante.....	U. F. C. Feb. 17....	Feb. 24
Advance.....	P. R. R. Feb. 18....	Feb. 25
Metapan.....	U. F. C. Feb. 20....	Mar. 1

Santa Marta.....	U. F. C. Feb. 24....	Mar. 3
Panama.....	P. R. R. Feb. 25....	Mar. 3
Pastores.....	U. F. C. Feb. 27....	Mar. 7

CRISTOBAL-COLON TO NEW YORK.

Zacapa.....	U. F. C. Feb. 18....	Feb. 25
Allianca.....	P. R. R. Feb. 18....	Feb. 26
Calamares.....	U. F. C. Feb. 22....	Mar. 1
Carrillo.....	U. F. C. Feb. 25....	Mar. 4
Colon.....	P. R. R. Feb. 27....	Mar. 5
Tenadores.....	U. F. C. Mar. 1....	Mar. 8
Almirante.....	U. F. C. Mar. 4....	Mar. 11
Advance.....	P. R. R. Mar. 6....	Mar. 13
Metapan.....	U. F. C. Mar. 8....	Mar. 16

NEW ORLEANS TO CRISTOBAL-COLON.

Cartago.....	U. F. C. Feb. 10....	Feb. 17
Turrialba.....	U. F. C. Feb. 13....	Feb. 18
Heredia.....	U. F. C. Feb. 17....	Feb. 24
Abangarez.....	U. F. C. Feb. 20....	Feb. 25
Parismina.....	U. F. C. Feb. 24....	Mar. 3
Atenas.....	U. F. C. Feb. 27....	Mar. 4

CRISTOBAL-COLON TO NEW ORLEANS.

Atenas.....	U. F. C. Feb. 18....	Feb. 23
Cartago.....	U. F. C. Feb. 18....	Feb. 25
Turrialba.....	U. F. C. Feb. 25....	Mar. 2
Heredia.....	U. F. C. Feb. 25....	Mar. 4
Abangarez.....	U. F. C. Mar. 4....	Mar. 9
Parismina.....	U. F. C. Mar. 4....	Mar. 11

CANAL



RECORD

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The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

NOTES OF PROGRESS.

Heavy Canal Traffic Last Week.

Thirty-three vessels passed through the Canal during the week ending at noon on Sunday February 21. Of these, 13 were bound from the Atlantic to the Pacific, and 20 from the Pacific to the Atlantic. Details of the traffic are given on the last page of this issue of THE CANAL RECORD.

None of the vessels was delayed in the Canal, and 33 vessels is a new record for the weekly period, under conditions of normal operation. The number has been exceeded once, when 36 vessels were passed through the Canal, in the week ending October 27; a great many of these vessels, however, had been held from the preceding week, during which six vessels went through, on account of a slide in Culebra Cut. The highest record for unobstructed traffic previous to last week, was the week ending December 6, when 23 vessels made the transit. During three other weekly periods, those ending December 12, January 17, and February 7, the number of vessels handled through during the week was 27.

West Coast Service of Japanese Vessels.

The principal Japanese steamship company, the Toyo Kisen Kaisha, will begin a regular service of calls at the port of Balboa, in connection with its South American service, with the steamship *Kiyo Maru*, due at Balboa on Wednesday, March 3. The service will be bi-monthly for the present.

This arrangement is in connection with an extension of the former itinerary of the company's South American service, which ran from Coronel, Chile, up the west coast as far as Callao, thence to China and Japan by way of Honolulu, and return. Hereafter, the vessels will continue up the coast as far as Los Angeles, California, thence to Honolulu and the Far East. The homeward bound itinerary is to be: Coronel, Valparaiso, Callao, Balboa, Salina Cruz, Manzanillo, Los Angeles, Honolulu, Yokohama, Kobe, Moji, and Hongkong. The outward bound vessels will call at the same ports in reverse order. It is planned to use four vessels in the service for the present, all of them fitted to carry passengers. The

Kiyo Maru is a double-screw steamship of 9,287 tons gross register, and 477 feet in length.

Now Called the "Marine Division"

The name of the Division of Canal Transportation has been changed to "Marine Division," and the title of the Superintendent of Transportation has been changed to "Marine Superintendent."

The change of names was not accompanied by any change in the organization or duties of the division. It is simply an alteration of nomenclature made in the interests of conciseness.

The Marine Division is in charge of the actual handling of vessels through the Canal. It includes in its organization the offices of the captains of the ports of Cristobal and Balboa, the admessurers of vessels, the Canal pilots, the forces for the operation and maintenance of signals and other aids to navigation, and the Board of Local Inspectors.

The "Cristobal" and the "Ancon" Making Special Trips.

The steamship *Ancon* of the Panama Railroad Steamship Line sailed for the Canal Zone on Friday, February 19, from New York with 9,600 tons of coal for the Canal plants.

The steamship *Cristobal* of the same line arrived at Cristobal on February 17, on an extra trip with cement for The Panama Canal and the Panama Railroad Company.

Twenty-ninth Infantry Ordered to the Canal Zone.

The Twenty-ninth Infantry, United States Army, is to sail for the Canal Zone from New York City on Wednesday, March 17, on the transport *Buford*. Upon arrival on the Isthmus the regiment will be stationed at Camp Gaillard at Culebra.

Accommodations for Eight More Families.

On account of economies in the operations of the Building Division, and the presence of a considerable quantity of surplus material, it has been found practicable to build one additional 4-family concrete house and two additional 2-family concrete houses at Balboa, without exceeding the expenditures allowed for the previously authorized houses. The Constructing Quartermaster has recommended that the three additional houses be built and his suggestion has been approved.

Demonstration of Methods of Artificial Respiration.

In connection with the February meeting of the Panama section of the American Institute of Electrical Engineers, which will be held at the Canal clubhouses at Balboa on Sunday, February 23, beginning at 9 a. m., a representative of the Health Department will give a demonstration of approved methods of artificial respiration. The general public is invited to attend this demonstration.

HEAVY FEBRUARY RAINFALL

Unusual Dry Season Precipitation Accompanied Recent Norther—Other Records.

In the two days beginning about noon, February 9, during which the most severe norther of recent years was blowing on the Atlantic side of the Isthmus, there was an unusual fall of rain all over the Isthmus. The least precipitation during the period recorded at any of the stations was .51 inch, at Miraflores; from this it ranged to 11.29 inches, at Brazos Brook.

New records for dry season rainfall in two days were established at all stations on the Atlantic side, and at all stations except Miraflores and Pedro Miguel, the two days' precipitation was in excess of the average for the entire month of February.

The precipitations at Colon were 1.46 inches on the 9th, 7.12 inches on the 10th, and 1.69 inches on the 11th. These records are from midnight to midnight, but the rainfall began between 10 and 11 in the morning of the 9th and ended before 9 a. m. on the 11th.

The fall of 7.12 inches at Colon on the 10th exceeded the maximum precipitation within 24 hours during the year 1914, which was 6.85 inches, at Gatun, on August 12-13.

All over the Isthmus the precipitation prior to the 9th was light, which is the usual dry season condition. The rainfall from the 9th to the 11th, inclusive, at the various stations is given herewith, in comparison with previous maximum falls for the entire month of February and with the station averages for February for the years of record:

STATION.	Rainfall from 9 to 11 of February, 1915, inclusive.	Maximum February rainfall, years of record.	Station average for years of record.	Years of record.
Balboa.....	1.71	3.22 (1911)	.51	15
Balboa Heights...	1.17	2.90 (1902)	.76	16
Miraflores.....	.51	2.49 (1913)	1.52	6
Pedro Miguel....	.65	3.25 (1902)	.79	7
Kio Grand.....	1.59	2.88 (1902)	.61	10
Culebra.....	2.01	2.45 (1902)	.55	24
*Camacho.....	1.88	2.16 (1902)	.71	8
Empire.....	2.36	1.50 (1902)	.54	9
Gatun.....	2.33	4.53 (1889)	.82	29
*Juan Mina.....	3.23	1.39 (1911)	.90	4
Alhajuela.....	2.26	3.71 (1902)	.71	13
*El Viga.....	2.01	4.88 (1902)	2.03	6
Frijoles.....	3.04	3.03 (1913)	2.46	3
*Trinidad.....	7.18	5.97 (1910)	2.46	7
*Monte Lirio.....	5.80	8.93 (1910)	3.69	7
Gatun.....	9.95	4.12 (1902)	2.32	10
*Brazos Brook.....	11.29	4.20 (1913)	2.37	8
Colon.....	10.27	6.49 (1892)	1.47	45

* Standard gage at starred stations; readings taken at 5 p. m. Automatic register at unstarred stations; rainfall midnight to midnight.

WINDS.

The following table gives the average hourly wind movement, prevailing direction, and maximum velocities at the different stations for the period from the 9th to the 11th of February, 1915, inclusive, and the average

February wind movement for the years of record:

STATION.	Max. hourly wind movement Feb. 9 to 11, 1915, inclusive.	Av. hourly wind movement for month of Feb.	Prevailing direction.	Maximum velocity Feb. 9 to 11, 1915, inclusive.		
				Miles.	Direction.	Date.
Balboa Heights.	10.4	9.7	N	23	N	11
Pedro Miguel.	5.0	7.2	NW	15	W	9
Gamboa.	6.0	.....	N	23	NE	9
Gatun.	7.4	11.5	N	24	NW	9
Colon.	18.4	15.0	N	33	N	9

The highest velocity that the wind had ever attained at Colon during the month of February since wind records were established at this place (record from 1908 to 1914, inclusive) was 36 miles, from the northeast on February 14, 1910.

TEMPERATURE.

The following table shows the maximum, minimum, and mean temperatures in degrees Fahrenheit for the 9th, 10th, and 11th of February, 1915, at Balboa Heights and Colon, together with the February average for the years of record:

BALBOA HEIGHTS.				
Date.	Max.	Min.	Mean.	Average.
Feb. 9.	85	72	78	.....
Feb. 10.	79	72	76	(81)
Feb. 11.	87	72	80	.....

COLON.				
Date.	Max.	Min.	Mean.	Average.
Feb. 9.	83	73	78	.....
Feb. 10.	78	72	75	(79)
Feb. 11.	84	72	78	.....

CHAGRES RIVER AND GATUN LAKE.

The river started to rise at 11 p. m., on the 9th, from elevation 92.25, and reached its maximum, 110.10, at 9.30 a. m., on the 11th. The most peculiar feature of the freshet was the number of crests reached in the 48 hours; five distinct crests were recorded, ranging in height from the first, at elevation 94.85, to the fifth, at elevation 100.10. As to the number of crests, this rise compares most closely to the freshet of November 27-29, 1912, when three crests were recorded. The November freshet was much larger, however, having a maximum momentary discharge of 54,000 cubic feet per second. The maximum momentary discharge of this freshet was 20,800 cubic feet per second; the maximum discharge for 12 hours was 17,679 cubic feet per second and 9,134 cubic feet per second for the 48 hours.

Since records have been kept at Alhajuela,

one other freshet of importance has been reported during the month of February; it occurred February 12-13, 1911.

It was a much larger rise, with only one crest, and having a maximum momentary discharge of 38,500 cubic feet per second.

The rainfall at Alhajuela and Vigia compares rather closely for these two rises, that of 1915 being a little larger.

The elevation of Gatun Lake was 87.10 feet when the rise began and had there been no other source of supply the amount which passed Alhajuela in these 48 hours, 1,578,355,200 cubic feet, would have been sufficient to raise the lake to 87.46.

So much other water was coming into the lake during the period that the spillway had to be operated far in excess of the calculations made at Alhajuela. During these 48 hours, the spillway gate operations totaled one gate for 110 hours and 14 minutes at 13,200 cubic feet per second, or an aggregate of 8,209,000,000 cubic feet. This shows that about five times the amount of water passing Alhajuela was let out through the spillway. The elevation of the lake at the end of this 48-hour period was 86.95.

ATMOSPHERIC PRESSURE.

Very little change in atmospheric pressure occurred during the presence of the storm, with the exception of the well marked diurnal change which is a characteristic of tropical regions, and no change in barometric pressure indicated its approach. There was, however, a slight fall of the barometer for a few days after the storm had passed. Ordinarily, these storms or "northers" are accompanied or followed by a considerable rise in pressure, but no marked pressure change precedes or indicates their approach.

NORTHERS.

The only storms of wide extent that visit the Isthmus are the so-called "northers" that occasionally reach as far south as Colon, during the period from November to April—the season of the northerly trade winds. They are occasioned by an anti-cyclonic or high pressure area over the Gulf and West Indies, there being a strong steady blow from this region of high barometric pressure toward the equatorial belt of low pressure. The principal damage to shipping interests results from the heavy swell and high waves that accompany the storms, and not from any extremely high maximum wind velocities.

The following table gives a list of "northers," the date of occurrence, and direction of

the wind, together with remarks as to the damage done by the storms:

NORTHERS FROM FRENCH RECORDS.				
Year.	Month.	Direction of wind.	Vessels wrecked.	Remarks.
1857	November	N.N.W.	7	Much damage to wharves.
1861	October 22	N	3	.....
1865	October	S.W.	.....	Lasted 6 hours; damage, \$300,000.
1872	February	N.N.W.	5	Wharves damaged.
1873	Jan. 18-19	N.N.W.	6	Wharves 5 and 6 partly destroyed; 2 vessels damaged at wharves.
1878	December 8	N.N.W.	4	Royal Mail str. <i>Para</i> resisted with 2 anchors and 90 fathoms of chain, under strong steam.
1879	Nov. 21-24	N.	4	Wharves 4 and 6 damaged.

The following table gives other "northers" of which we have knowledge, together with dates and remarks:

Year	Month.	Remarks.
1885	Dec. 2 to 6	14 vessels said to have been stranded.
1905	Jan. 26 to 27	No damage reported.
1906	December. . .	Five days duration, last week in December.

In the following table are listed those storms in which the wind averaged 18 or more miles an hour for a period of at least 21 hours, with a maximum velocity exceeding 26 miles an hour. This information is taken from Cristobal and Colon records from December, 1907, to February, 1915:

DATES.	Maximum Wind Velocity.
December 25, 1907 to Dec. 23, 1907.	23 miles—N.E.
Dec. 31, 1907 to Jan. 3, 1908.	27 miles—N.E.
Jan. 14, 1908 to Jan. 15, 1908.	31 miles—N.E.
Feb. 2, 1908 to Feb. 4, 1908.	23 miles—N.E.
Feb. 20, 1908 to Feb. 22, 1908.	31 miles—N.E.
Mar. 6, 1908 to Mar. 12, 1908.	29 miles—N.E.
April 4, 1908 to April 10, 1908.	32 miles—N.E.
Jan. 8, 1909 to Jan. 9, 1909.	31 miles—N.
Jan. 31, 1909 to Feb. 1, 1909.	32 miles—N.
Feb. 17, 1909 to Feb. 18, 1909.	23 miles—N.
Jan. 16, 1910 to Jan. 19, 1910.	27 miles—N.
Jan. 30, 1910 to Jan. 31, 1910.	31 miles—N.
Feb. 13, 1910 to Feb. 15, 1910.	36 miles—N.W.
December 3, 1910.	33 miles—N.
Feb. 10, 1911 to Feb. 18, 1911.	27 miles—N.E.
Feb. 23, 1911 to Feb. 24, 1911.	30 miles—N.
March 6, 1911 to March 7, 1911.	26 miles—N.E.
Apr. 14, 1911 to April 17, 1911.	28 miles—N.
Nov. 30, 1911 to Dec. 2, 1911.	34 miles—N.E.
Dec. 23, 1911 to Dec. 31, 1911.	34 miles—N.E.
Jan. 5, 1912 to Jan. 6, 1912.	32 miles—N.E.
Jan. 21, 1912 to Jan. 25, 1912.	27 miles—N.
Feb. 27, 1912 to March 5, 1912.	33 miles—N.E.
March 14, 1912 to March 21, 1912.	23 miles—N.E.
April 23, 1912 to April 27, 1912.	33 miles—N.E.
Nov. 18, 1912 to Nov. 20, 1912.	33 miles—N.W.
Feb. 10, 1913 to Feb. 12, 1913.	32 miles—N.E.
March 7, 1913 to March 9, 1913.	31 miles—N.E.
March 17, 1913 to March 19, 1913.	36 miles—N.E.
March 22, 1913 to March 24, 1913.	31 miles—N.
Dec. 27, 1913 to Dec. 28, 1913.	32 miles—N.E.
Feb. 6, 1914 to Feb. 10, 1914.	28 miles—N.E.
Feb. 15, 1914 to Feb. 18, 1914.	23 miles—N.E.
March 8, 1914 to March 14, 1914.	35 miles—N.E.
March 22, 1914 to March 28, 1914.	23 miles—N.
April 22, 1914 to April 23, 1914.	29 miles—N.
Feb. 9, 1915 to Feb. 11, 1915.	33 miles—N.

The storms listed above cannot all be considered as "northers" in the true sense of the word, although they are all a direct result of the interchange of air which takes place between an area of high barometric pressure over the Gulf and West Indies and the equatorial belt of low atmospheric pressure.

The steamer *Tongking*, through the Canal on February 18, was taking a cargo of fuel oil from California to Denmark. Preceding this voyage, she had delivered sesame seed at San Francisco from Shanghai.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Archer, Isaiah	24944	Barbados	Panama	Transp'n. Div.	Feb. 17, 1915.
Harvey, William	956	U. S. A.	Cristobal	Mechanical Div.	Feb. 17, 1915.
Leon, John	61902	Martinique	Golden Green	Div. of Lock Op.	Feb. 13, 1915.
Slagh, Chanda	58360	India	Colon	Div. of Ter. Con.	Feb. 8, 1915.
Zephie, Abraham	92600	St. Lucia	Colon	Electrical Div.	Feb. 13, 1915.

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

CANAL WORK IN JANUARY.

Monthly Report of the Governor to the Secretary of War.

BALEOA HEIGHTS, C. Z., February 17, 1915.
The Honorable the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of operations on the Isthmus for the month of January, 1915:

Department of Operation and Maintenance.

Lock operation and maintenance—All fender chains have been received, and their installation is complete with the exception of four at Miraflores Locks. Telephone systems were completed at Gatun and Pedro Miguel Locks, and 85 per cent completed at Miraflores Locks. The work of grading the dams and backfill at Pedro Miguel and Miraflores Locks continued. Ninety-eight lockages were made at Gatun, 98 at Pedro Miguel, and 97 at Miraflores.

Electrical Division—The output of the power plants was: Gatun hydroelectric station, 3,143,630 kilowatt hours; Miraflores steam station, 83,110 kilowatt hours; Balboa power plant, 2,228 kilowatt hours.

The output of the Balboa air compressor plant was 207,096,712 cubic feet of free air compressed to 105 pounds.

The west side of the transmission line between Gatun and Miraflores was put in service. Electric construction work on the substation at Darien for the high power naval radio station, and for the substation at Gamboa for the new permanent pumping plant of the Municipal Engineering Division progressed favorably. Work on the underground conduit systems in the Ancon-Balboa district, at Gatun, and in the Cristobal district, and on various new buildings, continued during the month.

Municipal Engineering Division—In addition to the work incident to maintenance, operation, and repairs, work was in progress on the following items of construction: Water supply system for Toro Point; construction of Atlantic and Pacific fuel oil handling plants and the installation of oil pipe lines; 300,000-gallon concrete reservoir at Gatun; water and sewer lines and roads for the Coast Artillery post on Balboa dump; locks repair shop and office buildings at Miraflores and Pedro Miguel; concrete arch bridge from Miraflores purification plant to the spillway; Balboa townsite; new Panama waterworks; installation of pumps, etc., at the Gamboa pumping station; and the completion of installation of valves, fittings, and pipe connections on the Miraflores-Gamboa pipe line.

Meteorology and hydrography—Rainfall was below normal everywhere excepting at Juan Mina, Frijoles, Balboa, and Balboa Heights. At the latter two points the rainfall was double the January normal. Monthly totals ranged from 3.63 inches at Frijoles to 0.39 inches at El Vigia. The maximum precipitation recorded in any one day was 1.70 inches, at Balboa on January 6. The estimated rainfall over the Chagres River basin figures 35 per cent below the average, or 2.51 inches against a 14-year average of 3.84 inches. Gatun Lake remained practically stationary at plus 86.93 during the month.

Slight seismic disturbances were recorded on the 13th, 23rd, and 28th of the month. No damage resulted from any of the tremors.

Division of Terminal Construction.

PACIFIC TERMINALS.

Shops—Work performed in connection with

the construction of the permanent shops included that in connection with the dry kilns in building No. 10, a temporary roadway to give access to the office building, and various other small finishing-up jobs.

Dry dock—Hand excavation was employed, and 5,786 cubic yards of material were removed. There were placed during the month 18,638 cubic yards of concrete, 14,496 cubic yards of which were mass concrete, and 4,142 cubic yards reinforced.

Coaling plant—All berm crane piers were completed to elevation 7.6, which is as far as this work could be carried until the steel decking has been erected; 423.5 tons of structural steel were erected on the berm cranes.

Quay wall and pier—Two caissons were sunk to rock and 10 were filled with concrete, making 101 caissons filled to date. Six panels of floor slab were poured. The total penetration amounted to 224 lineal feet. The total excavation in cylinders was 235 cubic yards. Tracks for both sides of pier No. 1 were laid to connect with the Panama railroad tracks.

Fuel oil plant—Three caissons were filled with concrete on crib No. 1, and the forms were built and reinforcement placed in the bracers for the four adjacent caissons. All of the caissons for the crib are now in place with the exception of two bracing caissons at the back side, and six caissons have been filled with concrete, 311 cubic yards being poured.

Sosa Hill Quarry—Four steamshovels excavated 82,542 cubic yards, all of which were classified as rock.

ATLANTIC TERMINALS.

East breakwater—In the construction of trestle, 5,840 lineal feet of piling were driven; the double trestle was extended 96 feet; and 384 lineal feet of track were laid. The total fill in place at the end of the month was 440,812 cubic yards.

Coaling plant—About 500 feet of trestle on the east side was removed to make way for erection of wharf deck steel. The filling of caissons under the south 500 feet of unloader wharf was completed and filling of caissons for the north section of wharf was begun. The caisson sinking under the north section of the unloader wharf was 50 per cent completed. About 390 feet of permanent bridge track were laid on the east wall and 150 lineal feet on the west.

Floating cranes—The wrecked jib of the crane *Ajax* was dismantled, and a new jib was ordered by cable, and will be manufactured at the home works of the contractor. The reinforcement of the jib of the crane *Hercules* was completed and the crane was offered for test on January 27. At the end of the month the tests had not been completed.

Division of Canal Transportation.

Ninety-eight vessels passed through the Canal in January, 51 northbound and 47 southbound. Collections for tolls amounted to \$376,810.88; for pilotage, \$3,074; for tug service, \$770.90; for launch service, \$60; for services of deck hands, etc., \$848; or a total of \$381,553.78.

Eighteen vessels were measured and 77 inspected to see whether their certificates conform to the rules.

Dredging Division.

The total excavation for the month, in-

cluding earth, rock, gravel, and sand, was 1,222,702 cubic yards, as follows:

	Cu. Yds.
Miraflores Locks to the sea.....	3,253.4
Balboa inner harbor.....	286,742
Culebra Cut.....	613,193
Sea to Gatun Locks.....	219,584
Approach channel, Cristobal.....	7,429
Inner harbor, Cristobal.....	9,425
Chagres River gravel and sand.....	32,000
Breakwater, Limon Bay.....	21,700
Breakwater harbor, Limon Bay.....	5,125

Total..... 1,222,702

The hydraulic grader was engaged during the month in digging drainage ditches and in washing down the silt on the east bank of the Canal opposite Culebra.

The destruction of water hyacinths continued, 3,350 square yards of plants being poisoned, and 1,500 square yards pulled up.

Mechanical Division.

An increasing volume of work in this division necessitated a net increase of 17 men on the gold roll force, and 51 on the silver roll force.

Shop orders authorized during the month numbered 988; those left over from the previous month, 403; those completed during the month, 852, and those carried forward into February, 537. The output of the foundry was 82,326 pounds of iron, 27,250 pounds of steel, and 13,653 pounds of brass. Hasting was done on 5,442 pieces of equipment, and shop and field repairs were made on 7,746 cars.

The fuel oil plant at Balboa was placed in partial operation by this division during the month.

Building Division.

Work completed during the month included the last of the two-family houses at Balboa; the medical storehouse at Ancon, and the commissary at Ancon, and the commissary warehouse at Cristobal. Work practically completed included the fire station, motor bus house, and the foundations for the oil house at Balboa. Work was begun on the Balboa dispensary on January 2. The removal of buildings for the insane asylum at Corozal continued, 10 of the 17 houses being under roof at the end of the month. The work for the Army at Culebra was over 50 per cent completed at the end of the month.

Supply Department.

The force report for the half-month ended January 20 showed a total of 24,564 employees of The Panama Canal and Panama Railroad Company, of whom 3,701 were white Americans and 20,863 were laborers. Of the latter, approximately 405 were Europeans and the remainder West Indian negroes. The total force was reduced 402; Americans 43, laborers 359.

The occupants of Government quarters numbered 7,090 white Americans, of whom 3,805 were men, 1,591 women, and 1,694 children; 8,598 West Indians, of whom 5,615 were men, 1,256 women, and 1,727 children.

The value of material received during the month was \$452,575.20. It came forward in 33 steamers; the total weight of the cargo, exclusive of lumber and piles, was 17,530 tons. Some of the principal items were 1,875,750 feet, board measure, of lumber for stock and the Mechanical Division, 1,593 piles, 197,066 bags of Portland cement, and 1,163 untreated cross ties.

Health Department.

General—No case of yellow fever, smallpox, or plague originated on or was brought to the Isthmus during the month. Thirty-nine

deaths occurred in the Canal Zone. The death rate for disease for the Canal Zone, based on a population of 31,480, was 13.72 per thousand, as compared with 12.37 for the preceding month and 16.34 for the corresponding month of last year.

Employees—The health of employees continued good. The number of names on the rolls for the preceding month was 35,618. On this basis, the admissions to hospitals and quarters, 988, gave a rate of 332.87 per thousand, as compared with 331.27 for the preceding month and 519.62 for the corresponding month of last year. The admission rates to hospitals and quarters for malaria were: Whites, 132.16; blacks, 44.93; Europeans, 190.73; Americans, 121.50. The total number of deaths from all causes was 17. Of these, 13 died from disease, or 4.38 per thousand, as compared with 3.64 for the preceding month and 4.87 for the corresponding month of last year.

Accounting Department.

The cash balance in Canal construction appropriations on January 31 was \$12,534,325.96; in the fortification appropriations, \$3,799,511.78. The pay rolls for January, exclusive of Army quarters, storehouses, fortifications, etc., amounted to \$924,351.84, the fortification roll to \$42,703.45, and the Army quarters and barracks roll to \$31,712.10. Payments by the Disbursing Clerk in Washington amounted to \$1,215,442.94, and by the Paymaster on the Isthmus, \$1,404,596.92. The latter also paid \$219,640.27 to the Panama Railroad Company on account of collections for commissary books. Collections on the Isthmus amounted to \$1,305,794.40, of which \$651,955.23 were repaid to appropriations, \$265,736.51 were trust funds, and \$385,102.66 were covered in to the Treasury as miscellaneous receipts. Of the miscellaneous receipts, \$376,810.83 were collected on account of tolls, as compared with \$398,111.49 for December. Deposits in the amount of \$125,826.57 were made with the Assistant Treasurer to be applied in payment of tolls and other charges. Canal Zone revenue collections and miscellaneous funds received amounted to \$217,652.69, and disbursements under the same heading were \$327,083.07.

Executive Department.

DIVISION OF CIVIL AFFAIRS.

Customs and licenses—One hundred and seventy-eight licenses of all kinds were issued during the month. Thirteen estates were settled, having a total value of \$735.20. At the port of Balboa 84 vessels entered and 84 cleared; and at Cristobal 111 vessels entered and 110 cleared.

Postal se vice—Postmasters remitted on account of stamp sales, second class mail collections, postage due collections, and box rent receipts, \$5,588.90. The money orders issued aggregated \$311,174.26. The fees collected thereon amounted to \$983.84. Of the total value of money orders issued, \$120,800 represents the value of deposit orders issued without fees. Deposit orders to the value of \$65,520 and postal savings certificates to the value of \$44,669 were paid. Balance of postal savings deposits on hand at the end of the month, represented by the unpaid certificates and deposit money orders, aggregated \$708,467, as compared with \$697,796 at the close of the previous month.

POLICE AND FIRE DIVISION.

Three hundred and seventy-six arrests were made during the month. Of these, 341 were males and 35 females. Forty-eight convicts were confined in the penitentiary at the close of the month. Eleven persons were deported. Of this number, eight were convicts who had completed their sentences in the penitentiary.

Fifteen fires occurred during the month. The damage to Panama Canal and Panama railroad property amounted to \$82.50.

COURTS.

In the District Court, 10 civil, 31 probate, and 30 criminal cases were settled; 14 civil, 22 probate, and 24 criminal cases were filed, and 110 cases of all kinds were pending at the close of the month. In the magistrates' courts, 34 civil and 365 criminal cases were tried.

DIVISION OF SCHOOLS.

The total enrollment in the Canal Zone schools for the month was 1,437 for the white schools, and 1,322 for the colored schools. In the white schools the net enrollment was 1,074; the average number belonging, 981.8, and the average daily attendance, 946.6; in the colored schools the net enrollment was 1,250, the average number belonging, 905.7, and average daily attendance, 795.6.

Panama Railroad.

Cargo handled at the Colon and Balboa agencies aggregated 135,791 tons, 15,443 tons of which were handled through the Canal in steamers of the Panama Railroad Steamship Line, as follows: From New York to Balboa, 2,408 tons; from Colon to Balboa, 3,423 tons; total, 5,831 tons; from Balboa to New York, 5,313 tons; from Balboa to Colon, 4,277 tons; total, 9,612 tons; grand total, 15,443 tons.

Trestle work on the new terminal dock was 94 per cent completed; steel cylinders, 53 per cent completed; excavation in cylinders, 25 per cent completed, and 13 per cent of the total amount of concrete required was placed in the cylinders. A contract was entered into with the United States Steel Products Company for the delivery and erection of material for the steel floor of the dock.

Respectfully,

GEO. W. GOETHALS,

Governor.

Cement Coating to Protect Steel in Sea Water.

An experiment was concluded recently which was designed to show something of the degree of protection afforded steel against the effects of sea water by coating the steel with cement. Two steel plates which had been coated with the mortar and immersed for three years near the dry dock at Mount Hope were examined carefully and photographed. The plates were each six by 14 inches by half an inch thick, and had been cleaned by a sand blast before coating. One plate was coated with cement mortar one inch thick on one side and 1½ inches thick on the other. The other plate was coated ½-inch on both sides.

Examination showed, with respect to the 1½-inch coating, that practically the entire surface beneath had rusted, rather lightly, with a uniformly distributed coat. Under the 1-inch coating the degree of rusting was practically the same as under the 1½-inch coating. Beneath the ½-inch coating the rust was appreciably heavier and deeper than for either the 1-inch or 1½-inch coating, and in places the characteristic lamination of advanced rusting had begun to appear.

The conclusions drawn from the experiment were that the ½-inch coating was not as effective as either of the others; that the 1-inch did as well as the 1½-inch; and that none of the coatings afforded sufficient protection to steel to dispel apprehension as to the permanence of structures dependent on such protection, but that the life of such structures would be very considerably prolonged by coating with cement only half an inch thick.

New Post Named "Camp Gaillard."

By order of the Adjutant General the new Army post at Culebra, to be occupied by the Twenty-ninth Infantry, has been named "Camp Gaillard," in honor of the late Lieutenant David DuB. Gaillard, Corps of Engineers.

Lieutenant Colonel Gaillard was a member of the Isthmian Canal Commission from the early part of 1907 until his death, on December 5, 1913. From July 1, 1903, until July, 1912, when he was compelled to leave the Isthmus on account of ill health, he was the head of the Central Division, in charge of the excavation of Culebra Cut.

WEATHER CONDITIONS, CANAL ZONE, JANUARY, 1914.

Rainfall for the month of January was below normal everywhere except at Juan Mina, Frijoles, and along the extreme Pacific coast. On the Pacific coast, the rainfall for the month was double the average amount. Monthly totals ranged from 7.63 inches at Frijoles to 0.39 inches at El Vigia. The maximum precipitation recorded in any one day was 4.70 inches, at Balboa on the 6th. The estimated rainfall over the Chagres River basin figures 35 per cent below the average, or 2.51 inches against a 14-year average of 3.84 inches.

Average air temperatures at both coast stations were the highest of record for the month of January, the daily excess being approximately 1° F., on the Pacific coast and 2° F., on the Atlantic coast. The relative humidity was above normal, while the atmospheric pressure and daytime cloudiness were slightly below the average. The wind movement was slightly above normal on the Pacific coast and slightly below normal on the Atlantic coast.

No fogs were observed during the month at either coast station. The average number of nights with fog at interior stations was five. Of the fogs observed, 26 per cent were dissipated by 6.30 a. m., 83 per cent by 7.30 a. m., and all fogs lifted or were dissipated by 9 a. m.

Elevations of Gatun Lake (feet above mean sealevel): Mean for month, 86.98; maximum, 87.06, on January 1; minimum, 86.00, on January 19; evaporation from lake surface, 6,398 inches.

Following is a summary of the month's conditions, as recorded at the Atlantic and Pacific entrances to the Canal:

STATION.	Pressure (reduced to mean of 24 hourly.)	Temperature.					Mean relative humidity.	Precipitation.			Wind.			
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days of .01 inch or more.	Total movement (miles).	Prevailing direction.	Max. velocity in (miles.)	Direction.
Colon.	29.842	81.8	87	Jan. 6	74	Jan. 28	86	3.41	3.9	16	9,494	N.	30	N E
* Balboa Heights ...	29.828	81.5	91	Jan. 20	67	Jan. 31	81	2.12	1.0	6	7,024	N.	29	N.

*Formerly Ancon.

OFFICIAL CIRCULARS.

Charges for Rent, Fuel, and Electric Current.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., February 24, 1915.

CIRCULAR NO. 627-3:

1. In conformity with the President's order of January 15, 1915, employees of The Panama Canal and Panama Railroad Company on the Isthmus of Panama will be charged for rent, fuel, and electric current on and after March 1, 1915.

RENT.

2. The charge for rent is based upon the value of the quarters occupied, as directed in the order referred to, which has been published as Circular No. 601-37. The valuation of the quarters is based upon the size and location of the apartments, class of construction, and such extra facilities as hot-water installations, bath tubs, laundry tubs, etc., with a percentage of increase for two-family houses and cottages.

3. The general rule adopted is to fix a value for the floor space contained in each apartment, the floor space in the rooms being considered two times as valuable as porch floor space. If the rooms are in a two-family house 10 per cent is added to this value; if in a cottage or one-family house 33 1/3 per cent is added to this value, except that this rule is not applied to certain French one-family houses which are not especially desirable for quarters. A fixed charge of \$2 is added to all apartments to cover the collection of garbage, furniture renewals, etc., and this charge is doubled for the larger houses of the official type. A charge of 50 cents per month is added for houses containing hot-water installations and laundry tubs. Some slight variations from the figures thus obtained have been made to cover desirable or undesirable features of the various quarters. The charge for garbage collection, janitor service, and cleaning materials for bachelor quarters has been figured at cost.

4. The figures thus obtained fix the rental for type-14, four-family houses at approximately \$6 per month per apartment; for type-17 cottages, approximately \$10 per month; bachelor quarters figure up approximately \$4 to \$6 for each room per month, about half of which is for janitor service. The rental for family quarters increases according to the size of the house and the facilities afforded, up to \$50 per month for the official-type houses. A complete schedule of rents for each house occupied by gold employees will be published in THE CANAL RECORD.

5. Policemen, firemen, and nurses, who are required for the good of the service to live in police stations, fire houses, and nurses' quarters, respectively, will be charged one-half of the regular rates. Policemen and firemen who pay rent for family quarters and are required to sleep at their stations will not be charged rent for their station quarters.

6. Employees occupying gold quarters will be notified within a few days by the district quartermasters of the amount to be charged for rent and as soon as possible of the amount to be charged for electric current. Employees may also obtain this information from the table to be published in THE CANAL RECORD. Employees will be expected to pay their rent and electric light bills promptly after the initial notice without further monthly notice where the bills are for the same amounts each month. Remittances should be made to the Collector of The Panama Canal, preferably by postal money order, or by paying cash at the Collector's office in the Administration Building at Balboa Heights or the deputy collector's office in the old Panama railroad office building at Colon. If bills are not paid by the close of business on the 15th of the month, a penalty of \$1 will be charged and the assignment to quarters may be canceled if circumstances are such as to warrant such action.

7. When quarters are vacated a refund for the fractional part of the month will be made to the employee of one-thirtieth of the amount paid for rental and electric current for each day remaining in the month. Refunds will be made by the Collector or deputy collector upon presentation of the receipt for the amount paid, together with a release from the quarters signed by the district quartermaster. Refunds will not be made for fuel, but employees may dispose of any fuel on hand to other employees if desired.

8. Rent and light charges will begin on the day the quarters are accepted, and the charge for the fractional part of a month will be one-thirtieth of the regular rate for each day remaining in the month.

9. Full rental and electric-light bills will be charged for family quarters during any period that they are not occupied by the employee to whom they are assigned. During such absence, not to exceed the time which is authorized for retention of quarters, the employee may sublet his quarters to any other gold employee but will not be permitted to charge more than the established rates for such occupancy plus not to exceed 25 per cent

if the sublessee is permitted to use the personal property and household utensils of the employee by whom the quarters are regularly occupied.

FUEL.

10. Coal will be sold by the commissaries at 30 cents per 100 pounds, delivered to the quarters in sacks, to be paid for by coupons the same as other commodities sold by the commissaries. Kindling wood will be sold in the same way, at 10 cents per sack.

ELECTRIC CURRENT.

11. The occupants of bachelor quarters will be charged 50 cents per month each for electric lights.

12. The occupants of family quarters containing four 16-candle power equivalents or less will be charged at the rate of 25 cents per month per equivalent, with a minimum charge of 50 cents per month.

13. The occupants of family quarters containing over four 16-candle power equivalents will be charged according to the following formula: \$1 plus 6 cents each for the total number of 16-candle power equivalents.

14. Electric appliances, such as irons, heaters, etc., will be charged for in addition to lighting at the present established rates.

NONEMPLOYEES.

15. A surcharge will be added to the schedule of rentals provided herein for quarters occupied by others than employees of The Panama Canal or Panama Railroad Company.

GEO. W. GOETHALS,

Governor, The Panama Canal,

President, Panama Railroad Company.

The schedule of rents referred to in the above circular, is published as a supplement to this issue of THE CANAL RECORD for distribution on the Isthmus only.

Act of Congress.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., February 12, 1915.

CIRCULAR NO. 600-13:

The extracts from an Act of Congress quoted below are published for the information of all concerned.

GEO. W. GOETHALS,

Governor.

AN ACT making appropriations to supply urgent deficiencies in appropriations for the fiscal year 1915 and prior years, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, to supply urgent deficiencies in appropriations for the fiscal year 1915 and prior years, and for other purposes, namely:

* * * * *

DEPARTMENT OF STATE.

Payment to Panama: To enable the Secretary of State to pay to the Government of Panama the third annual payment, due on February 26, 1915, from the Government of the United States to the Government of Panama under Article 14 of the Treaty of November 18, 1903, \$350,000.

* * * * *

PANAMA CANAL.

The balances of the appropriations heretofore made under the heading "Fortifications, Panama Canal," are hereby consolidated so as to constitute one fund in the Treasury, to be disbursed and accounted for under the appropriation title of "Panama fortifications" for the object specified in the several appropriation Acts and in accordance with such allotments as may be authorized by the Secretary of War.

Approved, January 25, 1915.

Efficiency Report for Gold Employees.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., February 15, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Now that the force is becoming permanently established it is deemed advisable to rate the efficiency of each gold employee annually, about the first of the year. An efficiency report, Form PC. 375, has been prepared and is directed that as soon as possible one copy of this report be forwarded to this office to be filed with the personnel record of each gold employee.

The blank should first be given to the employee, who will fill out the record of training and experience on the last page of the report, and the employee will then give the blank to whatever superior is designated by the head of the division to report on his efficiency, and his superior will render the report required on page 1 of the blank.

The head of the division will furnish the information

required on page 2 of the form and will then have the report forwarded to this office for record.

Some of the information called for is doubtless already on file in this office, but it is directed that none of the blanks be left unfilled on that account.

Owing to delay in receiving these blanks from the printer, they were not ready to send out at the beginning of the year and it is directed that these reports be furnished as soon as possible. A supply of the forms may be obtained by telephoning the storekeeper in this building, telephone No. 170.

GEO. W. GOETHALS,

Governor.

Invoicing of Property for Fuel Oil Handling Plants.

THE PANAMA CANAL,

OFFICE OF THE AUDITOR,

BALBOA HEIGHTS, C. Z., February 16, 1915.

CIRCULAR NO. 81:

Effective at once, nonexpendable property drawn from storehouses, or transferred from divisions, for use in the construction or operation of Panama Canal fuel oil handling plants will be invoiced to the Superintendent of the Mechanical Division.

Mr. F. C. Nichols will cease to be an accountable official of The Panama Canal upon effecting a transfer of his accountability to Mr. D. C. Nutting.

H. A. A. SMITH,

Auditor, Panama Canal.

Approved:

GEO. W. GOETHALS,

Governor.

Marking and Painting Hand and Push Cars.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., February 11, 1915.

CIRCULAR NO. 665-1:

1. The standard color for hand and push cars in the service of the several departments and divisions of The Panama Canal will be box car red, while yellow will be the standard color for hand and push cars in service of the Panama railroad, as heretofore.

2. As a distinguishing mark, the several departments and divisions will use the white diamond with initial showing division to which assigned, as well as numbering same.

3. Cars painted other than directed by this circular will be changed to standard colors as soon as practicable.

GEO. W. GOETHALS,

Governor, The Panama Canal,

President, the Panama Railroad Company.

Proposals for Earth Fill, Margarita Island.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., March 1, 1915, and then opened, for placing approximately 200,000 cubic yards of fill on certain low areas on Margarita Island indicated on a map in the office of the Fortification Division, Balboa Heights. Bids must be at a price per cubic yard for the entire work. Form of proposal, contract, and specifications may be obtained upon written application to the office of the Chief Quartermaster. Any further information may be obtained upon application to Lieut. A. H. Acher, Assistant Engineer, Fortification Division. Anyone desiring to visit the location will meet Lieutenant Acher at the Panama railroad station at Colon at 2 p. m., on Thursday, February 25, and will be taken to the island. Bids must be accompanied by post-office money order, certified check, or cash, for 15 per cent of the amount bid. The Panama Canal reserves the right to reject any or all bids. Bids should be marked "Proposal for earth fill, Margarita Island," and addressed to the Chief Quartermaster, Balboa Heights, C. Z.

Cars Loaded with Waste Material.

THE PANAMA RAILROAD COMPANY,

OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., February 11, 1915.

CIRCULAR NO. 25:

Heads of departments—When cars are loaded with waste material, scrap lumber, etc., which are to be switched to the dump at Balboa for burning or to be wasted, they should be tagged, showing the division loading same and the disposition required, in order that the department for whom this waste material is handled may be billed for its proportion of the labor charges necessary to handle this work.

Will you please see that this office is notified of all shipments of this kind so that we may arrange for its disposition.

The above is in accordance with instructions from the Acting Governor.

C. H. MOTSETT,

Superintendent.

COMMISSARY DEPARTMENT.

Notice to Patrons.

Commissary patrons are informed that milk and cream are bottled under ideal conditions at the Cristobal depot each afternoon, for sale in retail Commissaries on the following day. The date on which it is bottled is stamped on the bottle cap and patrons are requested to decline any bottle which bears a date earlier than that of the previous day.

The demand for "choice beef" having fallen off to a negligible quantity, this expensive quality will not be kept in retail commissaries on and after March 1, 1915. A quantity of "choice beef" will be kept on hand in the cold storage plant at Cristobal and all orders placed with retail commissaries before 11 a. m., will be shipped from Cristobal for delivery the following morning.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective February 25, 1915:

MISCELLANEOUS.	Price.
Brains, calves', per pound.....	12
Kidneys, beef, per pound.....	10
Livers—Beef, per pound.....	11
Calf, each.....	65
half, each.....	33
Oysters, fresh, per pkt.....	30
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	13
Frankfurter, per pound.....	13
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	10
Pork, per pound.....	17
Sweetbread, beef, per pound.....	10
Eggs, fresh, per dozen.....	13
per 1/2 dozen.....	17
Bluefish, per pound.....	15
Halibut, fresh, per pound.....	16
Salmon, per pound.....	6
Yeast, per pound.....	31
per cake.....	2

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound..	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	20
Half, per pound.....	22
Sliced, per pound.....	28
Butt end, per pound.....	12
Whole, boiled, per pound.....	30
Half, boiled, per pound.....	32
Sliced, boiled, per pound.....	38
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	29
Whole piece, per pound.....	28
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues (3 to 5 pounds), per pound.....	24
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound	29
Chickens—Fancy, roasting, corn fed, per pound	24
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	32
Broilers, milk fed, per pound.....	29
Broilers, corn fed, per pound.....	27
Turkeys, per pound.....	28
Geese, (10 to 14 pounds), per pound.....	23
Squabs, each.....	30
Partridges, each.....	1.00
Grouse, each.....	1.00
Iheasants, each.....	1.35
Mallard ducks, (2 to 2 1/2 pound ls), each.....	2.35

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	48
Sheffield Farms, extra fancy, per lb.....	58
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	21
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield, per quart.....	**15
Ferrellac, bottle.....	**25
Ice cream, quart.....	125
1-gallon.....	150
Cream, Sheffield Farms, quart.....	**23
pint.....	**19
1/2 pint.....	**12

VEGETABLES.

	Price.
Cauliflower, per pound.....	7
Beets, per pound.....	2
Celery, per head.....	7
Cabbage, per pound.....	2
Carrots, per pound.....	2
Lettuce, per pound.....	*3
Onions, per pound.....	2
Parsley, per pound.....	*13
Parsnips, per pound.....	3
Peppers, per pound.....	18
Potatoes, white, per pound.....	2
sweet, tropical, per pound.....	2
Spinach, per pound.....	*13
Turnips, per pound.....	1 1/2
Tomatoes, per pound.....	11
Squash, per pound.....	2 1/2
Yams, tropical, per pound.....	1 1/2

FRUITS.

Apples, per pound.....	2 1/2
Apples, fancy, per pound.....	5
Cranberries, fresh, per pound.....	6
Grapes, per pound.....	14
Grape fruit—American, each.....	5
Tropical, each.....	3 1/2
Lemons, per dozen.....	9
Limes, per 100.....	64
Oranges—American, each.....	2
Tropical, per dozen.....	12
Coconuts, each.....	5
Bananas, per bunch.....	38
Bananas, each.....	1 1/2
Apples, evaporated, per pound.....	11
Apricots, evaporated, per pound.....	13
Pears, evaporated, per pound.....	23
Tangerines, each.....	1 1/2
Pineapples, Cuban, each.....	7
Figs, dried, per pound.....	17

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

† Sold only from commissaries; no orders taken for delivery.

§ Not less than 1/2 lam or 1/2 shoulder of fresh pork will be sold.

Changes in Commissary Price Book.

THE PANAMA CANAL,

SUPPLY DEPARTMENT,

CRISTOBAL, C. Z., February 15, 1915.

BULLETIN No. 61:

To all concerned—The following changes and corrections are to be made in price book No. 9:

Page 10—Toffee, Corona, large size, 13 cents to five cents.

Page 23—Salmon bellies, per pound, 16 cents to 13 cents.

Above two items to be eliminated after present stock is exhausted.

Page 46—Gherkins, sour, 14 oz. bottle at 24 cents. Correct to read 18-ounce bottle.

Page 47—Spanish olives, Queen, in two or 10-gallon kegs; may be retailed by the quart at 34 cents.

Page 57—Franco-American soups, pints, 16 cents to 10 cents. Franco-American soups, quarts, 27 cents to 15 cents. These two items to be eliminated after present stock is exhausted.

Page 59—Paprika, C. & B.; eliminate C. & B.

Page 84—Add powder puffs, stock number 7731, each 29 cents. See price change No. 620.

Page 91—Eliminate oil cloth, stock number 5972.

Page 111—Eliminate suiting, worsted, stock number 11233.

Page 118—Eliminate napkins, sanitary, stock numbers 8767 and 8763. These items are correct on page 103.

Page 137—Change price of suiting, stock number 11233, to \$1.85 per yard. See elimination on page 111.

Page 144—Eliminate corsets, stock number 9453.

Page 157—Eliminate Clarke's thread, stock number 2486.

Page 181—Envelopes, stock number 9383, should read per package at six cents instead of per box.

Page 195—Shirts, Geyser & Boxmoor, stock numbers 11583 and 11584; change to read shirts, white dress, thousand plaited.

Page 206—Rubber heels, tan, stock number 21191. Correct to read 1 per pair, instead of each.

Page 266—Bakers, stove, stock numbers 25373 and 25374. Correct to read pokers, stove.

Page 271—Pastry boards, stock number 28311. Correct to read stock number 28331.

Page 306—Hooks, porcelain, stock number 26532. Correct to read hooks, towel.

Page 308—Add bed castors, stock number 35134, each three cents.

Additions to Stock.

Linen, damask, 72", yd.....	86
Shirts, thousand-plaited dress, ea.....	1.70
Shirts, thousand-plaited dress, ea.....	2.85
Heels, rubber, tan, ea.....	27
Knives, boy scout, ea.....	1.00
Caviar, tin.....	40
Knickerbockers, boys', pair.....	78

Socks, infant's, silk lisle, black, pr.....	20
Socks, infant's, silk lisle, white, pr.....	20
Cotton, crochet, Nos. 3, 10, 20, and 40, ball.....	09
Cotton, crochet, Nos. 16 and 25, skein.....	01
Baseballs, National league, ea.....	1.25
Belts, men's cotton, elastic, without buckle, ea.....	11
Hose, men's, lisle, black pr.....	23
Hose, men's, lisle, tan, pr.....	23
Boilers, milk, aluminum, 1-qt., ea.....	1.55
Covers for sauce pans, aluminum, 9 1/2", ea.....	56

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective February 20, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Walnuts, lb.....	23	19
Caviar, tin.....	20	22
Macaroni, lb.....	07	08
Vermicelli, lb.....	07	08
Sugar, granulated, sk.....	32	28
Hair tonic, bot.....	37	42
Burlap, yd.....	18	11
Needles, mitrailleur, case.....	07	09
Ties, bow, ea.....	20	24
Pants, Palm Beach, pr.....	2.30	2.35
Basins, wash, ea.....	26	23
Cages, bird, ea.....	95	1.15
Fitchers, water, ea.....	34	31

Misdirected Letters.

BALBOA HEIGHTS, C. Z., February 23, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts, and may be procured upon request of the addressee:

Cutler, Ralph	Metzger, Miss Elsie
Hyatt, Capt. J.	Thompson, Mrs. Jas. A. (2)
Kenyon, Doctor	Villano, Guglielmo
King, Mrs. Russell Wilson	Wilson, Capt. Charles.

LETTERS UNCALLED FOR, FEBRUARY 16.

Bailey, S. T.	Levine, Philip
Coke, Frank	Lindle, Willie Burr
Colley, David	McNelly, Charles J.
Bonitto, Clifford	Mamod, Borlio Alli
Cyrus, Cornelius	Meninger, Mrs. Cliff
Dunford, Rupert A.	Merrill, Dr. Albert S.
Dyer, James L.	Patterson, C.
Edwards, Shelby	Reisner, Waldo A.
Engelbrecht, Geo. J. T.	Schoenberg, Mrs.
Everett, Dwight W.	Smith, Wm. F.
Hansen, Carl V.	Thernis, Rubin
Higgins, Edw. J.	Tully, Peter
Horan, J. C.	Vernon, Charlotte
Howell, Walter H.	Wheatcroft, W. P.
Isley, Mrs. C. J.	Williams, Hurlbert A.
Judson, Major	Wilson, Harlan
Lauterbach, Leonhard	Wilson, W. C. (2)

Family Quarters.

Application for married quarters on file on January 31, were as follows:

DISTRICT.	List No. 1.	List No. 2.
Ancon.....	20 (9)	350 (117)
Ancon Hospital.....	2 (1)	5
Corozal.....	2	125 (35)
Paraiso.....		178 (21)
Gatun.....		43 (6)
Cristobal.....		117 (25)
Total.....	24 (10)	818 (204)

NOTE—The figures in parentheses show the number of applicants already occupying regular or non-house-keeping family quarters at stations other than those at which applications are filed.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, February 20, 1915:

DAY AND DATE.	STATIONS.				
	Vegia.	Alhajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Feb. 14.....	129 20	94 20	87 14	87 10	54 07
Mon., Feb. 15.....	127 65	93 65	87 15	87 11	54 40
Tues., Feb. 16.....	127 30	93 79	87 11	87 04	54 36
Wed., Feb. 17.....	127 10	92 52	87 11	87 04	54 20
Thurs., Feb. 18.....	127 00	92 48	87 05	86 99	54 14
Fri., Feb. 19.....	126 85	92 38	87 06	86 99	54 37
Sat., Feb. 20.....	127 20	92 74	87 02	86 99	54 32
Heights of low water to nearest foot.....	125.0	91.0			

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next five weeks are given in the following table:

FEBRUARY.

DATE.	Time and height of high and low water.			
Wed., Feb. 24.....	5:10	11:27	17:35	23:47
	4.6	10.3	5.4	10.9
Thurs., Feb. 25.....	6:19	12:49	18:44	.....
	4.3	10.7	4.9	.....
Fri., Feb. 26.....	1:01	7:19	13:49	19:43
	11.4	3.6	11.6	4.0
Sat., Feb. 27.....	1:58	8:10	14:33	20:32
	12.3	2.6	12.8	2.9
Sun., Feb. 28.....	2:43	8:54	15:11	21:15
	13.4	1.5	14.0	1.7

MARCH.

DATE.	Time and height of high and low water.			
Mon., March 1.....	3:24	9:35	15:48	21:57
	14.4	0.5	15.1	9.5
Tues., March 2.....	4:03	10:14	16:24	22:36
	15.3	-0.3	16.1	-0.4
Wed., March 3.....	4:41	10:52	17:01	23:18
	15.9	-0.8	16.7	-1.0
Thurs., March 4.....	5:20	11:34	17:38	23:58
	16.2	-1.0	17.0	-1.2
Fri., March 5.....	6:00	12:15	18:18	.....
	16.2	-0.7	16.9	.....
Sat., March 6.....	0:41	6:43	12:59	19:00
	-0.9	15.7	-0.1	16.3
Sun., March 7.....	1:27	7:27	13:45	19:46
	-0.2	14.9	0.9	15.3
Mon., March 8.....	2:19	8:19	14:40	20:41
	0.8	13.8	2.0	14.1
Tues., March 9.....	3:18	9:23	15:44	21:50
	1.8	12.7	2.1	13.0
Wed., March 10.....	4:27	10:44	17:00	23:16
	2.7	12.0	3.8	12.3
Thurs., March 11.....	5:45	12:16	18:20	.....
	3.0	12.0	3.8	.....
Fri., March 12.....	0:46	6:59	13:35	19:32
	12.4	2.7	12.7	3.1
Sat., March 13.....	1:58	8:01	14:34	20:30
	13.0	2.0	13.7	2.2
Sun., March 14.....	2:54	8:48	15:21	21:18
	13.8	1.3	14.5	1.4
Mon., March 15.....	3:39	9:37	16:01	22:01
	14.4	0.8	15.1	0.8
Tues., March 16.....	4:18	10:17	16:36	22:40
	14.8	0.5	15.4	0.4
Wed., March 17.....	4:53	10:56	17:09	23:16
	15.0	0.5	15.4	0.3
Thurs., Mar. 18.....	5:28	11:31	17:40	23:52
	14.8	0.8	15.1	0.5
Fri., March 19.....	6:00	12:07	18:12	.....
	14.5	1.3	14.6	.....
Sat., March 20.....	0:27	6:32	12:43	18:42
	1.0	13.9	2.0	14.0
Sun., March 21.....	1:04	7:05	13:19	19:14
	1.7	13.1	2.8	13.2
Mon., March 22.....	1:44	7:41	14:01	19:51
	2.6	12.3	3.7	12.4
Tues., March 23.....	2:29	8:24	14:48	20:34
	3.4	11.5	4.5	11.6
Wed., March 24.....	3:22	9:19	15:47	21:36
	4.1	10.8	5.1	11.0
Thurs., Mar. 25.....	4:26	10:37	16:58	22:59
	4.5	10.6	5.2	10.9
Fri., Mar. 26.....	5:35	11:57	18:08	.....
	4.3	11.0	4.7	.....
Sat., Mar. 27.....	0:18	6:38	13:01	19:08
	11.3	3.6	11.9	3.8
Sun., Mar. 28.....	1:20	7:31	13:51	20:00
	12.2	2.7	13.1	2.4
Mon., Mar. 29.....	2:10	8:19	14:34	20:45
	13.3	1.6	14.4	1.1
Tues., Mar. 30.....	2:56	9:02	15:14	21:27
	14.5	0.5	15.6	-0.2
Wed., Mar. 31.....	3:36	9:45	15:53	22:10
	15.5	-0.3	16.6	-1.2

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used in Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans the following Tuesday.

Every Saturday to New York, for all states. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

*Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE—The sailings on Monday, March 8, and April 5, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7:10 a. m., connects with the despatches for the two sailings mentioned above.

January Rainfall for Three Years.

STATIONS.	1913	1914	1915	Station Av.	Years of record	Rainy days '15
<i>Pacific Section—</i>						
Balboa.....	.78	.30	2.23	1.11	16	8
Balboa Heights.....	.63	.32	2.12	1.02	17	6
Miraflores.....	2.65	.57	1.67	1.85	7	8
Pedro Miguel.....	1.10	1.27	1.03	1.04	8	5
Rio Grande.....	2.09	1.08	.57	1.32	11	9
<i>Central Section—</i>						
Culebra.....	1.57	.38	1.33	1.67	25	5
Camacho.....	1.69	.46	.61	1.09	9	4
Empire.....	1.67	.34	.67	.78	10	8
Gamboa.....	2.65	.61	1.74	1.83	30	9
Juan Mina.....	1.91	.41	1.06	.54	5	7
Alhajuela.....	.96	.09	.36	1.12	16	7
El Vigia.....	.78	.28	.79	.90	7	5
Frijoles.....	3.85	.81	3.63	2.24	4	13
Trinidad.....	3.45	1.57	2.46	3.01	8	8
Monte Lirio.....	3.57	.23	2.54	3.12	8	6
<i>Atlantic Section—</i>						
Gatun.....	4.63	1.63	1.80	3.52	11	17
Brazos Brook.....	5.72	.90	2.96	3.41	9	16
Colon.....	6.71	1.35	3.41	3.95	45	16

Rainfall from February 1 to 23, 1915, Inclusive

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>			
Balboa.....	1.21	7	2.55
Balboa Heights.....	.93	7	2.83
*Miraflores.....	.38	9	.62
Pedro Miguel.....	.56	9	.74
Rio Grande.....	1.15	9	1.94
<i>Central Section—</i>			
Culebra.....	1.52	9	2.20
*Camacho.....	1.27	10	2.35
Empire.....	1.65	9	2.71
Gamboa.....	1.45	9	2.60
*Juan Mina.....	2.27	10	3.43
Alhajuela.....	1.30	9	2.43
El Vigia.....	.82	9	2.30
Frijoles.....	1.45	9	5.11
Trinidad.....	.....	.....	.....
*Monte Lirio.....	2.60	10	6.47
<i>Atlantic Section—</i>			
Gatun.....	6.57	10	12.61
*Brazos Brook.....	6.18	10	13.98
Colon.....	7.12	10	12.32

*Standard rain gage—readings at 5 p. m. daily.

Automatic rain gage at unstarred stations—values midnight to midnight.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls, or the purchase of supplies may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa from the Union Oil Company at the rate of from 1,300 to 1,600 barrels per hour. The present price is \$1.25 per barrel, reduced to 60° Fahrenheit. Diesel engine oil is for sale by the same company, at 45 shillings per ton or seven barrels.

The cable address of The Panama Canal on the Isthmus is "Isthmian, Balboa Heights;" in the United States, "Isthmian, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

Sailings of Vessels in Regular Service With the Isthmus.

REGULAR CONNECTIONS THROUGH THE CANAL

Approximately regular services between the Atlantic and the Pacific seaboard from Boston, New York, Philadelphia, and Baltimore, occasionally Charleston and New Orleans, to San Pedro, San Francisco, Portland, and Puget Sound, and return, are maintained by the American-Hawaiian Steamship Company, with a sailing each way about every five days; the Luckenbach Steamship Company, with a sailing each way about every 10 days; Sudden and Christenson, approximately fortnightly; the Atlantic and Pacific Steamship Company, about every three weeks; and the Boston and Pacific Line, and the Arrow Line, each sending a vessel each way about once a month.

Between the east coast of the United States and the west coast of South America, fortnightly services are maintained by the Merchants' Line and by the New York and South America Line; the West Coast Line has sailings each way about every four weeks.

Between the west coast of the United States, with connections to lower British Columbia, and Europe the following lines are in service: The Harrison-Direct Line, monthly; the Maple Leaf Line, about every six weeks; the East Asiatic Company, monthly, and the Johnson Line, every six or seven weeks.

The Pacific Steam Navigation Company is operating approximately a monthly service around South America from Liverpool, by way of the Canal.

The American-Australian Line has been sending vessels through the Canal about fortnightly from New York to ports in Australia and New Zealand.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service between Colon and Southampton, making the following way ports: Antilla, Jamaica, Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores, and Cherbourg. Its vessels all arrive at Colon on Sundays and sail on Tuesdays.

The Compagnie Generale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings, every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compania Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls en route, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal; and every Thursday, direct from New York; between Colon and New York by the United Fruit Company,

(Continued on page 254.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at noon February 21.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Feb. 15	Gryfevale	British	American-Australian S. S. Line	New York	Melbourne	Machinery (a)	6,340	4,475	3,502
Feb. 16	Palena	Chilean	South American S. S. Co.	Cristobal	Guayaquil	General cargo	1,400	3,639	2,537
Feb. 16	Ohioan	American	American-Hawaiian S. S. Co.	New York	San Francisco	General cargo	6,779	6,814	4,699
Feb. 16	Val 11	British	Gow, Harrison & Co.	New York	Chinese ports	Refined petrol'm	8,700	6,477	4,814
Feb. 16	Saint Ursula	British	American-Australian S. S. Line	New York	Dunedin, N. Z.	General cargo (b)	7,100	5,608	4,765
Feb. 17	Acajuti	British	Salvador Railway Co.	Cristobal	Salina Cruz	General cargo	314	1,219	627
Feb. 17	M. S. Dollar	American	Dollar Steamship Company	Port Arthur	Manila	Oil and gasoline	5,500	4,421	3,091
Feb. 19	Koranna	British	Ellerman & Bucknell Lines	Galveston	Yokohama	Steel, cotton (c)	5,956	4,672	3,511
Feb. 20	Quilpie	British	Pacific Steam Nav. Co.	Cristobal	Balboa	Manufact'd goods	365	3,922	2,231
Feb. 20	Dakota	American	American-Hawaiian S. S. Co.	New York	Los Angeles	General cargo	8,015	6,891	4,751
Feb. 20	F. Luckenbach	American	Luckenbach S. S. Co.	New York	San Francisco	General cargo	2,972	3,006	2,042
Feb. 21	Colon	American	Panama Railroad Co.	New York	Balboa	General cargo	3,230	5,866	4,222
Feb. 21	Thai	Swedish	Johnson Line	Gothenburg	Talchona	General cargo	1,250	1,474	875

(a) 3,900 tons structural steel, 1,200 tons machinery, 1,000 tons railroad material, 500 tons textiles, 400 tons wire fencing, etc. (b) Including 1,500 tons structural steel, 1,500 tons railroad rails. (c) 3,188 tons steel rails, from Pensacola, and 11,574 bales (2,763 tons) cotton, from Galveston.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Feb. 15	Celia	British	W. R. Grace & Co.	Valparaiso	New York	Nitrates, ore (a)	7,400	5,852	4,377
Feb. 15	S. V. Luckenbach	American	Luckenbach S. S. Co.	San Francisco	New York	General produce	2,200	3,859	2,632
Feb. 15	Oregonian	American	American-Hawaiian S. S. Co.	San Francisco	New York, Boston	General cargo	6,040	5,903	4,135
Feb. 15	Thode Faglund	Norwegian	W. R. Grace & Co.	Tocopilla	Rotterdam	Nitrates	6,400	4,758	3,563
Feb. 16	Bilster	British	Bilster S. S. Co.	Cruz Grande	Philadelphia	Iron ore	7,000	4,885	3,554
Feb. 16	Columbian	American	American-Hawaiian S. S. Co.	Hilo	Philadelphia	Sugar, pines (b)	11,637	8,662	6,404
Feb. 17	E. H. Vance	American	W. R. Grace & Co.	Drye Sound	New York	General, lum'r (c)	3,000	2,555	1,433
Feb. 17	Navajo	American	Arrow Line	Los Angeles	Galveston	General cargo (d)	800	2,705	1,779
Feb. 17	Allianca	American	Panama Railroad Co.	Balboa	New York	General cargo (e)	2,380	4,120	2,670
Feb. 17	Piton	British	Radcliffe Line	San Francisco	Falmouth	Barley and hops	7,459	5,484	3,984
Feb. 18	Strathord	British	Strathord S. S. Co.	Mejillones	Leith	Nitrates	6,550	4,630	3,434
Feb. 18	Tongking	Danish	East Asiatic S. S. Co.	San Francisco	Alhais	General	7,250	7,021	5,332
Feb. 18	Bellirano	British	West Coast Line	Valparaiso	New York	Nitrates, ore (f)	7,026	5,102	3,554
Feb. 18	Roma	American	Union Oil Company	Los Angeles	Galveston	Crude oil	2,300	3,177	2,335
Feb. 18	Hawaiian	American	American-Hawaiian S. S. Co.	Tacoma	Charleston	General cargo	6,814	5,903	4,193
Feb. 18	Indrasamha	British	Indra S. S. Co.	Yokohama	New York	General	7,000	5,612	4,181
Feb. 19	Hermiston	British	Borderdale S. S. Co.	Portland	Capetown	Wheat	6,122	4,782	3,522
Feb. 20	Strathdee	British	Strathdee S. S. Co.	Portland	Capetown	Wheat	6,074	4,660	3,428
Feb. 20	Muncaster Castle	British	Lancashire S. S. Co.	San Francisco	Great Britain	Barley and oats	6,953	5,690	4,361
Feb. 21	Lebu	Chilean	South American S. S. Co.	Antofagasta	Malaga (orders)	Nitrates	3,100	2,764	1,939

(a) 5,500 tons nitrates, 1,550 tons copper ore. (b) 11,144 tons sugar, 15,116 cases pineapples. (c) 1,969,000 feet lumber. (d) Including 407 tons beans. (e) 653 tons for Cristobal. (f) 5,225 tons nitrates, 113 tons copper ore, 663 tons silver ore.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
Feb. 22	Santa Rosalia	Isthmian S. S. Co.	New York
Feb. 25	Advance	Panama Railroad Co.	New York
Feb. 25	Strathgarry	Strathgarry S. S. Co.	United States

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Feb. 22	Washington	E. T. Radcliffe & Co.	Tacoma
Feb. 23	Panaman	American-Hawaiian S. S. Co.	Los Angeles
Feb. 26	Georgian	American-Hawaiian S. S. Co.	Hilo

PORT OF CRISTOBAL.

*ARRIVALS.

Feb. 17	Cristobal	Panama Railroad Co.	New York
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*DEPARTURES.

Feb. 15	Wilhelmina	Caribbean Transport Co.	Bluefields
Feb. 16	Ebro	Royal Mail S. P. Co.	Southampton

*EXPECTED ARRIVALS.

Feb. 22	Puerto Rico	Cie. Gen. Transatlantique	Bordeaux
Feb. 22	Amor	Dutch Royal Mail	Coast
Feb. 25	Wegadesk	Earn Line	Norfolk
Feb. 26	Ancon	Panama Railroad Co.	New York

*EXPECTED DEPARTURES.

Feb. 26	Puerto Rico	Cie. Gen. Transatlantique	Bordeaux
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*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Date	Vessel	Line	From
Feb. 15	Guatemala	Pacific Steam Nav. Co.	Callao
Feb. 21	Santa Rita	Union Oil Co.	Port Harford

*DEPARTURES.

Date	Vessel	Line	To
Feb. 15	Huallaga	Peruvian S. S. Co.	Callao
Feb. 16	San Juan	Pacific Mail S. S. Co.	San Francisco
Feb. 19	Manovi	Pacific Steam Nav. Co.	Guayaquil

*EXPECTED ARRIVALS

Feb. 24	Limari	South American S. S. Co.	Valparaiso
March 1	Aztec	Pacific Mail S. S. Co.	San Francisco
March 3	Huasco	South American S. S. Co.	Valparaiso

*EXPECTED DEPARTURES.

March 2	City of Para	Pacific Mail S. S. Co.	San Francisco
	Ecuador	Pacific Steam Nav. Co.	Buenaventura
	Guatemala	Pacific Steam Nav. Co.	Callao

*Other than vessels passing through the Canal.

(Continued from page 253.)

sailings via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails. Arrives

NEW YORK TO CRISTOBAL-COLON.			
Almirante	U. F. C.	Feb. 17	Feb. 24
Advance	P. R. R.	Feb. 18	Feb. 25
Metapan	U. F. C.	Feb. 20	Mar. 1
Santa Marta	U. F. C.	Feb. 24	Mar. 3
Panama	P. R. R.	Feb. 25	Mar. 3
Pastores	U. F. C.	Feb. 27	Mar. 7

Zacapa	U. F. C.	Mar. 3	Mar. 10
Allianca	P. R. R.	Mar. 4	Mar. 10
Calamares	U. F. C.	Mar. 6	Mar. 14
Carrillo	U. F. C.	Mar. 10	Mar. 17

CRISTOBAL-COLON TO NEW YORK.

Carrillo	U. F. C.	Feb. 25	Mar. 4
Colon	P. R. R.	Feb. 27	Mar. 5
Tenadores	U. F. C.	Mar. 1	Mar. 8
Almirante	U. F. C.	Mar. 4	Mar. 11
Advance	P. R. R.	Mar. 6	Mar. 13
Metapan	U. F. C.	Mar. 8	Mar. 16
Santa Marta	U. F. C.	Mar. 11	Mar. 18
Panama	P. R. R.	Mar. 13	Mar. 19
Pastores	U. F. C.	Mar. 15	Mar. 22

NEW ORLEANS TO CRISTOBAL-COLON.

Heredia	U. F. C.	Feb. 17	Feb. 25
Abangarez	U. F. C.	Feb. 20	Feb. 25
Parismina	U. F. C.	Feb. 24	Mar. 3
Atenas	U. F. C.	Feb. 27	Mar. 4
Cartago	U. F. C.	Mar. 3	Mar. 10
Turrialba	U. F. C.	Mar. 4	Mar. 11

CRISTOBAL-COLON TO NEW ORLEANS.

Turrialba	U. F. C.	Feb. 25	Mar. 2
Heredia	U. F. C.	Feb. 25	Mar. 4
Abangarez	U. F. C.	Mar. 4	Mar. 9
Parismina	U. F. C.	Mar. 4	Mar. 11
Atenas	U. F. C.	Mar. 11	Mar. 16
Cartago	U. F. C.	Mar. 11	Mar. 18

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, MARCH 3, 1915.

No. 28.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

NOTES OF PROGRESS.

Charges for Fuel Oil at Balboa.

The Panama Canal is ready to make deliveries of fuel oil to vessels at Balboa and Cristobal, and has established a rate of \$1.25 per barrel of 42 gallons for fuel oil sold by it to vessels alongside the cribs. There is no wharfage charge for vessels taking oil at the crib, just as there is no charge against vessels using the other docks solely for the purpose of taking on coal or other supplies furnished by the Canal.

Vessels delivering oil at the crib, however, will be subject to the regular wharfage charges of 15 cents per foot of length, measured over all, for each day or fraction thereof, for steam and motor vessels; or for sailing vessels, five, 10, or 15 cents per foot for vessels up to 100 feet in length, up to 200, and over 200 feet in length, respectively.

The charge for pumping oil from the crib to tanks, or from tanks to crib, is four cents per barrel of 42 gallons. There is, however, no charge for the pumping of oil sold to vessels by The Panama Canal. In the case of such deliveries to vessels at the crib, the only regular charge is the \$1.25 per barrel for the oil. If the ship should require extra men for handling lines, etc., at the crib, there would be an extra charge covering such expense.

The same conditions and rates will apply on fuel oil handling and sales at both Balboa and Cristobal.

Progress on New Radio Stations at Canal Entrances.

An antenna has been strung between the new steel masts of the Colon radio station and a series of receiving tests has been in progress. All of the equipment of the plant is ready for use and the towers are completed with the exception of the final riveting. It is expected to have the new plant in full operation upon the receipt of the new spreaders, specially designed of monel metal.

For the Balboa station, the erection of the first of the two steel towers was begun on February 17. These towers will be like those at Colon, self-supporting, 300 feet high, and set 600 feet apart. The apparatus for the Balboa station has been installed complete

and is ready for use upon the completion of the towers and antenna.

Upon the completion of the new plants, the old equipment in use at the respective stations will be dismantled. Parts of it have been found available for use in the new plants.

The Canal Route for Cruising Yachts.

Inquiry has been received from the International Society of Travel and Adventure, San Francisco, as to the cost of taking small pleasure yachts, of from 10 to 40 tons burden, through the Canal, and as to the possibility of reducing the cost by lashing a number of small craft together for towing. The society has been advised that tolls will be charged according to the rules for the measurement of vessels for the Panama Canal; that motor-driven small craft will not need to be towed, and that it is entirely practicable to lash a number of small craft together for towing and thus reduce the towage, the cost of tug service being thus divided among a number of vessels.

Several cruising yachts, including both steam and sailing vessels, have passed through the Canal and it is probable that this will become a favorite route for cruises, on account of the many attractions which it offers.

Commemorative Postage Stamps.

Postage stamps of a special issue, commemorative of the opening of the Panama Canal, were placed on sale at the Canal Zone post-offices on Monday, March 1. These stamps are part of the special 1915 issue of the Republic of Panama. In accordance with the Executive Order of December 3, 1904, the government of Panama furnishes the stamps for the Canal Zone postal service and receives for them 40 per cent of the face value. The government of Panama ordered and placed on sale eight kinds of stamps, aggregating 7,500,000 pieces, of which the Canal Zone postal service requested an issue of 350,000 surcharged "Canal Zone". These 350,000 stamps, consisting of 100,000 each of one, two, and five-cent stamps, and 50,000 10-cent stamps, have been distributed among the Canal Zone post-offices in proportion to their stamp sales for the month of January, 1915. Steps have been taken to prevent collectors from purchasing more than 100 stamps of each variety and to see that every one is given an equal chance to buy them.

The stamps are about three and one-half centimeters in length by two and one-half in width. The one-cent stamps are green and the design shows a relief map of the Panama Canal. The two-cent stamps are red, with a picture of Balboa "taking possession" of the Pacific Ocean. The five-cent stamps, blue, bear a picture of Gatun Locks, looking upward from the north end and showing the three levels. The 10-cent stamps, which are orange, show Culebra Cut near the Empire suspension bridge, after the water had been let into the Cut but before the bridge had been removed.

FIRST HALF YEAR OF CANAL.

Analysis of Traffic during First Six Months of Commercial Operation.

The first six months of commercial operation of the Canal were completed at the close of business on February 14, 1915, the Canal having been opened to commercial traffic on August 15, 1914.

Four hundred and ninety-six vessels, other than Canal vessels and launches, etc., which are not counted, passed through the Canal during the period. They carried a total of 2,367,244 tons of cargo. Their distribution over the most important routes followed by vessels using the Canal to this time is summarized herewith:

Route.	No. Vessels.	Cargo tonnage.
U. S. coastwise, eastbound.....	97	499,439
U. S. coastwise, westbound.....	109	493,272
U. S. Pacific coast to Europe.....	66	444,855
Europe to U. S. Pacific coast.....	16	59,516
South America to U. S. and Europe	69	378,386
U. S. and Europe to South America	31	128,922
U. S. Atlantic coast to Far East...	48	287,782
Far East to U. S. Atlantic coast...	2	14,500
Miscellaneous routings.....	13	60,572
Vessels without cargo.....	45	.....
Totals.....	496	2,367,244

As between passages eastbound, or from the Pacific to the Atlantic, and westbound, from the Atlantic to the Pacific, the traffic was as follows:

M'th	Eastbound.		Westbound.		Total.	
	Ves-sels.	Cargo.	Ves-sels.	Cargo.	Ves-sels.	Cargo.
Aug..	12	57,182	12	49,106	24	106,288
Sept..	30	186,776	27	135,262	57	322,038
Oct..	40	252,288	44	168,069	84	420,357
Nov..	38	242,291	54	206,510	92	448,801
Dec..	57	261,680	42	178,235	99	439,915
Jan..	51	240,875	44	208,082	98	448,957
Feb..	21	99,533	21	81,355	42	180,888
T'tl..	252	1,340,625	244	1,026,610	496	2,367,244

Slightly over 41 per cent of the cargo handled has been in movement between ports of the United States, in what is classified as United States coastwise trade. Over 21 per cent of all the cargo has been in movement between the Pacific coast of North America, principally the United States, and Europe; and approximately an equal proportion (21 per cent) has been moving on the route between the west coast of South America and the seaports on the Atlantic seaboard of the United States and Europe. Traffic between the Atlantic seaboard and the Far East has amounted to over 12 per cent of the whole. All together, the foregoing routes have been used for the transit of all but approximately two and one-half per cent of all cargo sent through the Canal.

The six principal commodities shipped through the Canal have been, in order of their tonnage: Grain, nitrates, coal, refined petroleum products, lumber, and cotton. The six commodities together have amounted to approximately one-third of all goods shipped through.

Grain shipments have amounted to 303,124 tons, of which all but 13,733 tons were shipped from the west coast of the United States and Canada. Of the other 13,733 tons, 6,200 tons were barley shipped from Valparaiso to Great Britain and 7,533 tons were wheat shipped from St. Johns, New Brunswick, to New Zealand.

The grain shipments from the west coast of North America consisted of 155,246 tons of wheat (5,744,000 bushels) and 134,145 tons of barley (6,170,000 bushels), a total of approximately 11,914,000 bushels.

Nitrates, shipped from the west coast of South America to various ports in the United States and Europe, amounted to 204,441 tons.

Coal, all moving to the Pacific, amounted to 151,745 tons. Of this quantity, 83,031 tons were shipped from the Atlantic seaboard of the United States, and 68,664 tons from the United Kingdom.

Refined petroleum and other products amounted to 102,456 tons, of which 87,857 tons were shipped from the Atlantic seaboard of the United States to China, Japan, and Korea, and 14,599 tons were shipped from Talara, Peru, to Great Britain.

Shipments of lumber have amounted to 56,078 tons. All but 600 tons (shipped from Gulfport to Panama) were from the west coast of North America. Of the 55,478 tons shipped from the west coast, all but 6,891 tons (from Nanaimo, British Columbia) were shipped from Pacific ports of the United States.

Raw cotton shipments have amounted to 38,239 tons, enroute from the Atlantic seaboard of the United States to the Far East. Over 70 per cent of the cotton passing through the Canal has been consigned to Japan.

TOLLS.

The tolls levied during the six months' period amounted to \$2,126,832.00. Adding to this the \$11,610.69 of tolls collected on barges prior to August 15, the total levy to February 15, 1915, is \$2,138,442.69, distributed as follows:

Period.	Amount.
Period to August 15, 1914.....	\$ 11,610.69
August 15 to August 31.....	84,401.80
September 1 to September 30.....	269,863.00
October 1 to October 31.....	278,089.12
November 1 to November 30.....	387,242.40
December 1 to December 31.....	411,895.44
January 1 to January 31, 1915.....	419,037.12
February 1 to February 14, inclusive..	172,305.12
Total.....	2,138,442.69

A Correction.

In the compilation of the report of traffic through the Canal in the month of December, the error was made of counting twice one shipment of 6,500 tons of general merchandise from New York to Melbourne, passing through the Canal on the British steamship *Trafalgar*, December 6. The figures for westbound cargo during December should accordingly be corrected to read 178,235 tons (instead of 184,735). The corrected figure for the total cargo handled through the Canal during December is 439,915 tons.

Contract for Fuel Oil at Atlantic Entrance.

Contract for supplying fuel oil to the tanks of The Panama Canal at the Atlantic entrance has been awarded to the Union Oil Company of California, at a rate of 95 cents per barrel. The company has already 117,000 barrels in its tanks on the Isthmus, which it will transfer to the Canal tanks as needed.

LABOR FORCE AND QUARTERS IN JANUARY.

The force report of January 20, 1915, shows the actual working force of The Panama Canal on that date to have been 20,926; of the Panama railroad, 3,638; and of contractors, 289, a total effective working force of 24,853. This is a decrease of 402, as compared with the statement of December 23, 1914.

The gold force on the Isthmus, composed almost exclusively of white Americans, was 3,713, a decrease of 43, as compared with the preceding month. The gold force of 3,713 was divided as follows: The Panama Canal, 3,334; the Panama railroad, 367; contractors, 12. Detailed figures of the total force employed on the Isthmus, by departments and divisions, follow:

DEPARTMENT OR DIVISION.	SILVER EMPLOYEES*											Total silver.	Total gold.	Grand total.	
	Artisans.						Laborers.								
	Monthly.	Special.	22 cents.	18 cents.	15 cents.	12 cents.	Special.	Euro- pean 16 cents.	13 cents.	10 cents.	7 cents.				5 cents.
Operation and Main- tenance; office & locks	449	14	5	42	120	14		2	3	165	1	815	171	986	
Terminal Constr'n	556		52	197	494	135	117	157	572	527	6	2,837	336	3,173	
Building Division	52	10	252	373	620	58			253	305	1	1,929	192	2,121	
Electrical	59	7	25	41	102	59				3		298	148	446	
Municipal Eng.	307		96	267	370	250	16	32	158	913	3	2,455	122	2,577	
Dredging	1,718	1	8	22	68	14		12	109	68	1	2,023	314	2,337	
Mechanical	143	11	78	108	546	493		10	40	150	9	1,593	788	2,381	
Marine	81						7					88	41	129	
Fortifications	101		56	120	289	25	42		198	202	5	1,038	92	1,130	
General Construct'n	13			1	3	1		143	28	70	1	267	2	269	
Total	3,479	43	572	1,171	2,612	1,049	182	356	1,361	2,403	21	13,343	2,206	15,549	
Supply: main office													17	17	
Commissary	624		4	7	12	14	233	9		91	33	1,027	163	1,190	
Subsistence	531		3		1	2						537	33	570	
Quartermaster	758	28	60	66	75		68	7	60	656	1	1,779	73	1,852	
Accounting	16											16	204	220	
Health	387		3	3	5				8	277	10	721	181	902	
Executive	164	2	2							1		169	457	626	
Panama railroad.	344	25	78	193	312	408	676	33	483	737	5	3,271	367	3,638	
Contractors	22			8	2		116	8	2	116	1	277	12	289	
Grand total	6,325	98	722	1,448	3,019	1,473	1,225	413	1,914	4,281	70	21,140	3,713	24,853	
Month previous.	5,951	101	786	1,614	3,123	1,510	1,382	422	2,014	4,375	43	178	21,499	3,755	
Changes.	+374	-3	-64	-166	-104	-37	-157	-9	-100	-94	+27	-26	-359	-13	

*The wages are stated in United States currency. †Formerly Division of Canal Transportation.

QUARTERS.

A report of Canal and Panama railroad quarters occupied on January 31, follows:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Child- ren	Men	Women	Child- ren	Men	Women	Child- ren
Balboa	720	199	196	258	11	29	1,643	484	609
Ancon	846	393	330				649	30	1
Corozal	477	207	199	55			460	50	59
Pedro Miguel	190	107	117	15			221	18	29
Paraiso	292	76	94	103	5	20	416	112	163
Culebra	104	76	79	6	7	12	405	305	380
Gamboa	19	8	8				122	25	32
Gatun	247	167	210	191	2	6	251	62	77
Cristobal	908	358	462	36			1,123	176	377
Toro Point	2						325		
Total	3,805	1,591	1,694	664	25	67	5,615	1,256	1,727

(1) Includes 50 Colombians and Panamanians. (2) Includes 12 American negroes, 40 Asiatics, and three Panamanians on the gold roll. (3) Includes Sabanas police station, Taboga Island, Naos Island, Culebra Island, and Palo Seco. (4) Includes Miraflores. (5) Includes one Asiatic. (6) Includes 25 Panamanians. (7) Includes Empire, Las Cascadas, and Bas Obispo. (8) Includes Colon Beach and Colon Hospital. (9) Includes 20 East Indians, 13 American citizens, and 72 Panamanians. Gold force of contractors (included above), occupying quarters, 107 bachelors.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Bonner, Chester F.	15869	U. S. A.	Ancon	P. R. R.	Feb. 21, 1915.
Clark, Levi	39318	Jamaica	Panama	Supply Dept.	Feb. 24, 1915.
De Costa, J.	30980	Barbados	Colon	Panama Canal.	Feb. 17, 1915.
Eastman, Fred.	39347	Barbados	Paraiso	Mech. Div.	Feb. 20, 1915.
Singh, Narain	58361	East Indies	Colon	Dredging Div.	Feb. 8, 1915.
Smith, James	1815	U. S. A.	Culebra	Police Div.	Feb. 22, 1915.
Taylor, Leonard	60104	Barbados	Panama	Oper. & Main.	Feb. 20, 1915.

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

EXECUTIVE ORDER.

Establishing Regulations Governing the Accounting to the Treasury of the United States for Panama Canal Collections (Section 5 of the Act of August 1, 1914, Public No. 161, P. 79.)

By virtue of the authority vested in me, under Section 5 of the Act of August 1, 1914, I hereby prescribe the following regulations governing accounting to the Treasury of the United States for moneys received on account of the Panama Canal by the collecting officers:—

1. The Collector of The Panama Canal shall render his accounts monthly to the Auditor for the War Department for all moneys received by him, or placed to his official credit from whatsoever source received, or in whatsoever manner placed to his official credit on account of the United States (Panama Canal). These accounts, however, need not include revenues of the Canal Zone Government, money order funds, postal saving bank funds, clubhouse funds, moneys of the Panama Railroad Company, or similar moneys or funds for which the United States can not be held to be a trustee. Said accounts shall be rendered in such detail and be accompanied by such papers, records, and copies thereof relating to such collections as are hereinafter specified and upon forms to be approved by the Comptroller of the Treasury in accordance with these regulations.

2. The Collector shall give bond to the United States, to be filed with the Secretary of the Treasury, in such sum as may be fixed by the Governor of The Panama Canal, conditioned for the faithful performance of his duties of collecting and disbursing all public moneys and honestly accounting without fraud or delay for the same, including moneys of the United States embraced in any special deposit account to be submitted to the Auditor for the War Department.

3. The monthly accounts current of the Collector, under both his regular account and such special deposit account as he may be authorized by law to keep, rendered on forms prescribed by the Comptroller of the Treasury for that purpose, shall be accompanied by a schedule of the amounts received by him, which accounts shall be so stated as to show the date each amount was received by him directly, or from his deputies, or from other receiving agents; the number of the Collector's receipt issued therefor, the person from whom received, the source from which received, and, in proper columns, the amounts collected for tolls, the amount to be covered into the Treasury as miscellaneous receipts, and the amount to be credited to appropriations, and in case of his special deposit account, a schedule of the amount of refunds or repayments made.

4. The schedule showing the details as provided in Section 3 above, shall be accompanied by signed copies of all formal bills, registered as such in the office of the Auditor of The Panama Canal, on which collection is made, and, where practicable in the judgment of the Governor of The Panama Canal and it can be done without an increase in the clerical force, signed copies of receipts, where there has been no formal bill, will be transmitted to the Auditor for the War Department, together with such other supporting papers as are deemed necessary by the Governor. In addition to the requirements of this section and Sections 3, 5, 6, and 7 hereof, the examination and inspection provided for in Section 8 hereof, shall be made, and the re-

port of the persons designated thereunder shall be filed with the accounts of the Collector transmitted to the Auditor for the War Department as a part of the record to support such accounts for the period covered by such report. The facts stated in this report shall be certified to by the persons designated to make the inspection and examination. Such inspection and examination shall be made at as early a date as practicable after the expiration of the period which it is to cover, and the report of the persons designated to make it shall be promptly filed. A signed copy of this report shall be furnished to and filed by the Auditor of The Panama Canal and preserved as a part of the files of his office and one copy shall be furnished to the Comptroller of the Treasury for his files.

5. Immediately following each item of receipt from the deputy collectors or other receiving agents, there shall be scheduled a list of all items collected by them on formal bills, in the same manner as if paid to the Collector direct, and all other collections not covered by formal bills, shall be segregated into items according to the source from which derived, such as hospital service, water rental, etc. Sales slips, memorandum bills for hotel and hospital services, water rentals, rentals for quarters, electric current, coral services, and bills of like character, and other papers relating thereto need not accompany the Collector's account, except in special cases where it would be necessary that they should accompany the account in order to make a complete explanation of the collection.

6. The Auditor of The Panama Canal shall prepare and forward with the Collector's account, a consolidated statement showing the total amount received by the Collector, classified according to the sources from which derived with as much detail as practicable, whether from sales of material, repairs, rentals, hotel or hospital service, towage, pilotage, etc., and shall specify the amount to be credited to each appropriation or to miscellaneous receipts, and the amount that should appear in the special deposit account.

7. The Auditor of The Panama Canal will certify to the correctness of the statements above referred to, and, in addition, will certify that he has examined the records and accounts of all officers and agents who have collected moneys for The Panama Canal, and that the statements include all funds received by the Collector from the persons and sources indicated, and that, so far as shown by the records of the Auditor's office, the Collector's account is a full, true, and complete account of all public moneys which came into the possession of the Collector during the period covered by the account, and that the special deposit account of the Collector contains a true, correct, and complete account of all moneys received by the Collector or placed to his official credit in his special deposit account, which does not appear in his regular account.

8. As a part of the detail required by these regulations, two competent persons, one from the office of the Auditor for the War Department designated by the Auditor, and one from the office of the Comptroller of the Treasury designated by the Comptroller, shall be detailed semiannually at such time as may be designated by the Comptroller, but not oftener than once in six months, to proceed to the Canal Zone and examine the records and accounts of the collections of

The Panama Canal for the six months just prior to such examination, in such detail as may be necessary to enable them to verify the correctness of the collections not supported by collection vouchers in detail for such period, as stated in the schedule of collections submitted by the Collector with his accounts. They shall also make such other investigations as the Comptroller may direct. Such persons shall make a report in triplicate, and certify and file the same as provided in Section 4 hereof. If such persons disagree each shall make and file in the same manner as provided for the joint report in Section 4 hereof a separate report as to the items upon which they disagree. Such persons shall be given free access to all records and papers pertaining to the accounts under examination. Such persons shall be furnished free transportation going to and returning from the Isthmus, including meals while on the steamer, and shall be paid a per diem of four (\$4.00) dollars from the day of sailing from the United States until return thereto, both dates inclusive, in lieu of subsistence and all other expenses. Such expenses shall be paid out of any appropriation for The Panama Canal that may be designated by the Governor, and which is applicable therefor.

9. The Collector shall, within 20 days after the close of each month, forward to the Auditor of The Panama Canal for administrative examination, his special deposit and regular accounts for such month. The Auditor for The Panama Canal shall give such accounts an administrative examination, and transmit them to the Auditor for the War Department within 20 days from the date of their receipt from the Collector.

10. The gross proceeds of all collections which the Panama Canal Act and Section 3 of the Act of August 1, 1914, or any other Act, authorize to be credited to appropriations, shall be so credited by the Collector and deposited in the Treasury to the credit of the proper appropriation or transferred to the Paymaster of The Panama Canal to be taken up in the Paymaster's accounts for disbursement.

11. At the close of each fiscal year, the Auditor of The Panama Canal shall determine, as nearly as may be practicable from a profit and loss account to be stated by him, the net profits for such fiscal year, and direct that there shall be covered into the Treasury from the proper appropriation to "Miscellaneous Receipts," a sum equal to the net profits shown by such account, and said account shall be transmitted to the Auditor for the War Department for examination and file.

12. The facts necessary to support such transactions as are not shown by collection vouchers in detail, shall be verified by the certificate of an administrative officer having personal knowledge of such transaction where this is practicable. The certificate above required may be so made, however, that one certificate will cover a number of items of collections of the same class, involving different transactions, such as the collections from the Tivoli Hotel, or the sales in stores, etc., as shown in Section 5 hereof, covering a period of time to be stated in such certificate.

13. The Governor of The Panama Canal shall prescribe such administrative regulations as he deems necessary to efficiently carry these regulations into full force and effect.

THE WHITE HOUSE, WOODROW WILSON.

February 4, 1915.

[No. 2135.]

NEW STREET LIGHTING SYSTEM

Plans Adopted for Illumination of Permanent Towns of the Canal Zone.

Permanent street lighting systems are to be installed in the permanent towns of the Canal Zone, namely Cristobal, Gatun, Pedro Miguel, Balboa, and Ancon. The lights will be supported on ornamental cast iron posts of the type used for street and park lighting in Washington, D. C., which were originally designed by the late Frank Millett, member of the Fine Arts Commission, and the transmission of current will be made through underground cable.

The posts will be spaced approximately 175 feet apart and each will bear a single lamp of about 200 candlepower, enclosed in a spherical polycased or Alba globe, 14 inches in diameter. The lamps will be of the recently developed nitrogen-filled type, using a concentrated coil of metal filament. Approximately the same lights and globes, on the same spacing, are now in service in a part of Balboa Heights, near the Governor's house, where the Electrical Division has been conducting experiments as to their efficiency and the most desirable spacing for them.

The lamps will be connected in series, like the usual practice with arclights, and will be used on a current of 6.6 amperes. They will be supplied from the nearest substations of the transisthmian transmission system through constant-current transformers and the usual switchboard control apparatus. There will be one circuit each at Cristobal, Gatun, and Pedro Miguel, where approximately 65,55, and 36 lights, respectively, will be used; and four separate circuits for the Ancon-Balboa district, in which a total of about 350 lights will be installed. The underground transmission will be made through a lead-sheathed, bandsteel armored cable of No. 6 copper, Brown and Sharpe gage.

The mounting height of the lamps will be 10 feet three inches, from the ground line to the center of the globe. The posts, rising approximately 10 feet above the ground, are to be of a slender, graceful type, in which utility is paramount, through combined with pleasing lines. Their diameter through the base is six inches, contracting to a diameter of three inches just below the capital; and the surface of the posts is relieved from severity by vertical fluting between base and capital. The capital is a simple series of concentric annulets, in which the globe will rest as in a cup.

In addition to the regular street lights of the type described, two ornamental posts of classic design will be mounted in front of the Administration Building at Balboa Heights, one on each side of the main entrance to the building. These posts will mount five lights each, four at the ends of arms extending at right angles from the column, and a larger light at the top of the column, surmounting the four smaller lights.

At selected locations in the various towns, combination fire alarm and lighting posts will be installed. These will be similar in form to the regular street lighting posts, except that at an elevation of about five and a half feet above the ground the width of the post is expanded sufficiently to allow the inseting of a fire alarm box. The globes on these posts will be marked with red to advertise the presence of the fire alarm boxes.

The necessary material for these systems

has been ordered from the United States, and first deliveries are expected within 10 days. The requisition calls for an aggregate of 619 posts, 120,000 feet of armored cable, and 31,000 feet of unarmored cable, which, with the miscellaneous material, lamps, shades, etc., will cost approximately \$46,000. This amount does not include the ornamental posts for the front of the Administration Building, which will cost about \$700 each.

Increase of Force at Balboa Shops.

On account of increased work at Balboa shops, the force has been increased by the following, requisitioned from the United States: Twenty machinists (marine), 10 boilermakers, 10 car repairers (wood), five car repairers (steel), six riveters, five shipwrights, and one diver, a total of 57 gold employees. This increase has been made necessary by the great amount of repair work needed on railroad and dredging equipment, which, in turn, has resulted from the retirement of a considerable part of the equipment and the consequent heavier service required of that still in use.

The force of the Mechanical Division on February 1, and not including the new men mentioned above, was 2,477, distributed as follows:

Balboa shops.....	556	970
Dry dock shops.....	96	344
Paraiso shops.....	105	231
Cristobal roundhouse.....	11	40
Miscellaneous.....	32	92
Total.....	800	1,677

The force employed by the Mechanical Division on June 30, 1914, was 942 gold and 2,452 silver employees; on July 1, 1913, it was 974 gold and 2,360 silver. In other words, it has decreased about 25 per cent from the requirements of the two years past.

Tungsten Filament Lamps.

The Electrical Division advises that tungsten filament lamps which have apparently burned out can often be reclaimed for a considerable period of further usefulness by gently tapping the lamp while it is in the socket with the current turned on. This will frequently cause the broken end of the filament to come into contact and unite with an unbroken section.

Publication Received.

Receipt is acknowledged by THE CANAL RECORD of a copy of a "Handbook of the Navigation Laws of the United States," printed and published at San Francisco by Walter MacArthur, and containing "sections and acts applicable to shipment and discharge of seamen, qualifications of licensed officers, manning scale, etc."

The steamship *Cristobal* of the Panama Railroad Steamship Line, which arrived at Cristobal from New York, on February 17, on a special trip with cement for The Panama Canal and the Panama Railroad Company, was sent through the Canal to Balboa in ballast on February 24, to load with cargo to New York.

The engineering and drafting office of the Division of Terminal Construction in the old Pacific Division office building at Corozal, has been directed to be in readiness to transfer to the Administration Building at Balboa Heights on 10 days' notice.

Water from the Chagres River.

The pumps of the new permanent pumping station on the south bank of the Chagres River, near the Gamboa bridge, were placed in operation on February 22, and since that date all of the water supply for the Canal villages on the Pacific slope of the continental divide, except Paraiso, and for the city of Panama has been taken from the Chagres. The filtration plant at Miraflores is not in operation and the water is treated with a solution of hypochlorite of lime for the destruction of bacilli, as has been done with the water taken from Miraflores Lake and Culebra Cut. The pumping station at Miraflores has been closed. The water descends to the purification plant by gravity from the crest of the continental divide, and its distribution to Corozal and Miraflores is made under the same force. Water for Ancon, Balboa Heights, and Panama is pumped into the local distribution system at the pumping station No. 3, near the Balboa railroad station.

Week End Rates at the Hotel Washington.

For employees desiring to spend the week end in Colon, the following rates have been made at the Hotel Washington, for rooms taken any time on Saturday and released on Sunday: For one person, room with private bath, \$2.25; room with shower, \$1.75; for two persons, 25 cents more than the charge for one person. These rates are for Government employees only. The hotel management will not assure reservations unless made in advance. Telephone reservations should be made at least 24 hours in advance of arrival.

There is music with dancing during dinner on the second, fourth, and fifth Saturdays of each month. On the first and third Saturdays there are dances of the Washington Cotillion Club.

Third Month's Awards of Prizes for Care of Houses at La Boca.

The committee on improvements at La Boca has announced the following distribution of prizes for the best kept houses in the silver settlement at La Boca during the month of February:

Class.	Prize	Won by
One-story house with plumbing...	\$5.00	No. 607
One-story house without plumbing...	5.00	No. 598
Two-story house with plumbing...	5.00	No. 621
Two-story house without plumbing...	5.00	No. 635
House with unscreened porches...	1/6 off rent	No. 636

Examination for Levelmen and Transitmten.

On Sunday morning, March 14, 1915, at 9 o'clock, an examination for levelmen and transitmten will be held in the board room of the Administration Building, Balboa Heights, C. Z. A written and oral examination will be given between the hours of 9 a. m. and 1 p. m., the examination to test the applicant's qualifications for promotion from the position of "Rodman" to that of "Levelman" or from the position of "Levelman" to that of "Transitmten."

All applicants for the examination should notify the Office Engineer, Balboa Heights, C. Z., on or before 12 m., March 10, 1915.

C. J. EMBREE, O. E. MALSBURY, A. W. WILSON, *Committee.*

General Vaccination In Canal Zone.

The Chief Health Officer has ordered a general vaccination of all persons in the Canal

Zone who have not had smallpox or been successfully vaccinated within five years.

The Health Department states that it has now a very good and pure lymph of its own manufacture.

The district physician at Ancon announces that nonemployees in Ancon district should apply for vaccination between 8 and 10 a. m., on any day except Sundays and holidays. Employees may apply at any hour that the dispensary is open, that is, from 8 to 10 a. m., from 12 noon to 1 p. m., and from 4 to 6 p. m.

No Extension of Time for Filing Claims before the Joint Land Commission.

In reply to the request of the Minister of Panama in Washington that an extension of 60 days be made to the six months' period, expiring December 27, 1914, agreed upon as the limit for filing claims before the Joint Land Commission, the Department of State advised him that in view of Rule 3, under which the Joint Land Commission has already the power to extend the time for the filing of claims three months in particular cases, it considers that the extension asked for is unnecessary.

Law of Panama Penalizing the Transfer of Commissary Coupons to Nonemployees of the United States, and Sale of Official Railway Transportation.

The following law of the Republic of Panama, penalizing the sale or transfer, within the Republic, of Canal commissary coupons to others than employees of the United States, and the sale or transfer of Panama railroad transportation issued in favor of officials and employees of the government of Panama, is published for the information and guidance of all concerned.

According to Article 9, the law is to become effective 10 days after its promulgation. Promulgation was effected by publication in the *Official Gazette* of Panama of February 5, 1915, No. 2172.

Making Additions to the Police Code. Act 21 of 1915. (January 19.)

THE NATIONAL ASSEMBLY OF PANAMA DECREES:

Article 1. Any person who, in territory under the control of the Panamanian authorities, shall sell, give away, or convey, in any form, for a consideration or gratuitously, coupons or tickets for making purchases in the commissaries of the Panama railroad or of the Isthmian Canal Commission, or goods coming therefrom, to a person not employed in the service of one or the other, shall pay to the proper municipal treasury a fine of 25 balboas for the first offense and in case of repetition shall be punished by a double fine or detention of from 10 to 30 days.

A person shall incur like penalties, who, not being employed in the service of the Panama Railroad Company or of the Isthmian Canal Commission, shall, in territory under Panamanian jurisdiction, buy, acquire, or accept, whether for a consideration or as a gratuity, the coupons or goods referred to.

Article 2. Any person who, not being employed in the service of the Panama railroad or of the Isthmian Canal Commission, shall bring into the Republic articles or commodities coming from the commissaries of those corporations, shall lose such articles or commodities, which shall be confiscated from him in favor of the National Treasury, and shall incur, according to the individual case, the same penalties provided for in the preceding section.

Article 3. Any merchant, owner, or manager of a commercial establishment where there are found on sale, either displayed or hidden, articles coming from the commissaries of the Panama Railroad Company or of the Isthmian Canal Commission, shall lose such articles, which shall be confiscated from him in favor of the district and he shall pay into the treasury of the same a fine of 50 balboas for the first offense. In case of repetition the fine shall be double and the individual responsible for the misdemeanor shall be liable in addition to detention of from 20 to 60 days.

Article 4. The functionaries invested with authority and jurisdiction, the employees of the National customs service, the internal revenue inspectors, the chief, employees, and agents of police who may find in any establishment articles or com-

modities coming from the commissaries of the Panama railroad or of the Isthmian Canal Commission, are under obligation to confiscate them immediately and place them at the disposal of the alcalde of the district, who, as soon as judgment is given as provided for by this law, shall deliver them to the municipal treasurer for sale with the usual legal formalities.

The articles so confiscated and turned over to the municipal treasurers for sale shall be previously marked so that they may be distinguished from others like them.

Article 5. When, through information from any private individual or public employee, articles mentioned in the preceding section are confiscated, 50 per cent of the proceeds of the sale shall be given to the informer.

Article 6. Every person who may sell, give, or convey in any manner, as compensation or gratuitously, a railroad pass made out in his favor in accordance with the contract concluded with the Panama Railroad Company, July 5, 1867, shall pay to the treasury of the proper district a fine of 25 balboas for the first offense. In case of repetition he shall incur a double fine and detention of from 10 to 30 days and shall lose whatever employment he may have.

When by virtue of the authority herein provided a person is condemned to lose the position he is filling, the functionary who imposes the penalty shall proceed immediately to dismiss the guilty party from the service, if he legally may; if not, he shall immediately report his sentence to the one who is legally competent, who shall immediately order his dismissal as decreed.

Article 7. Every person who may use or try to use or acquire or accept as a compensation or as a gratuity, a railroad pass issued in favor of another person in accordance with the contract before cited, shall incur, according to the circumstances of the case, the same penalties which are provided in the preceding section.

Article 8. The alcalde of the district shall impose the penalties provided for in this law through the procedure of police court hearings established by the code in regard to the matter; but the governor of the province may also impose them, following the same procedure.

Article 9. This law shall be published widely in Spanish, English, Italian, Greek, and Chinese and shall become effective 10 days after its promulgation.

Given at Panama, January 16, 1915.

CIRO L. URRIOLOA,

President.

J. M. FERNANDEZ,

Secretary.

Republic of Panama, National Executive Power,
Panama, January 19, 1915.

Let it be published and carried out.

BELISARIO PORRAS,

JUAN B. SOSA,

Secretary of Government and Justice.

OFFICIAL CIRCULARS.

Marine Division.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., February 20, 1915.

CIRCULAR No. 660-24:

Effective this date, the name of the Division of Canal Transportation is changed to Marine Division, and the title of Superintendent to Marine Superintendent.

GEO. W. GOETHALS,

Governor.

Applications for Leave of Absence.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., February 25, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

The following notice was published in THE CANAL RECORD of January 27:

"All concerned—It is requested that as far as possible, applications for leave of absence be forwarded to this office from 20 to 30 days before effective date of leave desired. Applications for leave should not, however, be forwarded more than 30 days prior to effective date of leave."

Instances have been noted where employees have been allowed to absent themselves for one or more days before the commencement of the leave of absence, as granted on the daily leave order. This must not be done. If a day off is desired prior to sailing, this day should be included in the request for leave of absence.

Other instances have been noted where employees have been allowed to enter upon a leave of absence in excess of five days before the request has reached this office and the leave authorized upon the daily leave order. It is desired that this practice be discontinued. If it is necessary or desirable that an employee enter upon leave before an application can be forwarded to this office and acted upon, the matter can be taken up by telephone and the leave authorized.

You are instructed to direct those in authority under

you to handle requests for leave of absence through the regular channels, and to be governed by the regulations covering the same.

GEO. W. GOETHALS,

Governor.

Bachelors Living at Corozal and Working at Balboa Heights.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., February 25, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Bachelors occupying quarters at Corozal and working at Balboa Heights, who are now being furnished transportation between residence and official station at the expense of The Panama Canal, will be required to file application for quarters in the Ancon-Balboa district, and on assignment such employees will be expected to transfer their quarters, or, if they elect to continue residence at Corozal, no further transportation will be issued.

GEO. W. GOETHALS,

Governor.

Request for Half-rate Mileage Books or Employee's Reduced Rate Tickets for Trip through the Canal.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., February 17, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

There is sent to you today a copy of form PC-495, "Request for half-rate mileage books or employee's reduced rate tickets for trip through Canal." This is a combination form, to be used either for requesting half-rate mileage books, or reduced tickets for a trip through the Canal on one of the vessels of the Panama Railroad Steamship Line. This form supersedes form 319 ("Request for half-rate mileage"), and a supply of same may be obtained upon requisition to the storekeeper, Administration Building, Balboa Heights.

C. A. MCLIVAIN,

Executive Secretary

Prompt Release of Coal Cars Requested.

THE PANAMA RAILROAD COMPANY,

OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., February 20, 1915.

CIRCULAR No. 31:

Heads of all departments—This is to call your attention to the fact that during the next few weeks we will receive several colliers from the United States, including the steamship *Ancon*, which ship alone will carry approximately 10,000 tons of coal.

In the past we have been handicapped in the handling of colliers owing to shortage in coal cars, and as it will be necessary to handle these boats with prompt despatch, your cooperation is requested, so that all cars under load with coal may be promptly released and turned back to R. W. Bergin, receiving and forwarding agent, Cristobal.

Will you kindly instruct your forces accordingly?

C. H. MOYSETT,

Superintendent.

Proposals for the Construction of a Steel and Concrete Pier at the Quarantine Station at Balboa.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., March 17, 1915, and then opened, for the construction of a landing pier 569 feet long, in front of the quarantine station at Balboa; all material entering into the permanent structure being furnished by The Panama Canal, and the contractor furnishing all labor, and material for temporary construction work. Bids should be submitted in the form of a lump sum bid. Specifications, form of contract, and proposal may be obtained upon written application to the Chief Quartermaster, Balboa Heights, and contract plans may be examined at the construction office of Balboa terminals. Bids must be accompanied by bond, certified check, post-office money order, or cash for \$1,000. The Panama Canal reserves the right to reject any or all bids. Bids should be marked "Proposal for construction of pier at quarantine station, Balboa," and addressed to the Chief Quartermaster, Balboa Heights, C. Z.

Prices of Scrap Turned into Supply Department.

THE PANAMA CANAL,

SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., February 19, 1915.

To all concerned—Circular No. 11-1, issued by the Chief Quartermaster under date of August 19, 1914, is hereby amended so that the price allowed for scrap rubber turned in to the Supply Department will be one-half cent per pound instead of one cent. This will become effective at once.

W. R. GROVE,

Chief Quartermaster.

COMMISSARY DEPARTMENT.

Coal and Kindling Wood.

Effective March 1, 1915 and until further orders, coal and kindling wood will be sold by commissaries as follows:

Coal—at 30 cents per 100-pound bag.

Kindling wood—at 10 cents per bag.

Orders for fuel will be accepted at commissaries and by commissary solicitors.

Higher Grade of Fresh Cream.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,

CRISTOBAL, C. Z., February 27, 1915.

Commissaries will hereafter handle a higher grade of fresh cream with a consequent increase in price. The new grade is 30 per cent cream, equal to the best grade available in the New York market.

BENJ. L. JACOBSON,
Depot Commissary.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective March 1, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Sugar, granulated, sack.....	.28	.31
Shoes, boy's, tan, blu., pr.....	2.40	2.70
Shoes, men's, blu., ox., pr.....	4.40	4.55
Shoes, men's, g-m., blu., pr.....	4.40	4.55
Shoes, men's, tan, blu., pr.....	4.50	4.65
Shoes, men's, tan, blu., pr.....	2.45	3.15
Locks, Yale, ea.....	.72	.78
Rugs, Crex, 6 x 9, ea.....	2.85	3.00

Additions to Stock.

Holders, soap, hanging, for bathtub, ea.....	\$.46
Holders, soap, wall, N. P., ea.....	1.05
Arms, folding, towel, N. P., ea.....	.70
Bars, towel, 24", N. P., ea.....	.30
Hangers, ladies', evening dress, ea.....	.07
Malto brau, bot.....	.10
Needles, embroidery, 25s, pkg.....	.04
Hose, men's, lisle, white, pr.....	.23
Tacks, carpet, tinned, pkg.....	.02
Pots, flower, 5", ea.....	.03
Pots, flower, 7", ea.....	.07
Pots, flower, 9", ea.....	.15
Pots, flower, 12", ea.....	.37
Pots, azalea, 6", ea.....	.04
Pots, azalea, 9", ea.....	.15
Pots, azalea, 12", ea.....	.41

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m. The gold departments of the Cristobal store will open at 2 p. m., on Saturdays.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective March 4, 1915:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....	9	
Shoulder, trimmed, per pound.....	12	
Leg (8 to 10 pounds), per pound.....	19	
Short cut, chops, per pound.....	23	
Shoulder, chops, per pound.....	14	
Lamb—Stewing, per pound.....	12	
Shoulder, trimmed, per pound.....	15	
Leg (5 to 8 pounds), per pound.....	24	
Chops, per pound.....	29	
Chops, shoulder, per pound.....	18	
Veal—Stewing, per pound.....	12	
Shoulder, for roasting (not under 4 lbs.), per pound.....	15	
Chops, shoulder, per pound.....	20	
Chops, per pound.....	30	
Loin, for roasting, per pound.....	30	
Cutlets, per pound.....	36	
Beef—Suet, per pound, special.....	03½	
Soup, per pound, special.....	7	
Soup, bones, per pound, special.....	2½	
Stew, per pound, special.....	11	
Plate, per pound, special.....	12	
Corned, No. 1, per pound.....	18	
Corned, No. 2, per pound.....	15	
Chuck roast, special, (3 lbs. and over), per pound.....	12	
Chuck roast, native (3 lbs. and over), per pound.....	11	
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16	
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24	
Rib roast, second cut, native (3½ pounds and over), per pound.....	15	
Rib roast, first cut (not under 3 pounds), special, per pound.....	19	
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27	

		Price.
Rib roast, first cut, native (3 pounds and over), per pound.....	18	
Pot roast, special, per pound.....	20	
choice, per pound.....	28	
native.....	19	
Rump roast, special, per pound.....	20	
choice, per pound.....	28	
native.....	19	
Porterhouse roast, special, per pound.....	22	
choice, per pound.....	31	
native, per pound.....	21	
Steak, chuck, special, per pound.....	13	
native, per pound.....	12	
Round, bottom, special, per pound.....	13	
choice, per pound.....	19	
native, per pound.....	12	
Round, top, special, per pound.....	15	
choice, per pound.....	22	
native, per pound.....	14	
Sirloin, special, per pound.....	20	
Sirloin, choice, per pound.....	28	
Sirloin, native, per pound.....	19	
Sirloin, choice cut, special, per pound.....	23	
Sirloin, choice cut, choice, per pound.....	32	
Sirloin, choice cut, native, per lb.....	22	
Rump, special, per pound.....	20	
choice, per pound.....	28	
native, per pound.....	19	
Porterhouse (not less than 1½ pounds), special, per pound.....	23	
Porterhouse (not less than 1½ pounds), choice, per pound.....	34	
Porterhouse (1½ pounds and over) native, per pound.....	22	
Porterhouse, short, Delmonico special, per pound.....	20	
Porterhouse, short, Delmonico choice, per pound.....	28	
Porterhouse, short, native, per lb.....	19	
Tenderloin, Western, special, per pound.....	35	
Tenderloin, Western, choice, per pound.....	46	
Tenderloin, Western, native, per lb.....	33	
Pork—Hams, fresh, per pound.....	\$23	
Shoulders, fresh, per pound.....	\$19	
Loin, chop, or roast, per pound.....	18	
Pigs' feet, fresh, each.....	8	
Pigs' head, fresh, whole.....	83	
½ head.....	42	
Sausage, home made, per pound.....	23	

MISCELLANEOUS.

Brains, calves', per pound.....	12
Kidneys, beef, per pound.....	10
Livers—Beef, per pound.....	11
Calif, each.....	65
half, each.....	33
Oysters, fresh, per pkt.....	30
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	13
Frankfurter, per pound.....	13
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	*14
Pork, per pound.....	17
Sweetbread, beef, per pound.....	20
Eggs, fresh, per dozen.....	†16
per ½ dozen.....	116
Bluefish, per pound.....	15
Halibut, fresh, per pound.....	6
Salmon, per pound.....	6
Yeast, per cake.....	31
per cake.....	2

CURED AND PICKLED MEATS.

Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Sugar cured, whole, per pound.....	*22
Half, per pound.....	*24
Sliced, per pound.....	*30
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	30
Half, boiled, per pound.....	32
Sliced, boiled, per pound.....	38
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	29
Whole piece, per pound.....	28
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound.....	29
Chickens—Fancy, roasting, corn fed, per pound.....	*26
Fowls, per pound.....	*24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	32
Broilers, milk fed, per pound.....	29
Broilers, corn fed, per pound.....	27
Turkeys, per pound.....	28
Squabs, each.....	*40
Partridges, each.....	1.00
Grouse, each.....	1.00
Pheasants, each.....	1.35
Mallard ducks, 2 to 2½ lbs., each.....	2.35

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	48
Sheffield Farms, extra fancy, per lb.....	58

		Price.
Cheese—Philadelphia cream, cake.....	9	
Roquefort, per pound.....	41	
Young America, per pound.....	21	
Swiss, per pound.....	30	
Edam, each.....	90	
Edam, tin.....	29	
Parmesan, per pound.....	38	
Gouda, per pound.....	26	
Snappy, per cake.....	9	
Milk, Sheffield Farms, per quart.....	**15	
Fermillac, bottle.....	**25	
Ice cream, quart.....	125	
½-gallon.....	150	
Cream, 30 per cent, quart.....	**52	
pint.....	**29	
½ pint.....	**17	

VEGETABLES.

Cauliflower, per pound.....	*9
Beets, per pound.....	2
Celery, per head.....	7
Cabbage, per pound.....	2
Carrots, per pound.....	2
Lettuce, per pound.....	*12
Onions, per pound.....	2½
Parsnips, per pound.....	3
Peppers, green, per pound.....	17
Plantains, per dozen.....	15
Potatoes, white, per pound.....	2
sweet, tropical, per pound.....	2
Turnips, per pound.....	1½
Tomatoes, per pound.....	11
Squash, per pound.....	*3
Yams, tropical, per pound.....	2½

FRUITS.

Apples, per pound.....	2½
Apples, fancy, per pound.....	5
Cranberries, fresh, per pound.....	6
Grapes, per pound.....	14
Grape fruit—American, each.....	5
Tropical, each.....	3½
Lemons, per dozen.....	9
Limes, per 100.....	64
Oranges—American, each.....	2
Tropical, per dozen.....	12
Coconuts, each.....	5
Bananas, per bunch.....	38
Bananas, each.....	½
Apples, evaporated, per pound.....	11
Apricots, evaporated, per pound.....	13
Pears, evaporated, per pound.....	23
Tangerines, each.....	1½
Pineapples, Cuban, each.....	7
Figs, dried, per pound.....	†13

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries; no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Examinations by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, March 10, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m.; and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the captain of the port of Cristobal on Friday, March 12, 1915, beginning at 9 a. m. Applicants should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.

F. M. NIXON,
Recorder, Board of Local Inspectors.

SHIPPING INFORMATION

Tide Predictions.

Panama tide predictions for the next four weeks are given in the following table:

MARCH.

DATE.	Time and height of high and low water.			
Wed., March 3.....	4:41	10:52	17:01	23:18
	15.9	-0.8	16.7	-1.0
Thurs., March 4....	5:20	11:34	17:38	23:58
	16.2	-1.0	17.0	-1.2
Fri., March 5.....	6:00	12:15	18:18	.....
	16.2	-0.7	16.9	.....
Sat., March 6.....	6:41	6:43	12:59	19:00
	-0.9	.....	-0.1	.....
Sun., March 7.....	1:27	7:27	13:45	19:46
	-0.2	14.9	0.9	15.3
Mon., March 8.....	2:19	8:19	14:40	20:41
	0.8	13.8	2.0	14.1
Tues., March 9....	3:18	9:23	15:44	21:50
	1.8	12.7	2.1	13.0
Wed., March 10....	4:27	10:44	17:00	23:16
	2.7	12.0	3.8	12.3
Thurs., March 11..	5:45	12:16	18:20	.....
	3.0	12.0	3.8	.....
Fri., March 12.....	6:46	6:59	13:35	19:32
	12.4	2.7	12.7	3.1
Sat., March 13.....	1:58	8:01	14:34	20:30
	13.0	2.0	13.7	2.2
Sun., March 14.....	2:54	8:48	15:21	21:18
	13.8	1.3	14.5	1.4
Mon., March 15....	3:39	9:37	16:01	22:01
	14.4	0.8	15.1	0.8
Tues., March 16....	4:18	10:17	16:36	22:40
	14.8	0.5	15.4	.04
Wed., March 17....	4:53	10:56	17:09	23:16
	15.0	0.5	15.4	0.3
Thurs., Mar. 18....	5:28	11:31	17:40	23:52
	14.8	0.8	15.1	0.5
Fri., March 19.....	6:00	12:07	18:12	.....
	14.5	1.3	14.6	.....
Sat., March 20.....	6:27	6:32	12:43	18:42
	1.0	13.9	2.0	14.0
Sun., March 21.....	1:04	7:05	13:19	19:14
	1.7	13.1	2.8	13.2
Mon., March 22....	1:44	7:41	14:01	19:51
	2.6	12.3	3.7	12.4
Tues., March 23....	2:29	8:24	14:48	20:34
	3.4	11.5	4.5	11.6
Wed., March 24....	3:22	9:19	15:47	21:36
	4.1	10.8	5.1	11.0
Thurs., Mar. 25....	4:26	10:37	16:58	22:59
	4.5	10.6	5.2	10.9
Fri., Mar. 26.....	5:35	11:57	18:08	.....
	4.3	11.0	4.7	.....
Sat., Mar. 27.....	6:18	6:38	13:01	19:08
	11.3	3.6	11.9	3.8
Sun., Mar. 28.....	1:20	7:31	13:51	20:00
	12.2	2.7	13.1	2.4
Mon., Mar. 29.....	2:10	8:19	14:34	20:45
	13.3	1.6	14.4	1.1
Tues., Mar. 30....	2:56	9:02	15:14	21:27
	14.5	0.5	15.6	-0.2
Wed., Mar. 31....	3:36	9:45	15:53	22:10
	15.5	-0.3	16.6	-1.2

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used in Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3.47.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York, for all states. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

*Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE—The sailings on Monday, March 8, and April 5, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho,

Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7.10 a. m., connects with the despatches for the two sailings mentioned above.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., March 1, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Bell, John	Markland, George
Birlington, Mrs. A. L.	Masterman, N. L.
Clarke, Waldo E.	Mayers, Gerald
Crain, Mrs. Merritt	Mends, P. S.
Gardner, T. B.	Mosely, Henry
Gart, Sary	Powell, W. F.
Geiger, James M.	Rebstock, T.
Goddard, Lee Evan	Rothenberg, Miss Bertha
Hudson, Mrs. Anna G.	Seymore, William
Irwin, J. C., Jr.	Vance, F. A.
Kilcorse, Mary F.	Weddle, James A.
Lawson, C. H.	Williams, J. B.
Libby, F. E.	

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, February 27, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alajuela	Gatun Lake.	Miraflores Lake.	
Sun., Feb. 21.....	127.95	92.79	86.97	86.92	54.42
Mon., Feb. 22.....	128.20	93.45	87.00	86.97	54.41
Tues., Feb. 23.....	127.30	92.90	86.92	86.96	54.22
Wed., Feb. 24.....	127.20	92.73	86.95	86.92	54.27
Thurs., Feb. 25.....	127.15	92.67	86.94	86.92	54.30
Fri., Feb. 26.....	127.20	92.72	86.99	86.93	54.23
Sat., Feb. 27.....	127.15	92.66	87.01	86.94	54.11
Heights of low water to nearest foot.....	126.0	91.0			

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls or the purchase of supplies may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Cristobal or Balboa from plants of The Panama Canal. The present price is \$1.25 per barrel, reduced to 60° Fahrenheit.

Diesel engine oil is for sale by the Union Oil Company, at 45 shillings per ton of seven barrels.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock, with a minimum charge of \$3. Vessels may take up from the fresh water sections of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light, and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges

for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the turning of the largest crank shafts or longest line shafts.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment is ward is \$1 per day; for foreign seamen, \$1.50 per day.

Subsistence supplies, including a large stock of fresh meats, vegetables, canned groceries, fruits, bakery products, etc., are available for quick delivery at either terminal. Prices are generally lower than the retail prices in the United States, and compare favorably with prices in any part of the world.

Application for supplies, or for services, should be made to the captain of the port, Cristobal or Balboa.

Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired; or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case the vessel has a known representative on the Isthmus, in care of such representative.

The cable address of The Panama Canal, on the Isthmus, is "Isthmian, Balboa Heights;" in the United States, "Isthmian, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C." for delivery in the United States.

Sailings of Vessels in Regular Service with the Isthmus.

REGULAR CONNECTIONS THROUGH THE CANAL.

Approximately regular services between the Atlantic and the Pacific seaboard from Boston, New York, Philadelphia, and Baltimore, occasionally Charleston and New Orleans, to San Pedro, San Francisco, Portland, and Puget Sound, and return, are maintained by the American-Hawaiian Steamship Company, with a sailing each way about every five days; the Luckenbach Steamship Company, with a sailing each way about every 10 days; Sudden and Christenson, approximately fortnightly; the Atlantic and Pacific Steamship Company, about every three weeks; and the Boston and Pacific Line, and the Arrow Line, each sending a vessel each way about once a month.

Between the east coast of the United States and the west coast of South America, fortnightly services are maintained by the Merchants' Line and by the New York and South America Line; the West Coast Line has sailings each way about every four weeks.

Between the west coast of the United States, with connections to lower British Columbia, and Europe the following lines are in service: The Harrison-Direct Line, monthly; the Maple Leaf Line, about every six weeks; the East Asiatic Company, monthly, and the Johnson Line, every six or seven weeks.

The Pacific Steam Navigation Company is operating approximately a monthly service around South America from Liverpool, by way of the Canal.

The American-Australian Line has been sending vessels through the Canal about fortnightly from New York to ports in Australia and New Zealand.

PACIFIC COAST CONNECTIONS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acajutla, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central American line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports abovenamed between Balboa and Ocos.

Grace & Company maintain a service with a vessel plying between San Francisco and Valparaiso, calling at way ports. It makes a round voyage about every 10 weeks.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Payta, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa to Valparaiso, calling at Paíta, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

The Toyo Kisen Kaisha operates a bimonthly service between Hongkong and Coronel, Chile, calling at the

(Continued on page 262.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p. m. February 28.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Feb. 24.	<i>Cristobal</i>	American	Panama Railroad Co.	New York	Balboa	Ballast		9,698	7,272
Feb. 25.	<i>Asyanax</i>	British	China Mutual Steam Nav. Co.	Liverpool	San Francisco	Gen. cargo (a)	1,430	5,125	3,237
Feb. 26.	<i>Lewis Luckenbach</i>	American	Luckenbach S. S. Co.	New York	San Diego	Steel, general (b)	6,000	4,599	3,492
Feb. 28.	<i>Star of India</i>	British	Commonwealth & Dominion Line	New York	Auckland	Gen. cargo	3,220	9,334	6,984

(a) Including 600 tons liquors. (b) Including 5,845 tons structural steel, machinery, and other steel goods.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Feb. 22.	<i>Washington</i>	British	E. T. Radcliffe & Co.	Tacoma	Rotterdam	Flour, meat (a)	7,400	5,547	3,915
Feb. 23.	<i>Panoman</i>	American	American-Hawaiian S. S. Co.	Seattle	Philadelphia	Gen. cargo	6,949	6,937	4,760
Feb. 24.	<i>Colon</i>	American	Panama Railroad Co.	Balboa	New York	General produce	3,200	5,866	4,222
Feb. 25.	<i>Limari</i>	Chilean	South American S. S. Co.	Valparaiso	Cristobal	General produce	1,652	3,631	2,421
Feb. 25.	<i>Strathgarry</i>	British	Strath Line	San Francisco	Great Britain	Barley	6,350	4,658	3,452
Feb. 25.	<i>Swindon</i>	British	Evan, Thomas, Radcliffe & Co.	Tacoma	Algiers	Wheat	7,395	5,547	3,895
Feb. 25.	<i>Sverre</i>	Norwegian	S. N. Kuhnle & Co.	San Francisco	Copenhagen	Barley	5,243	3,854	2,813
Feb. 26.	<i>Cranley</i>	British	Century Steamship Co.	San Francisco	Rotterdam	General pro. (b)	6,739	5,921	4,403
Feb. 26.	<i>Georgian</i>	American	American-Hawaiian S. S. Co.	Hilo	Del. Breakwater	Sugar, general	7,850	6,920	4,908
Feb. 26.	<i>Transvaal</i>	Danish	East Asiatic S. S. Co.	Callao	Copenhagen	Nitrates	6,700	4,850	3,473
Feb. 27.	<i>Salvador</i>	British	Salvador R. R. Co.	Salina Cruz	Cristobal	General produce	1,113	1,190	692
Feb. 28.	<i>Jamaica</i>	British	Pacific Steam Nav. Co.	Balboa	Cristobal	General produce	990	1,170	620

(a) 6,400 tons flour, 1,000 tons canned meat. (b) Including 2,500 tons barley, 2,928 tons flour, 1,338 tons beans.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
Feb. 28.	<i>Santa Clara</i>	W. R. Grace & Co.	New York.
Feb. 28.	<i>Howick Hall</i>	N. Y. and S. America Line.	New York.
Mar. 2.	<i>Montanan</i>	American-Hawaiian S. S. Co.	New York.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Feb. 28.	<i>Burcombe</i>	Burdick & Cook	Manzanillo.
Feb. 28.	<i>Roddam</i>	Stephens, Sutton & Stephens	Punta Arenas.
Mar. 4.	<i>Lampoc</i>	Bear Creek Oil & Ship Co.	San Francisco.
Mar. 4.	<i>Hondulan</i>	American-Hawaiian S. S. Co.	Los Angeles.

PORT OF CRISTOBAL.

*ARRIVALS.

Feb. 22.	<i>Amor</i>	Dutch Royal Mail	Cartagena.
Feb. 22.	<i>Puerto Rico</i>	Cie. Gen. Transatlantique	Bordeaux.
Feb. 25.	<i>Tordenskjold</i>	Earn Line	Norfolk.
Feb. 26.	<i>Eggesford</i>	T. S. N. Co.	Kingston.
Feb. 26.	<i>Wegadesk</i>	Earn Line	Norfolk.

*DEPARTURES.

Feb. 26.	<i>Amor</i>	Dutch Royal Mail	Porto Rico.
Feb. 26.	<i>Puerto Rico</i>	Cie. Gen. Transatlantique	Bordeaux.
Feb. 26.	<i>Eggesford</i>	T. S. N. Co.	Kingston.
Feb. 27.	<i>Tordenskjold</i>	Earn Line	Daiquiri.

*EXPECTED ARRIVALS.

Mar. 2.	<i>Oranian</i>	Leyland Line	Liverpool.
Mar. 2.	<i>Essequibo</i>	Royal Mail	Southampton.
Mar. 3.	<i>Siena</i>	La Veloce	Genoa.

*EXPECTED DEPARTURES.

Mar. 3.	<i>Essequibo</i>	Royal Mail	Southampton.
Mar. 6.	<i>Siena</i>	La Veloce	Genoa.

*Other than vessels passing through the Canal, United Fruit Company's regular vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Date	Vessel	Line	From
Feb. 22.	<i>Peru</i>	Pacific Steam Nav. Co.	Callao.
Feb. 24.	<i>City of Para</i>	Pacific Mail S. S. Co.	San Francisco.
Feb. 25.	<i>Pachitea</i>	Peruvian S. S. Co.	Callao.

*DEPARTURES.

Date	Vessel	Line	To
Feb. 22.	<i>Guatemala</i>	Pacific Steam Nav. Co.	Callao.
Mar. 1.	<i>Pachitea</i>	Peruvian S. S. Co.	Callao.
Mar. 6.	<i>Pachitea</i>	Peruvian S. S. Co.	Callao.

*EXPECTED ARRIVALS

Mar. 1.	<i>Aztec</i>	Pacific Mail S. S. Co.	San Francisco.
Mar. 3.	<i>Huasco</i>	South American S. S. Co.	Valparaiso.
Mar. 4.	<i>Kiyo Maru</i>	Toyo Kisen Kaisha	San Francisco.
Mar. 7.	<i>Peru</i>	Pacific Mail S. S. Co.	San Francisco.

*EXPECTED DEPARTURES.

Mar. 2.	<i>City of Para</i>	Pacific Mail S. S. Co.	San Francisco.
Mar. 4.	<i>Peru</i>	Pacific Steam Nav. Co.	Guayaquil.
Mar. 6.	<i>Manavi</i>	Pacific Steam Nav. Co.	Guayaquil.

*Other than vessels passing through the Canal.

(Continued from page 261.)

principal ports on the west coast between Los Angeles and Coronel.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail Steam Packet Company maintains a fortnightly service between Colon and the United Kingdom, making the following way ports: Cartagena, Puerto Colombia, Trinidad, and Barbados. These Royal Mail vessels arrive in Colon on Saturdays and sail on Tuesdays.

The Compagnie Generale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, be-

tween Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compania Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls enroute, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal; and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailing via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

NEW YORK TO CRISTOBAL-COLON.			
Sails.	Arrives.		
Santa Marta	U. F. C.	Feb. 24	Mar. 3
Panama	P. R. R.	Feb. 25	Mar. 3
Pastores	U. F. C.	Feb. 27	Mar. 7
Zacapa	U. F. C.	Mar. 3	Mar. 10
Allianca	P. R. R.	Mar. 4	Mar. 10
Calamares	U. F. C.	Mar. 6	Mar. 14
Carrillo	U. F. C.	Mar. 10	Mar. 17

Colon	P. R. R.	Mar. 11	Mar. 17
Tenadores	U. F. C.	Mar. 13	Mar. 21
Almirante	U. F. C.	Mar. 17	Mar. 24

CRISTOBAL-COLON TO NEW YORK.

Almirante	U. F. C.	Mar. 4	Mar. 11
Advance	P. R. R.	Mar. 6	Mar. 13
Metapan	U. F. C.	Mar. 8	Mar. 16
Santa Marta	U. F. C.	Mar. 11	Mar. 18
Panama	P. R. R.	Mar. 13	Mar. 19
Pastores	U. F. C.	Mar. 15	Mar. 22
Zacapa	U. F. C.	Mar. 18	Mar. 25
Allianca	P. R. R.	Mar. 20	Mar. 26

NEW ORLEANS TO CRISTOBAL-COLON.

Parismina	U. F. C.	Feb. 24	Mar. 3
Atenas	U. F. C.	Feb. 27	Mar. 4
Cartago	U. F. C.	Mar. 3	Mar. 10
Turrialba	U. F. C.	Mar. 4	Mar. 11
Heredia	U. F. C.	Mar. 10	Mar. 17
Abangarez	U. F. C.	Mar. 13	Mar. 18
Parismina	U. F. C.	Mar. 17	Mar. 24

CRISTOBAL-COLON TO NEW ORLEANS.

Abangarez	U. F. C.	Mar. 4	Mar. 9
Parismina	U. F. C.	Mar. 4	Mar. 11
Atenas	U. F. C.	Mar. 11	Mar. 16
Cartago	U. F. C.	Mar. 11	Mar. 18
Turrialba	U. F. C.	Mar. 18	Mar. 23
Heredia	U. F. C.	Mar. 18	Mar. 25



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

NOTES OF PROGRESS.

Traffic Suspended on Account of Slide.

A movement of the slide on the east bank of Culebra directly north of Gold Hill on Thursday, March 4, made it necessary to close the channel to traffic, in order to allow the dredging equipment full access to the obstruction. Vessels seeking passage through the Canal have been taken as far as Pedro Miguel Lock on the south side of the slide, and as far as Gatun Locks, Gamboa, or the mooring station opposite Empire, on the north side. The dredging fleet is concentrating its efforts on the obstruction, and has succeeded in clearing the way for most of the vessels by Wednesday afternoon, March 10.

Sailing Vessel Towed from San Francisco.

The first sailing vessel to come to the Canal from the Pacific Ocean is the *Springbank*, a Norwegian four-masted steel schooner, which arrived in the outer bay at Balboa on March 4, in tow of the American steamship *General Hubbard*. This is also the first vessel to come in under tow from the Pacific; the old prison ship *Success* arrived from Philadelphia on December 31 in tow of the steamship *Cricket*, bound for San Francisco.

The *General Hubbard* and the *Springbank* left San Francisco on February 6 and two days out they ran into a hurricane, with heavy seas and wind from the northeastward blowing about 100 miles an hour, according to the report of the master of the *General Hubbard*. This passed within 48 hours and the remainder of the voyage was made without incident. The *Springbank* was towed with a steel cable 140 fathoms long.

The *General Hubbard* called at the port of Los Angeles, leaving the *Springbank* outside. Upon resuming the tow, they made the voyage from Los Angeles to Balboa in 19 days and 19 hours, which is at the rate of about 150 miles per day. Without a tow, the *General Hubbard* could have made this part of the voyage in between 13½ and 14 days.

After entering the Caribbean Sea, the *Springbank* will proceed under sail to Denmark with a cargo of barley. The *General Hubbard* is bound for New Orleans, with a cargo of 2,200 tons of general produce.

The *Springbank* is 282 feet long, 43 feet in the beam, and has a draft of 22½ feet; her gross Canal tonnage is 2,463, and the net Canal tonnage, 2,252. The *General Hubbard*, chartered by Sudden and Christenson of San Francisco, is 258 feet long, 42 feet in the beam, and has a draft of 15½ feet. The gross and net Canal tonnage are 2,176 and 1,405 tons, respectively.

Another Pleasure Yacht through the Canal.

The sixth American cruising yacht to travel the Canal route is the steam yacht *Noma*, which arrived at Cristobal on Friday March 5, on her way from Jacksonville, by way of Kingston, to San Diego, by way of Acapulco. The *Noma* belongs to Vincent Astor of New York City, and is 262 feet long by 28 feet in the beam, and has a gross Canal tonnage of 811 and net tonnage of 425; she is carrying seven through passengers and a crew of 44.

Changes in United Fruit Company's Schedule.

Effective March 1, a change was effected in the New Orleans schedule of the United Fruit Company steamers, by which the steamers *Abangarez*, *Atenas*, and *Turrialba* are to be placed in the New Orleans-Havana-Colon-Bocas del Toro run, and the steamships *Cartago*, *Heredia*, and *Parismina* on the direct Colon-Limon-Bocas del Toro run.

The dates and hours of departures and arrivals of the vessels at the respective ports will be the same as the old schedule, the only change being in the ships.

Three Great Types of Vessels Together in Canal.

Among the vessels tied up at the upper approach wall of Pedro Miguel Lock, on Saturday, March 6, awaiting passage past the slide north of Gold Hill, the four-masted schooner *Springbank*, the steamship *General Hubbard*, and the Diesel engine ship *Fionia* were moored near together. Each of these may be said to represent an epoch in navigation. The use of sails for propelling vessels was developed at least as many years before the beginning of the Christian era as the adaptation of steam was after that event. The latter may be said to date its commercial practicability from the beginning of the nineteenth century, which is just about 100 years before the development of the Diesel engine.

The steamship *Panama* of the Panama Railroad Steamship Line started through the Canal from the Atlantic entrance on Sunday, March 7, but on account of the slide in Culebra Cut was turned back to Cristobal after reaching Gamboa. The *Panama* will sail from Cristobal on her regular trip to New York on Saturday, March 13.

The mineplanter *General J. M. Schofield*, Lieut. Geo. M. Peek, Coast Artillery Corps, commanding, sailed from Cristobal for Cuba Wednesday, March 10, after lying a week in Gatun Lake for the effect on barnacles.

NOTICE TO STEAMSHIP LINES.

Governor Points Out Satisfactory System of Handling Ships' Business.

1. In order to avoid needless delays to vessels transiting the Canal or using its terminal ports, to hasten the delivery to ships of coal and other supplies, to effect a more speedy adjustment of all accounts, to enable shipping interests to avoid the payment of agents' fees and commissions for which an adequate return is seldom received; in short, to facilitate all business transacted between The Canal and its users, the following information is published:

2. Commercial vessels which enter Canal waters may be divided into three general classes: (a) Those which come for the sole purpose of passing through the Canal and which do not take on or discharge freight or passengers, but may take on coal or supplies; (b) those which pass through the Canal and also use a terminal port to take on or discharge freight or passengers; and (c) those which do not pass through the Canal, but take on or discharge freight or passengers in a terminal port. A vessel falling under either class "b" or class "c" requires an agent on the Isthmus to handle its business, but one falling under class "a" does not.

3. Immediately upon arrival at a terminal port, a vessel is boarded by a pilot and by quarantine and boarding officers. Mail and cablegrams are then delivered, orders for coal and supplies taken and arrangements made for their delivery, and any other business which it is desired be transacted in connection with the ship's transit through the Canal is attended to. If advance information has been received, coal or whatever supplies may be needed are in readiness when the ship arrives, they can be taken on board and, in event tolls and other charges have been covered by an advance deposit and a tonnage certificate has been obtained, the vessel may proceed at once through the Canal, without the master leaving his ship or signing a paper. If, however, an agent must be consulted, either for the payment of tolls or the transaction of other ship's business, the vessel will probably be required to anchor until arrangements and settlements can be effected. Doing business through an agent on the Isthmus never facilitates a vessel's passage through the Canal.

4. Isthmian agents for steamships are dependent upon The Canal for all information concerning the arrival of, departure from, and movements of vessels in Canal waters; for practically all equipment such as tugs, lighters, etc., for the transportation and delivery of coal and supplies; and, while provisions and supplies can be purchased from local dealers, when furnished to shipping through local agents they are in a large majority of cases actually bought from and delivered by the Panama railroad. The Panama railroad is practically the only concern on the Isthmus

which handles coal in any quantity; it also has a large refrigerating plant, a laundry, and a commissary department which does a very extensive general merchandising business with shipping, and, being closely identified with The Panama Canal, is in a position to render service to shipping with the least possible delay. Being under Government control, it is the policy of both The Panama Canal and the Panama Railroad to keep at a minimum all charges against vessels and to sell coal and supplies at only a slight advance over purchase prices plus the cost of transportation and handling.

5. The interests of The Panama Canal and Panama Railroad Company are closely interwoven; the business of both is under one head; both employ the same Auditor and the same Collector, and the duties of many other officials on the Isthmus pertain to both. All payments to The Canal must be made by advance deposit or in cash, but a single deposit may be utilized to cover both Canal and railroad charges; adjustments are effected on the Isthmus and settlements made and bills rendered accordingly.

6. The most satisfactory way of prepaying tolls and other charges is by deposit with an Assistant Treasurer of the United States in New York, San Francisco, or other American seaport, who should be requested to immediately cable the Isthmus, giving the amount of the deposit, the ship for which it is made, and the name of the depositor. The cost of this cable service is \$5 and the amount is charged against the deposit. It is recommended that the deposit be slightly more than sufficient to cover tolls and other charges, so that in case the latter exceed the amount anticipated the vessel need not be delayed. It is also well to make the deposit several days in advance of the vessel's expected arrival in Canal waters, in order that she may not be held pending receipt of notice of deposit. In every case, as soon as the ship has passed through the Canal the total amount chargeable against the vessel is deducted from the amount of the deposit and any unexpended balance is remitted to the depositor, together with a statement of the account; a copy of this account is also furnished to the vessel before she leaves Canal waters. A shipping firm having offices in a port where there is an Assistant Treasurer can make its deposits direct, while those whose offices are elsewhere, or in foreign countries, can remit through their bankers or through other shipping agencies.

7. In connection with the close relationship existing on the Isthmus between The Panama Canal and the Panama Railroad Company in consequence of which the latter furnishes coal, provisions, supplies, etc., to shipping, it also operates the transisthmian railroad and a steamship line to and from New York, with its head office at 24 State Street, New York City, to which correspondence in relation to its affairs should be addressed. It acts as agent for vessels under classes "b" and "c", for the transaction of all business, for which a regular fee is charged; it also makes advances, through its New York office, to cover tolls and other charges against vessels under classes "a" and "b," for which it charges a commission but no fee. With this end in view, it at all times maintains on the Isthmus, in the hands of the Collector of The Panama Canal, ample funds to liquidate such charges. A foreign shipping firm can make deposit through the Panama Railroad Com-

pany in New York, or transact other business, in the same manner as it would through any other shipping firm, and this is very satisfactory to The Panama Canal officials.

8. Some shipowners have placed the payment of tolls and other charges in the hands of bankers on the Isthmus. This has in some cases caused delays which could have been avoided had the payments been made as recommended and been in the hands of the Collector of The Panama Canal who, from the very nature of his duties, is always in close touch with the movements of vessels. If advance deposits are made direct with an Assistant Treasurer of the United States, either directly or through the Panama Railroad Company in New York, the settlement of all bills will be directly in the hands of the Collector at the Canal, to whom it must eventually come if handled through a banking house or other agent on the Isthmus. It can be readily seen that where all advance information and all business connected with a vessel transiting the Canal are in the hands of one organization, all matters affecting the ship can be handled far more efficiently, simply, and quickly than where outside interests must be consulted.

9. Every effort has been made to simplify and systemize the methods of transacting all business in relation to shipping that uses the Canal, and it has been demonstrated by actual operating experience that it can be more efficiently and expeditiously handled by the Canal officials themselves than through local agents or banking firms, to say nothing of the saving to shipping of fees and commissions charged by outside parties, since The Canal charges neither the one nor the other on any business transacted directly with it.

10. After making deposit or arranging for the payment of a vessel's tolls and other charges, all communications bearing on her transit through the Canal, other movements, the purchase of coal and supplies, or any other matter affecting her while in Canal waters, should be addressed to the Marine Superintendent, The Panama Canal, Balboa Heights, Canal Zone. The cable address of The Panama Canal has been changed from "Isthmian, Balboa Heights" to "PANCANAL, PANAMA," though either will reach the Canal authorities.

GEO. W. GOETHALS, *Governor.*

BALBOA HEIGHTS, C. Z., February 19, 1915.

Quarantine Work in February.

The net emigration from the Isthmus to foreign ports during the month of February, 1915, was 1,561, as compared with 804 in

January and 1,328 in December. This brings the total exodus since July 1, 1913, to 24,097.

In this connection, it may be noted that the force engaged in work on the Canal and railroad on July 30, 1913, was 42,484; this force had diminished to 24,853 on January 20, 1915, a net decrease of 17,631. This is 6,466 less than the total net emigration from the Isthmus during the period.

Further details of the movements of persons through the ports are given in the following consolidated report of quarantine transactions at the ports of Balboa-Panama and Cristobal-Colon for the month of February:

Number of vessels inspected and passed...	141	
Number of vessels held in quarantine....	8	
Total.....		149
Number of vessels fumigated on arrival..	7	
Number of vessels fumigated on departure.....	2	
Total.....		9
Number of crew examined.....	9,332	
Number of passengers examined (including 468 U. S. troops).....	4,300	
Total.....		13,632
Number of persons vaccinated at ports of arrival because of compulsory vaccination law.....	440	
Number of persons vaccinated at ports of departure or en route because of compulsory vaccination law.....	1,073	
Total.....		1,513
Number of persons held in quarantine at the detention houses to complete period of incubation of yellow fever and plague.....	216	
Number of persons held in quarantine on board vessels to complete period of incubation of yellow fever and plague.....	951	
Total.....		1,167
Number of persons landed from foreign ports:		
Cabin.....	1,794	
Steerage.....	617	
Total.....		2,411
Number of persons embarked for foreign ports:		
Cabin.....	2,856	
Steerage.....	1,116	
Total.....		3,972
Number of persons arriving from coast towns on small launches and sailing craft.....	2,267	
Number of persons sailing for coast towns on small launches and sailing craft..	1,036	
Apparent increase for month from coast towns.....	1,231	
Apparent decrease for month from foreign ports:		
Cabin.....	1,062	
Steerage.....	499	
Total.....		1,561
Number of immigrants recommended for deportation.....	9	
Number of bills of health issued or vised..	101	
Total number of persons landed.....	4,678	
Less number for Pacific ports.....	178	4,500
Total number of persons sailing.....		5,008
Total apparent decrease for month.....		508

Obituary.

Harry W. Nollman of New York City, employed in the Record Bureau, was drowned in the Chagres River above Alhajuela on March 2.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
George, Filbert.....	59482	Grenada.....	Panama.....	Building Div....	Feb. 28, 1915.
Nollman, Harry W.....	4753	U. S. A.....	Corozal.....	Executive Dept..	Mar. 2, 1915.
Thompson, Thomas.....	16117	Jamaica.....	Colon.....	P. R. R.....	Mar. 2, 1915.
Williams, Geo.....	62190	Jamaica.....	Colon.....	Term. Const.....	Mar. 1, 1915.
Williams, Felix.....	23861	Jamaica.....	Panama.....	Dredging Div....	Jan. 31, 1915.
Villaverde, Gregorio.....	209017	Panama.....	Panama.....	Land Surveys....	July 29, 1914.

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against their estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

THE EAST ASIATIC LINE.

Movements of Vessels of Important Danish Company through Canal.

The motorship *Fionia* of the East Asiatic Company (Aktieselskab Det Ostasiatike Kompagni of Copenhagen), held at Pedro Miguel Lock on account of the slide in Culebra Cut last week, was making the thirteenth transit of vessels of this line through the Canal. With this trip, the *Fionia*, the *Transvaal*, and the *Jutlandia* will have been through the Canal twice; other vessels of the line using the Canal have been, in the order of their coming, the *Malakka*, *Natal*, *Cathay*, *Rhodesia*, *Pangan*, *Siam*, and *Tongking*. This is 10 vessels of the company's fleet of 24.

The *Fionia* and the *Jutlandia* in returning through the Canal were completing trips between Copenhagen and the west coast of the United States, as they had previously come out from Denmark with cargoes of general merchandise for the west coast. The *Transvaal* passed through the Canal both times from the Pacific to the Atlantic. Its first trip was on August 31, enroute from San Francisco to Europe with 7,082 tons of barley; after this was discharged the *Transvaal* loaded with general cargo for the Atlantic coast of lower South America, delivered it, and proceeded through the Strait of Magellan to the west coast. There it loaded with nitrates and general produce, aggregating 6,700 tons, with which it passed through the Canal on February 28, enroute for Copenhagen via St. Thomas, Danish West Indies.

Of the 13 transits, six have been from the Atlantic to the Pacific and seven eastbound. The westbound vessels carried principally manufactured goods, salt, perfumes, liquors, etc.; the aggregate cargo was 17,988 tons. This was carried in vessels having an aggregate net Canal tonnage of 24,642; the toll charge of \$1.20 per net ton was, accordingly, equivalent to approximately \$1.64 per ton of cargo carried.

The seven westbound vessels, aggregating 27,169 net Canal tons, carried 45,760 tons of cargo. The toll charges were, accordingly, equivalent to slightly over 71 cents per ton of cargo carried. The cargo was principally grains, dried and canned fruits, canned fish, and other foodstuffs. One of the eastbound vessels, the *Tongking*, carried 7,250 tons of sesame seed from Shanghai to Aarhus; this vessel had come by way of San Francisco to take on a supply of oil for its Diesel engines. The *Malakka*, which went through from the Atlantic to the Pacific, to return with foodstuffs from the west coast of North America, was wrecked on the return voyage off the coast of Mexico, while laden with wheat.

Ten of the company's 24 vessels are propelled by internal combustion engines. In this group are included the newer vessels and the *Pangan*, converted after use as a steamship to a motorship.

Report of Grounding of the "Blanche D. Pendleton."

Following its investigation of the grounding of the schooner *Blanche D. Pendleton* near Coco Solo Point during the "norther" on February 9, the Board of Local Inspectors has reported as its opinion that the responsibility rests with the master of the schooner.

From the testimony adduced it would seem that when a tug was sent to his assistance sometime during the forenoon, there was a hull, in which the wind and sea showed signs of

moderating, and a tow was refused. At the same time he requested additional ground tackle from shore, but before it could be received, the wind freshened, and the sea increased to such an extent that he signaled for a tug with a view of finding a more sheltered berth. Owing to the heavy sea, the constricted space in which he was moored, and the fact that the water was full of timber piling and timbers from the demolished breakwater, the line to the tug parted and the schooner drifted ashore. She is lying in an easy position awaiting instructions from her owners as to floating her and salvaging the cargo.

Payment of Rent and Charges for Electricity.

Rental and electric light charges are payable at the Collector's office in the Administration Building, Balboa Heights, or the deputy collector's office in the old Panama railroad office building at Colon.

Collectors will not call at houses to collect these charges. If payment is made by mail it is preferred that postal money orders be used.

Employees have been notified by the district quartermasters of the amount payable for rent. They can also obtain the same information from the table published as a supplement to THE CANAL RECORD of February 24, 1915.

The collector and his deputies have been furnished lists showing the amounts due from employes for electric current, except in cases where the charge is based upon meter readings, in which cases, only, bills will be rendered.

Suggestions for Library.

Since the establishment of the Canal library in the Administration Building many new and useful catalogues and publications have been obtained. In order that the collection may be more complete, however, officials and employes are invited to suggest catalogues or publications of interest to the work which should be procured.

To Supervise Tests at Darien Radio Station.

Dr. L. W. Austin, head of the Naval radio experimental laboratory at the Bureau of Standards in Washington, D. C., arrived on the Isthmus on Thursday, March 4, on duty with the Navy Department in connection with the receiving and sending tests to be conducted at the new Darien high power radio station. He will be stationed on the Isthmus for about two months. Dr. Austin, who is the president of the American Society of Radio Engineers, has recently aided in the development of a system of receiving circuits which has placed the United States practice considerably in advance of other countries in this part of wireless telegraphy.

Timber Wharf Burned.

The greater part of the superstructure of the mining wharf at Naos Island was destroyed by fire during the late afternoon of Monday, March 9. At the same time the fire consumed about 30,000 feet of lumber on the wharf. The creosoted piles of the structure were considerably damaged but most of them are still serviceable. The wharf was 240 feet long by 40 feet wide and its floor stood at 18 feet above mean sealevel.

Rates at Hotel Aspinwall.

The following are the present rates at the Hotel Aspinwall, on Taboga Island (American plan): Employes, dinner, lodging, and breakfast, \$1.50; per day, employes \$2.00; nonemployes, \$2.50; servants, and children under 12 years of age, \$1.00; employes staying two weeks or longer, \$1.75. The launch service is as follows:

Week days.—Leave Balboa dredge landing at 5.30 p. m., and Taboga at 6 a. m. *Sundays and holidays.*—Leave Taboga at 6 a. m., Balboa dredge landing at 9.40 a. m. and 5.30 p. m.; leave Taboga at 7.15 p. m. *Fares.*—Employes, 25 cents gold each way; nonemployes, 50 cents gold each way, children under 12 years, 15 cents gold each way.

WEATHER CONDITIONS, CANAL ZONE, FEBRUARY, 1915.

Rainfall for the month of February was above normal everywhere except at Miraflores. On the Pacific coast the rainfall for the month was triple the average amount, and on the Atlantic coast the rainfall was seven times greater than the average amount. Monthly totals ranged from 14.32 inches at Brazos Brook to 1.17 inches at Miraflores. The maximum precipitation recorded in any one day was 7.12 inches at Colon on the 10th.

The mean temperature at both coast stations was above normal, the daily excess being approximately 1° F. on the Pacific coast and 2° F. on the Atlantic coast. The relative humidity was above normal at both coasts; while the atmospheric pressure was slightly below the average. The daytime cloudiness was above the average at both coast stations.

The wind movement was slightly below the normal at the Pacific coast and slightly above at the Atlantic coast.

No fogs were observed during the month at either coast station. The average number of nights with fogs at interior stations was four. All fogs were dissipated by 9.30 a. m.

Elevations of Gatun lake (feet above mean sealevel): Mean for month, 86.98; maximum, 87.20 on the 10th; minimum, 86.88 on the 11th and 27th; evaporation from lake surface, 5.43 inches.

Following is a summary of conditions at the Atlantic station of Colon and the Pacific station at Balboa Heights:

STATIONS.	Pressure (reduced to mean of 24 hourly.)	Temperature.					Mean relative humidity.	Precipitation.			Wind.			
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days of .01 inch or more.	Total movement (miles.)	Prevailing direction.	Max velocity in (miles.)	Date.
Colon.....	29.850	81.4	87	Feb. 17	72	Feb. 10	85	12.37	1.71	15	10,278	N.	39	N. Feb. 9
*Balboa Heights...	29.838	81.3	92	Feb. 5	70	Feb. 1	86	2.96	.89	11	5,921	N.	31	N. Feb. 26

*Formerly Ancon.

OFFICIAL CIRCULARS.

Regarding the Reporting of Contagious and Infectious Diseases.
Ordinance No. 1.THE PANAMA CANAL,
BOARD OF HEALTH OF THE CANAL ZONE.

(Supplementing Section 10 of Act 9 of September 2, 1904, as amended by Executive Order of October 14, 1911.)

Be it ordained by the Board of Health of the Canal Zone:

Section 1. Each and every physician who treats or examines any person suffering from or afflicted with, or suspected to be suffering from or afflicted with, any one of the notifiable diseases, shall immediately report such case of notifiable disease in writing to the local health officer. Said reports shall be forwarded either by mail or by special messenger and shall give the following information:

1. The date when the report is made.
2. The name of the disease or suspected disease.
3. The name, age, sex, color, occupation, address, and school attended or place of employment of patient.
4. Number of adults and of children in the household.
5. Source or probable source of infection or the origin or probable origin of the disease.
6. Name and address of the reporting physician.

Provided: That if the disease is, or is suspected to be, smallpox, the report shall, in addition, show whether the disease is of the mild or virulent type and whether the patient has ever been successfully vaccinated, and, if the patient has been successfully vaccinated, the number of times and dates or approximate dates of such vaccination; and if the disease is, or is suspected to be, cholera, diphtheria, plague, scarlet fever, smallpox, or yellow fever, the physician shall, in addition to the written report, give immediate notice of the case to the local health officer in the most expeditious manner available; and if the disease is, or is suspected to be, typhoid fever, scarlet fever, or diphtheria, the report shall also show whether the patient has been, or any member of the household in which the patient resides is, engaged or employed in the handling of milk for sale or preliminary to sale.

Sec. 2. The requirements of the preceding paragraph shall be applicable to physicians attending patients ill with any of the notifiable diseases in hospitals, asylums, or other institutions, public or private: *Provided*, That the superintendent or other person in charge of any such hospital, asylum, or other institution in which the sick are cared for may report in the place of the attending physician or physicians the cases of notifiable diseases and disabilities occurring in or admitted to said hospital, asylum, or other institution in the same manner as that prescribed for physicians.

Sec. 3. Whenever the eyes of an infant under two weeks of age become reddened, inflamed, or swollen, or contain an unnatural discharge, and no physician is in attendance, an immediate report of the existence of the case shall be made to the local health officer by the midwife, nurse, attendant, or other person in charge of the patient.

Sec. 4. Teachers or other persons employed in, or in charge of, public or private schools, including Sunday schools, shall report immediately to the local health officer each and every known or suspected case of a notifiable disease in persons attending or employed in their respective schools.

Sec. 5. The written reports of cases of the notifiable diseases required by this ordinance of physicians shall be made upon blanks supplied for the purpose, through the local health officer, by the Health Department.

Sec. 6. Local health officers shall, within seven days after the receipt by them of reports of cases of notifiable disease, forward by mail to the Chief Health Officer the original written reports made by physicians, after first having transcribed the information given in the respective reports in a book or other form of record for the permanent files of the local health office. On each report thus forwarded the local health officer shall state whether the case to which the report pertains was visited or otherwise investigated by a representative of the local health office and whether measures were taken to prevent the spread of the diseases or the occurrence of additional cases.

Sec. 7. For the purposes of this ordinance district physicians are to be considered local health officers.

The foregoing ordinance was duly adopted at a meeting of the Board of Health of the Canal Zone held at Balboa Heights, Canal Zone, on the 21st day of December, 1914.

P. M. ASHBURN,
Secretary of the Board of Health.

Approved on the 27th day of February, 1915:

GEO. W. GOETHALS,
Governor, The Panama Canal.Relating to the Registration of Births and Deaths.
Ordinance No. 2.THE PANAMA CANAL,
BOARD OF HEALTH OF THE CANAL ZONE.*Be it ordained by the Board of Health of the Canal Zone:*

Section 1. The body of any person whose death occurs in the Canal Zone, or which shall be found dead therein, shall not be interred, deposited in a vault or tomb, cremated, or otherwise disposed of, or be temporarily held pending further disposition more than 24 hours after death, unless a permit for burial, removal, or other disposition thereof shall have been properly issued by the local health officer. And no such burial or removal permit shall be issued by any health officer until, wherever practicable, a complete and satisfactory certificate of death has been filed with him as hereinafter provided; *Provided*, That when a dead body is transported from outside the Canal Zone into the Canal Zone for burial, and the admission of the body into the Canal Zone is otherwise permissible, the transit or removal permit, issued in accordance with the law and health regulations of the place where the death occurred, shall be accepted by the local health officer of the district into which the body has been transported for burial or other disposition, as a basis upon which he may issue a local burial permit; he shall note upon the face of the burial permit the fact that it was a body shipped in for interment, and give the actual place of death.

Sec. 2. A stillborn child shall be registered as a birth and also as a death, and separate certificates of both the birth and the death shall be filed with the local health officer, in the usual form and manner, the certificate of birth to contain in place of the name of the child the word "stillbirth"; *Provided*, That a certificate of birth and a certificate of death shall not be required for a child that has not advanced to the fifth month of uterogestation. The medical certificate of the cause of death shall be signed by the attending physician, if any, and shall state the cause of death as "stillborn," with the cause of the stillbirth, if known, whether a premature birth, and if born prematurely, the period of uterogestation, in months, if known; and a burial or removal permit of the prescribed form shall be required. Midwives shall not sign certificates of death for stillborn children; but such cases, and stillbirths occurring without attendance of either physician or midwife, shall be treated as deaths without medical attendance, as provided for in Section 4 of this ordinance.

Sec. 3. The certificate of death shall contain the following items, which are hereby declared necessary for the legal, social, and sanitary purposes subserved by registration records:

- (1) Place of death, including country, district, city, or village. If in a city, the street and house number; if in a hospital or other institution, the name of the same to be given instead of the street and house number.
- (2) Full name of decedent. If an unnamed child, the surname preceded by "Unnamed."
- (3) Sex.
- (4) Color or race, as white, black, mestizo (or other negro descent), Indian, Chinese, Japanese, or other.
- (5) Conjugal condition, as single, married, widowed, or divorced.
- (6) Date of birth, including the year, month, and day.
- (7) Age in years, months, and days. If less than one day, the hours or minutes.
- (8) Occupation. The occupation to be reported of any person, male or female, who had any remunerative employment, with the statement of (a) trade, profession, or particular kind of work; (b) general nature of industry, business, or establishment in which employed (or employer).
- (9) Birthplace; at least United States, Canal Zone, Panama, or foreign country, if known.
- (10) Name of father.
- (11) Birthplace of father; at least United States, Canal Zone, Panama, or foreign country, if known.
- (12) Maiden name of mother.
- (13) Birthplace of mother; at least United States, Canal Zone, Panama, or foreign country, if known.
- (14) Signature and address of informant.
- (15) Official signature of health officer, with the date when certificate was filed, and registered number.
- (16) Date of death, year, month, and day.
- (17) Certification as to medical attendance on decedent, fact and time of death, time last seen alive, and the cause of death, with contributory (secondary) cause of complication, if any, and duration of each, and whether attributed to dangerous or insanitary conditions of employment; signature and address of physician or official making the medical certificate.
- (18) Length of residence (for inmates of hospitals and other institutions; transients, or recent residents) at place of death and in the city, together with the place where disease was contracted, if not at place of death, and former or usual residence.
- (19) Place of burial or removal; date of burial.

(20) Signature and address of undertaker or person acting as such.

The personal and statistical particulars (items 1 to 13) shall be authenticated by the signature of the informant, who may be any competent person acquainted with the facts.

The statement of facts relating to the disposition of the body shall be signed by the undertaker or person acting as such.

The medical certificate shall be made and signed by the physician, if any, last in attendance on the deceased, who shall specify the time in attendance, the time he last saw the deceased alive, and the hour of the day at which death occurred. And he shall further state the cause of death, so as to show the course of disease or sequence of causes resulting in the death, giving first the name of the disease causing death (primary cause), and the contributory (secondary) cause, if any, and the duration of each. Indefinite and unsatisfactory terms, denoting only symptoms of disease or conditions resulting from disease, will not be held sufficient for the issuance of a burial or removal permit; and any certificate containing only such terms as defined by the health officer shall be returned to the physician or person making the medical certificate for correction and more definite statement. Causes of death which may be the result of either disease or violence shall be carefully defined; and if from violence, the means of injury shall be stated and whether (probably) accidental, suicidal, or homicidal. And for deaths in hospitals, institutions, or of nonresidents the physician shall supply the information required under this head (item 18), if he is able to do so, and may state where, in his opinion, the disease was contracted.

Sec. 4. In case of any death occurring without medical attendance it shall be the duty of the undertaker to notify the local health officer of such death, and refer the case to him for immediate investigation and certification; *Provided*, That if the health officer has reason to believe that the death may have been due to unlawful act or neglect he shall then refer the case to the official authorized to investigate crimes for his investigation and certification, and such official shall make the certificate of death required for a burial permit, and shall state in the certificate the name of the disease causing death, or if from external causes, (1) the means of death and (2) whether (probably) accidental, suicidal, or homicidal, and shall in any case furnish such information as may be required by the health officer in order to properly classify the death.

Sec. 5. The undertaker or person acting as undertaker shall file the certificate of death with the local health officer of the place in which the death occurred and obtain a burial or removal permit prior to any disposition of the body. He shall obtain the required personal and statistical particulars from the person best qualified to supply them, over the signature and address of his informant. He shall then present the certificate to the attending physician, if any, or to the official authorized to investigate crimes, as directed by the local health officer, for the medical certificate of the cause of death and other particulars necessary to complete the record, as specified in Sections 3 and 4, and he shall then state the facts required relative to the date and place of burial or removal, over his signature and with his address, and present the completed certificate to the local health officer in order to obtain a permit for burial, removal, or other disposition of the body. The undertaker shall deliver the burial permit to the person in charge of the place of burial before interring or otherwise disposing of the body, or shall attach the removal permit to the box containing the corpse, when shipped by any transportation company, said permit to accompany the corpse to its destination, where it shall be delivered to the person in charge of the place of burial.

Sec. 6. Every person, firm, or corporation selling a casket shall keep a record showing the name of the purchaser, purchaser's post-office address, name of deceased, date of death, and place of death of deceased, which record shall be open to inspection of the health officer at all times. On the first day of each month the person, firm, or corporation selling caskets shall report to the health officer each sale for the preceding month, on a blank provided for that purpose: *Provided, however*, That no person, firm, or corporation selling caskets to dealers or undertakers only shall be required to keep such record, nor shall such report be required from undertakers when they have direct charge of the disposition of a dead body.

Sec. 7. If the interment or other disposition of the body is to be made within the Canal Zone, the wording of the burial or removal permit may be limited to a statement by the health officer, and over his signature, that a satisfactory certificate of death having been filed with him, as required by Health Department regulations, permission is granted to inter, remove, or dispose otherwise of the body, stating the name, age, sex, cause of death, and other necessary details upon the form prescribed by the Chief Health Officer.

Sec. 8. No person in charge of any premises on which interments are made shall inter or permit the interment or other disposition of any body unless it is accompanied by a burial, removal, or transit permit, as herein provided. And such person shall endorse upon the permit the date of interment, over his signature, and shall return all permits so endorsed to the local health officer of his district within five days from the date of interment, or within the time fixed by the local health officer. He shall keep a record of all bodies interred or otherwise disposed of on the premises under his charge, in each case stating the name of each deceased person, place of death, date of burial or disposal, and name and address of the undertaker; which record shall at all times be open to official inspection: *Provided*, That the undertaker, or person acting as such, when burying a body in a cemetery or burial ground having no person in charge, shall sign the burial or removal permit, giving the date of burial, and shall write across the face of the permit the words "No person in charge," and file the burial or removal permit within five days with the local health officer.

Sec. 9. The birth of each and every child born in the Canal Zone shall be registered as hereinafter provided.

Sec. 9a. Within five days after the date of each birth there shall be filed with the local health officer of the district in which the birth occurred a certificate of such birth, which certificate shall be upon the form adopted by the Chief Health Officer.

In each case where a physician, midwife, or person acting as midwife was in attendance upon the birth it shall be the duty of such physician, midwife, or person acting as midwife to file in accordance herewith the certificate herein contemplated.

In each case where there was no physician, midwife, or person acting as midwife in attendance upon the birth, it shall be the duty of the father or mother of the child, the householder or owner of the premises where the birth occurred, or the manager or superintendent of the institution where the birth occurred, each in the order named, within five days after the date of such birth, to report to the local health officer the fact of such birth. In such case and in case the physician, midwife, or person acting as midwife, in attendance upon the birth is unable, by diligent inquiry, to obtain any item or items of information contemplated in Section 10 of this ordinance, it shall then be the duty of the local health officer to secure from the person so reporting, or from any other person having the required knowledge, such information as will enable him to prepare the certificate of birth herein contemplated, and it shall be the duty of the person reporting the birth, or who may be interrogated in relation thereto, to answer correctly and to the best of his knowledge all questions put to him by the local health officer which may be calculated to elicit any information needed to make a complete record of the birth as contemplated by said Section 10, and it shall be the duty of the informant as to any statement made in accordance herewith to verify such statement by his signature, when requested so to do by the local health officers.

Sec. 10. The certificate of birth shall contain the following items, which are hereby declared necessary for the legal, social, and sanitary purposes subserved by registration records:

(1) Place of birth, including country, province, municipal district, city, or village. If in a city, barrio, street, and house number; if in a hospital or other institution, the name of the same to be given, instead of the street and house number.

(2) Full name of child. If the child dies without a name, before the certificate is filed, enter the words "Died unnamed." If the living child has not yet been named at the date of filing certificate of birth, the space for "Full name of child" is to be left blank, to be filled out subsequently by a supplemental report, as hereinafter provided.

(3) Sex of child.

(4) Whether a twin, triplet, or other plural birth. A separate certificate shall be required for each child in case of plural births.

(5) For plural births, number of each child in order of birth.

(6) Whether legitimate or illegitimate. (This question may be omitted if desired, or provision may be made so that the identity of parents will not be disclosed.)

(7) Date of birth, including year, month, and day.

(8) Full name of father.

(9) Residence of father.

(10) Color or race of father.

(11) Age of father at last birthday, in years.

(12) Birthplace of father; at least United States, Canal Zone, Panama, or foreign country, if known.

(13) Occupation of father. The occupation to be reported if engaged in any remunerative employment, with the statement of (a) trade, profession, or particular kind of work; (b) general nature of industry, business, or establishment in which employed (or employer).

(14) Maiden name of mother.

(15) Residence of mother.

(16) Color or race of mother.

(17) Age of mother at last birthday, in years.

(18) Birthplace of mother; at least United States, Canal Zone, Panama, or foreign country, if known.

(19) Occupation of mother. The occupation to be reported if engaged in any remunerative employment, with the statement of (a) trade, profession, or particular kind of work; (b) general nature of industry, business, or establishment in which employed (or employer).

(20) Number of children born to this mother, including present birth.

(21) Number of children of this mother living.

(22) The certification of attending physician or midwife as to attendance at birth, including statement of year, month, day (as given in item 7), and hour of birth, and whether the child was born alive or stillborn. This certification shall be signed by the attending physician, or midwife, with date of signature, and address; if there is not physician or midwife in attendance, then by the father or mother of the child, householder, owner of the premises, or manager or superintendent of the institution where the birth occurred, or other competent person whose duty it shall be to notify the local health officer of such birth, as required by Section 9 of this regulation.

(23) Exact date of filing in office of local health officer, attested by his official signature, and registered number of birth, as hereinafter provided.

Sec. 11. When any certificate of birth of a living child is presented without the statement of the given name, then the local health officer shall make out and deliver to the parents of the child a special blank for the supplemental report of the given name of the child, which shall be filled out as directed, and returned to the local health officer as soon as the child shall have been named.

Sec. 12. Every physician, midwife, and undertaker shall, without delay, register his or her name, address, and occupation with the local health officer of the district in which he or she resides, or may hereafter establish a residence; and shall thereupon be supplied by the local health officer with a copy of this regulation.

Sec. 13. All physicians, midwives, informants, or undertakers, and all other persons having knowledge of the facts, are hereby required to supply, upon a form provided by the health officer or upon the original certificate, such information as they may possess regarding any birth or death upon demand of the health officer, in person, by mail, or through the local sanitary inspector: *Provided*, That no certificate of birth or death, after its acceptance for registration by the local health officer, and no other record made in pursuance of this act, shall be altered or changed in any respect otherwise than by amendments properly dated, signed, and witnessed.

Sec. 14. Each local health officer shall supply blank forms of certificates to such persons as require them. Each local health officer shall carefully examine each certificate of birth or death when presented for record in order to ascertain whether or not it has been made out in accordance with the provisions of these regulations and the instructions of the Chief Health Officer; and if any certificate of death is incomplete or unsatisfactory, it shall be his duty to call attention to the defects in the return, and to withhold the burial or removal permit until such defects are corrected. All certificates, either of birth or of death, shall be written legibly, in durable black ink, and no certificate shall be held to be complete and correct that does not supply all of the items of information called for therein, or satisfactorily account for their omission. If the certificate of death is properly executed and complete, he shall then issue a burial or removal permit to the undertaker; *Provided*, That in case the death occurred from some disease which is held by these regulations to be infectious, contagious, or communicable and dangerous to the public health, no permit for the removal or other disposition of the body shall be issued by the health officer, except under such conditions as may be prescribed by the Chief Health Officer. If a certificate of birth is incomplete, the local health officer shall immediately notify the informant and require him to supply the missing items of information if they can be obtained. He shall number consecutively the certificates of birth and death, in two separate series, beginning with number one for the first birth and the first death in each calendar year, and sign his name as health officer in attest of the date of filing in his office. He shall also make a complete and accurate copy of each birth and each death certificate registered by him in a record book supplied by the Chief Health Officer, to be preserved permanently in his office as the local record, in such manner as directed by the Chief Health Officer. And he shall, on the first day of each month, transmit to the Chief Health Officer all original certificates registered by him for the preceding month. And if no births or no deaths occurred in any month, he shall, on the

first day of the following month, report that fact to the Chief Health Officer, on a card provided for such purpose.

Sec. 15. The Chief Health Officer shall, upon request, supply to any applicant a certified copy of the record of any birth or death registered under provisions of this regulation.

Sec. 16. Any person, who for himself or as an officer, agent, or employee of any other person, or of any corporation or partnership (a) shall inter, cremate, or otherwise finally dispose of the dead body of a human being, or permit the same to be done, or shall remove said body from the district in which the death occurred or the body was found without the authority of a burial or removal permit issued by the health officer of the district in which the death occurred or in which the body was found; or (b) shall refuse or fail to furnish correctly any information in his possession, or shall furnish false information affecting any certificate or record required by this act; or (c) shall wilfully alter, otherwise than is provided by Section 13 of this regulation, or shall falsify any certificate of birth or death, or any record established by this regulations; or (d) being required by this regulation to fill out a certificate of birth or death and file the same with the local health officer, or deliver it, upon request, to any person charged with the duty of filing the same, shall fail, neglect, or refuse to perform such duty in the manner required by this regulation and by the instructions and direction of the Chief Health Officer, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding \$25, or by imprisonment in jail not exceeding 30 days, or by both such fine and imprisonment in the discretion of the court.

Sec. 17. For the purposes of this ordinance, district physicians shall be considered local health officers and district sanitary inspectors shall be considered undertakers; for deaths and births occurring in hospitals, asylums, or other institutions in which the sick and disabled are cared for, the superintendent or other person in charge shall be considered the local health officer.

The foregoing ordinance was duly adopted at a meeting of the Board of Health of the Canal Zone held at Balboa Heights, Canal Zone, on the 21st day of December, 1914.

P. M. ASHBURN,
Secretary of the Board of Health.

Approved on the 27th day of February, 1915:

GEO. W. GOETHALS,
Governor, The Panama Canal.

Relating to the Practice of Midwifery. Ordinance No. 3.

THE PANAMA CANAL,
BOARD OF HEALTH OF THE CANAL ZONE.

Be it ordained by the Board of Health of the Canal Zone:

Section 1. No license to practice midwifery within the Canal Zone will be granted unless an application therefor, made on printed form issued by the Chief Health Officer, has been filed with the local health officer. This application must be certified to by two regularly licensed and registered physicians, and by one reputable and responsible layman (preferably a clergyman or priest).

Sec. 2. The applicant must be 21 years of age or over, and of good moral character. She must be able to read and write. She must be clean and constantly show evidences, in general appearances, of habits of cleanliness. She must have attended, under the instruction of a licensed and registered physician, at least 20 cases of labor and have had the care of at least 20 mothers and new-born infants during the lying-in period (10 days), except that midwives licensed before the adoption of this ordinance may be excused from this requirement in the discretion of the local health officer.

Sec. 3. The Board of Health may issue a license to practice midwifery, within 30 days after an application for such permit has been filed, provided the applicant is considered competent to care for women in normal labor. This license will allow the holder to act as midwife for one year from the date of issuance and must be renewed at the end of that time. The Board of Health may at any time revoke said license.

Sec. 4. No license will be granted to an applicant who has been convicted of criminal practice or of practicing medicine illegally, and any such conviction will be sufficient cause for the revocation of a license.

Sec. 5. Before a license is given to an applicant she must appear in person at the local health office and register her name and address. She will also receive and receipt for a copy of the rules and regulations governing the practice of midwifery which have been adopted by the Chief Health Officer. These rules and regulations must be explicitly followed.

Sec. 6. For the purposes of this ordinance, district physicians shall be considered local health officers.

The foregoing ordinance was duly adopted at a meeting of the Board of Health of the Canal Zone

held at Balboa Heights, Canal Zone, on the 21st day of December, 1914.

P. M. ASHBURN,
Secretary of the Board of Health.
Approved on the 27th day of February, 1915:
GEO. W. GOETHALS,
Governor, The Panama Canal.

**Relating to the Maintenance of Premises, Buildings, Stables, Etc.
Ordinance No. 4.**

THE PANAMA CANAL,
BOARD OF HEALTH OF THE CANAL ZONE.
Be it ordained by the Board of Health of the Canal Zone:
Section 1. All premises, improved and unimproved, and all open lots and areas, shall be kept clean and free from all rubbish and similar loose material that might serve as a harborage for rats, and all lumber, boxes, barrels, loose iron, and similar material that may be permitted to remain on such premises, and that may be used as a harborage by rats, shall be placed on supports and elevated not less than two feet from the ground, with a clear intervening space beneath to prevent the harboring of rats.

Sec. 2. All manure from stables shall be removed therefrom at least once in 24 hours and disposed of as the Chief Health Officer may direct. All manure so removed shall be placed in wagons so protected as to render said manure inaccessible to flies, as far as practicable.

Sec. 3. All grain, malt, and other animal food, except hay, stored or kept in any stable must be kept in permanently constructed feed bins of concrete, metal, or wood lined with metal so as to be rat proof. Said feed bins must be kept closed at all times except when momentarily opened to take food therefrom, or when same are being filled. No feed shall be scattered about such bin or stable and all such feed found on the floor or in the stalls of said stables shall be removed daily. No foodstuffs intended for or susceptible of human consumption shall be kept or stored in any stable or any other place where animals are kept.

Sec. 4. Cow stables shall be used for no other purpose than for keeping of cows. All manure shall be removed twice daily, and no manure shall be moved during the milking or within one hour prior thereto.

The foregoing ordinance was duly adopted at a meeting of the Board of Health of the Canal Zone held at Balboa Heights, Canal Zone, on the 28th day of December, 1914.

P. M. ASHBURN,
Secretary of the Board of Health.
Approved on the 27th day of February, 1915:
GEO. W. GOETHALS,
Governor, The Panama Canal.

Rent for Special Quarters.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 26, 1915.
CIRCULAR NO. 627-4:
1. Paragraph 5 of the Executive Order of January 19, 1915, states:

"Where employees for the good of the service are required to live in certain designated quarters, one-half of the rental will be remitted."

2. This paragraph does not apply to employees for whom special quarters have been constructed so that they may be convenient to their work; but applies only to employees who are required to live in designated quarters so that they will be within reach in sudden emergencies of fire, riot, disorder, or other public calamity.

GEO. W. GOETHALS,
Governor.
Accountable Official.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,
BALBOA HEIGHTS, C. Z., March 1, 1915.

CIRCULAR NO. 82:
Effective at once, Mr. F. M. M. Richardson is designated an accountable official, and as such will account for all nonexpendable property paid for from Y. M. C. A. funds or hereafter purchased from the Bureau of Clubs and Playgrounds funds. Officials now carrying such property on their accountability will transfer same to Mr. Richardson by not later than March 20, 1915.

H. A. A. SMITH,
Auditor, The Panama Canal.
Approved:
GEO. W. GOETHALS,
Governor.

Employees Temporarily Assigned to Higher Grade.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 27, 1915.
To all concerned—There appears to be a misunderstanding on the part of employees as to the regulations

governing cases where one employee is temporarily assigned to perform the duties of a man in a higher grade, particularly in reference to such employee's being paid the higher rate of pay while so performing such duties.

For the information of all concerned, attention is invited to the following. Circular No. 603, Paragraph 16, (d) and (e), dated April 1, 1914, reads:

"(d) An employee temporarily assigned to perform the duties of a man in a higher grade who is absent on vacation leave *with pay*, or on sick leave *with pay*, shall not be allowed the salary of the higher position, except that an artisan on an hourly basis, temporarily performing the duties of a foreman, may be transferred to the monthly basis with foreman's pay to avoid excessive overtime.

"(e) When an employee is absent *without pay* for more than 30 days, the substitute assigned to perform his duties may be paid the usual entrance salary of the position during such temporary assignment."

Paragraph (e) above is rendered null and void by Section 12 of the Sundry Civil Appropriation Act of August 1, 1914 (Circular 603-4), reading as follows:

"Sec. 12. That it shall not be lawful hereafter to pay to any person employed in the service of the United States under any general or lump sum appropriation, any sum additional to the regular compensation received for or attached to any employment held prior to an appointment or designation as acting for or instead of an occupant of any other office or employment. This provision shall not be construed as prohibiting regular and permanent appointments by promotion from lower to higher grades of employment."

That section expressly prohibits the payment of the regular salary of a position of higher grade to an employee of a lower grade temporarily assigned to the duties of the higher position, except where the amount of overtime likely to be required of hourly men serving temporarily in supervisory capacities would make the total pay at hourly rates greater than the monthly pay, in which case the regular monthly salary of the position may be allowed.

GEO. W. GOETHALS,
Governor.

Changes in Organization of Accounting Department.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,
BALBOA HEIGHTS, C. Z., March 3, 1915.
To all concerned—The following changes in the organization of the Accounting Department are announced, effective March 4, 1915:

Mr. T. H. Chambers, in charge of general inspection work, is transferred to the Collector's office.

Mr. Herbert Pearson, commissary accountant, is placed in charge of the general inspection section.

Mr. J. R. DeGrummond is assigned to duty as commissary accounting inspector.

Mr. L. E. Willson, in charge of the material and property accounting section, is temporarily placed in charge of the commissary accounts as acting commissary accountant.

Mr. C. A. Hanson is appointed assistant to the acting commissary accountant.

Mr. Max Herz is temporarily placed in charge of the material and property accounting section.

H. A. A. SMITH,
Auditor, The Panama Canal.

Card Passes for Year 1915.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., March 2, 1915.

CIRCULAR NO. 466:
To all concerned—Card passes for 1914 will expire after March 5, and 1915 card passes will be honored effective March 6.

C. H. MOTSETT,
Superintendent.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., March 8, 1915.
The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Anderson, A.	Graham, Alexander
Anderson, J. R.	Henry, E. U.
Anderson, Miss Edith	Henry, Eustace
Ball, C. C.	Kimble, Calvin P.
Benjamin, Joseph	Linton, Nathaniel R.
Bennett, Sammie	Marston, Orr K.
Bugbee, Cornell	Massiah, George (photo)
Bugbee, Miss Faith	Meline, Miss Hilda (paper)
Coke, Frank	Mosley, H. M.
Crawford, Lt. Medorem	Moulder, Edd
Crawford, W. F. (paper)	Partello, Mrs. Jos. K.
Cuff, Martin	Pfabe, Ernest E.
Dakavarian, N.	Pool, Lieut. H. M.
Ezill, Mrs. Marguerite	Ryckman, Laverne
Fenton, Capt. Charles B.	Taitt, Ethelbert
Finlayson, Wm. (paper)	Tucker, Fred (paper)
Gevorcoff, Hamaic	West, Lieut. W. J.

COMMISSARY DEPARTMENT.

Beef Killed in Canal Zone.

Attention is invited to the new prices to be charged for fresh beef, killed and dressed in the Canal Zone by employees of the commissary branch, and offered for sale at all commissaries.

The prices will be found in the price list published below.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m. The gold departments of the Cristobal store will open at 2 p. m., on Saturdays.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective March 11, 1915:

	Price.
FRESH MEATS.	
Mutton—Stewing, per pound.....	9
Shoulder, trimmed, per pound.....	12
Leg (8 to 10 pounds), per pound.....	19
Short cut, chops, per pound.....	23
Shoulder, chops, per pound.....	14
Lamb—Stewing, per pound.....	12
Shoulder, trimmed, per pound.....	15
Leg (5 to 8 pounds), per pound.....	24
Chops, per pound.....	29
Chops, shoulder, per pound.....	18
Veal—Stewing, per pound.....	12
Shoulder, for roasting (not under 4 lbs.), per pound.....	15
Chops, shoulder, per pound.....	20
Chops, per pound.....	30
Loin, for roasting, per pound.....	30
Cutlets, per pound.....	36
Beef—Suet, per pound, special.....	3½
Soup, per pound, special.....	7
Soup, per pound, native.....	5
Soup, bones, per pound, special.....	2½
Stew, per pound, special.....	11
Stew, per pound, native.....	8
Plate, per pound, special.....	12
Corned, No. 1, per pound.....	18
Corned, No. 2, per pound.....	15
Chuck roast, special, (3 lbs. and over), per pound.....	12
Chuck roast, native (3 lbs. and over), per pound.....	18
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
Rib roast, second cut, native (3½ pounds and over), per pound.....	19
Rib roast, first cut (not under 3 pounds), special, per pound.....	19
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27
Rib roast, first cut, native (3 pounds and over), per pound.....	11
Pot roast, special, per pound.....	20
choice, per pound.....	28
native.....	112
Rump roast, special, per pound.....	28
choice, per pound.....	112
native.....	22
Porterhouse roast, special, per pound.....	31
choice, per pound.....	116
native, per pound.....	13
Steak, chuck, special, per pound.....	19
native, per pound.....	13
Round, bottom, choice, per pound.....	19
native, per pound.....	19
Round, top, special, per pound.....	15
choice, per pound.....	22
native, per pound.....	110
Sirloin, special, per pound.....	20
Sirloin, choice, per pound.....	28
Sirloin, native, per pound.....	112
Sirloin, choice cut, special, per pound.....	23
Sirloin, choice cut, choice, per pound.....	32
Sirloin, choice cut, native, per lb.....	116
Rump, special, per pound.....	20
choice, per pound.....	28
native, per pound.....	112
Porterhouse (not less than 1½ pounds), special, per pound.....	23
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse (1½ pounds and over) native, per pound.....	117
Porterhouse, short, Delmonico special, per pound.....	20
Porterhouse, short, Delmonico choice, per pound.....	28
Porterhouse, short, native, per lb.....	112
Tenderloin, Western, special, per pound.....	35
Tenderloin, Western, choice, per pound.....	46
Tenderloin, Western, native, per lb.....	125

	Price
Pork—Hams, fresh, per pound.....	\$23
Shoulders, fresh, per pound.....	\$19
Loin, chop, or roast, per pound.....	18
Pigs' feet, fresh, each.....	8
Pigs' head, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23

Additions to Stock.

Baking powder, Reliable, tin.....	\$0.14
Cranberries, evaporated, tin.....	2.10
Olive oil, Francesconi, tin.....	1.75
Dust pans, ea.....	.07

Price Changes.

The following changes in prices of articles in stock at the commissary stores become effective March 11, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Baking powder, Reliable, tin.....	\$0.06	\$0.08
Extract, almond, bot.....	.43	.40
Extract, orange, bot.....	.43	.40
Extract, rose, bot.....	.20	.23
Extract, rose, hot.....	.43	.40
Extract, strawberry, bot.....	.19	.23
Extract, strawberry, bot.....	.43	.40
Beef, corned, tin.....	.22	.25
Beef steak and onions, tin.....	.10	.12
Beef steak and onions, tin.....	.24	.22
Aprons, sanitary, silk, ea.....	.61	.68
Umbrellas, ladies, ea.....	2.45	1.95
Bags, cowhide, 18", ea.....	9.05	10.00
Handles, Howard mop, ea.....	.31	.41
Percolators, ea.....	7.00	6.25
Cigarettes, Savory, pkg.....	.05	.02
Apples, dehydrated, tin.....	.60	.55

Rainfall from February 1 to 28, 1915, inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>			
Balboa.....	1.21	7	2.73
Balboa Heights.....	.93	7	2.96
*Miraflores.....	.50	23	1.17
Pedro Miguel.....	.78	23	1.69
Rio Grande.....	1.15	9	2.81
<i>Central Section—</i>			
Culebra.....	1.52	9	3.63
*Camacho.....	1.27	10	3.45
Empire.....	1.65	9	3.53
Gamboa.....	1.43	9	2.75
*Juan Mina.....	2.27	10	3.43
Alhajuela.....	1.30	9	2.53
*El Vigia.....	.82	9	2.34
Frijoles.....	1.45	9	5.66
*Trinidad.....	4.60	10	8.88
*Monte Lirio.....	2.60	10	6.57
<i>Atlantic Section—</i>			
Gatun.....	6.57	10	13.17
*Brazos Brook.....	6.18	10	14.32
Colon.....	7.12	10	12.37
†Bocas del Toro†	2.45	18	9.87

*Standard rain gage—readings at 5 p. m. daily.
 Automatic rain gage at unstarred stations—values midnight to midnight.
 †Standard rain gage—readings at 8 a. m. daily.
 ‡From 1 to 27 inclusive.

February Rainfall for Three Years.

STATIONS.	1913	1914	1915	Station Av.	Years of record	Rainy days '15
Pacific Section—						
Balboa.....	.19	.00	2.73	.65	16	11
Balboa Heights.....	.22	.02	2.96	.89	17	11
Miraflores.....	2.49	.00	1.17	1.47	7	9
Pedro Miguel.....	.07	.07	1.69	.90	8	6
Rio Grande.....	.43	.25	2.81	.81	11	8
Central Section—						
Culebra.....	.78	.20	3.63	.67	25	10
*Camacho.....	.44	.33	3.45	1.01	9	8
Empire.....	.79	.27	3.53	.84	10	10
Gamboa.....	.68	.23	2.75	.89	30	12
Juan Mina.....	.94	.38	3.43	1.41	5	6
Alhajuela.....	.22	.22	2.53	.83	16	8
El Vigia.....	.86	.51	2.34	2.12	7	7
Frijoles.....	3.03	1.33	5.66	3.28	4	14
Trinidad.....	1.80	1.16	8.88	3.26	8	13
Monte Lirio.....	2.52	1.55	6.57	4.05	8	8
Atlantic Section—						
Gatun.....	2.92	1.07	13.17	3.31	11	18
*Brazos Brook.....	4.20	.94	14.32	3.70	9	15
Colon.....	1.75	1.32	12.37	1.71	45	15

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next five weeks are given in the following table:

MARCH.				
DATE.	Time and height of high and low water.			
Wed., March 10....	4:27	10:44	17:00	23:16
	2.7	12.0	3.8	12.3
Thurs., March 11....	5:45	12:16	18:20	.....
	3.0	12.0	3.8	.....
Fri., March 12.....	0:46	6:59	13:35	19:32
	12.4	2.7	12.7	3.1
Sat., March 13.....	1:58	8:01	14:34	20:30
	13.0	2.0	13.7	2.2
Sun., March 14.....	2:54	8:48	15:21	21:18
	13.8	1.3	14.5	1.4
Mon., March 15....	3:39	9:37	16:01	22:01
	14.4	0.8	15.1	0.8
Tues., March 16....	4:18	10:17	16:36	22:40
	14.8	0.5	15.4	.04
Wed., March 17....	4:53	10:56	17:09	23:16
	15.0	0.5	15.4	0.3
Thurs., Mar. 18....	5:28	11:31	17:40	23:52
	14.8	0.8	15.1	0.5
Fri., March 19.....	6:00	12:07	18:12	.....
	14.5	1.3	14.6	.....
Sat., March 20.....	0:27	6:32	12:43	18:42
	1.0	13.9	2.0	14.0
Sun., March 21.....	1:04	7:05	13:19	19:14
	1.7	13.1	2.8	13.2
Mon., March 22....	1:44	7:41	14:01	19:51
	2.6	12.3	3.7	12.4
Tues., March 23....	2:29	8:24	14:48	20:34
	3.4	11.5	4.5	11.6
Wed., March 24....	3:22	9:19	15:47	21:36
	4.1	10.8	5.1	11.0
Thurs., Mar. 25....	4:26	10:37	16:58	22:59
	4.5	10.6	5.2	10.9
Fri., Mar. 26.....	5:35	11:57	18:08	.....
	4.3	11.0	4.7	.....
Sat., Mar. 27.....	0:18	6:38	13:01	19:08
	11.3	3.6	11.9	3.8
Sun., Mar. 28.....	1:20	7:31	13:51	20:00
	12.2	2.7	13.1	2.4
Mon., Mar. 29.....	2:10	8:19	14:34	20:45
	13.3	1.6	14.4	1.1
Tues., Mar. 30.....	2:56	9:02	15:14	21:27
	14.5	0.5	15.6	-0.2
Wed., Mar. 31.....	3:36	9:45	15:53	22:10
	15.5	-0.3	16.6	-1.2

APRIL.

Thurs., April 1....	4:17	10:27	16:33	22:52
	16.2	-0.9	17.2	-1.7
Fri., April 2.....	4:59	11:10	17:14	23:37
	16.6	-1.0	17.4	-1.8
Sat., April 3.....	5:42	11:54	17:57	.....
	16.5	-0.7	17.6	.....
Sun., April 4.....	0:21	6:27	12:39	18:42
	-1.3	15.9	0.0	16.2
Mon., April 5.....	1:05	7:14	13:30	19:32
	-0.4	15.0	1.0	15.1
Tues., April 6.....	2:02	8:09	14:27	20:29
	0.7	13.9	2.2	13.8
Wed., April 7.....	3:02	9:15	15:34	21:41
	1.9	12.8	3.3	12.6
Thurs., April 8.....	4:11	10:35	16:49	23:08
	2.8	12.2	3.9	12.0
Fri., April 9.....	5:26	12:03	18:07	.....
	3.2	12.2	3.8	.....
Sat., April 10.....	0:34	6:36	13:15	19:14
	12.0	3.6	12.8	3.1
Sun., April 11.....	1:42	7:37	14:10	20:09
	12.6	2.6	13.5	2.3
Mon., April 12.....	2:34	8:27	14:55	20:55
	13.2	2.1	14.1	1.6
Tues., April 13.....	3:18	9:11	15:32	21:35
	13.8	1.7	14.5	1.0
Wed., April 14.....	3:54	9:50	16:06	22:12
	14.2	1.4	14.8	0.7

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it. The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.
 Every Saturday to New York, for all states. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

*Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama, at 11 a. m., connects with the above despatches.

*NOTE—The sailing on Monday April 5, will not land mail in New York until Tuesday of the following week; hence, despatches on that date will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7.10 a. m., connects with the despatches for this sailing.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges. Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls or the purchase of supplies may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Cristobal or Balboa from plants of The Panama Canal. The present price is \$1.25 per barrel of 42 gallons.

Diesel engine oil is for sale by the Union Oil Company, at 45 shillings per ton of seven barrels.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock, with a minimum charge of \$3. Vessels may take up from the fresh water sections of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light, and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

The cable address of The Panama Canal, on the Isthmus, is "Pan canal, Panama;" in the United States, "Pan canal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C." for delivery in the United States.

Sailings of Vessels in Regular Service with the Isthmus.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail Steam Packet Company maintains a fortnightly service between Colon and the United Kingdom, making the following way ports: Cartagena, Puerto Colombia, Trinidad, and Barbados. The Royal Mail vessels arrive in Colon on Saturdays and sail on Tuesdays.

The Compagnie Generale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

(Continued on page 270.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m. March 7, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Mar. 1.....	Limari.....	Chilean.....	South American S.S. Co.....	Cristobal.....	Valparaiso.....	General cargo.....	1,357	3,631	2,421
Mar. 1.....	Howick Hall.....	American.....	N. Y. & S. A. Line.....	New York.....	Peru and Chile.....	Steel, general (a).....	6,520	6,048	4,348
Mar. 1.....	Santa Clara.....	American.....	W. R. Grace & Co.....	New York.....	Los Angeles.....	Iron, tin, gen'l (b).....	8,200	6,748	4,492
Mar. 2.....	Bertha K. May.....	Honduran.....	H. R. Wood.....	Colon.....	Panama.....	Ballast (c).....		74	50
Mar. 3.....	Salvador.....	British.....	Salvador R. R. Co.....	Cristobal.....	Salina Cruz.....	General cargo.....	820	1,190	692
Mar. 3.....	Montanan.....	American.....	American-Hawaiian S.S. Co.....	New York.....	San Diego.....	General cargo.....	7,609	6,857	4,706
Mar. 3.....	Inter Clyde.....	British.....	Inver Steamships, Ltd.....	New York.....	Valdivostok.....	General cargo.....	7,160	5,701	3,913
Mar. 5.....	St. Helens.....	American.....	E. J. Dodge Company.....	Philadelphia.....	San Francisco.....	Coal.....	1,813	1,642	775
Mar. 6.....	Noma.....	American.....	Vincent Astor.....	Jacksonville.....	San Diego.....	Steam yacht.....		811	425
Mar. 6.....	Jamaica.....	British.....	Pacific Steam Nav. Co.....	Cristobal.....	Balboa.....	General cargo.....	800	1,170	620

(a) Including 3,000 tons rails, 1,768 tons machinery, 1,149 tons structural steel. (b) 3,000 tons structural steel, 3,000 tons tin plate. (c) Sailing vessel.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Mar. 1.....	Burcombe.....	British.....	Burdick & Cook.....	Manzanillo.....	Jamaica.....	Coal.....	1,600	4,447	3,321
Mar. 1.....	Roddam.....	British.....	Stephens, Sutton & Stephens.....	Punta Arenas.....	Jamaica.....	Coal.....	3,600	3,540	2,729
Mar. 2.....	Lyra.....	American.....	Luckenbach S.S. Co.....	San Francisco.....	New York.....	Lumber, general.....	5,400	4,708	3,637
Mar. 2.....	Trevaion.....	British.....	Hain S.S. Co.....	Falkland Islands.....	St. Lucia.....	Ballast.....		5,167	3,953
Mar. 2.....	Gotaland.....	Swedish.....	Atel Brostrom & Son.....	Antofagasta.....	Rotterdam.....	Nitrates.....	5,650	3,893	2,945
Mar. 3.....	Lompoc.....	British.....	C. T. Bowring & Co.....	San Francisco.....	London.....	Gasoline.....	9,680	7,482	5,335
Mar. 4.....	Honolulu.....	American.....	American-Hawaiian S. S. Co.....	San Francisco.....	New York, Boston.....	General cargo.....	6,157	7,661	5,493
Mar. 4.....	Chalister.....	British.....	Barber & Co.....	Yokohama.....	New York.....	General cargo.....	9,600	6,921	5,354
Mar. 5.....	Mancunia.....	British.....	Manchester, Salford S. S. Co.....	Seattle, Tacoma.....	Falmouth.....	Wheat.....	5,314	4,307	3,117
Mar. 5.....	Fionia.....	Danish.....	East Asiatic Co.....	San Francisco.....	Copenhagen.....	General cargo (a).....	5,767	5,744	4,021
Mar. 5.....	General Hubobrd.....	American.....	Sudden & Christenson.....	San Francisco.....	New Orleans.....	General cargo.....	2,200	2,176	1,405
Mar. 5.....	Springbank.....	Norwegian.....	McNair & Son.....	San Francisco.....	Denmark.....	Barley.....	3,838	2,463	2,252
Mar. 6.....	Clarissa Rodcliffe.....	British.....	Radcliffe Line.....	San Francisco.....	London.....	General cargo.....	3,175	6,835	5,154
Mar. 6.....	Cristobal.....	American.....	Panama Railroad Co.....	Balboa.....	New York.....	General cargo.....	10,000	9,698	7,272
Mar. 6.....	African Transport.....	British.....	Empire Transport Co.....	San Francisco.....	Southampton.....	Railroad ties.....	6,300	4,978	3,657
Mar. 6.....	Oldfield Grange.....	British.....	Houlder Line.....	Cruz Grande.....	Philadelphia.....	Iron ore.....	7,300	5,788	3,861
Mar. 7.....	Lewis K. Thurlow.....	American.....	Sudden & Christenson.....	San Francisco.....	New York.....	Lead, lumber.....	700	3,440	2,444

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
Mar. 6.....	Cacique.....	W. R. Grace & Co.....	Newport News.
Mar. 6.....	Arizonian.....	American-Hawaiian S. S. Co.....	New York.
Mar. 7.....	Peter H. Crowell.....	Crowell & Thurlow.....	New York.
Mar. 7.....	Copenhagen.....	West Coast Line.....	New York.
Mar. 7.....	City of Newcastle.....	Hall Line.....	New York.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Mar. 7.....	Kiev.....	Russian Volunteer Fleet.....	Seattle.
Mar. 8.....	Lucerie.....	Bank Line.....	Tacoma.

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
Mar. 2.....	Essequibo.....	Royal Mail.....	Southampton.
Mar. 3.....	Siena.....	La Veloce.....	Genoa.
Mar. 5.....	Jupiter.....	Seeberg S. S. Co.....	New Orleans.
Mar. 6.....	Ocland.....	Earn Line.....	Norfolk.
Mar. 6.....	Professor.....	Harrison Line.....	Liverpool.

*DEPARTURES.

Date	Vessel	Line	To
Mar. 3.....	Wegadesk.....	Earn Line.....	Felton, Cuba.
Mar. 3.....	Essequibo.....	Royal Mail.....	Southampton.
Mar. 6.....	Siena.....	La Veloce.....	Genoa.

*EXPECTED ARRIVALS.

Mar. 8.....	Venezuela.....	Cie. Gen. Transatlantique.....	St. Nazaire.
Mar. 9.....	Legaspi.....	Barcelona Transatlantic Co.....	Barcelona.

*EXPECTED DEPARTURES.

Mar. 12.....	Legaspi.....	Barcelona Transatlantic Co.....	Barcelona.
Mar. 12.....	Venezuela.....	Cie. Gen. Transatlantique.....	St. Nazaire.

*Other than vessels passing the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Date	Vessel	Line	From
Mar. 2.....	Manovi.....	Pacific Steam Nav. Co.....	Colombian ports.
Mar. 3.....	Urubamba.....	Peruvian S. S. Co.....	Peru.
Mar. 4.....	Kiyo Maru.....	Toyo Kisen Kaisha.....	Hongkong.
Mar. 7.....	Capt. A. F. Lucas.....	Standard Oil Co.....	San Francisco.

*DEPARTURES.

Date	Vessel	Line	To
Mar. 2.....	Limari.....	South American S. S. Co.....	Valparaiso
Mar. 3.....	City of Para.....	Pacific Mail S. S. Co.....	San Francisco.
Mar. 3.....	Manovi.....	Pacific Steam Nav. Co.....	Guayaquil.
Mar. 5.....	Kiyo Maru.....	Toyo Kisen Kaisha.....	Colon.

*EXPECTED ARRIVALS

Mar. 17.....	Pennsylvania.....	Pacific Mail S. S. Co.....	San Francisco.
Mar. 17.....	Paleno.....	South American S. S. Co.....	Valparaiso.

*EXPECTED DEPARTURES.

.....	Peru.....	Pacific Steam Nav. Co.....	Guayaquil.
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*Other than vessels passing through the Canal.

(Continued from page 269.)

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 78 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compañia Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls enroute, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal; and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailing via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United

Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails. Arrives.

NEW YORK TO CRISTOBAL-COLON.

Zacapa.....	U. F. C. Mar. 3.....	Mar. 10
Allianca.....	P. R. R. Mar. 4.....	Mar. 10
Calamares.....	U. F. C. Mar. 6.....	Mar. 14
Carrillo.....	U. F. C. Mar. 10.....	Mar. 17
Colon.....	P. R. R. Mar. 11.....	Mar. 17
Tenadores.....	U. F. C. Mar. 13.....	Mar. 21
Almirante.....	U. F. C. Mar. 17.....	Mar. 24
Advance.....	P. R. R. Mar. 18.....	Mar. 25
Metapan.....	U. F. C. Mar. 20.....	Mar. 29
Santa Marta.....	U. F. C. Mar. 24.....	Mar. 31

CRISTOBAL-COLON TO NEW YORK.

Santa Marta.....	U. F. C. Mar. 11.....	Mar. 22
Panama.....	P. R. R. Mar. 13.....	Mar. 19

Pastores.....	U. F. C. Mar. 15.....	Mar. 22
Zacapa.....	U. F. C. Mar. 18.....	Mar. 25
Allianca.....	P. R. R. Mar. 20.....	Mar. 26
Calamares.....	U. F. C. Mar. 22.....	Mar. 29
Carrillo.....	U. F. C. Mar. 25.....	April 1
Colon.....	P. R. R. Mar. 27.....	April 2

NEW ORLEANS TO CRISTOBAL-COLON.

Turrialba.....	U. F. C. Mar. 3.....	Mar. 10
Heredia.....	U. F. C. Mar. 6.....	Mar. 11
Abangarez.....	U. F. C. Mar. 10.....	Mar. 17
Parismina.....	U. F. C. Mar. 13.....	Mar. 18
Atenas.....	U. F. C. Mar. 17.....	Mar. 24

CRISTOBAL-COLON TO NEW ORLEANS.

Atenas.....	U. F. C. Mar. 11.....	Mar. 16
Cartago.....	U. F. C. Mar. 11.....	Mar. 18
Turrialba.....	U. F. C. Mar. 18.....	Mar. 23
Heredia.....	U. F. C. Mar. 18.....	Mar. 25



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employes of The Panama Canal and Panama Railroad Company whose names are on the gold roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

First French Vessel Through Canal.

The first French vessel to make use of the Canal is the merchant ship *Saint Andre*, which entered the Canal on the morning of Tuesday, March 16, in passage from Tahiti to Glasgow with a cargo of 6,800 tons of ores. The *Saint Andre* is a steel freight steamship, 398 feet long by 50 feet in the beam, and was built at St. Nazaire, in 1912, for La Compagnie Navale de L'Océanie (Maritime Company of Oceania), which has since operated the vessel principally in Pacific trade.

No official recognition was taken of the passage of the vessel, just as none has been taken of the first vessels of other foreign nations making use of the Canal, but at points along the way individuals gave indications of their appreciation of the nation which performed so important work in the building of the Canal.

The concession to build a canal across the Isthmus was granted to the first French company in May, 1876, by the government of Colombia. On January 10, 1881, ground was broken at the Pacific entrance by Ferdinand de Lesseps, and regular excavation was begun near Empire in January of the next year. Work in that section has been carried on continually since then; with the exception of five years, in which activities were halted by financial difficulties. The idea of building a sealevel canal was abandoned in 1887, and the less expensive plan of a lake and lock construction adopted, but in February, 1889, the first company went into the hands of a receiver. A second company took charge and began heavy excavation in Culebra Cut in 1894. It continued operations until the American occupation, May 4, 1904.

The line of the proposed French canal was much the same as that of the present Canal, and a considerable part of the French work has been of value to the American forces. Of their total excavation of 78,146,960 cubic yards, 29,908,000 cubic yards were useful to the present Canal project. Other important features of the French work were their surveys, borings, hydrographic records, the erection of Ancon and Colon hospitals, of Gor-

gona (Bas Matachin) shops, Paraiso shops, the Mount Hope shops and dry dock, the establishment of residential villages at points all along the line, including Cristobal, Bohio, Tabernilla, San Pablo, Gorgona, Matachin, Bas Obispo, Las Cascadas, Empire, Culebra, Paraiso, and La Boca, and the assembly of a great deal of railroad and excavating equipment, much of which is in service today. If

The French spent close to \$250,000,000 on the Isthmus and lost about 6,283 lives in their attempts to build the Canal. Hundreds of the men who lost their lives in the French service are buried in the cemeteries on the Isthmus, where since have gone to join them hundreds who continued their work under the American flag. The French regime, 1881 to May 4, 1904, and the American, from the latter date to the present, have lost approximately equal numbers of employes by death.

Sales of Bunker Coal to Vessels.

During the month of February 56 vessels were supplied with 17,672½ tons of coal by the Panama railroad at Colon. Of these, all but six were vessels which passed through the Canal. The sales at Balboa were only to vessels not using the Canal, and amounted approximately to 3,000 tons. The preponderance of sales on the Atlantic side is due to the fact that coal is sold for \$1 less per ton there than at Balboa.

Coal sales to vessels at Cristobal during January amounted to 13,391½ tons. In December, 1914, they were 18,000½ tons. The average monthly sales to vessels at both terminals since the opening of the Canal have approximated 17,100 tons.

The stock of coal regularly kept on the Isthmus is 75,000 tons, any proportion of which is available for sale to vessels. The monthly importations will be increased as the consumption increases, but the surplus stock on the Isthmus assures that the needs of vessels will always be met.

New Tug for the Canal on Its Way.

The tug *Tavernilla*, one of two harbor tugs for which contract was let by The Panama Canal to the Staten Island Shipbuilding Company, in June of last year, sailed from the contractor's yards at Port Richmond, N. Y., for Cristobal on Monday, March 15. It is expected to arrive by next Wednesday. The second tug, the *Gorgona*, has been launched, with its hull cemented and tested, and is now being fitted with machinery. The condenser has been installed, tested, and accepted.

Passage through Slide Opened as Expected.

The blocking of the Canal channel just north of Gold Hill, which had caused the suspension of traffic, was cut through to sufficient width and depth in the afternoon of Wednesday, March 10, to allow the resumption of traffic, and vessels have since been going through the Canal without delay.

FUEL OIL FOR VESSELS.

Ample Facilities for Supplying Oil to Shipping at Both Canal Terminals.

The arrangements for furnishing fuel oil to vessels at the two entrances to the Canal have been brought to a state which is ample for the present demands, and will be extended as occasion arises. Oil is sold by both the Government and private corporations.

By the end of this month the storage capacity for fuel oil at Balboa, which is the principal point of loading, will be 220,000 barrels, and 37,000 barrels of Diesel engine oil. The fuel oil is held in two 42,000-barrel tanks belonging to The Panama Canal, three 37,000-barrel tanks of the Union Oil Company of California, and one 25,000-barrel tank of the Panama Agencies Company. The Diesel engine oil is handled at present by the Union Oil Company, using a 37,000-barrel storage tank; this company is also selling fuel oil. The Roxana Petroleum Company expects to complete two 55,000-barrel tanks within the next three months.

All of the above tanks are connected with the Government oil crib, through the handling plant of The Panama Canal. The depth of water along the crib is 45 feet at mean mean tide. Plans have been approved for the building of two additional cribs as soon as the necessity for them develops. Under the present arrangement, fuel oil can be delivered to vessels at any rate up to approximately 2,000 barrels per hour.

The fuel oil storage capacity at Cristobal at present is 195,000 barrels, using two 42,000-barrel tanks of The Panama Canal and three 37,000-barrel tanks belonging to the Union Oil Company of California. Diesel engine oil is not sold at the Atlantic entrance at this time. The Union Oil Company has withdrawn from the oil business at the Atlantic terminal and is arranging to dispose of its tanks on that side of the Isthmus to one of the several companies which expect to engage in the business of supplying fuel oil to shipping at the Atlantic entrance.

These tanks are connected with the new handling plant of The Panama Canal. Oil is delivered at Docks 13 and 14, which have 30 feet of water alongside. It is expected to extend the delivery pipe ultimately to either dock No. 10 at Cristobal or to the permanent coaling plant, across the French canal. Several of the companies which have leased lots in the Mount Hope tank farm expect to erect oil tanks during 1915.

The price of fuel oil sold by The Panama Canal at either Balboa or Cristobal is \$1.25 per barrel of 42 gallons. It is sold as dry oil at the local temperature; that is, without any reduction in the gross volume on account of the temperature's being above 60° Fahrenheit, though the entire amount of water which the oil is shown by analysis to contain is subtracted from the gross volume before the bill is rendered. The prices made by the

several corporations may be obtained on application to the respective corporations.

The oil now sold by The Panama Canal is American oil of excellent grade, the technical characteristics required by the specifications being as follows: Flash point, 150° F.; fire test, above 220° F.; gravity at 60° F., not less than 16 nor more than 24 degrees Baumé; sulphur content, not more than 2.33 per cent; water content, not more than two per cent; fixed carbon, not more than six per cent; asphaltum, 40 to 60 per cent; British thermal units per pound of dry oil, 18,500 to 19,000.

Pleasure Yacht Makes Part of Canal Passage.

The yacht *Wayfarer*, belonging to A. J. Vanderbilt of New York, visited the Canal last week, but did not make a complete

passage from ocean to ocean. It entered from the Atlantic side on March 12 and went as far as Pedro Miguel, but then returned to the Atlantic, and sailed for Port Limon on Tuesday, March 16. The *Wayfarer* was formerly christened the *Warrior*.

Notice to Mariners—Buoys Discontinued at Pacific Entrance.

Black spar buoys Nos. 17 and 19, Pacific entrance, on the west side of the dredged channel, abreast of Beacons Nos. 17 and 19, respectively, will be discontinued on and after March 15, 1915.

GEO. W. GOETHALS,
Governor.

BALBOA HEIGHTS, C. Z.,
March 9, 1915.

LABOR FORCE AND QUARTERS IN FEBRUARY.

The force report of February 24, 1915, shows the actual working force of The Panama Canal on that date to have been 20,111; of the Panama railroad, 2,978; and of contractors, 356, a total effective working force of 23,445. This is a decrease of 1,408 from the force on January 20, which was 24,853.

The gold force on the Isthmus, composed almost exclusively of white Americans, was 3,494, a decrease of 219, as compared with the preceding month. The gold force for February was divided as follows: The Panama Canal, 3,088; the Panama railroad, 377; contractors, 29, a total of 3,494. Detailed figures of the total force employed on the Isthmus, by departments and divisions, follow:

DEPARTMENT OR DIVISION.	SILVER EMPLOYEES*											Total silver.	Total gold.	Grand total.	
	Artisans.						Laborers.								
	Monthly.	Special.	22 cents.	18 cents.	15 cents.	12 cents.	Special.	Euro- pean 16 cents.	13 cents.	10 cents.	7 cents.				5 cents.
Operation and Main- tenance; office & locks	420	...	5	38	103	12	...	4	4	211	...	2	799	168	967
Terminal Construc't'n	440	...	51	192	461	107	82	31	470	595	1	19	2,449	286	2,735
Building Division...	36	9	250	430	582	66	...	...	202	269	...	11	1,855	164	2,019
Electrical	58	...	26	40	76	59	65	...	...	19	...	1	344	137	481
Municipal Eng....	306	...	97	254	391	146	18	28	143	714	39	...	2,046	109	2,155
Dredging.....	1,707	...	9	21	66	16	...	16	77	99	...	...	2,011	302	2,313
Mechanical.....	150	11	81	112	573	521	...	11	47	151	9	4	1,673	716	2,389
Marine.....	84	...	...	...	...	...	...	...	...	...	...	...	84	44	128
Fortifications...	89	...	59	126	249	26	26	3	231	230	...	8	1,047	96	1,143
General Construct'n	15	...	...	1	4	8	1	129	31	61	...	6	256	4	260
Total.....	3,305	20	578	1,214	4,415	964	192	222	1,205	2,349	10	90	12,564	2,026	14,590
Supply: main office.	613	...	4	7	11	15	241	8	...	100	41	...	1,040	153	1,193
Commissary.....	563	1	2	1	1	2	...	...	...	...	...	...	570	32	602
Subsistence.....	759	43	65	82	90	...	85	11	52	746	...	2	1,935	71	2,006
Quartermaster....	16	...	...	...	...	...	...	...	...	...	...	...	16	185	201
Accounting.....	375	...	3	4	6	...	...	...	6	288	12	30	724	17	898
Health.....	169	2	1	2	...	...	...	...	...	...	...	...	174	431	605
Executive.....	350	65	82	194	253	289	449	18	311	570	5	15	2,691	377	2,978
Panama railroad...	92	...	...	...	30	...	198	7	...	...	...	...	327	29	356
Contractors.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Grand total.....	6,242	131	735	1,504	2,806	1,270	1,165	266	1,574	4,053	68	137	19,951	3,494	23,445
Month previous....	6,325	98	722	1,448	3,019	1,473	1,225	413	1,914	4,281	70	152	21,140	3,713	24,853
Changes.....	-83	+33	+13	+56	-213	-203	-60	-147	-340	-228	-2	-15	-1,189	-219	-1,408

*The wages are stated in United States currency.

QUARTERS.

A summary of the occupation of Canal and Panama railroad quarters on February 28, 1915, is given below:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Children	Men	Women	Children	Men	Women	Children
Balboa	762	219	215	212	10	25	1,667	485	599
Ancon	864	397	329	668	33	1	356	62	67
Corozal	428	204	210	227	18	29	439	112	165
Pedro Miguel	189	108	123	16	5	20	415	295	367
Paraiso	297	73	86	82	7	12	121	26	33
Culebra	78	40	31	6	2	6	284	100	109
Gamboa	25	8	8	14	4	4	1,099	171	380
Gatun	231	170	190	167	2	6	325	171	380
Cristobal	854	362	457	14	4	4	325	171	380
Toro Point	2	1	1	2	1	1	325	171	380
Total	3,730	1,581	1,649	626	24	63	5,601	1,302	1,750

(1) Includes 94 Colombians and Panamanians. (2) Includes 13 American negroes, 25 Asiatics, and three Panamanians on the gold roll. (3) Includes Sabanas police station, Taboga Island, Naos Island, Culebra Island, and Palo Seco. (4) Includes Miraflores. (5) Includes one Asiatic. (6) Includes 50 Panamanians. (7) Includes Empire, Las Cascadas, and Bas Obispo. (8) Includes Colon Beach and Colon Hospital. (9) Includes 35 East Indians, 10 American citizens, and 107 Panamanians. Gold force of contractors (included above), occupying Government quarters, 110 bachelors.

WORK ON EAST BREAKWATER.

New Approach Trestle Being Driven with Salvaged Timbers—Plans Remain the Same.

Work was begun last week by forces of the Division of Terminal Construction in driving a new trestle for the construction of the East Breakwater in Limon Bay, to replace the sections of trestle carried away by heavy seas on February 9.

The plan of construction has not been substantially changed from that in effect at the time of the norther, with the exception that the replaced part of the approach trestle is to be made single instead of double track. The approved project provides that the breakwater as completed shall be a detached mole, with its outer end 2,000 feet from the outer end of the west breakwater. The length of the east breakwater is to be 5,400 feet. This makes the proposed inner end of the mole lie about 5,925 feet from the shore at Coco Solo. The construction involves therefore the two features of the approach trestle, extending from land to the site of the breakwater proper, and the trestle and fill of heavy material which shall form the breakwater itself.

At the time of the occurrence of the norther the approach trestle had been completed to its full length, approximately 5,900 feet, and from its outer end the trestle for the breakwater proper had been built a distance of 3,700 feet, leaving 1,700 feet to be built. In advance of the driving of the trestle, fill had been placed along most of the line, from sea-going and pipeline suction dredges, to render the trestle more stable. At a point slightly over 1,600 feet from shore a relay station had been installed alongside the trestle, to boost the discharge of the pipeline dredge, and at the extreme end of the approach trestle a second relay station was under construction. For the protection of these stations, the regular fill had been augmented there by dumping rock, which formed a mound extending several feet above sealevel.

The heavy seas of the norther swept away entirely the 4,200-foot section of approach trestle, between the fills of heavy material at the relay stations. From the land to the first station the trestle held firm, being somewhat in the lee of Margarita Point, and strengthened at its outer end by heavy fill. The superstructure of the first relay station was swept away but the pumps and motors, anchored to the platform by heavy bolts, were saved. Only the platform of the second relay station had been built; this held firm and was the place of refuge of the 69 men who were marooned on the breakwater proper when the outer part of the approach trestle was swept away.

A considerable amount of heavy fill had been dumped on the breakwater, beyond the second relay station, reaching, in general, to an elevation of about 14 feet below the surface of the water. This fill served to stabilize the trestle, and saved it from being swept away completely, like the parts of the approach trestle not protected by heavy fill. For a distance of 2,100 feet beyond the second relay station, that is, for the first 2,100 feet of the breakwater proper, the trestle still retains the decking, with the exception of five stringers. The damage in this section consisted principally in twisting the trestle out of alignment; the track on the sea side of the breakwater was forced over against the track on the harbor side. Beyond this section, for

a distance of 1,600 feet, to the outer end of the trestle as built at that time, all the superstructure, stringers, caps, ties, and rails, were swept away, leaving only the piles standing. It can not be determined at this time of how much value these piles will be in the reconstruction of the trestle, as they are considerably out of alignment.

The washing away of the trestle at the outer end of construction on the breakwater proper carried away the handcar on which were mounted the acetylene lights used to indicate the end of the trestle, and two pile-drivers, one in use on each track of the double trestle. The disappearance of the lights, during the night of February 8, was the first indication that the trestle was giving way. The piledrivers had been drawn back from the ends of the trestles, as was customary, for safety at the close of work on the 8th. By morning of February 9 parts of the approach trestle had so given way that in spite of reinforcement and shimming it was impossible to bring the rolling stock to land. The men on the breakwater proper made every effort to reinforce the trestle beneath the piledrivers but in spite of this the trestle gave way and both piledrivers disappeared within 10 minutes of each other, in the afternoon of the 9th. From the divers' report it appears practicable to salvage piledriver No. 103, which is resting on firm fill, but No. 104 has sunk so deep in soft fill as to make a very difficult job of raising. In addition to the piledrivers, a train of 21 Lidgerwood flat cars, with the unloader and plow, went into the sea from the approach trestle. It was customary to leave one train on this section at the close of work at night, to make room in the yards on land and to have the train available for operations the first thing in the morning. The giving way of trestle immediately beyond the first relay station during the night of February 8 made it impossible to bring this train to land on the 9th.

In the absence of the regular piledrivers use is being made of Panama railroad piledriver No. 1. This, however, is not equipped with as long leads as are desirable for this kind of work. It is now at work just beyond the first relay station, reconstructing the approach trestle beyond that point. This trestle is to be built single track, following the line of the former sea track of the double trestle.

The piles and squared timbers being used are some of those reclaimed from the shore after the washing out of the trestle. Each bent of the new trestle uses four piles; the two in the center are creosoted, while those flanking them on each side, and driven on a batter, are untreated except for a coating with carbolineum.

A force of approximately 150 men is engaged in the reclamation of timbers swept

ashore. It is believed that 90 per cent of the timbers removed from the trestles have been beached along Colon Beach and in Manzanillo Bay at the mouth of Folks River. Many have drifted a considerable distance inland. In the reclamation along part of Colon Beach it has been practicable to use a locomotive crane, equipped with a long cable, dragging the piles from the shore to the track in front of the radio station and loading them on flat cars to be hauled to Coco Solo. At other points the piles are gathered by crews in small boats and assembled in rafts, to be towed to Coco Solo by the gasoline tug *Coco Solo*. It is estimated that about a third of the squared timbers lost can be used again. Many of these were used in the construction of the west breakwater, from Toro Point. Of the piling, a large part, including creosoted piling, can be used, mostly with splicing, in the reconstruction of the approach trestle, and the trestle of the breakwater proper.

In connection with the reconstruction, fill is being placed in the gap between the relay station sites, by the seagoing suction dredge *Caribbean* and by clamshells handling spoil from ladder dredge No. 1, excavating at the new coaling station at Cristobal. This fill is intended to increase the stability of the trestle and to allow the use of shorter piles. Where the piles will not reach to bed rock it is proposed to increase the skin friction by affixing to each pile a heavy timber collar or ruff, made fast to the pile by means of iron bolts.

EFFECTS ON OTHER BREAKWATERS.

An inspection of the completed west breakwater in Limon Bay, extending from Toro Point, shows that it was damaged in five places, to the extent of exposing one or more piles of the construction trestle, since heavily armored with hard rock. The seas broke over the breakwater repeatedly, but it is estimated that all damage done could be repaired by the use of 500 cubic yards of rock.

The mole at the Cristobal piers, extending about half a mile in length and affording additional protection to the docks in its lee, was severely battered and it is believed it would have been washed out except for the prompt and continued efforts of forces of the Panama railroad in reinforcing it. In the afternoon of February 9, when the mole was reported in danger, trains of rock were procured from the yards at Coco Solo and elsewhere and dumped along the sea side of the mole. Three gangs, comprising about 75 men, continued this work on the 9th, 10th, 11th, and 12th, during all of which time high seas were running. Men were knocked down repeatedly by the waves breaking over the mole, and one of the two tracks on top of it was swept away. About 12,000 cubic yards of rock were dumped, and the mole is now considered to be in better condition than it was prior to the norther.

SUCCESSFUL VACCINATIONS.

District Physicians Securing Good Results with Lymph Made at Ancon Laboratory.

In the general vaccination of residents of the Isthmus now in progress, the physicians of the Health Department have been attaining unusually good results, with a high percentage of "takes" and practically no very sore arms or legs. For instance, the district physician at Ancon reported that among 191 children of the Ancon school who were vaccinated, not one developed a sore arm or leg and only two lost time on account of fever. He expresses his opinion that trouble with vaccinations is due principally to lack of cleanliness on the part of either the physician or, later, of the patient. Those who are vaccinated at the Ancon dispensary are instructed to protect the abrasion from infection and to report every few days for inspection. Prior to vaccination, the skin is cleaned carefully with medicated soap and water, followed by alcohol. Then the abrasion is covered with a dressing. If later there should be signs of infection, the vaccination is disinfected and dressed as often as may be required.

A large part of the success of the vaccinations has been due to the use of a high grade lymph prepared in the laboratory of the Board of Health at Ancon. This lymph has not only been found to be highly efficacious with respect to the proportion of successful inoculations, but is known to be pure, as every stage of its preparation is performed in the Board of Health laboratory and nothing is taken on faith. It has been tested and checked at every point.

On account of the difficulty of keeping a virulent vaccine in the tropics, the laboratory staff began about three months ago the making of vaccine on the premises. Original lymph for the inoculation of calves was obtained from the health department of New York City. The calves are procured from the herd of Ancon Hospital, which is in healthy condition; but in addition the history of each calf is gone into, and the calf is subjected to isolation and careful examination before it is accepted for inoculation. It is placed in a screened room, with a sawdust floor, and inspected thoroughly, with especial care for diseases of the skin. Its temperature is taken daily for a week.

The calf being found acceptable, it is placed on an operating table constructed for the purpose and strapped down. The hair is then shaved from its abdomen, and frequently also from the inside of the thigh, where there is a flat surface of clean and tender skin. After a thorough cleansing, these parts are vaccinated with stock lymph, saved from the preceding calf. Vaccination is effected by making linear incisions, from 10 inches to a foot long, spaced about a quarter of an inch apart, and inoculating the cuts with a lance. The incisions are made the depth of the skin, barely drawing blood; anesthesia is used when the protests of the calf are of sufficient vigor to warrant it.

Following vaccination, the calf is kept in a screened room and inspected daily. On or about the fifth day the calf is placed on the operating table and, after cleansing, the scabs and lymph over and within the incisions are scraped away with a curette. This product is bottled and placed on ice, and within a short time is placed in a mixture of saline solution and glycerine and thoroughly triturated.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Thompson, Samuel.	20475	Barbados	Colon Hospital	Health Dept.	Mar. 4, 1915.

The estate of the abovenamed deceased employe of The Panama Canal or the Panama Railroad Company is now in process of settlement, and any claims against the estate or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. This name will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

ted, for the disintegration of the epithelial cells into a uniform, homogeneous pulp. Portions of this fluid are then mixed with glycerine, in dilutions of one-tenth, one-twentieth, and one-fortieth strength, and each solution is tested for its efficacy by inoculations. These tests make for economy in the manufacture of vaccine points and also serve to assure the efficacy of the virus sent out from the laboratory.

The virus is bottled and kept on ice. The glycerine with which the virus is in suspension has the effect of destroying any outside germs which might have entered the mixture, while preserving the cowpox germ. From time to time cultures are made from the solution to determine its condition.

The vaccine lances, or "points," which the district physicians use in vaccinating are made up at the laboratory in batches calculated to meet the demand, while at the same time assuring that only fresh points are sent out. Each lance, a little sliver of ivory, sterilized, is inserted in a small cup or cap of glass, which is half-filled with vaccine virus by means of a medicine dropper, and cap and lance are then dipped in paraffine, which seals the virus within the cup and prevents later contamination. The completed lances are put up in boxes of 100 for distribution to physicians.

The laboratory has been making from 5,000 to 7,000 lances from the pulp taken off each calf. The calves are used but once. Each calf, each vaccination, and each batch of pulp are numbered, and a close record of every step is kept. This is to provide against the introduction of extraneous diseases and afford a means of checking promptly any variation from the normal.

Besides being generally more satisfactory than the imported vaccine points, those made at the laboratory represent a distinct saving of money to the Health Department. While imported points have cost approximately 10 cents each, the laboratory has been making them for \$.014 each.

The new 36-foot, 45-horsepower gasoline launch for the section of Meteorology and Hydrography has been accepted and christened *Priscilla*.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the two weeks ending midnight, Saturday, March 13, 1915:

DAY AND DATE.	STATIONS.				
	Vigila.	Alhajuela.	Gatun.	Gatun Lake.	Miraflores Lake.
Sun., Feb. 28.....	126.90	92.63	86.94	86.99	54.01
Mon., Mar. 1.....	128.80	92.42	86.94	87.04	54.02
Tues., Mar. 2.....	126.78	92.24	86.95	87.00	53.90
Wed., Mar. 3.....	126.75	92.34	86.95	87.07	54.00
Thurs., Mar. 4.....	126.75	92.34	86.96	87.02	53.87
Fri., Mar. 5.....	126.65	92.30	86.94	86.99	53.80
Sat., Mar. 6.....	126.50	92.28	86.96	87.03	53.79
Heights of low water to nearest foot..	125.0	91.0			
Sun., March 7.....	126.70	92.40	87.02	86.97	53.73
Mon., March 8.....	126.35	92.40	87.00	86.98	53.70
Tues., March 9.....	126.15	92.27	86.98	86.96	53.86
Wed., March 10.....	126.10	92.06	86.94	86.94	54.00
Thurs., March 11.....	126.00	91.96	86.92	86.92	54.38
Fri., March 12.....	125.95	91.90	86.92	86.90	54.40
Sat., March 13.....	126.00	91.86	86.88	86.88	54.10
Heights of low water to nearest foot..	125.0	91.0			

PANAMA CANAL DIRECTORY.

Executive Department.

Headquarters, Balboa Heights.

GEO. W. GOETHALS, U.S.A., Governor.

M. B. Stevens, Secretary.

C. A. McILVAINE, Executive Secretary.

W. P. Copeland, Chief Clerk.

John K. Baxter, Chief, Division of Civil Affairs, Balboa Heights.

Capt. Harry D. Mitchell, U. S. A., Chief, Division of Police and Fire, Balboa Heights.

A. R. Lang, Superintendent, Division of Schools, Balboa Heights.

FRANK FEUILLE, Special Attorney, Ancon.

WILLIAM K. JACKSON, District Attorney, Ancon.

Department of Operation and Maintenance.

(Under immediate direction of the Governor as Head of the Department.)

Headquarters, Balboa Heights.

LIEUT.-COL. CHESTER HARDING, U. S. A., Engineer of Maintenance.

C. O. Carlson, Secretary.

C. J. EMBREE, Office Engineer.

CAPT. W. H. ROSE, U. S. A., Electrical Engineer, Electrical Division.

GEO. M. WELLS, Resident Engineer, Division of Municipal Engineering.

F. D. WILLSON, Chief Hydrographer, Section of Meteorology and Hydrography.

O. E. MALSBURY, Assistant Engineer, Section of Surveys.

H. H. ROUSSEAU, Civil Engineer, U. S. N., Engineer of Terminal Construction.

R. H. Hand, Secretary.

F. H. COOKE, Civil Engineer, U. S. N., Designing Engineer.

T. B. MÖNNICHE, Engineer of Docks, Cristobal.

J. A. WALKER, General Superintendent, Balboa.

W. G. THOMPSON, Superintendent, Cristobal.

C. C. SNEDEKER, Supervisor, Coco Solo, Cristobal.

F. C. NICHOLS, Assistant Engineer, Balboa Heights.

CAPT. HUGH RODMAN, U. S. N., Marine Superintendent, Marine Division, Balboa Heights.

COM. D. E. DISMUKES, U. S. N., Captain of the Port, Cristobal.

LIEUT.-COM. H. V. BUTLER, U. S. N., Captain of the Port, Balboa.

Board of Local Inspectors—COMMANDER DISMUKES, *Chairman*, LIEUTENANT-COMMANDER BUTLER, J. MACFARLANE, Headquarters, Balboa Heights.

W. G. COMBER, Resident Engineer, Division of Dredging, Paraiso.

D. C. NUTTING, JR., Constructor, U. S. N., Superintendent, Mechanical Division, Balboa.

CAPT. R. E. WOOD, U. S. A., Constructing Quartermaster, Building Division, Balboa Heights.

FIRST-LIEUT. A. H. ACHER, U. S. A., Assistant Engineer, Division of Fortifications, Balboa Heights.

Supply Department.

MAJ. W. R. GROVE, U. S. A., Chief Quartermaster, Balboa Heights.

CAPT. F. H. SMITH, Assistant Chief Quartermaster, Balboa Heights.

C. H. MANN, Sales Agent, Cristobal.

BENJ. L. JACOBSON, Depot Commissary, Cristobal.

Accounting Department.

H. A. A. SMITH, Auditor, Balboa Heights.

JOHN H. McLEAN, Paymaster, Balboa Heights.

T. L. CLEAR, Collector, Balboa Heights.

AD. FAURE, Chief Accountant, Balboa Heights.

ELWYN GREENE, Chief Examiner, Balboa Heights.

Health Department.

LIEUT.-COL. CHARLES F. MASON, U. S. A., Chief Health Officer, Balboa Heights.

LIEUT.-COL. G. D. DESHON, U. S. A., Superintendent, Ancon Hospital.

MAJ. PERCY M. ASHBURN, U. S. A., General Inspector, Balboa Heights.

DR. M. C. GUTHRIE, U. S. P. H. S., Chief Quarantine Officer, Balboa Heights.

CAPT. D. W. HARMON, U. S. A., Health Officer of Colon, Cristobal.

CAPT. H. P. CARTER, U. S. A., Health Officer of Panama, Ancon.

Washington Office.

MAJ. F. C. BOGGS, U.S.A., General Purchasing Officer and Chief of Office.

A. L. FLINT, Assistant Chief of Office.

Panama Railroad Company.

Office in the United States, 24 State Street, New York City.

C. H. MOTSETT, Superintendent, Balboa Heights.

SAMUEL W. HEALD, Master of Transportation, Balboa Heights.

CHARLES R. WILLIAMS, Attorney, Ancon.

Courts.

WILLIAM H. JACKSON, District Judge, Ancon.

E. M. Goolsby, Clerk, Ancon.

W. H. MAY, Marshal, Ancon.

S. E. BLACKBURN, Magistrate, Balboa.

JOHN W. THOMPSON, Magistrate, Cristobal.

Joint Land Commission.

FEDERICO BOYD, Panama City.

SAMUEL LEWIS, Panama City.

LEVI M. KAGY, Ancon.

NICHOLAS CORNET, Ancon.

William Taylor, Secretary, Ancon.

Family Quarters.

Applications for married quarters on file on February 28, 1915, were as follows:

DISTRICT.	List No. 1.	List No. 2.
Ancon.....	20 (9)	356 (107)
Ancon Hospital.....	2 (1)	7
Corozal.....	1	120 (32)
Paraiso.....		176 (9)
Gatun.....		37 (6)
Cristobal.....	1 (1)	125 (27)
Total.....	24 (11)	821 (181)

NOTE—The figures in parentheses show the number of applicants already occupying regular or nonhouse-keeping family quarters at stations other than those at which applications are filed.

OFFICIAL CIRCULARS.

Quarters for Gold Employees.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 12, 1915.

CIRCULAR No. 627-5.

1. Effective April 15, 1915, Circular No. 627, dated April 1, 1914, and Circular No. 627-2, dated December 3, 1914, will be canceled and the following rules will govern the assignment of family quarters to gold employees:

APPLICATIONS.

2. Applications for original assignment or transfer within a district will be placed on file on one list according to the date of employee's last entrance into the service, irrespective of salary.

3. A list showing all applications on file for each district will be posted in the office of the district quartermaster and will be open to inspection.

4. An employee may, at the request of the head of his department, file an application for family quarters at or transfer his application to a point other than that at which he is employed.

ASSIGNMENTS.

5. When a house is to be assigned, it will be offered in the following order:

(a) To applicants on waiting list of longest continuous service, who are filling positions which will be retained in the permanent organization of The Panama Canal or Panama railroad in the district in which the house is located.

(b) To other applicants according to length of service.

6. Service being equal, the employee drawing the highest salary will be offered the assignment.

7. Employees will be required to accept or reject tender of quarters within five days from the date of tender.

SPECIAL HOUSES.

8. All houses on which the rental is fixed at \$25 or more per month and all houses or apartments necessary for firemen, policemen, nurses or others requiring special assignment, will be considered as special houses, and assignment thereto will be made by the Chief Quartermaster, with the approval of the Governor.

HOLDING QUARTERS.

9. Family quarters may be held for 90 days during the absence of an employee to whom they are assigned or his family, or both simultaneously, provided that this privilege shall not be granted for more than one period of 90 days in any service year. If vacated a second time during the service year, either by the employee, his family, or both simultaneously, quarters will be held not more than 30 days. The two periods can not be taken advantage of continuously or allowed to lap each other, either through absence of both employee and family at the same time or of either separately. The two periods must be regarded as entirely separate and distinct, and the quarters must be reoccupied both by the employee and his family after the first period of absence before they can be vacated, without forfeiture, for the second period of absence.

10. A new form of application will be gotten out, which will have to be filled out by all applicants, old and new, showing last date of entry into service, department, whether in permanent position or not, place of work, and highest rate of rental applicant is willing to pay. This application must be approved by the head of the department and certified by the Executive Secretary as to the employee's personnel record.

GEO. W. GOETHALS,
Governor.

Sales Agent.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMAS-
TER, BALBOA HEIGHTS, C. Z., March 1, 1915.

To all concerned—Effective this date, Mr. C. H. Mann is appointed Sales Agent and will have charge of all sales of obsolete and surplus material and equipment, etc., for the Supply Department.

The position of Depot Quartermaster is hereby abolished.

Approved: WM. R. GROVE,
Chief Quartermaster.
GEO. W. GOETHALS,
Governor.

Sanitary Rules for Construction of Buildings in Canal Zone.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 2, 1915.

CIRCULAR No. 666:

1. The following rules proposed by the Chief Health Officer, in order to secure rat-proof buildings as a

protection against plague, will be used as a guide in all future construction in the Canal Zone:

2. For the purpose of rat-proofing, all buildings, out-houses, and other superstructures, except stables, shall be divided into two classes, to wit: Class A and Class B; and the same shall be rat-proofed in the manner following, to wit:

3. *Class A*—All buildings, outhouses, and other superstructures of Class A shall have concrete floors, and such floor shall rest, without any intervening space between, upon the ground or upon filling to be approved by the Chief Health Officer; said floor shall extend, and be hermetically sealed, to walls surrounding said floor, which walls shall be made of concrete, stone, or brick laid in cement mortar, and each wall to be not less than six inches thick, and shall extend into and below the surface of the surrounding ground at least two feet, except where such foundation walls are built upon solid rock, and shall extend not less than one foot above the surface of said floor. If it is desired to place a wooden floor over the concrete floor, sleepers not less than two inches by two inches shall be embedded in the concrete with the upper surface flush with the top of same. Over these sleepers the wood floor must be nailed, and there shall be no free space between the wood and the concrete.

4. *Class B*—All buildings, outhouses, and other superstructures of Class B shall be set upon pillars, so that there shall be a clear space of not less than three feet between the ground and the sills of any house, except in buildings erected as in Class A. In case the building is located on sloping ground, the sills of the building at the end nearest the ground must be not less than 18 inches above the ground level. When the space between the sills and ground is more than three feet and not less than six feet, and is properly concreted, it may be utilized for such purposes as may be approved by the Chief Health Officer, with this exception: No refuse or material of any kind shall be stored or allowed to remain in the space beneath the house.

5. Every slaughterhouse, abattoir, market, bakery, rendering plant, candy factory, ice cream manufactory, hotel kitchen, restaurant kitchen, warehouse where grain or cereals are stored, milk depot where milk is received or stored for distribution or sale, or where milk is converted into cream, cheese, or other products, dairy, building wherein poultry, game, animals, or birds are stored or kept for sale, or sold, and other buildings wherein foodstuffs are manufactured or prepared, shall be rat-proofed in the manner provided for hereinabove as Class A. In the event that the Canal authorities shall grant permits or licenses to persons or enterprises to carry on any of the activities mentioned in this paragraph, including produce and commission houses, hide stores, and the like, they shall be required to comply with the provisions of this paragraph. All other buildings, residences, outhouses, and superstructures, except stables, not hereinabove specified as Class A, shall be rat-proofed in the manner provided hereinabove as Class B; provided, that in plague-infected areas, or where, from any cause, a building or outhouse, or other superstructure is, or may become, in his opinion, a menace or dangerous to public health, the Chief Health Officer may require any such building, outhouse, or other superstructure, hereinabove required to be rat-proofed as a building of Class B, to be rat-proofed as a building of Class A, provided that the owner of any building, residence, or superstructure in Class B may rat-proof same as provided in Class A if he so elects.

6. All wall space, accidental and unnecessary spaces and holes, ventilators, and other openings other than doors and windows in every building, outhouse, and other superstructure in the Canal Zone shall be closed with cement or screened with wire having not more than one-half inch mesh, as the case may require, in such manner as to prevent the ingress or egress of rats: Provided, That in all buildings, outhouses, and other superstructures of Class A, and in all stables, where there are any spaces in walls between the wall proper and the covering on same, or in ceilings, between the ceiling and floor or other ceiling covering above, said spaces shall be eliminated by the removal of said covering, or so closed as to prevent the ingress or egress of rats, and the whole, as determined and in such manner as shall be approved by the Chief Health Officer.

7. There shall be no frame buildings erected which provide for more than a single wall, except upon permission in writing from the Chief Health Officer, and when double walls are allowed it shall be stipulated in the permit that there shall be at least eight inches of concrete between the walls immediately above the sills of each floor, placed in such manner as to entirely fill all openings.

8. Attic space must have an opening into it of not less than two feet square and shall be closed by a trap door, which can be opened for the purpose of inspection; under no circumstances shall any article or articles of any nature whatsoever be stored in the attic space.

GEO. W. GOETHALS,
Governor, The Panama Canal.

Sanitary Rules for the Construction of Stables in Canal Zone.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 2, 1914.

CIRCULAR No. 696-1:

1. Stables shall have water and sewer connections, and good ventilation. The stalls shall be approximately 10 feet long, five feet six inches wide, and 10 feet high at entrance. The buildings shall be constructed as follows:

WALLS.

2. The foundation walls shall be constructed of concrete, brick, or stone, laid in cement mortar, and shall be not less than six inches thick, and shall extend into and below the surface of the surrounding ground not less than two feet.

FLOORS.

3. The floors of stables and stalls shall, unless specifically excepted in writing, be of concrete not less than three inches thick, upon which shall be laid a dressing not less than one-half inch thick of cement or stone, laid in cement mortar in such way as to prevent ingress or egress of rats, and such floors to have a slope of one-eighth inch per foot to the gutter drains hereinafter provided for.

STALLS.

4. The floors of stalls may be of planking, fitting either tightly to the concrete floor or elevated not more than one-half inch from the stall floor, and so constructed as to be easily removable. Such removable planking shall be raised at least once a week and the said planking and the concrete floor beneath thoroughly cleaned.

GUTTERS.

5. Semicircular or V-shaped gutter drains shall be constructed in such stables in such manner that a gutter shall be placed so as to receive all liquid matter from each stall, and each of these gutters to connect with the public sewer or with a main gutter of the same construction, which in turn shall be connected with the public sewer. All openings from drains into sewers shall be protected by a metal grating having openings not more than one-half inch between the gratings.

MANGERS.

6. Each manger shall be constructed so as to have a slope of two inches toward the bottom, shall be covered with tin or zinc, and shall be at least 18 inches deep, to avoid spilling of food.

FEED BINS.

7. All feed bins shall be constructed of concrete, stone, metal, or wood, and if constructed of wood shall be lined or covered with metal, and the whole so constructed as to prevent the ingress or egress of rats.

WASHING PLATFORM.

8. Each stable must be provided with a cemented area of sufficient size upon which carriages and animals are washed. This area shall be properly graded and trapped to sewer.

GEO. W. GOETHALS,
Governor, The Panama Canal.

Annual Leave.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 1, 1915.

To all concerned—Some employees and persons in supervisory positions appear not to understand the regulations relative to annual leave.

Annual leave when taken alone (i. e., not with cumulative leave) must be entered upon within the service year, or forfeited.

When taken with cumulative leave, annual leave may be entered upon at any time within two months after the close of the service year.

For the good of the service (not for the convenience or profit of an employee) the Governor, upon recommendation of the head of a department or division, may extend the time in which annual leave may be taken in conjunction with cumulative leave.

Under no circumstances may annual leave (unless taken with cumulative leave) be entered upon after the close of the service year.

GEO. W. GOETHALS,
Governor.

Barges for Handling Coal.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 11, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

The Panama railroad is in urgent need of three barges, suitable for handling 200 tons of coal each, to replace three barges now in its service which have been condemned.

It is requested that information be furnished the Surveying Officer with as little delay as practicable, as to whether or not any barges can be released at this time in order to handle coal for the Panama railroad. Information should also be furnished as to number of barges on hand and in what service same are now being

used, which could be used to advantage by the Panama Railroad in case it should be considered necessary for the good of the service to transfer same for coal service.

GEO. W. GOETHALS,
Governor.

Release from Quarters.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,
BALBOA HEIGHTS, C. Z., March 13, 1915.

TO DISTRICT QUARTERMASTERS AND OTHER CONCERNED:
Hereafter in issuing release from quarters as required by Circular 675-1 as amended by Circular 675-2, such release should be given—"Subject to payment of rent"—unless the party to whom the release is given shall present to the district quartermaster a receipt showing the payment of rent up to the date of the release from quarters, and in such case notation should be made on the release that—"Rent has been paid to"

H. A. A. SMITH,
Auditor, Panama Canal.

Distribution of Cars.

THE PANAMA RAILROAD,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., February 9, 1915.
HEADS OF DEPARTMENTS AND DIVISIONS:

It is necessary to revise the distribution of cars to the several divisions and departments, effective April 1, 1915, for the three ensuing months, and you are requested to advise me at your early convenience the requirements of your department, showing the total number of each class of car you will require for the three months of April, May, and June, 1915.

For your information I am appending hereto a copy of the car distribution statement covering this equipment for the quarter ending March 31, 1915.*

C. H. MOTSETT,
Superintendent.

Examinations by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, March 24, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boat, will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m.; and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the captain of the port of Cristobal on

Friday, March 26, 1915, beginning at 9 a. m. Applicants should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.

F. M. NIXON,
Recorder, Board of Local Inspectors.

Bidders for Landing Pier, Quarantine Station, Balboa.

The attention of prospective bidders for the construction of a steel and concrete pier at the quarantine station, Balboa, is called to the fact that supplement No. 1 has been issued which changes the provisions under the heading "Plant" on the third page of the specifications so as to provide that bidders must state the number of items of equipment they will require, and the length of time they will require such equipment. This supplement gives a list of equipment which may be available under this paragraph and also provides that if any repairs are necessary on any of this equipment to put it in working order, the cost of repairs shall be charged to the contractor and the contractor will be required to pay for all running repairs. Copy of this supplement may be obtained upon application to the office of the Chief Quartermaster, Balboa Heights.

WM. R. GROVE,
Chief Quartermaster.

Rainfall from March 1 to 6, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa .....	..	..	.00
Balboa Heights .....	..	..	.00
*Miraflores .....	..	..	.00
Pedro Miguel .....	..	..	.00
Rio Grande .....	..	..	.00
<i>Central Section—</i>			
Culebra .....	..	..	.00
*Camacho .....	..	..	.00
Empire .....	..	..	.00
Gamboa .....	..	..	.00
*Juan Mina .....	.03	3	.03
Alhajuela .....	.03	4	.03
El Vigia .....	.02	2	.02
Frijoles .....	.03	5	.03
Trinidad .....	..	..	..
Monte Lirio .....	.30	3	.30
<i>Atlantic Section—</i>			
Gatun .....	.19	3	.30
*Brazos Brook .....	.20	3	.22
Colon .....	.17	4	.29

Rainfall from March 1 to 13, 1915, Inclusive.

<i>Pacific Section—</i>	<i>Ins.</i>	<i>Date.</i>	<i>Ins.</i>
Balboa .....	..	..	.00
Balboa Heights .....	..	..	.00
*Miraflores .....	..	..	.00
Pedro Miguel .....	..	..	.00
Rio Grande .....	..	..	.00
<i>Central Section—</i>			
Culebra .....	..	..	.00
*Camacho .....	..	..	.00
Empire .....	..	..	.00
Gamboa .....	..	..	.00
*Juan Mina .....	.03	3	.04
Alhajuela .....	.03	4	.03
*El Vigia .....	.02	2	.02
Frijoles .....	.03	5	.04
*Trinidad .....	.44	3	.50
*Monte Lirio .....	.30	3	.30
<i>Atlantic Section—</i>			
Gatun .....	.20	11	.51
*Brazos Brook .....	.24	11	.49
Colon .....	.22	11	.52

*Standard rain gage—readings at 5 p. m. daily.

Automatic rain gage at unstarred stations—values midnight to midnight.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.; with the exception that the Balboa store's afternoon hours are from 2.30 to 6.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective March 18, 1915:

Prices of fresh meats, cured and pickled meats, and dairy products are practically unchanged since publication in THE CANAL RECORD of March 10.

	Price.
VEGETABLES.	
Beets, per pound	2
Celery, per head	7
Cabbage, per pound	2
Carrots, per pound	2
Cauliflower, per pound	18
Lettuce, per pound	12
Onions, per pound	12
Parsley, per pound	13
Parsnips, per pound	3
Peppers, green, per pound	17
Plantains, per dozen	15
Potatoes, white, per pound	2
sweet, tropical, per pound	2
Spinach, per pound	11
Squash, per pound	3
Tomatoes, per pound	11
Turnips, per pound	1 1/2
Yams, tropical, per pound	2 1/2
FRUITS.	
Apples, per pound	*4
Apples, fancy, per pound	*6
Cranberries, fresh, per pound	6
Grape fruit—American, each	5
Tropical, each	3 1/2
Lemons, per dozen	12
Oranges—American, each	2
Tropical, per dozen	12
Coconuts, each	5
Bananas, per bunch	38
Bananas, each	3
Apples, evaporated, per pound	11
Apricots, evaporated, per pound	15
Pears, evaporated, per pound	23
Tangerines, each	1 1/2
Pineapples, Cuban, each	7
Figs, dried, per pound	*18
Figs, dried, 12-oz. package	14
Figs, dried, 5-oz. package	5

* Indicates advance from preceding list.

† Indicates reduction from preceding list.

Additions to Stock.

Caviar, tin	\$0.83
Roast beef, tin	1.35
Osnaburg flour sacks, ea.	10
Heels, rubber, woman's black, Cuban, pr.	23
Shoes, boy's, oxford tan, pr.	2.70
Pans, roasting, 12 1/2 x 17 1/2 x 8, ea. ....	.29
<i>Garden accessories—</i>	
Fibre saucers, 7", ea.	11
Fibre saucers, 9", ea.	23
Fibre saucers, 12", ea. ....	.30
Plant pots, 11 x 9", ea. ....	.40
Rubber sprinklers, ea. ....	.95
Watering pots, 4-qt., ea.	2.30
Pruning shears, ea.	1.30
Garden trowels, 6", ea. ....	.22

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective March 13, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Biscuits, Saltines, tin	\$0.27	\$0.24
Flour, tin	1.37	1.66
Puffed wheat, ctn .....	.09	.13
Caviar, tin .....	.40	.43
Salmon, steak, R. S., tin .....	.22	.25
Peas, dried, green, lb .....	.05	.07
Rice, 2d quality, lb .....	.04	.04 1/2
Ketchup, tomato, Griffin, bot. ....	.26	.30
Asparagus tips, tin .....	.18	.21
Corn, sugar, tin .....	.11	.13
Pimenton marrones, tin .....	.09	.06
Sponges, rubber, ea. ....	.33	.36
Syringes, fountain, ea.	1.35	1.55
Pajamas, suit	1.50	1.35
Heels, rubber, men's, black, pr. ....	.25	.27
Mattresses, ea.	6.60	5.25
Cups, custard, ea. ....	.69	.10

*DISTRIBUTION OF CARS FOR THE MONTHS OF JANUARY, FEBRUARY, AND MARCH, 1915.

DIVISIONS.	Steel flat.	Ldg. flat.	12-yd Dump	19-yd Dump	Sup ply cars	Box	Pass. cars.	Bag-gage cars	Gon-dolas	Stock	Roger Bal-last	Total
Municipal Engineering	1	1	2	3	..	1	..	..	..	..	..	8
Forsts:												
Margarita Point .....	..	..	..	..	..	..	..	..	..	..	..	0
Toro Point	3	2	7	..	..	..	..	..	..	..	..	12
Naos Island .....	..	..	40	..	..	..	..	..	..	..	..	40
Mechanical Division .....	..	..	..	6	..	..	..	..	..	..	..	10
Coaling Station .....	..	12	25	50	..	..	..	..	..	..	..	87
Dredging Division .....	..	..	..	..	1	..	..	..	..	..	..	1
Termi Con. E. Breakwater	4	376	..	..	..	1	..	..	..	..	..	381
Termi Con. Bal. Term. ....	..	60	190	150	..	..	..	..	..	..	..	400
Panama railroad	462	100	117	23	..	768	46	7	23	22	200	1,768
Electrical Division .....	..	..	..	..	..	1	..	..	..	..	..	1
Pacific locks .....	..	2	4	..	..	..	..	..	..	..	..	6
H. A. Pearce, contractor .....	..	..	..	160	..	..	..	..	..	..	..	160
Totals	470	557	385	332	1	771	46	7	23	22	200	2,814

SHIPPING INFORMATION.

April Weather Probabilities.

The following weather conditions may be expected to prevail at the Canal entrances during the month of April. Predictions are based on the records at Colon and Ancon for the past seven and eight years, respectively.

Winds—Fresh northerly dry season winds will continue during the month, although there will be a decrease in the wind movement with the approach of the rainy season and as compared with the March conditions. North and northeast winds will prevail at the Atlantic entrance to the Canal, with an average hourly velocity of about 13 miles an hour. A maximum velocity of more than 33 miles an hour is not likely to occur.

Over the interior and on the Pacific side the prevailing winds will blow from the northwest, with an average hourly velocity of about nine miles an hour. The maximum velocity is not likely to exceed 26 miles an hour.

Rain—Occasional showers may be expected at both the Atlantic and Pacific entrances and as much as one inch of rain may fall in one day, although April is a dry season month. The average April rainfall on the Atlantic side has been 4.05 inches, and 2.72 inches on the Pacific side. The average number of days on which .01 inch of rain fell has been 16 and eight, respectively.

Fogs—No fogs are likely to occur at the Pacific entrance to the Canal, and the average number of fogs at the Atlantic entrance during the month of April has been only one. Night and early morning fogs may be expected over the Culebra Cut section of the Canal, but under present operating conditions they will not affect navigation. The average number of nights with fog at Culebra has been 11, although most of them lifted or were dissipated by 8.30 a. m.

Temperature—An average shade temperature of 81° F. will probably occur at the Atlantic entrance and an average temperature of 82° F. may be expected at the Pacific entrance. On the Atlantic side the temperature is not likely to rise above 90° F., or fall below 72° F., but a maximum of 97° F. and a minimum of 64° F. may occur at the Pacific entrance. The mean daily range in temperature during the month of April is much greater at the Pacific than at the Atlantic entrance to the Canal, being 18° and 7° F., respectively, for the years of record.

Barometric pressure—Changes in barometric pressure on the Isthmus are very slight, except for the well-marked diurnal change which is a characteristic of tropical regions, and of little value in forecasting weather conditions. The average April sealevel pressure is 29.86 inches. A maximum air pressure of more than 29.99 inches or a minimum of less than 29.73 inches is not likely to occur at either entrance of the Canal.

Storms—Severe general storms of wide extent are not likely to occur at either Canal entrance, although a rough sea and heavy swell may at times be produced outside the breakwater at Colon by the fresh northerly trade winds or by the so-called "northerly" that occasionally reach as far south as the Atlantic entrance to the Canal. Occasional thunderstorms may be expected at both Canal entrances. Generally fair weather with smooth to moderate seas can be expected at the Pacific entrance.

Tides—The average tidal range at Colon is less than one foot and the maximum range is approximately two feet. Owing to this fact, tidal fluctuations need not be considered in navigating the Atlantic entrance to the Canal.

At the Pacific entrance the average tidal range is about 13 feet, while a maximum range of 20 feet may occur.

Panama (Balboa) tide predictions are given below:

Tide Predictions.

Panama tide predictions for the next five weeks are given in the following table:

MARCH.				
DATE.	Time and height of high and low water.			
Wed., March 17....	4:53	10:56	17:09	23:16
	15.0	0.5	15.4	0.3
Thurs., Mar. 18....	5:28	11:31	17:40	23:52
	14.8	0.8	15.1	0.5
Fri., March 19....	6:00	12:07	18:12	.....
	14.5	1.3	14.6	.....
Sat., March 20....	0:27	6:32	12:43	18:42
	1.0	13.9	2.0	14.0
Sun., March 21....	1:04	7:05	13:19	19:14
	1.7	13.1	2.8	13.2
Mon., March 22....	1:44	7:41	14:01	19:51
	2.6	12.3	3.7	12.4
Tues., March 23....	2:29	8:24	14:48	20:34
	3.4	11.5	4.5	11.6
Wed., March 24....	3:22	9:19	15:47	21:36
	4.1	10.8	5.1	11.0
Thurs., Mar. 25....	4:26	10:37	16:58	22:59
	4.5	10.6	5.2	10.9
Fri., Mar. 26....	5:35	11:57	18:08	.....
	4.3	11.0	4.7	.....
Sat., Mar. 27....	0:18	6:38	13:01	19:08
	11.3	3.6	11.9	3.8
Sun., Mar. 28....	1:20	7:31	13:51	20:00
	12.2	2.7	13.1	2.4
Mon., Mar. 29....	2:10	8:19	14:34	20:45
	13.3	1.6	14.4	1.1
Tues., Mar. 30....	2:56	9:02	15:14	21:27
	14.5	0.5	15.6	-0.2
Wed., Mar. 31....	3:36	9:45	15:53	22:10
	15.5	-0.3	16.6	-1.2

APRIL.

DATE.	Time and height of high and low water.			
Thurs., April 1....	4:17	10:27	16:33	22:52
	16.2	-0.9	17.2	-1.7
Fri., April 2....	4:59	11:10	17:14	23:37
	16.6	-1.0	17.4	-1.8
Sat., April 3....	5:42	11:54	17:57	.....
	16.5	-0.7	17.0	.....
Sun., April 4....	0:21	6:27	12:39	18:42
	-1.3	15.9	0.0	16.2
Mon., April 5....	1:05	7:14	13:30	19:32
	-0.4	15.0	1.0	15.1
Tues., April 6....	2:02	8:09	14:27	20:29
	0.7	13.9	2.2	13.8
Wed., April 7....	3:02	9:15	15:34	21:41
	1.9	12.8	3.3	12.6
Thurs., April 8....	4:11	10:35	16:49	23:08
	2.8	12.2	3.9	12.0
Fri., April 9....	5:26	12:03	18:07	.....
	3.2	12.2	3.8	.....
Sat., April 10....	0:34	6:36	13:15	19:14
	12.0	3.0	12.8	3.1
Sun., April 11....	1:42	7:37	14:10	20:09
	12.6	2.6	13.5	2.3
Mon., April 12....	2:34	8:27	14:55	20:55
	13.2	2.1	14.1	1.6
Tues., April 13....	3:18	9:11	15:32	21:35
	13.8	1.7	14.5	1.0
Wed., April 14....	3:54	9:50	16:06	22:12
	14.2	1.4	14.8	0.7
Thurs., April 15....	4:28	10:27	16:37	22:47
	14.4	1.3	14.8	0.6
Fri., April 16....	4:58	11:03	17:08	23:23
	14.4	1.4	14.7	0.7
Sat., April 17....	5:33	11:39	17:40	.....
	14.1	1.8	14.3	.....
Sun., April 18....	0:06	6:06	12:15	18:12
	1.1	13.7	2.3	13.8
Mon., April 19....	0:37	6:40	12:53	18:45
	1.6	13.1	2.9	13.2
Tues., April 20....	1:16	7:16	13:35	19:23
	2.3	12.5	3.6	12.6
Wed., April 21....	2:00	7:59	14:22	20:07
	3.0	11.9	4.2	11.9

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York, for all states. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

*Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama, at 11 a. m., connects with the above despatches.

*NOTE—The sailing on Monday, April 5, will not land mail in New York until Tuesday of the following week; hence, despatches on that date will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7:10 a. m., connects with the despatches for this sailing.

Fuel and Supplies.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Cristobal or Balboa from plants of The Panama Canal, or from the private corporations which have tanks at the terminals. The present price for fuel oil supplied by The Panama Canal is \$1.25 per barrel of 42 gallons.

Diesel engine oil is for sale by the Union Oil Company, at 45 shillings per ton of seven barrels. This company also handles fuel oil.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock, with a minimum charge of \$3. Vessels may take up from the fresh water sections of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light, and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required, or the turning of the largest crank shafts or longest line shafts.

Application for supplies, or for services, should be made to the captain of the port, Cristobal or Balboa.

The cable address of The Panama Canal, on the Isthmus, is "Panacan, Panama;" in the United States, "Panacan, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C." for delivery in the United States.

Sailings of Vessels in Regular Service with the Isthmus.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal; and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailing via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails. Arrives.

NEW YORK TO CRISTOBAL-COLON.

Carrillo U. F. C., Mar. 10.... Mar. 17
Colon P. R. R., Mar. 11.... Mar. 17

(Continued on page 278.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m. March 14, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Mar. 8.	Cacique	American	W. R. Grace & Co.	Newport News.	San Francisco	Coal	8,303	6,256	4,638
Mar. 8.	Arizonan	American	American-Hawaiian S.S. Co.	New York	San Francisco	General cargo	11,460	8,989	6,864
Mar. 8.	Copenhagen	British	West Coast Line	New York	Peru & Chile	General cargo	5,933	5,029	3,760
Mar. 9.	Spectator	British	Harrison Line	Liverpool	U. S. & Canada	General cargo	2,900	4,296	2,961
Mar. 9.	William Chatham	American	William Chatham S.S. Co.	Newport News.	San Francisco	Coal	1,936	1,702	823
Mar. 9.	City of Newcastle	British	Hall Line	New York	Vladivostok	General cargo (a)	11,118	8,310	6,276
Mar. 10.	Peter H. Crowell	American	Crowell & Thurlow	New York	San Francisco	General cargo	2,516	3,345	2,360
Mar. 11.	Queen Maud	British	Dunlop S.S. Co.	Middlesborough	Pisagua	Ballast			3,458
Mar. 14.	Allianca	American	Panama Railroad Co.	New York	Balboa	General cargo (b)	1,360	4,120	2,670
Mar. 14.	S. V. Luckenbach	American	Luckenbach S.S. Co.	New York	San Francisco	General cargo	3,100	3,859	2,632

(a) Including 1,240 tons structural steel, 2,920 tons railroad material, 1,840 tons pig iron. (b) Composed of 422 tons from New York to Central America, 438 tons from New York to South America, and 500 tons loaded at Cristobal for south Pacific ports.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Mar. 9.	Luceric	British	Bank Line	Tacoma	London	Wheat & oats	9,600	8,447	6,465
Mar. 9.	Richmond	American	Standard Oil Company	San Francisco	New York	Oil (a)	7,550	6,690	4,149
Mar. 10.	San Joaquin	Norwegian	Union Oil Company	Lapitos, Peru	Vallo, Norway	Fuel oil, benzine	8,290	7,020	5,042
Mar. 10.	Kiev	Russian	Russian Volunteer Fleet	Seattle	New York	Coal	1,000	5,797	3,861
Mar. 11.	Barge No. 95	American	Standard Oil Co.	San Francisco	New York	Distillates (b)	5,300	4,238	3,689
Mar. 11.	Huasco	Chilean	South American S.S. Co.	Talcahuano	Cristobal	General cargo	1,465	4,563	3,121
Mar. 11.	Wray Castle	British	Maple Leaf Line	Seattle	Avonmouth	General produce	6,300	5,482	4,194
Mar. 12.	Santa Cecilia	American	W. R. Grace & Co.	San Francisco	New York	Lumber, general	7,195	6,748	4,476
Mar. 12.	Armonia	Chilean	J. J. Macauliffe	Talcahuano	Genoa	Saltpetre	5,500	5,291	3,802
Mar. 12.	Victoria	British	Pacific Steam Nav. Co.	Valparaiso	Liverpool	General cargo	2,749	6,840	4,520
Mar. 12.	Harry Luckenbach	American	Luckenbach S.S. Co.	San Francisco	New York	General cargo	3,000	3,001	2,047
Mar. 12.	Stanley Dollar	American	Dollar Line	Seattle	New York	Lumber	2,300	1,840	933
Mar. 12.	Virgman	American	American-Hawaiian S.S. Co.	Honolulu	Delaware B'k'w't'r	Sugar, general	11,262	10,100	7,472
Mar. 13.	Nordic	Swedish	Swedish-African Line	Port Augusta	Galveston	Ballast		5,418	4,056
Mar. 13.	Indra	British	Indra Line	Manila	Baltimore	General cargo	11,000	6,844	4,931
Mar. 13.	Minerica	British	Bank Line	Tocopilla	Alexandria	Nitrates	7,500	6,103	4,708
Mar. 14.	Annam	Danish	East Asiatic Co.	San Francisco	Copenhagen	Coffee, barley	8,370	7,063	5,315

(a) 52,916 barrels. (b) 2,224,601 gallons.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From	Date	Vessel	Line	From
Mar. 13.	Lodorer	Lodorer S.S. Co.	Philadelphia.	Mar. 15.	Iowan	American-Hawaiian S.S. Co.	Los Angeles.
Mar. 15.	Oregonian	American-Hawaiian S.S. Co.	New York.	Mar. 15.	Director	Harrison Line	San Francisco.
Mar. 15.	City of Bristol	Ellerman Lines	New York.	Mar. 15.	Teno	South American S.S. Co.	Valparaiso.
Mar. 15.	Oriana	Pacific Steam Nav. Co.	Trinidad.	Mar. 16.	St. Andre	Cie. Navale de L'Oceanie	Tabita.
Mar. 15.	Edgar H. Vance	W. R. Grace & Co.	United States.	Mar. 16.	Pacific	Johnson Line	San Francisco

PORT OF CRISTOBAL.

*ARRIVALS.

*DEPARTURES.

Date	Vessel	Line	From	Date	Vessel	Line	To
Mar. 7.	Oranian	Leyland Line	Liverpool	Mar. 7.	Professor	Harrison Line	Belize.
Mar. 11.	Venezuela	Cie. Gen. Transatlantique	St. Nazaire.	Mar. 9.	Oceland	Earn Line	Nima Nima, Cuba.
Mar. 11.	Chiswick	Earn Line	Norfolk	Mar. 10.	Oranian	Leyland Line	Port Limon.
Mar. 12.	Legaspi	Barcelona Transatlantic Co.	Barcelona	Mar. 14.	Jupiter	Seeborg S.S. Co.	Progreso.
Mar. 13.	Frances Hyde	Robert Walsby	New Orleans.	Mar. 14.	Chiswick	Earn Line	Daiquiri.
Mar. 13.	Seth, Jr.	Robert Walsby	Manzanillo.				
Mar. 14.	Nubian	Leyland Line	Liverpool				

*EXPECTED ARRIVALS.

*EXPECTED DEPARTURES.

Mar. 15.	Beckenham	Earn Line	Norfolk.	Mar. 15.	Legaspi	Barcelona Transatlantic Co.	Barcelona.
Mar. 20.	Chagres	Elders & Fyffes	Port Limon.	Mar. 17.	Venezuela	Cie. Gen. Transatlantique	St. Nazaire.
				Mar. 20.	Chagres	Elders & Fyffes	Bristol.

*Other than vessels passing the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

*DEPARTURES.

Mar. 7.	Capt. A. F. Lucas	Standard Oil Co.	San Francisco.	Mar. 8.	Quilque	Pac. Steam Nav. Co.	Callao.
Mar. 7.	Barge No. 93	Standard Oil Co.	San Francisco.	Mar. 9.	Baja California	Baja California Line	Honolulu.
Mar. 8.	Peru	Pacific Mail S.S. Co.	San Francisco.	Mar. 10.	Capt. A. F. Lucas	Standard Oil Co.	San Francisco.
Mar. 8.	Baja California	Baja California Line	Antofagasta.	Mar. 10.	Borge No. 93	Standard Oil Co.	San Francisco.
Mar. 8.	Tampico	W. R. Grace & Co.	San Francisco.	Mar. 11.	Tompico	W. R. Grace & Co.	Valparaiso.
Mar. 9.	Columbia	W. R. Grace & Co.	San Francisco.				
Mar. 10.	Ecuador	Pacific Steam Nav. Co.	Tumaco.				
Mar. 11.	General Pesqueira	Cia. Naviera del Pacifico	San Francisco.				
Mar. 11.	Huallaga	Peruvian S.S. Co.	Valparaiso.				

*EXPECTED ARRIVALS

*EXPECTED DEPARTURES.

Mar. 17.	Palena	South American S.S. Co.	Valparaiso.	Mar. 15.	Huallaga	Peruvian S.S. Co.	Callao.
Mar. 17.	Pennsylvania	Pacific Mail S.S. Co.	San Francisco.	Mar. 16.	Peru	Pacific Mail S.S. Co.	San Francisco.
Apr. 1.	Challanoga	United States Navy	Corinto.				

*Other than vessels passing through the Canal.

(Continued from page 277.)

Tenadores	U. F. C.	Mar. 13	Mar. 21
Almirante	U. F. C.	Mar. 17	Mar. 24
Advance	P. R. R.	Mar. 18	Mar. 25
Metapan	U. F. C.	Mar. 20	Mar. 29
Santa Marta	U. F. C.	Mar. 24	Mar. 31

CRISTOBAL-COLON TO NEW YORK.

Zacapa	U. F. C.	Mar. 18	Mar. 25
Allianca	P. R. R.	Mar. 20	Mar. 26

Calamares	U. F. C.	Mar. 22	Mar. 29
Carrillo	U. F. C.	Mar. 25	April 1
Colon	P. R. R.	Mar. 27	April 2
Tenadores	U. F. C.	Mar. 29	April 5
Almirante	U. F. C.	April 1	April 8

NEW ORLEANS TO CRISTOBAL-COLON.

Abangarez	U. F. C.	Mar. 10	Mar. 17
Parismina	U. F. C.	Mar. 13	Mar. 18
Atenas	U. F. C.	Mar. 17	Mar. 24

CRISTOBAL-COLON TO NEW ORLEANS.

Heredia	U. F. C.	Mar. 18	Mar. 23
Abangarez	U. F. C.	Mar. 18	Mar. 25
Parismina	U. F. C.	Mar. 25	Mar. 30
Atenas	U. F. C.	Mar. 25	April 1
Cartago	U. F. C.	April 1	April 6
Turrialba	U. F. C.	April 1	April 8



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,
THE CANAL RECORD
Balboa Heights, Canal Zone,
Isthmus of Panama

NOTES OF PROGRESS.

Record in Placing Concrete.

In the construction of the north entrance pier at Balboa, which is connected with the north wall of dry dock No. 1, a gang of men operating a $\frac{1}{2}$ -yard Austin cube mixer, equipped with an elevator and movable chutes, mixed and placed 540 batches of concrete on March 9. In place, the 540 batches measured 275.5 cubic yards and this was placed in seven hours and 15 minutes actual working time. During the eight hours work, there were the following delays: Broken chute, 10 minutes; repairs to mixer, 20 minutes; moving mixer ahead, 15 minutes; total delays, 45 minutes.

The labor cost, including supervision, was \$39.91, which makes a unit labor cost for mixing and placing of \$0.1448 per cubic yard. All the material was wheeled in wheelbarrows from a point about 100 feet from the mixer. The average run per hour, actual working time, was 36.33 cubic yards.

Inquiring for Material for Ataksan Railway.

Inquiry has been received from Lieut. Frederick Mears, on behalf of the Alaska Railway Commission, if the Panama Canal can transfer to the commission a French ladder dredge, tugs and barges or clapets to serve the same, four 201-class locomotives, four locomotive cranes, 60 12-yard dump cars, two steamshovels, and two piledrivers complete. The reply was that the material other than the dredge, tugs, barges, clapets, and locomotive cranes could be supplied, but that none of the former could be spared for several months.

Assortment of Cargo on One Vessel.

As an example of the great variety of goods carried in the westbound United States coastwise trade, it is interesting to note some of the items in the cargo of 4,500 tons carried by the *Peter H. Crowell* through the Canal March 10, on the way from New York to Los Angeles and San Francisco. Among the items listed by the master on the partial cargo declaration form supplied by The Panama Canal were: Battery cells, caustic soda, olives, chemicals, earthenware, glassware, lard, liquors, struc-

tural steel, machinery, refined petroleum, vegetable oils, paint, paper and paperware, pianos, rubber goods, salt, soap, stamped ware, textiles, tobacco, wooden ware, marble, starch, and thread; and the declaration was finished with "Balance, 1,189 tons, small lots of various articles."

Exposition Tours of United Fruit Company.

In connection with the sale of tickets by rail and steamer lines through New York and New Orleans to San Francisco or San Diego on account of the Panama-Pacific International Exposition, the United Fruit Company is selling reduced rate tickets for a variety of tours and side trips to Panama and through the Spanish Main. The tours start from New York and end at New Orleans and range in price from \$54 to \$134.70, according to extent and duration. The company's prospectus remarks, "a trip through the Panama Canal acts as a fitting prelude to the expositions; perhaps in no other way can the purpose and meaning of these commemorative expositions be so well understood."

Italian Exhibits for San Francisco.

Nine hundred tons of material for the exhibit of the Italian Government at the Panama-Pacific International Exposition were taken through the Canal in the steamship *Vega*, entering March 19.

A Shipment from the Far East.

The steamship *Indra*, passing through the Canal on March 13, was the fifth vessel to make the Canal transit in direct routing from the Far East to the Atlantic coast of the United States. Most of the 16 vessels which have made the outward voyage over this route have subsequently taken various tramp assignments; some have returned through the Canal with grain from the west coast of north America for Europe. The cargo of the *Indra*, loaded at Shanghai, Hongkong, Kobe, Yokohama, and Manila, for discharge at New York, includes beans, rice, copra, manufactured goods, copper and tin ingots, vegetable and cotton seed oils, manganese, skins and hides, tea, cotton, hemp, silk waste, wool, curios, mattings and rattans, bamboo, vegetable tallow, and antimony.

Miraflores Purification Plant in Service.

The new filtration plant at Miraflores, the largest and most complete purification plant, in Central America, was placed in service on Sunday, March 14. All water supplied to the Canal villages south of Paraiso, and the city of Panama, is now purified at this plant, after being pumped from the Chagres River at Gamboa.

The water passes first through a process of aeration, followed by coagulation, sedimentation, and filtration, after which it is treated with an injection of hypochlorite of lime for sterilization.

NEW RULE FOR TOLL CHARGES.

Amount Collectible Limited on Basis of Net United States Registry.

1. In accordance with a recent decision of the Attorney General of the United States, no Panama Canal tolls may be demanded or collected which aggregate more than \$1.25 per ton or be less than 75 cents per ton, upon the net registered tonnage as measured under the statutes of the United States, upon any vessel of commerce or other vessel such as Army and Navy transports, colliers, hospital ships, and supply ships, which may be classified for the payment of tolls upon the same basis of measurement as commercial vessels.

2. The tolls, however, for the abovementioned vessels, when carrying cargo or passengers, shall still be reckoned upon their net tonnage as obtained by the Panama Canal rules of measurement, including deck loads, at \$1.20 per net ton; provided, that if the sum obtained by multiplying the net tonnage thus obtained by the Canal rules of measurement by \$1.20 exceeds the sum obtained by multiplying the net registered tonnage, as obtained by the United States statutes, by \$1.25, the excess is uncollectible.

3. In accordance with the same decision, vessels included under paragraph 1 can not be charged less than 75 cents per net registered ton as obtained by the United States statutes; hence, when they are in ballast and do not carry cargo or passengers, the tolls shall be reckoned upon their net tonnage as obtained by the Panama Canal rules of measurement, at 72 cents per net ton; provided, that if the sum obtained by multiplying the Panama Canal net tonnage by 72 cents, be less than that obtained by multiplying their United States registered net tonnage, or its equivalent, by 75 cents, the larger sum shall be collected.

4. Referring to the Proclamation of the President dated November 13, 1912, fixing Panama Canal rates, to the decision of the Attorney General in reference thereto, and subject to the conditions set forth in the foregoing paragraphs, Nos. 1, 2, and 3, the rates of toll for vessels using the Panama Canal will be as follows:

Rule 1—On merchant vessels carrying passengers or cargo, \$1.20 per net vessel ton—each 100 cubic feet—of actual earning capacity.

Rule 2—On vessels in ballast without passengers or cargo, 72 cents per net vessel ton—each 100 cubic feet—of actual earning capacity.

Rule 3—Upon naval vessels, other than transports, colliers, hospital ships, and supply ships, 50 cents per displacement ton.

Rule 4—Upon Army and Navy transports, colliers, hospital ships, and supply ships, \$1.20 per net ton, the vessel to be measured by the same rules as are employed in determining the net tonnage of

merchant vessels, under the Panama Canal rules of measurement.

5. From the foregoing it will be seen that before the proper tolls can be levied, it will be necessary for the admessurers at the Canal to know both (a) the *net registered tonnage*, or the equivalent thereof, of every vessel using it, domestic and foreign, in accordance with the *United States statutes* for estimating net registered tonnage, and (b) the *Panama Canal net tonnage*, as shown on her Panama Canal certificate of measurement. The official papers carried by a United States commercial vessel, in the form of her register or enrollment, will give (a) her net registered tonnage, and in her case no further steps will be necessary; but every foreign vessel, and every domestic vessel such as transports, colliers, supply and hospital ships, should obtain (a) a certificate from any official who may be authorized to issue it, specifying her net tonnage in accordance with the United States statutes; otherwise, she will of necessity be delayed in Canal waters pending remeasurement for this purpose.

6. Steps have been taken to authorize the measurers, both in the United States and abroad, now authorized to issue Panama Canal certificates, to further issue (a) certificates of net registered tonnage in accordance with United States statutes, and an application should be made at once by every such vessel holding a Panama Canal certificate to the measurer who issued her original certificate for the additional one required. In event the original measurer has not sufficient data at hand to enable him to issue the required certificate, advantage should be taken of the first opportunity to have the ship remeasured by anyone authorized to do so and a new certificate obtained. It follows, however, that the original measurer for her Panama Canal certificate can, from the data then obtained, since much of it is common to both, issue her second certificate with less trouble and delay than anyone else.

7. In future, when vessels are measured for Panama Canal certificates, either in the United States or abroad, the measurers should be requested to enter and certify on such certificates the (a) net registered tonnage in accordance with the United States statutes, in addition to the data already required for Panama Canal measurements.

8. The general effect of this change will probably be toward a small reduction in tolls in the majority of cases; in no case will the tolls be increased, but until the new measurement required (a) has been officially obtained, full deposits on the old basis (b) should be continued, and in the same manner as formerly.

9. No other change is made in the collection of tolls, and all previous regulations in relation thereto will remain the same.

10. All claims for differences arising under the Attorney General's decision should be addressed to The Governor, The Panama Canal, Balboa Heights, Canal Zone.

GEO. W. GOETHALS,

Governor.

BALBOA HEIGHTS, C. Z., March 15, 1915.

Launch Connections for Taboga.

The dredge landing at Balboa docks used by the launch for Taboga has been reopened, and in the future guests for the Hotel Aspinwall can take either the labor train or the street cars direct to the docks.

CANAL TRAFFIC IN FEBRUARY.

Actual Tonnage Less than in Preceding Months, but Proportion is Same.

Ninety-one seagoing vessels passed through the Canal during the month of February, carrying a total of 424,606 tons of cargo.

This was less cargo than had passed through the Canal during any month since October, 1914, but the daily proportion of cargo for the 28-day month of February was practically the same as the daily average transit during the months of November, December, and January. In February, the daily average was 15,164½ tons.

Four vessels passed through in ballast. For the others, the average cargo was slightly over 4,880 tons. The distribution of the vessels over the principal routes was as follows:

Route.	No. Vessels.	Cargo tonnage.
Coastwise, eastbound.....	19	92,281
Coastwise, westbound.....	13	64,498
U. S. Pacific coast to Europe.....	14	92,658
Europe to U. S. Pacific coast.....	3	8,720
South America to U. S. and Europe.....	17	80,634
U. S. and Europe to South America.....	3	8,535
U. S. Atlantic coast to Far East.....	11	67,560
Far East to U. S. Atlantic coast.....	1	7,000
Central American, eastbound.....	2	2,046
Central American, westbound.....	3	674
Vessels without cargo.....	4	.....
Total.....	92	424,606

The total cargo carried through the Canal to March 1, 1915, was 2,610,962 tons. Its distribution over the principal routes was:

Route.	No. Vessels.	Cargo tonnage.
Coastwise, eastbound.....	108	552,609
Coastwise, westbound.....	115	520,328
U. S. Pacific coast to Europe.....	76	511,840
Europe to U. S. Pacific coast.....	17	60,946
South America to U. S. and Europe.....	77	424,271
U. S. and Europe to South America.....	30	131,578
U. S. Atlantic coast to Far East.....	54	324,598
Far East to U. S. Atlantic coast.....	3	21,500
Central American, eastbound.....	2	2,046
Central American, westbound.....	3	674
Miscellaneous routings.....	13	60,572
Vessels without cargo.....	46	.....
Total.....	546	2,610,962

The total traffic in the American coastwise trade, through the Canal, has been 1,072,937 tons of cargo, which is slightly over 41 per cent of all the traffic through the Canal. The exchanges between the northern Pacific coast and Europe, totalling 572,786 tons, have been slightly less than 22 per cent of all traffic. Cargo to and from the west coast of South America has amounted to 555,849 tons, over half as much as the total United States coastwise trade, and over 21 per cent of the grand total. The total trade between the Atlantic coast of the United States and the Far East,

including Japan, China, Siberia, the Philippines, and Australia and New Zealand, has been 346,098 tons, over 13 per cent of all the traffic. The foregoing principal routes have been used for approximately 97 per cent of all the commercial traffic.

Of the four vessels passing through the Canal in ballast, all were bound from the Atlantic to the Pacific. Of the 92 vessels making the transit, 39 were bound from the Atlantic to the Pacific or westbound, and 53 from the Pacific, to the Atlantic, or eastbound. The division between eastbound and westbound vessels for the time of the commercial operation of the Canal has been 284 eastbound and 261 westbound vessels. Their distribution, with cargo, by months, is given below:

M'th.	Eastbound.		Westbound.		Total.	
	Ves-sels.	Cargo.	Ves-sels.	Cargo.	Ves-sels.	Cargo.
Aug....	12	57,182	12	49,106	24	106,288
Sept....	30	186,776	27	135,262	57	322,038
Oct....	40	252,288	44	168,069	84	420,357
Nov....	38	242,291	54	206,510	92	448,801
Dec....	57	261,680	42	178,235	99	349,915
Jan....	54	240,875	44	208,082	98	448,957
Feb....	53	274,619	39	149,987	92	424,606
Total.....	284	1,515,711	262	1,095,251	546	2,610,962

The tolls levied during the month of February amounted to \$403,219.16, bringing the total amount of tolls levied on barges and vessels passing through the Canal to \$2,365,358.73. This has been distributed as follows:

Period.	Amount.
Prior to August 15, 1914.....	11,610.69
August 15 to August 31.....	84,401.80
September 1 to September 30.....	269,863.00
October 1 to October 31.....	378,089.12
November 1 to November 30.....	387,242.40
December 1 to December 31.....	411,895.44
January 1 to January 31, 1915.....	419,037.12
February 1 to February 28.....	403,219.16
Total.....	2,365,358.73

Twelve vessels, other than those which passed through the Canal, entered the port of Balboa during February; those entering the port of Cristobal without passing through the Canal numbered 51.

Rent Payments Not to Be Sent Under Official Frank.

To all concerned—The Collector has received a number of remittances in payment of rent, light, and fuel bills enclosed in official business envelopes. This is not official business as defined by the Postal Laws and Regulations and postage must be paid on all such letters.

JOHN K. BAXTER,

Director of Posts.

BALBOA HEIGHTS, C. Z., March 19, 1915.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Christian, Abel.....	31239	Antigua.....	Panama.....	O. and M.....	Mar. 13, 1915.
Dawkins, William.....	57857	Jamaica.....	Corozal.....	Fortifications.....	Mar. 15, 1915.
Mowbray, Daniel.....	95812	Jamaica.....	Colon.....	Tr'nspn., P. R. R.....	Mar. 12, 1915.
Parris, David.....	29386	Barbados.....	Paraíso.....	Mechanical.....	Mar. 16, 1915.
Phillips, Charles.....	80376	Barbados.....	La Boca.....	Balboa agency.....	Mar. 13, 1915.
Williams, Aldin.....	15459	Fortune Island.....	Colon.....	P. R. R. docks.....	Mar. 17, 1915.

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published

JOHN K. BAXTER,

Administrator of Estates.

CANAL WORK IN FEBRUARY.

Monthly Report of the Governor to the Secretary of War.

BALBOA HEIGHTS, C. Z., March 20, 1915.

The Honorable the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of operations on the Isthmus for the month of February, 1915:

Department of Operation and Maintenance.

Lock operation and maintenance.—The status of the fender chain work remained unchanged during February. The installation of the telephone system at Miraflores Locks was completed during the month, which completed the installation of the telephone systems at all locks. The work of grading dams and back fill at Miraflores and Pedro Miguel progressed satisfactorily.

The following lockages were made during the month:

Gatun, 93 lockages, 102 vessels; Pedro Miguel, 91 lockages, 106 vessels; Miraflores, 92 lockages, 107 vessels.

ELECTRICAL DIVISION.

The output of the power plants was: Gatun hydroelectric station, 2,785,830 kilowatt-hours; Miraflores steam station, 85,050 kilowatt-hours; Balboa power plant, 2,256 kilowatt-hours; total output, 2,873,136 kilowatt-hours.

The output of the Balboa air compressor plant was 129,438,628 cubic feet of free air, compressed to 105 pounds.

The electrical work at the substation at Gamboa for the new permanent pumping plant of the Municipal Engineering Division was completed and the substation was put in service during the month. Construction work on the substation at Darien for the high power naval radio station progressed satisfactorily during the month. Construction work was carried on in connection with the installation of underground conduit systems in the Ancon, Balboa, and Cristobal districts; the electrification of the dry dock shops at Mount Hope; the construction of barracks, quarters, headquarters buildings, etc., at Fort Grant; the construction of various buildings at Balboa, and the new freight house in Panama City. The painting of the track-span bridges of the 44,000-volt transmission line was practically completed during the month.

MUNICIPAL ENGINEERING DIVISION.

In addition to the work incident to maintenance, operation, and repairs, work was in progress on the following items of construction: Atlantic and Pacific fuel oil handling plants; improvements around Ancon commissary and construction of drains in Ancon; grading around quarters at Coast Artillery post, Balboa dump, and installation of water and sewer system and street pavement for the post; connections to water mains at Naos Island; re-surfacing and oiling of roads for the Canal Zone Government and Health Department; road construction and other improvements in the townsite of Balboa; construction of a concrete reservoir for water supply at Gatun; construction work on lock office buildings at Miraflores and Pedro Miguel; purification plant at Miraflores, and other parts of the new Panama waterworks. Pumping stations Nos. 1 and 3, at Gamboa and Balboa, respectively, were placed in operation on February 22, 1915. Water for the settlements at the southern end of the Panama Canal

and for Panama City is now furnished from the Chagres River at Gamboa.

METEOROLOGY AND HYDROGRAPHY.

The rainfall was above normal at all points except at Miraflores. On the Pacific coast the rainfall was triple the average amount, and on the Atlantic coast it was seven times the average amount. The monthly totals ranged from 14.32 inches at Brazos Brook to 1.17 inches at Miraflores. The maximum precipitation recorded in any one day was 7.12 inches at Colon on February 10, 1915. The estimated rainfall over the Chagres River basin figures 29 per cent above the average, or 6.05 inches against a 14-year average of 2.08 inches. The discharge at Alhajuela was 67 per cent above the 26-year February normal.

The elevation of Gatun Lake varied from 87.20 feet on the 10th, to 86.88 feet on the 11th and 27th, averaging 86.98 feet.

Division of Terminal Construction.

PACIFIC TERMINALS.

Shops.—The steel work for the crane extension at the north end of the machine shop aisle in building No. 1 was erected complete and riveted during the month. The riveting for the steelwork for the exhaust system collector in building No. 14 was completed.

Dry dock.—Hand excavation in connection with the work of preparing foundation was continued and amounted to 5,790 cubic yards. The material, consisting of rock, is used largely in the walls. Fourteen thousand three hundred and thirty-five cubic yards of concrete were placed. Of this amount 4,809 cubic yards were classed as reinforced concrete. One hundred twenty-three thousand six hundred and forty pounds of reinforcing steel and 18,118 pounds of fixed steel were placed. All steel for the dry dock crane has arrived on the Isthmus.

Coaling plant.—The floor in the west area was brought to grade. The steel work for the berm crane runways was erected, but was not riveted up at the close of the month. Work was begun on the floor of the unloader wharf and steelwork was erected between stations 5 and 10. Fifty-two lineal feet of trestle for the reloader wharf was built.

Quay wall and pier.—Steel for the two gangways for quay wall ij-mn, arrived on the Isthmus. The steel decking for section e-f was completed and two bays of d-e were erected and riveted. The amount of steel placed in quay wall was 238,530 pounds.

Fuel oil plant.—An 8-inch oil line connection between oil crib No. 1 and the oil handling plant, for Diesel engine oil, was installed. Work was begun on the forms for the bracing under the future floor of crib No. 1, and the remaining concrete to be placed in the caissons was put in; 181 cubic yards of concrete were placed as filler for the caissons and 73 cubic yards were placed in the braces.

Sosa Hill Quarry.—Rock excavation amounted to 38,834 cubic yards. Owing to the partial collapse of the east breakwater in the storm, rock filling there was discontinued on the 9th and the operations at the quarry reduced to that extent. The rock excavated was used for the Cristobal mole and for the Naos Island dock approach.

ATLANTIC TERMINALS.

East breakwater.—A heavy sea made up shortly after midnight on Monday night, February 8, 1915, increasing rapidly, and at 2.45 a. m. bents 596, 597, and 598 lost the caps, stringers, and decking, throwing the

lighthouse into the sea, and taking out all of the piles on the harbor side of bent 568. At 1.50 p. m. a train of 21 cars, with unloader, gradually went down with the trestle, and at about 4.35 a further section of the trestle went down, carrying with it two piledrivers. All of the wreckage will be salvaged.

Coaling plant.—All piledriving is now complete, except that for fender system. The sealing with concrete of the caissons under the north section of unloader wharf was begun. One thousand two hundred and thirty-one cubic yards of coral were excavated on west side of coal pocket. The driving of caissons is about 80 per cent completed and excavation about 65 per cent completed for north section of unloader wharf.

Floating cranes.—The work of repairing the crane *Ajax* is being held up, pending the receipt of material. No further tests were made of the crane *Hercules*. On February 18, 1915, the use of this crane was placed at the disposal of The Panama Canal in connection with certain repair work to the dredges in Culebra Cut. At the close of the month the crane was still in the service of The Panama Canal.

Marine Division.

Effective February 20, 1915, the name of the Division of Canal Transportation was changed to Marine Division and the title of Superintendent to Marine Superintendent.

Ninety-six vessels passed through the Canal in February, 53 northbound and 43 (including four launches) southbound. Collections for tolls amounted to \$403,219.16 and for pilotage to \$2,754.

Fourteen vessels were measured and 81 were inspected to see whether their certificates conform to the rules.

Dredging Division.

The total excavation for the month, including earth, rock, gravel, and sand, was 1,142,448 cubic yards, as follows:

	Cu. Yds.
Miraflores Locks to the sea.....	7,003
Balboa inner harbor.....	200,816
Culebra Cut.....	589,153
Gatun Locks to the sea.....	238,264
Approach channel.....	21,331
Shelter cove at Toro Point.....	37,349
Breakwater, Limon Bay.....	7,207
Chagres River gravel and sand.....	38,000
For Municipal Division at Balboa.....	3,325
Total.....	1,142,448

The hydraulic grader was engaged during the month in furnishing steam and water to the power drills and in washing down loose material on the north toe of Gold Hill. Work was started on the system of ditches for draining the Obispo Diversion into the Canal. The work of exterminating water hyacinths continued during the month.

Mechanical Division.

The increasing volume of work in this division necessitated the addition to the force of two clerks, one machinist, and six shipwrights, who were requisitioned from the United States.

Shop orders authorized during the month numbered 727, those left over from the previous month being 537, those completed during the month numbering 810, and those carried forward into March numbered 454. The output of the foundry was 114,640 pounds of iron, 57,495 pounds of steel, and 17,502 pounds of brass. Hostling was done on 4,792 pieces of equipment, and shop and field repairs were made on 6,720 cars.

The oil handling plant at Balboa was in operation during the month and handled

99,139.63 barrels of oil. The oil plant at Mount Hope was turned over on February 25, and was used in making delivery of oil from storage tanks of the Union Oil Company to the oil tanks of the Government on that date.

Building Division.

The following buildings were completed during the month: The medical storehouse at Ancon; the dairy buildings at Corozal; the motor bus-house at Balboa Heights; the conversion of three of the insane asylum buildings at Ancon into family quarters, and at Fort Amador two 4-family houses for officers were completed and turned over to the military authorities. Work on the remaining officers' quarters and army barracks progressed satisfactorily. The commissary building at Balboa is practically completed, with the exception of painting and the installation of shelving, counters, etc.

Supply Department.

The force report for the half month ending Wednesday, February 24, showed a total of 23,089 employees of The Panama Canal and Panama Railroad Company, of whom 3,465 were white Americans and 19,624 were laborers. Of the latter, approximately 259 were Europeans and the remainder West Indian negroes. The total force was reduced 1,408; Americans 219, laborers 1,189.

The occupants of Government quarters numbered 6,960 white Americans, of whom 3,730 were men, 1,581 women, and 1,649 children; 8,653 West Indians, of whom 5,601 were men, 1,302 women, and 1,750 children.

The value of material received during the month was \$433,802.52. It came forward in 26 steamers; the total weight of the cargo, exclusive of lumber and piles, was 14,867 tons. Some of the principal items were: 144,191 feet B. M. of lumber for stock, 223 piles, and 197,819 bags of Portland cement, etc.

Health Department.

General.—One case of smallpox occurred on the steamship *Panama* which arrived at Cristobal on February 3. The patient was taken sick on the 7th and removed from the ship on the 10th. The disease was contracted prior to his arrival on the Isthmus. No other cases have occurred. With this exception, no cases of yellow fever, smallpox, or plague have originated on or were brought to the Isthmus during the month. The death rate for disease for the Canal Zone, based upon a population of 31,948, was 5.63 per thousand, as compared with 13.72 for the preceding month and 13.86 for the corresponding month of last year.

Employees.—The health of employees continued good. The number of names on the pay rolls for the preceding month was 34,266. On this basis the admissions to hospitals and quarters, 840, gave a rate of 294.17 per thousand, as compared with 332.87 for the preceding month and 437.70 for the corresponding month of last year. The admission rates to hospitals for all diseases were: Whites, 329.22; blacks, 109.73, Europeans, 819.11, Americans, 258.22. The admission rates for malaria to hospitals and quarters, were: Whites, 137.39; blacks, 34.01; Europeans, 368.60; Americans, 103.88. The total number of deaths from all causes was 19. Of these, nine died from disease, or 3.15 per thousand, as compared with 4.38 for the preceding month, and 5.34 for the corresponding month of last year. Of the deaths from disease, one was an American and the other eight were blacks.

Accounting Department.

The cash balance in Canal construction appropriations on February 28, 1915, was \$10,756,154.34, and in the fortification appropriations, \$3,624,558.04. The payrolls for February, exclusive of Army quarters, storehouses, fortifications, etc., amounted to \$881,497.92, and the fortification roll amounted to \$43,334.37. Payments by the Disbursing Clerk in Washington amounted to \$984,295.81; by the Paymaster on the Isthmus, \$1,385,473.60. Collections on the Isthmus amounted to \$1,226,319.70, of which \$532,590.19 were repaid to appropriations, \$283,481.29 were commissary collections and other trust funds, and \$410,248.22 were covered into the Treasury as miscellaneous receipts. Of the miscellaneous receipts, \$403,219.16 were collected on account of tolls, as compared with \$376,810.88 for January. Deposits in the amount of \$237,821.30 were made with the Assistant Treasurer, to be applied in payment of tolls and other charges against vessels using the Canal. Canal Zone revenue collections and miscellaneous funds received, amounted to \$198,978.40, and the disbursements under the same heading amounted to \$482,063.13.

Executive Department.

DIVISION OF CIVIL AFFAIRS.

One hundred and forty-two licenses of all kinds were issued during the month. Twenty-four estates were settled, having a total value of \$734.44. At the port of Balboa, 77 vessels entered and 77 cleared; and at Cristobal, 119 vessels entered and 125 cleared.

Postal service.—Postmasters remitted on account of stamp sales, second-class mail collections, postage due collections, and box rent receipts, \$5,640.96. The money orders issued aggregated \$316,797. The fees collected thereon amounted to \$1,023.37. Of the total value of money orders issued, \$112,275 represents the value of deposit orders issued without fee. Deposit orders to the value of \$82,585 and postal savings certificates to the value of \$41,556 were paid. Balance of postal savings deposits on hand at the end of the month, represented by the unpaid certificates and deposit money orders, aggregated \$696,601, as compared with \$708,467 at the close of the previous month.

POLICE AND FIRE DIVISION.

Three hundred and thirty-one arrests were made during the month. Of these, 309 were males and 22 females. Fifty-seven convicts were confined in the penitentiary at the close of the month. Five persons were deported, all of whom were convicts who had completed their sentences in the penitentiary.

Twelve fires occurred during the month. The damage to Panama Canal and Panama railroad property amounted to \$25.

COURTS.

In the District Court, 10 civil, 27 probate, and 15 criminal cases were settled; 11 civil, 22 probate, and 20 criminal cases were filed, and 100 cases of all kinds were pending at the close of the month. In the magistrates' courts, 35 civil and 313 criminal cases were tried.

DIVISION OF SCHOOLS.

The total enrollment in the Canal Zone schools for the month was 1,552 for the white schools, and 1,382 for the colored schools. In the white schools the net enrollment was 1,101, the average number belonging, 1,033.9, and the average daily attendance, 990.1; in the colored schools the net enrollment was

1,304, the average number belonging, 879.1, and the average daily attendance, 718.1.

Panama Railroad.

Cargo handled at the Colon and Balboa agencies aggregated 116,892 tons, of which 17,883 tons were handled through the Canal in steamers of the Panama Railroad Steamship Line, as follows: from New York to Balboa 2,848 tons; from Colon to Balboa, 1,929 tons; total, 4,777 tons. From Balboa to New York, 10,777; from Balboa to Colon, 2,329; total 13,106 tons. Grand total, 17,883 tons.

Trestle work on the new terminal dock at Cristobal was completed; steel cylinders 57 per cent completed, excavation in cylinders, 35 per cent completed, and 23 per cent of the total amount of concrete required was placed in cylinders. Eighteen caissons were completed during the month, making a total to date of 51, or 24 per cent of the number required. The dredging work at pier No. 10 was completed and the driving of fender piles and fitting up of string pieces was started.

Respectfully,

GEO. W. GOETHALS,

Governor.

EXECUTIVE ORDER

Relative to the Production, Importation, Compounding, Dealing in, Dispensing, Selling, Distributing, or Giving away Opium or Coca Leaves, their Salts, Derivatives, or Preparations in the Canal Zone, under the Act of Congress approved December 17, 1914.

WHEREAS, the Act of Congress, approved December 17, 1914 (Public No. 223), is made specifically applicable in the Canal Zone, but further provides that

"The President is authorized and directed to issue such executive orders as will carry into effect in the Canal Zone the intent and purpose of this Act by providing for the registration and imposition of a special tax upon all persons in the Canal Zone who produce, import, compound, deal in, dispense, sell, distribute, or give away opium or coca leaves, their salts, derivatives, or preparations;" and

WHEREAS, the Auditor of The Panama Canal and the Collector of The Panama Canal perform in the Canal Zone corresponding duties in connection with the revenues of the Canal Zone as are performed in the United States by the Commissioner of Internal Revenue and the collectors of internal revenue, respectively;

NOW, THEREFORE, by virtue of the authority conferred upon me by the above quoted provisions of the said Act of Congress, it is hereby ordered:

SECTION 1. That in enforcing the provisions of the Act of Congress approved December 17, 1914, entitled, "An Act to provide for the registration of, with collectors of internal revenue, and to impose a special tax upon all persons who produce, import, manufacture, compound, deal in, dispense, sell, distribute, or give away opium or coca leaves, their salts, derivatives, or preparations, and for other purposes," the Auditor of The Panama Canal shall perform in the Canal Zone administrative duties like unto those the Commissioner of Internal Revenue is required to perform outside of the Canal Zone, and the Collector of The Panama Canal shall perform duties in the Canal Zone like unto those the collectors of internal revenue are required to perform in districts outside of the Canal Zone.

SEC. 2. That on and after the first day of March, 1915, no person shall produce, import, manufacture, compound, deal in, dispense, sell, distribute, or give away in the Canal Zone opium or coca leaves, their salts, derivatives, or preparations, unless he shall have complied with the provisions of the Act of Congress approved December 17, 1914, in the manner provided for in this Executive Order.

SEC. 3. That every person who by the terms of said Act would be required, if located outside of Porto Rico, the Philippine Islands, or the Canal Zone, to register with the collector of internal revenue of his district, his name or style, place of business and place or places where such business is to be carried on, shall register the like information with the Collector of The Panama Canal on forms to be prescribed by the Auditor of The Panama Canal. At the time of such registry and on or before the first day of July annually thereafter, every person who produces, imports, manufactures, compounds, deals in, dispenses, sells, distributes, or gives away any of the aforesaid drugs shall pay to the Collector of The Panama Canal a special tax at the rate of one dollar per annum, *Provided*, However, that any person who would not be required, if located outside of the Canal Zone, to register or pay a special tax shall not be required to register or pay the special tax as herein provided.

SEC. 4. That the Auditor of The Panama Canal, with the approval of the Governor of The Panama Canal, shall cause suitable order forms and blanks to be prepared and placed in the hands of the Collector of The Panama Canal for sale by such Collector to persons who shall have registered and paid the special tax as required by said Act and this Executive Order. The price to be paid for such order forms and blanks shall be one dollar per hundred, and the Collector of The Panama Canal shall be subject to the same limitation as to sales of said order forms and blanks as collectors of internal revenue in districts outside of the Canal Zone. The Collector shall account monthly to the Auditor of The Panama Canal for the special taxes collected by him and for all monies received by him from the sale of blanks, or for any other purpose under the provisions of said Act. The Auditor of The Panama Canal, with the approval of the Governor of The Panama Canal, shall provide such regulations as may be necessary to carry into full force and effect the provisions of this Executive Order. In providing such regulations the form of regulations prescribed by the Internal Revenue Commissioner and approved by the Secretary of the Treasury shall be followed so far as they can be made applicable to conditions in the Canal Zone.

SEC. 5. That the Auditor of The Panama Canal, with the approval of the Governor of The Panama Canal, shall have the right to make such inspection and take such action as may be necessary to enforce the provisions of the Act of December 17, 1914, under this Executive Order.

SEC. 6. That any person who violates or fails to comply with any of the requirements of said Act in the manner provided for in this Executive Order, in the Canal Zone, shall be subject to such penalties as are provided for in said Act. **WOODROW WILSON.**

THE WHITE HOUSE, March 1, 1915.

[No. 2142.]

OFFICIAL CIRCULARS.

Use of Bad Order Lidgerwood Cars.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 16, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

My attention has been invited to the fact that Lidgerwood cars which have been surveyed and ordered scrapped, or held in reserve, have not been immediately retired from service. I consider such practice dangerous and especially so on main line work, as these cars have been retired from service for the reason that they are unfit for service in their present condition, being in need of excessive repair which conditions do not warrant being made. Under no circumstances, therefore, should these cars be used for any purpose, either yard or main line work, and the practice of storing on them retired machinery or parts, bad order dump cars, etc., will also be discontinued, for the reason that good order cars are available. Should circumstances at any time warrant the use of cars requiring heavy repairs, the Panama railroad will arrange with the Mechanical Division to have same put in a safe operating condition, but they must not be returned to service without proper inspection and approval for service by the Mechanical Division.

GEORGE W. GOETHALS,
Governor, The Panama Canal,
President, Panama Railroad Company.

Quarters for Gold Employees.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 19, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Referring to paragraph 9 of Circular No. 627-5, "Quarters for Gold Employees":

While the effective date of the above circular is April 15, 1915, quarters now vacant or which may become vacant between this date and April 15 through the absence of the employee or his family, or both, will, upon written application from the employee, and with the approval of this office, be held for a period of 90 days, provided such quarters have not been previously vacated during the current service year.

GEORGE W. GOETHALS,
Governor.

Pay Car Schedule.

THE PANAMA CANAL,
OFFICE OF PAYMASTER,
BALBOA HEIGHTS, C. Z., March 16, 1915.

The following approximate schedule for pay cars for all Panama Canal and Panama railroad employees will be followed, beginning with the April payment:

From Colon—

- 7th—Commissary silver employees, 1 p. m.
- 9th—Forenoon—Margarita, Coco Solo, scrap yards, Afternoon—Mount Hope depot, dry dock shops, and coaling station.
- 10th—Forenoon—Colon docks and coal hoist, Afternoon—Cristobal docks.
- 12th—Forenoon—Engineering and maintenance of way and duct line gangs in Colon and Mount Hope yards and main line to Gatun.

From Balboa Heights—

- 8th—Afternoon—Balboa docks and Panama yards, for Panama railroad employees.
- 10th—Forenoon—Leave 6.30; Naos Island, 7 to 7.30; Fort Amador to LaBoca road, 7.30 to 8.20; LaBoca road, 8.20 to 9.15; Balboa flats (old commissary), 9.15 to 9.25; east side dry dock, 9.30 to 10; Balboa material yard, 10.05 to 10.20; cement shed, 10.25 to 10.45; Ancon, back of Tivoli, 11 to 12. Afternoon—Balboa shops, 1 to 2.30; Corozal, 2.50 to 3.20; Miraflores Locks, south end, field office, and north end, 3.30 to 4.30; arrive Balboa Heights, 5.
- 11th—Forenoon—Leave 6.30; Pedro Miguel, 7 to 7.50, Las Cascadas to pontoon bridge, 8.10 to 8.50; Paraiso shops, 8.50 to 9.25; main line gangs, Pedro Miguel to Gamboa, 9.30 to 10.10; Darien, 10.25 to 10.35. Afternoon—Gatun, 11.10 a. m. to 12.30 p. m.; main line gangs to Darien, 1 to 2; Miraflores hill, 3 to 3.30; Miraflores substation, 4 to 4.20; arrive Balboa Heights, 5.

Silver employees will not be paid at either pay office between the first and twelfth of each month, except those having time vouchers on termination of service and except those employed inside the Administration Building. It is desired that all silver employees with regular pay tickets be paid only from the pay cars between the fifth and twelfth. Any employee who misses the pay car will be paid at either office after the twelfth.

All foremen, field clerks, and timekeepers are requested to advise silver employees of this notice and tell them to wait for the pay car as they will not be paid at the offices during this period.

All outside payments not scheduled above will be made on such dates as best suit all concerned, which dates are agreed upon as soon as possible each month.

R. W. GLAW,
Paymaster.

Approved:

GEORGE W. GOETHALS,
Governor.

Purchasing Reduced Rate Tickets for Trip through Canal.

THE PANAMA CANAL,
OFFICE OF EXECUTIVE SECRETARY,
BALBOA HEIGHTS, C. Z., March 17, 1915.

To all concerned—Effective April 1, 1915, it will be necessary for employees to present form PC-495, properly signed and validated, in order to purchase a reduced rate ticket for a trip through the Canal. No reduced rate tickets will thereafter be sold to employees who merely show their brass checks.

C. A. MCLIVANNE,
Executive Secretary.

Proposals for Taking Down Steel Tower Tank at Gatun.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., April 1, 1915, and then opened, for taking down the 400,000-gallon steel tower tank at Gatun, and completely dismantling the tower, tank, and all pipe connections above the ground, and delivering all parts on an area immediately in front of the Gatun railroad station.

Specifications, form of contract, and proposal may be obtained upon written application to the Chief Quartermaster, Balboa Heights. General drawings of the tank may be examined at the office of the Resident Engineer, Division of Municipal Engineering, Balboa Heights, and further information at the site of the tank may be obtained upon application to Mr. E. H. Chandler, office at Cristobal, phone 57 Colon.

Bids must be accompanied by cash, certified check, or bond for 15 per cent of the amount bid.

The Panama Canal reserves the right to reject any or all bids.

Proposals should be marked "Proposal for taking down steel tower tank at Gatun" and addressed to the Chief Quartermaster, Balboa Heights, C. Z.

Sale of Transits and Levels.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 12, 1915.

Sealed bids will be received at the office of the storekeeper, Supply Department, Balboa, C. Z., until 2 o'clock p. m., April 7, 1915, when they will be opened in the presence of attending bidders, for any or all of 12 transits and 10 levels now on hand at Balboa storehouse. These instruments may be seen on any working day between the hours of 7 to 11 a. m. and 12 to 4 p. m. on application to this office. The right is reserved to reject any or all bids or any combination of bids. Bids must be sealed and plainly marked "Proposal to purchase transits and levels," addressed to the Storekeeper, Supply Department, Balboa, Canal Zone.

R. K. MORRIS,
Storekeeper, Supply Department.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., March 22, 1915.

The following insufficiently addressed letters, originating in the United States or its possessions, have been received at the office of the Director of Posts, and may be procured upon request of the addressee:

Bratt, Hon. H. C.	Linsay, Vincent L. A.
Cahill, Bart	McCoy, J. G.
Campbell, H. W.	Malloy, J. E.
Carr, W. A.	Pierce, H. A.
Chaffin, Judge Wm. (3)	Ploessel, E.
Craswell, Robert J.	Shepard, A.
Crump, J. M.	Sherburne, Walter F.
Donovan, John	Simon, Sergt.
Dornn, Eddie	Slonaker, C. E.
Eberley, Mrs. Helen	Stansky, Frank
Fitzpatrick (electrician)	Valle, Guadeloupe (Señora)
Gasun, D.	Washbaugh, Frank
Glaesser, Miss Fannie L. (2)	Williams, H. E.
Lindle, Billy	

LETTERS UNCALLED FOR MARCH 15.

Banks, John J.	McHugh, D. F.
*Bratt, Harry C.	Mitchell, J. (V. M. C. A.)
Burg, W.	*Pearson, Mrs. Nora
Coke, Frank	Pierson, Elmer
*Connell, C. W.	Pringle, Captain Ralph
*Cook, James Gordon	Raymond, W. A.
Duncan, Ana Maria	Rice, Mrs. Don M.
Garcia, Esterella	*Russell, C. B.
Gass, Louis	Schmidt, Thomas
Gibbs, Thomas	Steenstrup, P. S.
Hanna, John	Stapleton, Lackey
Heider, Mrs. C.	Walker, John J.
*Hosten, E. R.	Whetton, Samuel
Jarrot, M. J.	White, Clarence A.
Jones, J. M. (2)	*Williamson, Jos. S.

*Papers.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.; with the exception that the Balboa store's afternoon hours are from 2.30 to 6.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective March 25, 1915:

FRESH MEATS.		Price
Mutton—Stewing, per pound.....	9	
Shoulder, trimmed, per pound.....	12	
Leg (8 to 10 pounds), per pound.....	19	
Short cut, chops, per pound.....	23	
Shoulder, chops, per pound.....	14	
Lamb—Stewing, per pound.....	12	
Shoulder, trimmed, per pound.....	15	
Leg (5 to 8 pounds), per pound.....	24	
Chops, per pound.....	29	
Chops, shoulder, per pound.....	18	
Veal—Stewing, per pound.....	12	
Shoulder, for roasting (not under 4 lbs.), per pound.....	15	
Chops, shoulder, per pound.....	20	
Chops, per pound.....	30	
Loin, for roasting, per pound.....	30	
Cutlets, per pound.....	36	
Beef—Suet, per pound, special.....	3½	
Soup, per pound, special.....	7	
Soup, per pound, native.....	5	
Soup, bones, per pound, special.....	2½	
Stew, per pound, special.....	11	
Stew, per pound, native.....	8	
Plate, per pound, special.....	12	
Plate, per pound, native.....	8	
Corned, No. 1, per pound.....	18	
Corned, No. 2, per pound.....	15	
Chuck roast, special, (3 lbs. and over), per pound.....	12	
Chuck roast, native (3 lbs. and over), per pound.....	8	
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16	
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24	
Rib roast, second cut, native (3½ pounds and over), per pound.....	9	
Rib roast, first cut (not under 3 pounds), special, per pound.....	19	
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27	
Rib roast, first cut, native (3 pounds and over), per pound.....	11	
Pot roast, special, per pound.....	20	
choice, per pound.....	28	
native.....	12	
Rump roast, special, per pound.....	20	
choice, per pound.....	28	
native.....	12	
Porterhouse roast, special, per pound.....	22	
choice, per pound.....	31	
native, per pound.....	16	
Steak, chuck, special, per pound.....	13	
native, per pound.....	19	
Round, bottom, special, per pound.....	13	
choice, per pound.....	19	
native, per pound.....	19	
Round, top, special, per pound.....	15	
choice, per pound.....	22	
native, per pound.....	110	
Sirloin, special, per pound.....	20	
Sirloin, choice, per pound.....	28	
Sirloin, native, per pound.....	112	
Sirloin, choice cut, special, per pound.....	23	
Sirloin, choice cut, choice, per pound.....	32	
Sirloin, choice cut, native, per lb.....	116	
Rump, special, per pound.....	20	
choice, per pound.....	28	
native, per pound.....	112	
Porterhouse (not less than 1½ pounds), special, per pound.....	23	
Porterhouse (not less than 1½ pounds), choice, per pound.....	34	
Porterhouse (1½ pounds and over) native, per pound.....	117	
Porterhouse, short, Delmonico special, per pound.....	20	
Porterhouse, short, Delmonico choice, per pound.....	28	
Porterhouse, short, native, per lb.....	112	
Tenderloin, Western, special, per pound.....	35	
Tenderloin, Western, choice, per pound.....	46	
Tenderloin, Western, native, per lb.....	125	
Pork—Hams, fresh, per pound.....	23	
Shoulders, fresh, per pound.....	19	
Loin, chop, or roast, per pound.....	18	
Pigs' feet, fresh, each.....	8	
Pigs' head, fresh, whole.....	83	
½ head.....	42	
Sausage, home made, per pound.....	23	
MISCELLANEOUS.		
Brains, calves', per pound.....	12	
Calves' heads, each.....	*80	

Kidneys, beef, per pound.....	Price
Livers—Beef, per pound.....	10
Calf, each.....	11
half, each.....	65
Oysters, fresh, per pkt.....	33
Steak—Hamburger, package.....	30
Hamburger, 20-pound containers, per pound.....	17
Sausage—Bologna, per pound.....	14
Frankfurter, per pound.....	13
Frankfurter, imported, tln.....	13
Lieberwurst, per pound.....	14
Pork, per pound.....	110
Sweetbread, beef, per pound.....	115
Eggs, fresh, per dozen.....	20
per ½ dozen.....	124
Bluefish, per pound.....	112
Halibut, fresh, per pound.....	15
Salmon, per pound.....	6
Yeast, per pound.....	6
per cake.....	31
2	

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound.....	29
Chickens—Fancy, roasting, corn fed, per pound.....	26
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	32
Broilers, milk fed, per pound.....	*32
Broilers, corn fed, per pound.....	*28
Turkeys, per pound.....	28
Squabs, each.....	40
Partridges, each.....	1.00
Grouse, each.....	1.00
Pheasants, each.....	1.35
Mallard ducks, 2 to 2½ lbs., each.....	2.35

VEGETABLES.

Beets, per pound.....	*3
Celery, per head.....	7
Cabbage, per pound.....	2
Carrots, per pound.....	2
Cauliflower, per pound.....	18
Lettuce, per pound.....	19
Onions, per pound.....	*2½
Parsley, per pound.....	110
Parsnips, per pound.....	*4½
Peppers, green, per pound.....	17
Plantains, per dozen.....	15
Potatoes, white, per pound.....	2
sweet, tropical, per pound.....	2
Spinach, per pound.....	111
Squash, per pound.....	3
Tomatoes, per pound.....	11
Turnips, per pound.....	*2
Yams, tropical, per pound.....	2½

FRUITS.

Apples, per pound.....	*5
Apples, fancy, per pound.....	*6
Cranberries, fresh, per pound.....	6
Grape fruit—American, each.....	5
Tropical, each.....	3½
Lemons, per dozen.....	12
Oranges—American, each.....	2
Tropical, per dozen.....	12
Coconuts, each.....	5
Bananas, per bunch.....	38
Bananas, each.....	1
Apples, evaporated, per pound.....	11
Apricots, evaporated, per pound.....	15
Pears, evaporated, per pound.....	23
Tangerines, each.....	1½
Pineapples, Cuban, each.....	7
Figs, dried, 12-oz. package.....	14
Figs, dried, 5-oz. package.....	5

* Indicates advance from preceding list.

† Indicates reduction from preceding list.

‡ Sold only from commissaries; no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores become effective March 24, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Jams, asstd. American, tin.....	\$0.10	\$0.12
Sage, powdered, tin.....	.03	.06
Vaseline, tube.....	.10	.08
Napkins, sanitary, box.....	.23	.17
Union suits, ea.....	.38	.42
Playing cards, pk.....	.34	.30
Playing cards, pk.....	.14	.10
Overalls, boys', pr.....	.24	.27
Hand bags, 18", ea.....	10.00	10.70
Beds, single, ea.....	2.90	2.15
Mops, dust, ea.....	1.20	1.25
Locks, Yale, ea.....	.82	.97
Locks, Yale, ea.....	.58	.62
Locks, Yale, ea.....	.69	.74

Additions to Stock.

Olives, ripe, bot.....	\$0.33
Blanco, box.....	.12
Scissors, 7", pr.....	.29
Mops, dish, ea.....	.05

JOINT LAND COMMISSION.

Notice of Awards.

In the matter of sundry claims, Award No. 74, docket numbers as shown, March 17, 1915.—An award is hereby made against the United States, in favor of the persons hereinafter named, in the sum of \$2,071 United States currency.

This award shall be paid to the claimants hereinafter named, in the amounts hereinafter specified, on or before the 17th day of April, 1915, and if payment or tender of payment of any of the items of this award is not made on or before that date, such items shall thereafter bear interest at the rate of six per centum per annum until paid:

Francisco Campos, docket No. 299.—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which the said Campos may possess or may have possessed in the lands of Cardenas y La Ramona, not covered by payment of the disbursing officer, made in 1908, of \$750 U. S. currency, the sum of \$1,600 U. S. currency.

Victorino Fierro, docket No. 297.—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which the said Fierro may possess or may have possessed on the lands of Cardenas y La Ramona, the sum of \$150 U. S. currency.

Manuel Gonzalez and Augusto Espinosa, docket No. 319.—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which the said Gonzalez and Espinosa may possess or may have possessed upon the lands of Cardenas y La Ramona, the sum of \$171 U. S. currency.

Irene de Leon and Esteban Lasso, docket No. 336.—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which Esteban and José Maria Lasso may possess or may have possessed on the lands of Cardenas y La Ramona, Irene de Leon being the mother and sole heir of said José Maria Lasso, now deceased, the sum of \$150 U. S. currency.

Total, \$2,071 U. S. currency.

JORGE E. BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of Dismissal.

In the matter of sundry claims, rule of dismissal No. 175, docket numbers as shown, March 16, 1915.—With reference to the following claims, the evidence before the Commission is that settlement therefor has been made by the United States:

Claimant.	D't.	No.	Tax Nos.	Date of payment.
Alvarez, Julian.....	301	131 & P-74.		11-24-13
Baldecchi, Augusto.....	325	C-2025 & C.		12-30-13
Gutierrez, José F.....	302	129 and 6.		12-23-13
		2007.		
Reed, William.....	326	C-2004.....		11-16-13

In view of the above settlements, no further action is necessary by the Commission, and the foregoing claims are therefore dismissed.

JORGE E. BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, March 20, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Mar. 14.....	126.25	92.06	86.88	86.82	54.43
Mon., Mar. 15.....	126.50	92.42	86.87	86.80	54.34
Tues., Mar. 16.....	126.60	91.98	86.89	86.79	54.30
Wed., Mar. 17.....	126.00	91.91	86.87	86.80	54.27
Thurs., Mar. 18.....	125.95	91.94	86.84	86.80	54.35
Fri., Mar. 19.....	125.95	91.93	86.84	86.80	54.35
Sat., Mar. 20.....	126.35	92.35	86.86	86.80	54.32
Heights of low water to nearest foot.....	125.0	91.0			

Launch Service to Taboga.

Week days.—Leave Balboa dredge landing at 5.30 p. m., and Taboga at 6 a. m. Sundays and holidays.—Leave Taboga at 6 a. m., Balboa dredge landing at 9.40 a. m., and 5.30 p. m.; leave Taboga at 7.15 p. m. Fares—Employees, 25 cents gold each way; nonemployees, 50 cents gold each way, children under 12 years, 15 cents gold each way.

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next five weeks are given in the following table:

MARCH.

DATE.	Time and height of high and low water.			
Wed., March 24....	3:22	9:19	15:47	21:36
	4.1	10.8	5.1	11.0
Thurs., Mar. 25....	4:26	10:37	16:58	22:59
	4.5	10.6	5.2	10.9
Fri., Mar. 26.....	5:35	11:57	18:08	.....
	4.3	11.0	4.7	.....
Sat., Mar. 27.....	0:18	6:38	13:01	19:08
	11.3	3.6	11.9	3.8
Sun., Mar. 28.....	1:20	7:31	13:51	20:00
	12.2	2.7	13.1	2.4
Mon., Mar. 29.....	2:10	8:19	14:34	20:45
	13.3	1.6	14.4	1.1
Tues., Mar. 30.....	2:56	9:02	15:14	21:27
	14.5	0.5	15.6	-0.2
Wed., Mar. 31.....	3:36	9:45	15:53	22:10
	15.5	-0.3	16.6	-1.2

APRIL.

DATE.	Time and height of high and low water.			
Thurs., April 1....	4:17	10:27	16:33	22:52
	16.2	-0.9	17.2	-1.7
Fri., April 2.....	4:59	11:10	17:14	23:37
	16.6	-1.0	17.4	-1.8
Sat., April 3.....	5:42	11:54	17:57	.....
	16.5	-0.7	17.0	.....
Sun., April 4.....	0:21	6:27	12:39	18:42
	-1.3	15.9	0.0	16.2
Mon., April 5.....	1:05	7:14	13:30	19:32
	-0.4	15.0	1.0	15.1
Tues., April 6.....	2:02	8:09	14:27	20:29
	0.7	13.9	2.2	13.8
Wed., April 7.....	3:02	9:15	15:34	21:41
	1.9	12.8	3.3	12.6
Thurs., April 8.....	4:11	10:35	16:49	23:08
	2.8	12.2	3.9	12.0
Fri., April 9.....	5:26	12:03	18:07	.....
	3.2	12.2	3.8	.....
Sat., April 10.....	0:34	6:36	13:15	19:14
	12.0	3.0	12.8	3.1
Sun., April 11.....	1:42	7:37	14:10	20:09
	12.6	2.6	13.5	2.3
Mon., April 12.....	2:34	8:27	14:55	20:55
	13.2	2.1	14.1	1.6
Tues., April 13.....	3:18	9:11	15:32	21:35
	13.8	1.7	14.5	1.0
Wed., April 14.....	3:54	9:50	16:06	22:12
	14.2	1.4	14.8	0.7
Thurs., April 15....	4:28	10:27	16:37	22:47
	14.4	1.3	14.8	0.6
Fri., April 16.....	4:58	11:03	17:08	23:23
	14.4	1.4	14.7	0.7
Sat., April 17.....	5:33	11:39	17:40	.....
	14.1	1.8	14.3	.....
Sun., April 18.....	0:00	6:06	12:15	18:12
	1.1	13.7	2.3	13.0
Mon., April 19.....	0:37	6:40	12:53	18:45
	1.6	13.1	2.9	13.2
Tues., April 20.....	1:16	7:16	13:35	19:23
	2.3	12.5	3.6	12.6
Wed., April 21.....	2:00	7:59	14:22	20:07
	3.0	11.9	4.2	11.9
Thurs., April 22....	2:50	8:50	15:18	21:04
	3.6	11.5	4.7	11.4
Fri., April 23.....	3:48	9:56	16:24	22:15
	3.9	11.3	4.7	11.2
Sat., April 24.....	4:52	11:06	17:29	23:31
	3.9	11.7	4.2	11.5
Sun., April 25.....	5:52	12:09	18:28	.....
	3.4	12.4	3.2	.....
Mon., April 26.....	0:37	6:48	13:04	19:23
	12.3	2.6	13.5	1.9
Tues., April 27.....	1:32	7:40	13:52	20:11
	13.3	1.7	14.7	0.6
Wed., April 28.....	2:22	8:29	14:38	20:58
	14.4	0.7	15.8	-0.5

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

*Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE—The sailing on Monday, April 5, will not land mail in New York until Tuesday of the following week; hence, despatches on that date will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7:10 a. m., connects with the despatches for this sailing.

Rainfall from March 1 to 20, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa . . . . .			.00
Balboa Heights	T	16	T
*Miraflores . . . . .	.01	19	.01
Pedro Miguel . . . . .			.00
Rio Grande . . . . .			.00
<i>Central Section—</i>			
Culebra . . . . .	.02	20	.02
*Camacho . . . . .	.83	20	.83
Empire . . . . .	.18	20	.18
Gamboa	T	20	T
*Juan Mina . . . . .	.16	20	.20
Alhajuela . . . . .	.03	4	.03
El Vigia . . . . .	.02	2	.03
Frijoles . . . . .	.42	18	.59
Trinidad			
Monte Lirio . . . . .	.30	3	.40
<i>Atlantic Section—</i>			
Gatun . . . . .	.21	18	.82
*Brazos Brook . . . . .	.24	11	.76
Colon . . . . .	.44	20	1.18

*Standard rain gage—readings at 5 p. m.

Automatic rain gage at unstarred stations—values midnight to midnight.

†And other dates.

Fuel and Supplies.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Cristobal or Balboa from plants of The Panama Canal, or from the private corporations which have tanks at the terminals. The present price for fuel oil supplied by The Panama Canal is \$1.25 per barrel of 42 gallons. The prices made by the corporations may be obtained on application to them.

Diesel engine oil is for sale by the Union Oil Company, at 45 shillings per ton of seven barrels. This company also handles fuel oil.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock, with a minimum charge of \$3. Vessels may take up from the fresh water sections of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light, and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Panama;" in the United States, "Panacanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C." for delivery in the United States.

Sailings of Vessels in Regular Service with the Isthmus.

REGULAR CONNECTIONS THROUGH THE CANAL.

Approximately regular services between the Atlantic and the Pacific seaboard from Boston, New York, Philadelphia, and Baltimore, occasionally Charleston and New Orleans, to San Pedro, San Francisco, Portland, and Puget Sound, and return, are maintained at the American-Hawaiian Steamship Company, with a

sailing each way about every five days; the Luckenbach Steamship Company, with a sailing each way about every 10 days; Sudden and Christenson, approximately fortnightly; the Atlantic and Pacific Steamship Company, about every three weeks; and the Boston and Pacific Line, and the Arrow Line, each sending a vessel each way about once a month.

Between the east coast of the United States and the west coast of South America, fortnightly services are maintained by the Merchants' Line and by the New York and South America Line; the West Coast Line has sailings each way about every four weeks.

Between the west coast of the United States, with connections to lower British Columbia, and Europe the following lines are in service: The Harrison-Direct Line, monthly; the Maple Leaf Line, about every six weeks; the East Asiatic Company, monthly, and the Johnson Line, every six or seven weeks.

The Pacific Steam Navigation Company is operating approximately a fortnightly service between the west coast of South America and Liverpool, by way of the Canal, with either direct vessels or connections at Colon with vessels of the Royal Mail Steam Packet Company.

The American-Australian Line has been sending vessels through the Canal about fortnightly from New York to ports in Australia and New Zealand.

PACIFIC COAST CONNECTIONS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puertarenas, San Juan del Sur, Corinto, Amapala, La Union, La Libertad, Acajutla, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central American line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports abovenamed between Balboa and Ocos.

Grace & Company maintain a service with a vessel plying between San Francisco and Valparaiso, calling at way ports. It makes a round voyage about every 10 weeks.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Payta, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa to Valparaiso, calling at Paita, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

The Toyo Kisen Kasha operates a bimonthly service between Hongkong and Coronel, Chile, calling at the principal ports on the west coast between Los Angeles and Coronel.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways, between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail Steam Packet Company maintains a fortnightly service between Colon and the United Kingdom, making the following way ports: Cartagena, Puerto Colombia, Trinidad, and Barbados. The Royal Mail vessels arrive in Colon on Saturdays and sail on Tuesdays.

The Compagnie Generale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano and Trinidad.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compania Trasatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls enroute, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal; and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailing via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United

(Continued on page 286.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m. March 21, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Mar. 15...	Loderer	British	Loderer S.S. Co.	Philadelphia	Sakai, Japan	Refined petroleum	5,106	3,938	2,923
Mar. 15...	Oregonian	American	American-Hawaiian S.S. Co.	New York	San Francisco	Metal, general (a)	7,858	5,903	4,145
Mar. 17...	Huasco	Chilean	South American S.S. Co.	Cristobal	Valparaiso	General cargo	2,153	4,563	3,121
Mar. 17...	Oriano	British	Pacific Steam Nav. Co.	Liverpool	Valparaiso	General cargo	412	8,402	5,044
Mar. 18...	Trevince	British	Hain S.S. Co.	Kingston	Pacific Ocean	Coal	5,375	4,305	3,131
Mar. 19...	Acajulla	British	Salvador Railway Co.	Cristobal	Salina Cruz	General mfg.	205	1,219	627
Mar. 19...	Vego	Italian	Italian Government	Genoa	San Francisco	Exposition exhibits	900	3,110	2,079
Mar. 19...	Tuscan Prince	British	Prince Line	New York	Vladivostok	General cargo	8,000	6,741	5,024
Mar. 19...	Beckenham	British	Britain S.S. Co.	Norfolk	Cruz Grande	Ballast (b)		4,943	3,508
Mar. 20...	Mogileff	Russian	Russian Volunteer Fleet	New York	Vladivostok	General cargo	8,300	6,574	4,940
Mar. 20...	Machaon	British	Ocean S.S. Co.	Liverpool	Seattle	General cargo	360	6,656	4,639
Mar. 21...	Colon	American	Panama Railroad Co.	New York	Balboa	General cargo	778	5,966	4,222
Mar. 21...	Eggesford	British	Tatem Steam Nav. Co.	Kingston	Pacific Ocean	Coal and oil	6,600	5,335	4,124
Mar. 21...	Edgar H. Vance	American	W. R. Grace & Co.	Philadelphia	Los Angeles	General cargo	3,300	2,555	1,433
Mar. 21...	Samui	Danish	East Asiatic Co.	Copenhagen	Callao	General cargo	1,600	2,912	2,101

(a) Including 4,396 tons steel and iron, 1,926 ton tin. (b) Discharged 6,100 tons coal at Cristobal.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Mar. 15...	Iowan	American	American-Hawaiian S.S. Co.	Tacoma	Charleston	General cargo	4,971	6,819	4,668
Mar. 16...	Saint Andre	French	Maritime Co. of Oceania	Tahiti	Glasgow	Chrome ores	6,800	5,859	4,147
Mar. 16...	Teno	Chilean	South American S.S. Co.	Valparaiso	Savannah, Ga.	Nitrates	3,400	2,749	1,780
Mar. 16...	Carolyn	American	Luckenbach S.S. Co.	San Francisco	New York	Lumber, general	4,500	3,425	2,322
Mar. 16...	Acajulla	British	Salvador Railway Co.	Salina Cruz	Cristobal	General produce	647	1,219	627
Mar. 16...	Pacific	Swedish	Johnson Line	San Francisco	Stockholm	General produce	5,713	5,137	3,836
Mar. 17...	Batsford	British	Harrison & Dixon	Portland	London	Oats and wheat	7,840	6,052	4,544
Mar. 17...	Barbara	British	West Hartlepool S. N. Co.	Talcahuano	Liverpool	Oats, general	6,100	4,223	3,061
Mar. 18...	Allionca	American	Panama Railroad Co.	New York	Balboa	General cargo	1,940	4,120	2,670
Mar. 18...	Director	British	Harrison Line	Honolulu (b)	Liverpool	General cargo	6,000	5,444	3,742
Mar. 18...	Guatemala	British	Pacific Steam Nav. Co.	Callao	Cristobal	General produce	1,728		
Mar. 18...	Montara	American	Pacific Coast S.S. Co.	Seattle	New York	General cargo	2,200	2,665	1,678
Mar. 19...	Strathspey	British	Strath Line	San Francisco	Europe	Barley	6,301	4,693	3,445
Mar. 20...	Minnesolan	American	American-Hawaiian S.S. Co.	Junin	Baltimore	Nitrates	8,000	6,875	4,610
Mar. 20...	Alaskan	American	American-Hawaiian S.S. Co.	Hilo	Philadelphia	Sugar, pineapples	11,740	8,868	6,509
Mar. 20...	Strathairly	British	Strath Line	Antofagasta	Baltimore	Nitrates	6,800	4,680	3,369
Mar. 20...	Guernsey	Norwegian	W. Welhems	Tocopilla	Philadelphia	Nitrates	6,650	4,418	3,280
Mar. 21...	Moyune	British	China Mutual S. Nav. Co.	Los Angeles	Liverpool	General cargo	5,000	5,088	3,665
Mar. 21...	Dayton	American	Standard Oil Co.	Junin	New York	Petroleum	5,408	5,072	3,688
Mar. 21...	Santa Cruz	American	W. R. Grace & Co.	Los Angeles	New York	General cargo	6,000	5,427	3,751

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From	Date	Vessel	Line	From
Mar. 22...	Inverki	Inverki S.S. Co.	England	Mar. 22...	Strathleven	Strath Line	Callao
Mar. 22...	City of Bristol	Ellerman Lines	New York	Mar. 22...	Caesar	United States Navy	San Francisco
Mar. 23...	Columbian	American-Hawaiian S.S. Co.	New York	Mar. 23...	John A. Hooper	Sudden & Christenson	San Francisco
Mar. 24...	Panaman	American-Hawaiian S.S. Co.	New York				
Mar. 24...	Jersey City	American-Hawaiian S.S. Co.	England				

PORT OF CRISTOBAL.

*ARRIVALS.

*DEPARTURES.

Date	Vessel	Line	From	Date	Vessel	Line	To
Mar. 18...	Tabor	Earn Line	Norfolk	Mar. 15...	Legaspi	Barcelona Transatlantic Co.	Barcelona
Mar. 18...	Wayfarer	A. G. Vanderbilt	Port Limon	Mar. 16...	Wayfarer	A. G. Vanderbilt	Port Limon
Mar. 19...	Oberon	Dutch Royal Mail	Cartagena	Mar. 17...	Nubian	Leyland Line	Cartagena
Mar. 19...	Stella	Dutch Royal Mail	St. Thomas	Mar. 17...	Venezuela	Cie. Gen. Transatlantique	St. Nazaire
Mar. 21...	Chagres	Elders & Fyffes	Port Limon	Mar. 18...	Wayfarer	A. G. Vanderbilt	Havana
				Mar. 21...	Chagres	Elders & Fyffes	Bristol

*EXPECTED ARRIVALS.

*EXPECTED DEPARTURES.

Mar. 22...	Tordenskjold	Earn Line	Norfolk	Mar. 22...	Tabor	Earn Line	Cuba
Mar. 25...	Wegadesk	Earn Line	Norfolk				

*Other than vessels passing the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

*DEPARTURES.

Mar. 21...	Ecuador	Pac. Steam Nav. Co.	Callao	Mar. 15...	General Pesqueira	Cia. Naviara del Pacifico	San Francisco
				Mar. 16...	Huallaga	Peruvian S.S. Co.	Callao
				Mar. 16...	Peru	Pacific Mail S.S. Co.	San Francisco
				Mar. 21...	Ecuador	Pacific Steam Nav. Co.	Callao

*EXPECTED ARRIVALS.

*EXPECTED DEPARTURES.

Mar. 23...	Pennsylvania	Pac. Mail Nav. S.S. Co.	San Francisco				
April 1...	Challanooga	United States Navy	Corinto				
	Aztec	Pacific Mail S.S. Co.	San Francisco				

*Other than vessels passing through the Canal.

(Continued from page 286.)

Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails. Arrives.

NEW YORK TO CRISTOBAL-COLON.

Almirante	U. F. C.	Mar. 17	Mar. 24
Advance	P. R. R.	Mar. 18	Mar. 25
Metapan	U. F. C.	Mar. 20	Mar. 29
Santa Marta	U. F. C.	Mar. 24	Mar. 31
Panama	P. R. R.	Mar. 25	Mar. 31
Pastores	U. F. C.	Mar. 27	April 4

CRISTOBAL-COLON TO NEW YORK.

Zacapa	U. F. C.	Mar. 31	April 7
Allianca	P. R. R.	April 1	April 7
Carrillo	U. F. C.	Mar. 25	April 1
Colon	P. R. R.	Mar. 27	April 2
Tenadores	U. F. C.	Mar. 29	April 5
Almirante	U. F. C.	April 1	April 8
Advance	P. R. R.	April 3	April 10
Metapan	U. F. C.	April 5	April 13
Santa Marta	U. F. C.	April 8	April 15
Panama	P. R. R.	April 10	April 16

NEW ORLEANS TO CRISTOBAL-COLON.

Atenas	U. F. C.	Mar. 17	Mar. 24
Cartago	U. F. C.	Mar. 20	Mar. 25
Turrialba	U. F. C.	Mar. 24	Mar. 31
Heredia	U. F. C.	Mar. 27	April 1

CRISTOBAL-COLON TO NEW ORLEANS.

Paristmina	U. F. C.	Mar. 25	Mar. 30
Atenas	U. F. C.	Mar. 25	April 1
Cartago	U. F. C.	April 1	April 6
Turrialba	U. F. C.	April 1	April 8

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, MARCH 31, 1915.

No. 32.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

New Form of Canal Certificate.

Pursuant to the modifications in the rules for collecting tolls on vessels passing through the Canal, a supply of a new form of Panama Canal tonnage certificate, with corrections and additions to the present form, has been ordered through the Washington office of the Canal. Twenty-five hundred copies are to be sent to the Isthmus as soon as practicable, and further distribution will be made from Washington to those persons in the United States and abroad who are authorized to measure vessels for the Canal. Pending the issuance of the new forms, a supplemental form for the old certificate is being distributed, for use in supplying additional information so that the net United States registry of the vessel may be determined, and tolls may not exceed an amount equivalent to that produced by multiplying the net United States tonnage by \$1.25.

Arrival of the "Northern Pacific."

The passenger steamship *Northern Pacific*, a sister ship of the *Great Northern* which passed through the Canal on February 2, arrived at Cristobal in the afternoon of Tuesday, March 30, and started through the Canal in the morning of March 31. The vessel is on the way from Philadelphia to San Francisco with 367 passengers, and is on her maiden voyage, as was also the *Great Northern* in making the transit of the Canal. The two ships are to be used in a coastwise service between Portland, Ore., and San Francisco.

Disposing of Obsolete and Retired Equipment.

In the sale of obsolete and required equipment formerly used in the Canal and Panama railroad construction work, the disposal of a No. 8 rock crusher to the France Stone Company, for \$800, and of three barges to A. Levingston for \$4,000, were among the more important transactions in February. Delivery was made of three of 11 Marion steam-shovels sold in January to the France Stone Company for a total of \$30,000.

Publications of The Panama Canal.

The Panama Canal has issued the following publications, which will be supplied free to interested parties making application for them:

"Official Handbook of the Panama Canal" (fourth edition, 1913), a manual of popular information about the Canal and its construction prepared primarily for the layman. Paper, five by nine inches, 61 pages, with map inserts.

"Rules and Regulations Governing the Operation and Navigation of the Panama Canal," the Executive Order of July 9, 1914, setting forth the general rules governing the transit of vessels through the Canal; of primary interest to owners, agents, and masters of vessels; previously published as Governor's circular No. 604-17; paper, library size, 5½ by nine inches, 37 pages.

Various circulars, and notices to steamship lines, covering details of business with The Panama Canal.

A second edition of "Sailing Directions and General Information," designed primarily for the use and information of mariners making the Canal but containing a great deal of matter of value to shipowners and agents, is now in preparation.

Requests for any of the above should be addressed to The Panama Canal, Balboa Heights, Canal Zone.

Locks Guards Assisting in Enforcement of Quarantine Regulations.

In order better to protect the Canal against infection from the ships permitted to make the transit "in quarantine," the infantry guards stationed at the several locks are co-operating with the sanitary officers in enforcing strict compliance with the regulations covering the transit of such vessels. Copies of the special regulations for passage in quarantine have been furnished the military headquarters at the locks, and all sentries are advised that ships passing through the Canal in quarantine may be known by the fact that they fly the yellow quarantine flag. They are further instructed that no one be allowed to enter or leave such a ship, or take cargo on or off of it, without written authority from the quarantine officer or quarantine guard on board; that when such a ship is tied up to the lock walls, all lines leading to the shore must be provided with rat-guards, the ship must be breasted off at least six feet from the lock walls, and the gangplank is to be kept raised at all times; and that any infringement of the regulations should be reported immediately to the quarantine officer or quarantine guard on board and to the proper military authorities.

Rent May Be Paid On Pay Car.

To employees—Hereafter, payment of rental and charges for electric current may be made to representatives of the Collector upon the pay car.

H. A. A. SMITH,

Auditor, The Panama Canal.

BALBOA HEIGHTS, C. Z., March 31, 1915.

NEW YORK OMITTS RESTRICTION

Completeness of Quarantine at Canal Assures Protection against Plague.

On account of the satisfactory quarantine practices observed by The Panama Canal, the health officer of the port of New York issued an order on March 15 exempting vessels touching at Balboa from fumigation on arrival at New York.

Prior to that time the quarantine authorities at New York had required fumigation of vessels which stopped at Balboa on the way through the Canal, from whatever port of original or later sailing, in the belief that such vessels might have become contaminated with plague-infected rats off ships coming from plague ports in South America. This fumigation always caused delay to vessels at New York and the chief health officer of that port, desiring to minimize interference with commerce, addressed an inquiry to the Chief Health Officer of The Panama Canal regarding the practices at Balboa, with a view to determining the necessity for fumigation of vessels from the Canal.

In reply the Chief Health Officer stated that great care is taken to prevent infection of the Canal ports or of shipping in them by ships arriving from the infected ports of South America; that, in his opinion, there is no likelihood of infection occurring in such manner, and that there had not been a case of human or rat plague on the Isthmus since 1905, except one or two human cases taken off at quarantine. He enclosed a copy of the quarantine regulations in force, pointed out the legal steps taken to enforce observance of them, and concluded with these paragraphs:

"Our requirements concerning hides, grain, etc., are considered so severe that it may be said that these articles have ceased to come from plague-infected places.

"The wharves at Balboa are either modern, all reinforced concrete without harboring places for rats, or, in one instance, a combination of concrete, steel, and wood. Rat catching is constantly carried on on all wharves and all rats obtained (27 caught and two found dead in February) are examined for plague, so that we can state that rats are not numerous on any of our wharves, and that no rat plague exists. The Board of Health laboratory examines 800 to 900 rats and mice per month; no infected animal has been found in 10 years, so we may say there is no rat plague on the Isthmus.

"Should any condition arise that is considered apt to endanger other ports, such as the discovery of rat plague, the local occurrence of human plague, or any necessary weakening of our quarantine regulations, notice would be sent out from here."

It was upon the receipt of the foregoing explanations that the health officer of New York issued his order of exemption. The officials of the Canal quarantine service regard this action as additional vindication of their policies, and point out to steamship agents and masters who occasionally protest against the strictness of the regulations that the faithful observance of the regulations is after all a simple social safeguard, without which they would ultimately be put to greater inconvenience and expense than are necessitated by present practices.

Employees Desiring Work on Alaskan Railway.

The following statement is published at the request of Mr. H. P. Warren, a representative of the Alaskan Engineering Commission, at present on the Isthmus. Mr. Warren's address is the Hotel Tivoli, Ancon.

The following information may be of interest to men who desire to secure employment on the Government railway work in Alaska:

The route of the railway is not yet fixed, the decision resting with the President.

The work during the first year will be comparatively small as it will require time to open up the line, get in equipment, etc., and the appropriation is limited.

The scale of wages for clerks, skilled mechanics, foremen, etc., will be somewhat lower than has prevailed on the Isthmus, conforming to the pay of men in similar positions on the railroads of western Canada. The labor will doubtless be white Americans.

The present intention is to do both contract and force account work.

The Alaskan Commission does not purpose to furnish married quarters for employees. It is possible to rent houses on the coast towns where living conditions are good for a new country. There are very few places along the line of the railroad where houses exist at present. Where necessary, the Commission will furnish temporary living quarters for men employed on the work. Boarding facilities will also be furnished where necessary.

As far as possible, work will be continued throughout the year, but it is impossible, at present, to estimate what proportion can be so handled.

Those who wish to secure work on this railroad should send on application to the Alaskan Engineering Commission, Bureau of Mines Building, Washington, D. C., where it will receive consideration when positions are open. It is not necessary to be a civil service man to secure an appointment.

Employees must pay their way to Seattle; thence to Alaska transportation will be furnished.

The undersigned is not in any sense a recruiting agent but will be glad, of course, to answer questions he can consistently concerning the work.

H. P. WARREN.

The American steamship *Crofton Hall*, which passed through the Canal on January 12 on its way from Valparaiso to New York in the west coast service of the New York and South America Line, has been placed in passenger service between New York and Buenos Aires, calling at Montevideo. This is said to be the first vessel to enter the regular River Plate passenger service under the American flag.

PUBLIC STABLE IN PANAMA.

To Be Erected by Panama Railroad Company as Sanitary Measure.

Final instructions have been issued for the construction by the Panama Railroad Company of a public stable in the city of Panama which shall afford accommodations for the animals now housed in various private stables in the city. This has been done for sanitary purposes. It is believed that the death rate in the city, especially of children, has been considerably augmented by the transmission of diseases by flies; and it has been pointed out that the stables as at present conducted are prolific breeding places for rats, the principal carriers of plague. In the event that plague should enter the Isthmus one of the first steps in protection would be the demolition of the private stables. It has been decided to eliminate this menace before the grave necessity arises.

The plans adopted call for the construction of a modern, sanitary stable of 250 stalls on the lot of land lying between the municipal and Chinese cemeteries, on the road leading to Balboa. The stalls will be rented for \$2.50 United States currency per month. This site was selected and work was begun there early in March, but final decision on the matter was held up on account of various objections. On March 16 the Governor appointed a committee, consisting of the Chief Health Officer, the Special Attorney, the Superintendent of the Panama railroad, and the Executive Secretary, to consider the situation and recommend a policy. The committee submitted its report, on which final action was based, on March 22. The report stated, in part:

"The committee held its first meeting on the afternoon of March 18, as directed, and spent the time in making an inspection of practically all of the stables in Panama city. We found an almost continuous chain of stables from the point where the street from Ancon Hospital joins Central Avenue, extending in a southerly direction to the ocean at the edge of the Coco Grove district, these stables bordering the outskirts of the city.

"We also found stables in the heart of the city, one being in the ruins of an old church, a stone's throw from Cathedral Plaza; another, next door to the Union Club; quite a number in the Guachapali district near Calidonia road; and a further number directly on the Calidonia road.

"The first stable that we visited is being torn down by the owner, and will be converted into an automobile garage. Real estate in that

vicinity is very valuable, and the owner will suffer no loss by tearing out the old stable, but will, in fact, be benefited. A striking instance of the wisdom of the sanitary regulations with respect to the construction of stables was pointed out at this place, there being a small concrete platform about 10 feet wide and 15 feet long, under which the rats had burrowed to build their nests. It was an ideal place for them as they were snug and dry under this concrete, and when it was torn out 98 rats were killed in that one place. If the concrete had been carried down at the edges two feet below the surface, as required by the present regulations, the rats would not have nested there as they do not burrow that deep into the ground.

"Ninety per cent of the stables we visited were in an exceedingly dilapidated condition, being built of old second-hand lumber and galvanized iron, being surrounded by or in close proximity to tenement houses, stores, and shops of various kinds, so that even though it were possible to keep rats from nesting on the actual stable premises, it is not possible to keep them from nesting in the adjoining buildings and using the stables for feeding grounds. We found grain scattered about the stalls and mangers in practically all the stables, and where this condition exists, with breeding places for rats in the vicinity, the rats are bound to be found in large numbers.

"Most of the stable owners apparently make an effort to keep the stalls swept, and the stables appear to be cleaned of manure every day, but it is impossible to prevent small quantities of manure accumulating between the rough stones and imperfect concrete stable floors, many of which are in very bad condition, and it is in these small accumulations of dirt and filth that the flies deposit their eggs, and it is from this source that the pest of flies in Panama city originates.

"We found in many of the stables, horses and mules suffering from running sores, and others apparently sick from other causes. Primitive remedies were usually applied, but the animals needed the care of a veterinarian.

"The stables are in most part constructed on land, which, if the stables were all removed, would be very valuable for tenement house sites, and in view of the present congestion in the city of Panama it would seem that the owners of these sites would be financially benefited if they would remove their stables and use this valuable territory for apartment houses or stores.

"We visited the site of the proposed new stables to be built by the Panama Railroad Company and found that a large amount of

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Ferguson, Titus.....	87206	Fortune Island..	Colon.....	P. R. R.....	Mar. 22, 1915
Longdowns, Alfred.....	86270	Jamaica.....	Colon.....	P. R. R.....	Mar. 1, 1915
	90176			Freight.	
Parker, John.....	95263	Jamaica.....	N. Culebra.....	Supply.....	Mar. 23, 1915
Allen, Wilford.....	92792	Jamaica.....	New Gatun.....	P. R. R.....	Mar. 24, 1915
St. John, Martin.....	36731	Grenada.....	Panama.....	O. & M.....	Mar. 24, 1915

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published

JOHN K. BAXTER,
Administrator of Estates.

work has already been done on this site, and that it is an ideal site for stables, being dry, well drained, and removed from the residential section of Panama.

"We also visited the municipal stables of the Government of Panama out on the Calidonia road and found them in excellent condition. It was a relief to see well kept and clean stables after visiting the dirty, dilapidated, rat-infested and fly-breeding stables in the other sections of the city.

"The municipal stables are constructed in accordance with sanitary regulations, and are satisfactory in their present site, and do not offer the menace to health that the other stables offer.

"This concluded our inspection for the afternoon.

"The committee held its second and final meeting on the afternoon of March 20 and discussed the various features of this stable question. The committee gave consideration to the letter of the Secretary of Foreign Relations of Panama, dated March 6, protesting against the construction of stables on the tract adjoining the cemeteries in Panama because of the fact that remains of certain distinguished citizens of Panama, who are held in great veneration, rest there. The committee fully appreciates the sentiment expressed by the Honorable Secretary, but can not believe that the construction of stables in that vicinity can be or should be construed as indicating any lack of veneration or respect for the memory of the distinguished men referred to.

"If it were intended to establish saloons or disreputable resorts of any kind on this tract, the protest would have more force, but the purpose is altruistic, and the Panama Railroad Company is investing large sums of money in this improvement solely to better the health conditions of Panama and not in any sense as a commercial enterprise. The stables will be clean, sanitary, well built, well laid out, and there will be nothing objectionable in their establishment there so far as the committee can foresee. It is not surprising to the committee, after visiting the stables in Panama City, that there should be some misconception in the minds of the citizens of Panama regarding the thought of having stables near the cemeteries, but the stables to be constructed will not be of the class with which many of the residents of Panama are familiar.

"Furthermore, the committee noticed in its inspection tour that a large stable of the dilapidated class, generally described above, is situated on the opposite side of the same cemetery, and, in fact, the wall of the cemetery is used as a part of the construction of the sheds used for this purpose. Across the street from this stable and touching another cemetery is the "red light district" of Panama, the most disreputable, troublesome, and immoral part of the city, this district having been set aside by the authorities of Panama.

"It therefore seems to the committee that the protest of the Government of Panama with respect to the construction of model stables on the tract referred to is, in view of the above facts, without force, and the committee recommends that the construction of the stables proceed as originally planned.

"The question of the number of stalls which ought to be constructed at once was given consideration, and the committee is of the opinion that about 250 stalls should be built

immediately, and that a charge should be made of \$2.50 U. S. currency per month per stall, which will include the use of the stall, the use of feed bins and lockers, shelter for coaches, the advice of a veterinarian, the free use of water for the animals and for washing carriages, and the removal of litter from the stalls. It is planned to build a warehouse, where supplies may be purchased if desired, and to afford whatever facilities may be required by the owners of horses and carriages. It is thought that it will be preferable to rent these stores or warehouses to merchants, who may conduct their business with the owners of the horses and carriages, rather than to have them operated by the Panama Railroad Company.

"There are a few stables in the city of Panama which are constructed on unimproved sites, and these stables should be immediately removed, as they do not comply with either the old or new sanitary regulations, and the committee recommends approval of the program of the Health Department in this respect.

"The other stables which are on improved sites are in practically all cases of so poor construction, and fail in so many important respects to comply with the regulations of the Health Department respecting the construction of stables, that it will be necessary for the owners to make very extensive repairs and alterations, which in most cases will be more difficult than it would be to build entirely new stables in a new location.

"Furthermore, the Chief Health Officer informs the committee that while such reconstruction of old stables will be permitted by the Health Department, the Health Department will not guarantee that in case of an outbreak of plague or other menace to the public health, these stables will be permitted to continue operations in their present locations. In fact the first step the Health Department would take in such an event would be to order the immediate abandonment of these stables, and the destruction of any parts of them which might be suspected of harboring rats.

"It furthermore appears to the committee that in view, first, of the value for other purposes of land occupied by stables, second, the cost of reconstructing these old stables to comply with the recent regulations, and third, the insecure tenure of these locations in case the protection of the public health should require their abandonment, that it would be most unwise and hazardous for the stable owners to reconstruct the old stables, rather than to rebuild in the areas set aside for that purpose.

"The committee recognizes the fact that doubtless a number of these stable owners are comparatively poor men to whom it would be somewhat of a hardship to build new stables, although if the stable owners also own the land upon which they are constructed there would be no hardship whatever because of the greater value of the land for other purposes.

"It is to meet this possible hardship that the Panama railroad stables are being constructed, with the hope that in view of the great advantages offered and the reasonable charge to be made, the owners of horses and coaches will eventually abandon their present stables and move into the new.

"To this end the Health Department has not been insisting upon the reconstruction of these old stables, and will not insist upon this action

until the new Panama railroad stables are ready for occupancy, and approval of the above program is respectfully recommended.

"It was brought to the attention of the committee that modern sanitary regulations in Porto Rico and Cuba absolutely prohibit the stabling of horses, mules, or other domestic animals within the residential parts of the cities, and it seems most regrettable that the authorities of Panama do not stand ready to assist the Health Department more in this most important matter.

CONCLUSION.

"The program recommended by the committee, therefore, is as follows:

"(1) The immediate removal of stables which do not comply with the old sanitary regulations which prohibit the continuance of such stables on unimproved streets.

"(2) The immediate construction of about 250 stalls by the Panama Railroad Company on the Huerta-Sandoval tract as originally planned.

"(3) The temporary withholding of the enforcement of the regulations respecting the construction of stables until accommodations are ready in the Panama railroad stables."

Improved Telephone Service.

The Canal telephone system has been improved in excess of expectations by the use of the recently installed cable system over the Isthmus, and it is stated by those in charge of the telephones that the number of calls over the lines has increased at least 30 per cent in the last three months, on account of the greater ease in securing long distance connections and the improved clarity of transmission.

The switchboards and trunks have been so arranged as to eliminate half of the former number of exchanges. The exchanges at Corozal, Panama, Balboa, Balboa shops, and Mount Hope were done away with, and business is now handled through the main line exchanges of Cristobal, Gatun, Pedro Miguel, Empire, and Balboa, with private branch exchanges ("P. B. X." boards) at the Washington and Tivoli hotels, Paraiso shops, and the Governor's office. The rearrangements have made it possible to carry on a long distance transmission with no more trouble than is ordinarily experienced in putting a local call through one exchange in the United States. The transmission cables, equipped with Dr. Pupin's loading coils, have improved the audibility of the instruments, and possess a marked freedom from cross-talk.

It is proposed ultimately to eliminate the exchange at Empire, and to make the Empire service part of a system of "P. B. X." boards, connected with the Canal trunks, which will include Toro Point, Margarita Point, Las Cascadas, Empire, Culebra, Balboa headquarters building, and Naos Island.

Twenty-ninth Infantry Arrives.

The Twenty-ninth Regiment of Infantry, United States Army, arrived at Cristobal on the transport *Buford* on Thursday, March 25, and is now stationed at Camp Gaillard, Culebra. The regiment had sailed from New York City on March 17. It consists of 41 officers and 869 men; before sailing for the Isthmus it had been divided into three detachments, stationed at Buffalo, Port Oswego, and Governor's Island.

DECORATIONS IN ROTUNDA.

Paintings in Administration Building of Scenes in Canal Construction.

The decorative paintings for the Administration Building at Balboa Heights, comprising the only ornamentation in the building, have been installed in the rotunda. They were executed by Mr. W. B. Van Ingen, assisted by Mr. C. T. Berry and Mr. Ira Remsen. Mr. Van Ingen is an artist of considerable reputation, and has done similar work for various buildings in the United States, including the Congressional Library at Washington, the mint at Philadelphia, and the court room in one of the public buildings of Indianapolis.

The contract with Mr. Van Ingen was entered into in March, 1914, and called for the decoration of approximately 1,000 square feet of surface in the rotunda, at a price of \$25 per foot. It was specified that the paintings were to represent various phases of the construction of the Canal. Most of the work is reproduced from sketches made by the artist before the contract was entered into. The finished area is about 958 square feet.

There are five paintings, consisting of four panels and a frieze. The panels represent Culebra Cut at Gold Hill, construction of the Spillway in Gatun Dam, construction of a lock gate, and construction of a lock at Miraflores. The frieze is a panorama of operations in the digging of Culebra Cut, and consists of spaces in the foreground, showing construction work, including dynamite gangs, steamshovels, transportation of spoil, and illustrations of types of machines used, alternating with spaces showing the opposite bank of the Cut. Although there is a wealth of detail in the paintings, they are perhaps most impressive for their massive scale, which purports to represent the spirit of the work here in construction days.

In order to attain a desirable setting, the white walls of the rotunda surrounding the paintings were tinted and a soft light is thrown on the pictures by a circle of electric lamps concealed in the dome. The artists' work has received favorable comment, and the rotunda has been visited by numbers of residents of the Canal Zone and tourists.

Supplementary Rent Schedule.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER
BALBOA HEIGHTS, C. Z., March 26, 1915.

To all concerned—The following changes and additions have been made to the rent schedule published as effective March 1, and will become effective as follows: Decreases and additional rates will be effective as of March 1, 1915, and increases will become effective April 1, 1915.

GOLD QUARTERS.
Decreases.

District	Kind	Building No.	Apartment or room No.	From	To
Ancon	Family	130 O. F.		\$20.00	\$16.00
Do	Bachelor	152 O. F.	45, 46	3.00	12.50
Do	do	126 O. F.		6.00	12.25
Do	do	1, post-office		5.00	14.50
Do	do	P. R. R. station	19, 20	4.50	13.00
Do	do	P. R. R. Yard O.	1, 2, and 3	4.60	12.50
Colon	Coast Artillery	Paymaster's Office		65.00	45.00
Corozal	Family	44		8.00	17.00
Do	do	31	A	10.00	18.50
Do	do	do	B	8.00	17.50
Do	Bachelor	165, post-off.		6.50	15.00
Pedro Miguel	Family	31		8.25	17.00
Do	do	35		8.25	17.00
Paraiso	Bachelor	Post-office		6.50	15.00
Colon Beach	Family	59	B	7.50	6.50

Increases.

Ancon	Family	118		25.00	26.00
Corozal	do	63		7.00	19.00
Pedro Miguel	do	79		6.25	17.00

Additions.

Ancon	Family	145			15.00
Do	do	52			14.00
Do	do	268			14.00
Balboa	do	106	A, B		17.00
Do	do	do	C, D		18.00
Corozal	do	83			19.00
Do	do	100			15.00
Do	Bachelor	87			14.25
Paraiso	do	34, Bas Obispo			12.13
Gatun	Family	R. R. station	Monte Lirio		14.00
Do	do	Section house	do		14.00
Do	do	do	Frijoles		18.00
Cristobal	Bachelor	67	Annex		12.00

Miscellaneous—Gold Quarters.

Stewards occupying rooms in line hotels	2.17
Secretaries of Y. M. C. A.'s occupying rooms in Y. M. C. A. buildings	3.00
Cashiers and assistants at the Hotels Washington and Tivoli	4.25

SILVER QUARTERS.

Decreases.

House No. 615, La Boca, reduced from \$7.50 to \$7.
House No. 617, La Boca, reduced from \$7.50 to \$7.
House 73, Paraiso, 4 large rooms upstairs, increased from \$3 to \$4.
Two small rooms upstairs, \$3.
Twelve rooms downstairs, reduced from \$4 to \$3 each
1 per apartment. 1 per man. 1 less a reduction of 25 per cent account of being suitable only for hotel stewards.
nonhousekeeping.

Approved:
GEO. W. GOETHALS,
Governor.

WM. R. GROVE,
Chief Quartermaster.

PROVISIONAL CERTIFICATES

Of American Registry to Be Issued to Vessels Abroad.

It has been recommended that the Captain of the Port of Cristobal and the Captain of the Port of Balboa be authorized to issue provisional certificates of American registry to foreign-built vessels, in accordance with the following Act of Congress (Public—No. 321—63d Congress), "To provide for provisional certificates of registry of vessels abroad, and for other purposes," approved March 4, 1915:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That consular officers of the United States and such other persons as may from time to time be designated by the President for the purpose are hereby authorized to issue provisional certificates of registry to vessels abroad which have been purchased by citizens of the United States, including corporations, as defined in Section 4132, Revised Statutes, as amended by the Panama Canal Act and the Act of August 18, 1914.

(a) Such a provisional certificate shall entitle the vessel to the privileges of a vessel of the United States in trade with foreign countries or with the Philippine Islands and the islands of Guam and Tutuila until the expiration of six months from its date or until 10 days after the vessel's arrival at a port of the United States, whichever first happens, and no longer. On arrival at a port of the United States the vessel shall become subject to the laws relating to officers, inspection, and measurement, as amended by the Act of August 18, 1914.

(b) The Secretary of Commerce shall prescribe the conditions in accordance with which such provisional certificates shall be issued and the manner in which they shall be surrendered in exchange for certificates of registry at ports of the United States.

(c) The form of such provisional certificate shall be prescribed by the Commissioner of Navigation and shall include the name of the ship and of the master, time and place of purchase and names of purchasers, and the best particulars respecting her tonnage, build, description, and inspection of survey which the consular officer is able to obtain.

(d) Copies of such provisional certificates shall be forwarded as soon as practicable by the issuing officer to the Commissioner of Navigation.

SEC. 2. That Section 4165 of the Revised Statutes and Section 10 of the Act of March 3, 1897, entitled "An Act to amend the laws relating to navigation," are hereby repealed.

SEC. 3. That this Act shall take effect 60 days after date of its passage.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, March 27, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa	Gatun Lake.	Miraflores Lake.
Sun., Mar. 21	126.20	92.32	86.83	86.80	54.40
Mon., Mar. 22	125.80	91.80	86.81	86.80	54.37
Tues., Mar. 23	125.65	91.72	86.80	86.80	54.30
Wed., Mar. 24	125.65	91.70	86.82	86.80	54.32
Thurs., Mar. 25	125.65	91.78	86.80	86.77	54.35
Fri., Mar. 26	125.50	91.65	86.77	86.80	54.15
Sat., Mar. 27	125.50	91.65	86.75	86.75	54.11
Heights of low water to nearest foot...	125.0	91.0			

OFFICIAL CIRCULARS.

Transfer from Excepted Positions to Competitive Classified Service.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 10, 1915.

CIRCULAR No. 603-8:

1. An Executive Order of January 19, 1915 (see Panama Canal circular No. 601-38), provides as follows:

"A citizen of the United States in the service of The Panama Canal on or before January 1, 1915, in an excepted position other than that of clerk paying not more than \$75 in gold per month, may be transferred without examination to a position in the competitive classified service, provided:

"(a) This section shall not apply to a person appointed to a competitive position in accordance with the civil service rules, his transfer to be governed by the general provisions of the rules.

"(b) This section shall not apply to a person appointed without examination to perform the duties of clerk of any grade, bookkeeper, stenographer, typewriter, surgeon, physician, trained nurse, or draftsman.

"(c) He must have rendered at least two years' service in a position above the grade of mere unskilled laborer in the service of The Panama Canal or of the Panama railroad by transfer from the Canal.

"(d) He may be transferred to a position of no higher grade requiring similar qualifications or to a position of a lower grade for which he is qualified.

"(e) He must be specially recommended by the Governor of The Panama Canal by reason of efficient service and satisfactory conduct.

"(f) If separated from the service the requisition for transfer must be made within three years from the date of separation, and if he has been separated more than one year evidence of continuing good character and efficiency may be required."

"The effect of this order is to confer eligibility for transfer, subject to proper restrictions, upon employees of The Panama Canal who have rendered two years' satisfactory service in excepted positions and who have not had full opportunity for examination."

2. This order confers eligibility for transfer. It does not provide a position for anyone nor even place persons eligible upon a preferential basis. The burden of procuring a position into which to transfer will rest with the person desiring to secure a transfer.

3. The successive steps should be as follows:

(a) Make application for the Governor's recommendation, which, when given, will be forwarded by The Panama Canal to the Civil Service Commission, Washington, D. C., and the applicant will be notified of such action.

(b) Find a vacant position in the competitive classified service; the department to which transfer is desired will request the approval of such transfer by the Civil Service Commission.

4. After the Governor has forwarded his recommendation to the Civil Service Commission no further action will be taken by The Panama Canal, except as the Civil Service Commission may request further information. The interpretation of the provisions of the Executive Order is entirely outside of the functions of The Panama Canal.

5. Application for the Governor's recommendation for transfer should be made, by persons residing on the Isthmus, to "The Governor, The Panama Canal, Balboa Heights"; by persons not resident on the Isthmus to "The Chief of Office, The Panama Canal, Washington, D. C." Application should be in writing and the applicant's name and position held, or last held, should be clearly stated.

6. Persons whose workmanship or conduct is rated below "good" will not be recommended for transfer.

7. Persons who have been separated from the service for more than one year must furnish certificates by two qualified persons (preferably employers, or official superiors) showing that workmanship and conduct have continued satisfactory.

8. The interpretation of section (d) is in the hands of the Civil Service Commission, to which recommendations, and in doubtful cases full explanations, will be made by the Governor of The Panama Canal.

GEO. W. GOETHALS,

Governor.

Numbering and Marking Hand and Push Cars.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 22, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

In connection with circular No. 665-1, dated February 11, 1914, particularly paragraph 2 covering numbering and marking of hand and push cars, the following procedure will govern:

All hand cars, whether the property of The Panama Canal or Panama Railroad Company, will be

numbered in one series from 1 upwards, and all push cars from 1,000 upwards.

Cars repaired at shops will be properly numbered and painted. New cars will be painted and numbered by the Supply Department before issue.

The Auditor will assign all numbers and maintain a record of same.

GEO. W. GOETHALS,

Governor, The Panama Canal,

President, Panama Railroad Company.

Leave Regulations—Sundays and Holidays.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 20, 1915.

CIRCULAR No. 602-13:

Paragraph 8 of Circular No. 602 is amended to read as follows:

In all cases where a Sunday or holiday falls within a leave of absence, so that the employee is on leave both prior and subsequent to such day, the Sunday or holiday shall be counted as one day of leave (except, that if the employee worked half of the day preceding and half of the day following a Sunday or holiday, the Sunday or holiday shall not be charged against his leave). If an employee enters upon, or returns from, a leave of absence on a Sunday or holiday, or on the day following a Sunday or holiday, the Sunday or holiday shall not be considered a part of his leave if the employee worked the full day preceding, in case of entry on leave, or the full day following, in case of return from leave.

GEO. W. GOETHALS,

Governor.

Acting Chief Health Officer.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 26, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

During the absence on leave of Col. Chas. F. Mason, effective the 27th instant, Major Percy M. Ashburn is designated as Acting Chief Health Officer.

GEO. W. GOETHALS,

Governor, The Panama Canal.

Requests for First Aid Supplies.

THE PANAMA CANAL,

HEALTH DEPARTMENT,

BALBOA HEIGHTS, C. Z., March 22, 1915.

CIRCULAR No. 76:

To all accountable officials—Emergency or first aid supplies intended to be secured from and charged against the Health Department should be applied for in letter or memorandum form addressed to this office, accompanied by a brief explanation showing where same are to be used. As far as practicable, however, when the stock of the dispensary or hospital nearest you will permit, supplies of this character should be obtained from the physician in charge. Original packages of bandages, cotton, gauze, etc., which your district physician may be unable to conveniently furnish you should be applied for by letter or memorandum as above indicated.

Supplies called for on requisitions against the medical storehouse, Ancon, will be charged against the divisions submitting same. First aid supplies furnished the Panama Railroad Company will be charged to that division as heretofore.

CHAS. F. MASON,

Chief Health Officer.

"Advance" to Sail a Day Earlier.

THE PANAMA RAILROAD,

OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., March 27, 1915.

CIRCULAR No. 38:

All concerned—The sailing date of the steamer *Advance* has been changed from Saturday, April 3, to Friday, April 2, at 3 p. m., from Pier 11, Cristobal.

C. H. MOSETT,

Superintendent.

Shipments of Empty Oil Drums.

THE PANAMA CANAL,

OFFICE OF CHIEF QUARTERMASTER,

BALBOA HEIGHTS, C. Z., March 20, 1915.

All concerned—Considerable difficulty is being experienced in identifying oil drum shipments on account of many cars containing drums being sent to the oil house at Mount Hope and the storehouse at Balboa without tags or papers to cover, which is contrary to existing instructions. It is impossible to hold these cars under load until consignor can be located, and if drums are unloaded and placed with other drums, confusion results.

It is therefore requested that all cars containing empty drums for return to stock be tagged properly, showing contents, consignor, and consignee, and that transfer papers be forwarded promptly.

WM. R. GROVE,

Chief Quartermaster.

Transfer of Radio Headquarters.

OFFICE OF RADIO OFFICER, CANAL ZONE,

NAVAL RADIO STATION, DARIEN, C. Z.,

March 25, 1915.

To all departments—You are advised that on Thursday, March 25, 1915, the office of the Radio Officer of the Canal Zone was moved from the Colon radio station to the Darien radio station. It is requested that all correspondence, bills, and other matter to be handled through this office be addressed to the Radio Officer, Canal Zone, Naval Radio Station, Darien, C. Z.

R. S. CRENSHAW,

Radio Officer, Canal Zone.

Changes in White Schools.

THE PANAMA CANAL,

DIVISION OF SCHOOLS,

BALBOA HEIGHTS, C. Z., March 23, 1915.

To all concerned—The following changes in the white schools will be made, effective Monday, April 5, 1915:

Grades I and II at Corozal will be combined and placed in charge of Miss Mosteller.

Miss Edmonds will be transferred from Corozal to Grade V and part of IV at the Balboa school.

Miss Schield will be transferred from Gatun to Grades I and II at the Cristobal school.

Grades I, II, and III at Gatun will be combined and placed in charge of Mrs. Dechlem.

Grades IV and V at Gatun will be combined and placed in charge of Miss Stone.

Grade VII will be offered at Gatun and combined with Grade VI in charge of Miss Cobban. Pupils now living at Gatun or other stations along the line and attending Grade VII at Cristobal who will take up Grade VII at Gatun should forward their railroad passes to this office.

A. R. LANG,

Superintendent of Schools.

Examinations by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, April 1, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the captain of the port of Cristobal on Friday, April 9, 1915, beginning at 9 a. m. Applicants should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.

F. M. NIXON,

Recorder, Board of Local Inspectors.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., March 29, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts, and may be procured upon request of the addressees:

Cole, Lieut. Henry C.	Maxwell, D. J.
Conway, Capt. James H.	(2) Roscoe, M. P.
Deane, R. E. (paper)	Rose, L. E.
Demmy, J. L.	Smith, George
Hilliard, J. C.	Thompson, A.
McMonigle, Elmer	

COMMISSARY DEPARTMENT.

Charge Accounts at Commissaries for Messes.

THE PANAMA CANAL,

SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., March 24, 1915.

To all concerned—Arrangements have been made whereby messes operated by Canal employes and Army officers may be granted charge accounts at the commissaries where they purchase their supplies; this privilege to be extended upon the condition that the mess deposits with the Auditor of The Panama Canal cash sufficient to cover the estimated purchases of the mess for one month. Bills for supplies furnished under such charge accounts will be submitted on the 16th and last of each month and must be paid within 10 days after bill is rendered, under penalty of cancellation of the privilege. Messes desiring to avail themselves of this privilege should arrange to make deposit with the Auditor and upon advice from him that such deposit has been made, this office will issue authority to the commissary to make sales accordingly.

Each mess, upon being given a charge account, will be required to designate a responsible member of the club who will be authorized to order supplies for the mess and against whom bills will be rendered.

WM. R. GROVE,
Chief Quartermaster.

Closing of Commissaries to Take Quarterly Inventory.

THE PANAMA CANAL,

SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., March 22, 1915.

All concerned—The following stores will be closed to take the quarterly inventory on Wednesday, March 31, and Thursday, April 1:

The cold storage and grocery departments will be opened as usual on April 1:

Cristobal	Culebra	Ancon
Gatun	Paraiso	Balboa
Las Cascadas	Pedro Miguel	La Boca
Empire	Corozal	

The following stores will be closed on March 31, only: Toro Point, Camp Biedr, Gamboa, and Naos Island.

Detailed instructions governing the taking of the last quarterly inventory will be observed in taking this inventory.

WM. R. GROVE,
Chief Quartermaster.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m. but the Balboa store is open from 2.30 to 6 p. m.

The gold departments of the Cristobal store will open at 2 p. m., on Saturdays and sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective April 1, 1915:

FRESH MEATS.

	Price.
Mutton—Stewing, per pound.....	9
Shoulder, trimmed, per pound.....	12
Leg (8 to 10 pounds), per pound.....	19
Short cut, chops, per pound.....	23
Shoulder, chops, per pound.....	14
Lamb—Stewing, per pound.....	12
Shoulder, trimmed, per pound.....	15
Leg (5 to 8 pounds), per pound.....	24
Chops, per pound.....	29
Chops, shoulder, per pound.....	18
Veal—Stewing, per pound.....	12
Shoulder, for roasting (not under 4 lbs.), per pound.....	15
Chops, shoulder, per pound.....	20
Chops, per pound.....	30
Loin for roasting, per pound.....	30
Cutlets, per pound.....	36
Beef—Suet, per pound, special.....	03½
Soup, special, per pound.....	7
Native, per pound.....	5
Soup, bones, per pound, special.....	2½
Stew, special, per pound.....	11
Native, per pound.....	8
Tongue, native, whole, per pound.....	12
Plate, special, per pound.....	12
Native, per pound.....	8
Corned, No. 1, per pound.....	18
Corned, No. 2, per pound.....	15
Chuck roast, special, (3 lbs. and over), per pound.....	12
Chuck roast, native (3 lbs. and over), per pound.....	8
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
Rib roast, second cut, native (3½ pounds and over), per pound.....	9
Rib roast, first cut (not under 3 pounds), special, per pound.....	19
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27

	Price.
Rib roast, first cut, native (3 pounds and over), per pound.....	11
Pot roast, special, per pound.....	20
choice, per pound.....	28
native.....	12
Rump roast, special, per pound.....	20
choice, per pound.....	28
native.....	12
Porterhouse roast, special per pound.....	22
choice, per pound.....	31
native, per pound.....	16
Steak, chuck, special, per pound.....	13
native, per pound.....	9
Round, bottom, special, per pound.....	13
choice, per pound.....	19
native, per pound.....	9
Round, top, special, per pound.....	15
choice, per pound.....	22
native, per pound.....	10
Sirloin, special, per pound.....	20
Sirloin, choice, per pound.....	28
Sirloin, native, per pound.....	12
Sirloin, choice cut, special, per pound.....	23
Sirloin, choice cut, choice, per pound.....	32
Sirloin, choice cut, native, per lb.....	16
Rump, special, per pound.....	20
choice, per pound.....	28
native, per pound.....	12
Porterhouse (not less than 1½ pounds), special, per pound.....	23
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse (1½ pounds and over) native, per pound.....	17
Porterhouse, short, Delmonico special, per pound.....	20
Porterhouse, short, Delmonico choice, per pound.....	28
Porterhouse, short, native, per lb.....	12
Tenderloin, Western, special, per pound.....	35
Tenderloin, Western, choice, per pound.....	46
Tenderloin, Western, native, per lb.....	25
Pork—Hams, fresh, per pound.....	23
Shoulders, fresh, per pound.....	19
Loin, chop, or roast, per pound.....	18
Pigs' feet, fresh, each.....	8
Pigs' head, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23
Ox tails, per pound.....	11
MISCELLANEOUS.	
Brains, calves' per pound.....	12
Calves' head, each.....	80
Kidneys, beef, per pound.....	10
Livers—Beef, per pound.....	11
Calf, each.....	65
half, each.....	33
Oysters, fresh, per pkt.....	30
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	10
Frankfurter, per pound.....	13
Frankfurter, imported, tin.....	14
Liebertvurst, per pound.....	10
Pork, per pound.....	15
Sweetbread, beef, per pound.....	20
Eggs, fresh, per dozen.....	24
per ½ dozen.....	12
Bluefish, per pound.....	15
Halibut, fresh, per pound.....	*7
Salmon, per pound.....	6
Yeast, per pound.....	31
per cake.....	2
POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound.....	29
Chickens—Fancy, roasting, corn fed, per pound.....	26
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	32
Broilers, milk fed, per pound.....	32
Broilers, corn fed, per pound.....	28
Turkeys, per pound.....	28
Squabs, each.....	40
Geese, per pound.....	23
Grouse, each.....	1.00
Mallard ducks, 2 to 2½ pounds, each.....	2.35
VEGETABLES.	
Beets, per pound.....	3
Cabbage, per pound.....	2
Carrots, per pound.....	2
Celery, per head.....	*9
Lettuce, per pound.....	*7
Onions, per pound.....	*2
Parsley, per pound.....	10
Parsnips, per pound.....	4½
Plantains, per dozen.....	*12
Peppers, per pound.....	17
Potatoes, white, per pound.....	2
Spinach, per pound.....	11
Turnips, per pound.....	2
Tomatoes, per pound.....	11
Squash, new summer, per pound.....	*10
Yams, tropical, per pound.....	2½
FRUITS.	
Apples, per pound.....	5
Cranberries, fresh, per pound.....	6
Grape fruit—Select, each.....	5
Tropical, each.....	3½
Lemons, per dozen.....	12

	Price.
Oranges—Select, each.....	2
Tropical, per dozen.....	12
Coconuts, each.....	*1
Bananas, per bunch.....	38
Bananas, each.....	½
Apples, evaporated, per pound.....	11
Apricots, evaporated, per pound.....	15
Pears, evaporated, per pound.....	23
Pineapples, each.....	12
Figs, dried, 12-oz package.....	14
Figs, dried, 5-oz package.....	5

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective March 30, 1915.

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Walnuts, jar.....	\$0.27	\$0.23
Nutmegs, lb.....	.24	.21
Apollinaris water, bot.....	.11	.12
Apollinaris water, bot.....	.08	.09
Nets, fringe, ea.....	.12	.09
Underwaists, ea.....	.20	.24
Hats, felt, ea.....	3.15	3.30
Bathing suits, men's, ea.....	2.05	2.10
Knives, Tudor, ea.....	.69	.74
Ammonia, P. C., bot.....	.10	.14

Additions to Stock.

Pettijohn breakfast food.....	\$0.14
Lace, fancy cloth, yd.....	.24
Foundation silk, yd.....	.22
Crepe, fancy, yd.....	.09
Sheer, linen, fancy, yd.....	.18
Linen, clipped dots, yd.....	.19
Waistings, yd.....	.23
Madras, check, yd.....	.18
Shrunk fancies, yard.....	.35
Linen, wide novelties, yd.....	.24
Linen, wide novelties, yd.....	.24
Voile, fancy, yd.....	.27
Ribbon, velvet, aberdern, yd.....	.02
Ribbon, velvet, aberdern, yd.....	.03
Heels, rubber, Women's, Cuban, tan, pr.....	.23
Drainers, dish, galvanized, ea.....	.06
Men's coat hangers, ea.....	.13
Mouse traps, ea.....	.04

Proposals for Plastering 20 Concrete Houses, Balboa Dump and Balboa Flat.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., April 7, 1915, and then opened, for furnishing the necessary labor to completely finish the plastering in 10 concrete houses on Balboa dump and 10 concrete houses on Balboa flat. Bids must be at a price per square yard and one bidder may submit bid on all or part of the buildings. In case bid is submitted for all of the houses, it must be accompanied by cash, certified check, or post-office money order for \$2,000. In case bid is submitted for part of the houses only, it must be accompanied by deposit of five per cent of the total amount bid. Specifications and all necessary information may be obtained upon application to the office of the Constructing Quartermaster, Room 268, Balboa Heights, C. Z. The Panama Canal reserves the right to accept or reject any or all bids or any part of any bid in its discretion.

Proposals should be marked "Proposal for plastering concrete houses, Balboa dump and Balboa flat," and addressed to the Chief Quartermaster, Balboa Heights, C. Z.

Proposals for Plumbing Two Four-Family Concrete Houses, Balboa Dump.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., April 10, 1915, and then opened, for furnishing the necessary labor to completely finish the plumbing in two four-family concrete houses which are now being erected on Balboa dump. Separate bid should be submitted for each house but one bidder may bid on both houses. Bidders should state in their proposal the time in which they propose to complete each house. Specifications and further information may be obtained upon application to the office of the Constructing Quartermaster, Room 268, Balboa Heights, C. Z.

Bids must be accompanied by certified check, post-office money order, or cash, in the sum of \$100. The Panama Canal reserves the right to accept or reject any or all bids.

Bids should be marked "Proposal for plumbing two four-family houses, Balboa dump," and addressed to the Chief Quartermaster, Balboa Heights, C. Z.

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next five weeks are given in the following table:

APRIL.

DATE.	Time and height of high and low water.			
Thurs., April 1.....	4:17	10:27	16:33	22:52
Fri., April 2.....	16.2	-0.9	17.2	-1.7
	4:59	11:10	17:14	23:37
Sat., April 3.....	16.6	-1.0	17.4	-1.8
	5:42	11:54	17:57	.....
Sun., April 4.....	16.5	-0.7	17.0	.....
	0:21	6:27	12:39	18:42
Mon., April 5.....	-1.3	15.9	0.0	16.2
	1:05	7:14	13:30	19:32
Tues., April 6.....	-0.4	15.0	1.0	15.1
	2:02	8:09	14:27	20:29
Wed., April 7.....	0.7	13.9	2.2	13.8
	3:02	9:15	15:34	21:41
Thurs., April 8.....	1.9	12.8	3.3	12.6
	4:11	10:35	16:49	23:08
Fri., April 9.....	2.8	12.2	3.9	12.0
	5:26	12:03	18:07	.....
Sat., April 10.....	3.2	12.2	3.8	.....
	0:34	6:56	13:15	19:14
Sun., April 11.....	12.0	3.0	12.8	3.1
	1:42	7:37	14:10	20:09
Mon., April 12.....	12.6	2.6	13.5	2.3
	2:34	8:27	14:55	20:55
Tues., April 13.....	13.2	2.1	14.1	1.6
	3:18	9:11	15:32	21:35
Wed., April 14.....	13.8	1.7	14.5	1.0
	3:54	9:50	16:06	22:12
Thurs., April 15.....	14.2	1.4	14.8	0.7
	4:28	10:27	16:37	22:47
Fri., April 16.....	14.4	1.3	14.8	0.6
	4:58	11:03	17:08	23:23
Sat., April 17.....	14.4	1.4	14.7	0.7
	5:33	11:39	17:40	.....
Sun., April 18.....	14.1	1.8	14.3	.....
	0:00	6:06	12:15	18:12
Mon., April 19.....	1.1	13.7	2.3	13.8
	0:37	6:40	12:53	18:45
Tues., April 20.....	1.6	13.1	2.9	13.2
	1:16	7:16	13:35	19:23
Wed., April 21.....	2.3	12.5	3.6	12.6
	2:00	7:59	14:22	20:07
Thurs., April 22.....	3.0	11.9	4.2	11.9
	2:50	8:50	15:18	21:04
Fri., April 23.....	3.6	11.5	4.7	11.4
	3:48	9:56	16:24	22:15
Sat., April 24.....	3.9	11.3	4.7	11.2
	4:52	11:06	17:29	23:31
Sun., April 25.....	3.9	11.7	4.2	11.5
	5:52	12:09	18:28	.....
Mon., April 26.....	3.4	12.4	3.2	.....
	0:37	6:48	13:04	19:23
Tues., April 27.....	12.3	2.6	13.5	1.9
	1:32	7:40	13:52	20:11
Wed., April 28.....	13.3	1.7	14.7	0.6
	2:22	8:29	14:38	20:58
Thurs., April 29.....	14.4	0.7	15.8	-0.5
	3:09	9:14	15:31	21:43
Fri., April 30.....	15.4	-0.1	16.7	-1.4
	3:54	10:02	16:08	22:30
	16.1	-0.6	17.1	-1.8

MAY.

DATE.	Time and height of high and low water.			
Sat., May 1.....	4:40	10:48	16:54	23:17
	16.5	-0.7	17.2	-1.8
Sun., May 2.....	5:26	11:36	17:40	.....
	16.3	-0.4	16.8	.....
Mon., May 3.....	0:05	6:14	12:26	18:29
	-1.3	15.9	0.2	15.9
Tues., May 4.....	0:54	7:05	13:19	19:22
	-0.5	15.1	1.2	14.8
Wed., May 5.....	1:49	8:02	14:17	20:21
	0.6	14.1	2.2	13.5

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used in Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

*Every Monday to New York for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE—The sailing on Monday, April 5, will not land mail in New York until Tuesday of the following week; hence despatches on that date will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7:10 a. m., connects with the despatches for the sailing on April 5.

Rainfall from March 1 to 27, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa.....	.....	.....	.....
Balboa Heights.....	.....	.....	.....
*Mirafleres.....	.63	23 & 24	.07
Pedro Miguel.....	.22	24	.22
Rio Grande.....	.15	24	.19
<i>Central Section—</i>			
Culebra.....	.07	24	.09
*Camacho.....	.83	20	.88
Empire.....	.18	20	.24
Gambao.....	.01	22 & 25	.02
*Juan Mina.....	.16	20	.20
Alhajuela.....	.03	4	.04
El Vigia.....	.03	23	.06
Frijoles.....	.42	18	.69
Monte Lirio.....	.30	3 & 26	.70
<i>Atlantic Section—</i>			
Gatun.....	.21	18	.86
*Brazos Brook.....	.24	11	.87
Colon.....	.44	20	1.67

*Standard rain gage—readings at 5 p. m.
Automatic rain gage at unstarred stations—values midnight to midnight.
†Several dates.

Fuel and Supplies.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Cristobal or Balboa from plants of The Panama Canal, or from the private corporations which have tanks at the terminals. The present price for fuel oil supplied by The Panama Canal is \$1.25 per barrel of 42 gallons. The prices made by the corporations may be obtained on application to them.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock, with a minimum charge of \$3. Vessels may take up from the fresh water sections of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Subsistence supplies, including a large stock of fresh meats, vegetables, canned groceries, fruits, bakery products, etc., are available for quick delivery at either terminal. Prices are generally lower than the retail prices in the United States, and compare favorably with prices in any part of the world.

The cable address of The Panama Canal, on the Isthmus, is "Panacan, Balboa Heights;" in the United States, "Panacan, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

Sailings of Vessels in Regular Service with the Isthmus.

REGULAR CONNECTIONS THROUGH THE CANAL.

Approximately regular services between the Atlantic and the Pacific seaboard from Boston, New York, Philadelphia, and Baltimore, occasionally Charleston and New Orleans, to San Pedro, San Francisco, Portland, and Puget Sound, and return, are maintained by the American-Hawaiian Steamship Company, with a sailing each way about every five days; the Luckenbach Steamship Company, with a sailing each way about every 10 days; Sudden and Christenson, approximately fortnightly; the Atlantic and Pacific Steamship Company, about every three weeks; and the Boston and Pacific Line, and the Arrow Line, each sending a vessel each way about once a month.

Between the east coast of the United States and the west coast of South America, fortnightly services are maintained by the Merchants' Line and by the New York and South America Line; the West Coast Line has sailings each way about every four weeks.

Between the west coast of the United States, with connections to lower British Columbia, and Europe the following lines are in service: The Harrison-Direct Line, monthly; the Maple Leaf Line, about every six weeks; the East Asiatic Company, monthly, and the Johnson Line, every six or seven weeks.

The Pacific Steam Navigation Company is operating approximately a fortnightly service between the west coast of South America and Liverpool, by way of the Canal, with either direct vessels or connections at Colon with vessels of the Royal Mail Steam Packet Company.

The American-Australian Line has been sending vessels through the Canal about fortnightly from New York to ports in Australia and New Zealand.

PACIFIC COAST CONNECTIONS.

The Pacific Mail has sailings about every 10 days between Balboa and San Francisco, with calls at Puntarenas, San Juan del Sur, Corinto, Amalpa, La Union, La Libertad, Acajutla, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. The company also operates a direct line between Balboa and San Francisco, with sailings about every six weeks; and a Panama-Central American Line, between Balboa and Ocos, making one round voyage monthly, and calling at all the ports abovementioned between Balboa and Ocos.

Grace & Company maintain a service with a vessel plying between San Francisco and Valparaiso, calling at way ports. It makes a round voyage about every 10 weeks.

The Peruvian Steamship Company maintains a weekly service between Balboa and Callao, with calls at Guayaquil, Paíta, Eten, Pacasmayo, and Salaverry. Every second voyage includes Mollendo.

The South American Steamship Company's vessels sail on alternate Mondays from Balboa to Valparaiso, calling at Paíta, Eten, Pacasmayo, Salaverry, Callao, Mollendo, Arica, Iquique, Antofagasta, and Coquimbo.

The Pacific Steam Navigation Company has sailings on alternate Mondays for Peru and Chile; every 10 days for Ecuador; and on alternate Mondays for Colombian and Ecuadorian ports.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service between Colon and Southampton, making the following way ports: Antilla, Jamaica, Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores and Cherbourg. Its vessels all arrive at Colon on Sundays and sail on Tuesdays.

The Compagnie Generale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano and Trinidad.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, Tenerife, and Barcelona.

The Compania Transatlantica de Barcelona sends a vessel from Colon to Genoa on the 12th day of each month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls enroute, the vessels sail from Genoa on the 8th day of each month.

(Continued on page 294.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m. March 28, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Mar. 22....	Columbian.....	American.....	American-Hawaiian S.S. Line...	New York.....	Los Angeles.....	General cargo.....	11,700	8,662	6,409
Mar. 22....	Jersey City.....	British.....	W. R. Smith & Sons.....	Port Talbot.....	Pisagua.....	Ballast.....		5,271	3,836
Mar. 23....	Panamon.....	American.....	American-Hawaiian S.S. Line...	New York.....	San Francisco.....	General cargo.....	8,196	6,937	4,760
Mar. 24....	Suecia.....	Swedish.....	Johnson Line.....	Göteborg.....	San Francisco.....	General cargo.....	353	5,275	3,986
Mar. 24....	Damara.....	American.....	Luckenbach Line.....	New York.....	Los Angeles.....	General cargo.....	8,100	5,835	4,506
Mar. 25....	Guatemala.....	British.....	Pacific Steam Nav. Co.....	Cristobal.....	So. Pac. ports.....	General cargo.....	750	4,249	2,772
Mar. 27....	Jason.....	American.....	United States Navy.....	Norfolk.....	San Francisco.....	Coal, exhibits.....	6,000	11,365	6,346
Mar. 28....	Georgian.....	American.....	American-Hawaiian S.S. Line...	New York.....	San Francisco.....	General cargo.....	9,100	6,920	4,908
Mar. 28....	Advance.....	American.....	Panama R.R. S.S. Line.....	New York.....	Balboa.....	General cargo.....	1,262	2,965	2,161
Mar. 28....	Waturus.....	American.....	I. L. Severns.....	Curacao.....	Balboa.....	Yacht (ballast).....		607	304
Mar. 28....	Netherby Hall.....	British.....	Ellerman Lines.....	Philadelphia.....	Ten San, Korea.....	Case oil.....	4,350	4,831	3,588

(a) Including 4,934 tons of structural material and 1,827 tons of tin plate.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Mar. 22....	Strathorven.....	British.....	Strath Line.....	Callao.....	Azores, (orders).....	Sugar.....	6,528	4,676	3,406
Mar. 22....	Caesar.....	American.....	United States Navy.....	San Francisco.....	Hampton Roads.....	Arms & ammun.....	1,560	2,934	1,731
Mar. 23....	John A. Hooper.....	American.....	Sudden & Christenson.....	Calita Colosa.....	Philadelphia.....	Nitrates.....	2,950	2,462	1,536
Mar. 23....	Rhodesia.....	Danish.....	East Asiatic Line.....	San Francisco.....	Copenhagen.....	Barley, flour, genl.....	6,182	4,592	3,311
Mar. 24....	Aysen.....	Chilean.....	So. American S.S. Co.....	Talcahuano.....	Cristobal.....	General cargo.....	1,251	4,593	3,042
Mar. 24....	Isthmia.....	American.....	American-Hawaiian S.S. Line...	Calita Buena.....	Savannah.....	Nitrates.....	6,999	5,677	3,975
Mar. 25....	Jamaica.....	British.....	Pacific Steam Nav. Co.....	Tumaco.....	Cristobal.....	General cargo (a).....	617	1,170	620
Mar. 25....	Atlantic.....	American.....	Boston & Pacific Line.....	Genoa Bay.....	New York.....	Lumber (b).....	7,500	5,421	3,811
Mar. 25....	Colon.....	American.....	Panama R.R. S.S. Line.....	Balboa.....	New York.....	General cargo.....	1,395	5,966	4,222
Mar. 25....	Janno.....	Norwegian.....	D. Stern.....	San Francisco.....	Bergen.....	Barley.....	2,631	1,731	1,608
Mar. 26....	Mexico.....	British.....	Pacific Steam Nav. Co.....	Valparaiso.....	New Orleans.....	Nitrates.....	4,527	6,493	4,137
Mar. 26....	Leeds City.....	British.....	W. R. Smith.....	Calita Buena.....	New Orleans.....	Nitrates.....	6,852	4,329	3,021
Mar. 26....	Pennsylvania.....	American.....	American-Hawaiian S.S. Line...	Iquique.....	Norfolk.....	Nitrates.....	8,600	6,819	4,663
Mar. 27....	Olsen & Mahoney.....	American.....	Olsen & Mahoney.....	Seattle.....	New York.....	Lumber (c).....	3,216	1,564	782
Mar. 28....	Peru.....	British.....	Pacific Steam Nav. Co.....	Guayaquil.....	Colon.....	General cargo.....	1,273	4,038	2,626
Mar. 28....	California.....	American.....	Sudden & Christenson.....	Mejillones.....	Charleston, S.C.....	Nitrates.....	11,485	8,073	6,647
Mar. 28....	Crickel.....	American.....	Lindeman S.S. Co.....	San Francisco.....	Boston.....	Lumber, sb'gles(d).....	2,017	1,330	805
Mar. 28....	Kentuckian.....	American.....	American-Hawaiian S.S. Line...	Hilo.....	Delaware Bkwr.....	Sugar.....	8,717	6,913	4,756

(a) Including 199 pounds of gold dust, valued at \$38,242, and two tons of hats, valued at \$26,137.78. (b) 4,500,000 feet board measure. (c) 1,930,000 feet, board measure. (d) 1,210,218 feet, board measure.

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
Mar. 29....	Inverkip.....	Inverkip S.S. Co.....	England.
Mar. 29....	City of Bristol.....	Ellerman Lines.....	New York.
Mar. 23....	Hawaii.....	American-Hawaiian Line.....	New York.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Mar. 29....	De Soto.....	Standard Oil Co.....	Talara, Peru.
Mar. 29....	Strathdene.....	Strath Line.....	.....

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date	Vessel	Line	From	Date	Vessel	Line	To
Mar. 22....	Tordenskjold.....	Earn Line.....	Norfolk.	Mar. 22....	Tabor.....	Earn Line.....	Nima Nima.
Mar. 25....	Haiti.....	Cie. Gen. Transatlantique.....	Bordeaux.	Mar. 24....	Oberon.....	Dutch Royal Mail.....	Puerto Barrios.
Mar. 25....	Buford.....	U. S. transport.....	New York.	Mar. 24....	Stella.....	Dutch Royal Mail.....	Amsterdam.
Mar. 25....	Wegadesk.....	Earn Line.....	Norfolk.	Mar. 24....	Seth, Jr.....	Robert Wilcox.....	New York.
				Mar. 25....	Tordenskjold.....	Earn Line.....	Nima Nima.
				Mar. 26....	Frances Hyde.....	Cie. Gen. Transatlantique.....	New Orleans.
				Mar. 27....	Haiti.....	Cie. Gen. Transatlantique.....	Bordeaux.
				Mar. 28....	Wegadesk.....	Earn Line.....	Felton, Cuba.

*EXPECTED ARRIVALS.

April 3....	Naperion.....	Leyland Line.....	Liverpool.
April 14....	Musicien.....	Harrison Line.....	Liverpool.

*EXPECTED DEPARTURES.

.....	Buford.....	U. S. transport.....
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*Other than vessels passing through the Canal. United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.				*DEPARTURES.			
Mar. 23....	Pennsylvania.....	Pacific Mail S.S. Co.....	San Francisco.....	Mar. 25....	Hercules (tug)	Ship Merch'ts' Tug Boat Co.	San Francisco.
Mar. 25....	Ucayali.....	Peruvian S.S. Co.....	Callao.				
Mar. 25....	Hercules (tug)	Ship Merch'ts' Tug Boat Co.	Port Harford.				
*EXPECTED ARRIVALS.				*EXPECTED DEPARTURES.			
Mar. 30....	San Jose.....	Pacific Mail S.S. Co.....	San Francisco.	Mar. 30....	Pennsylvania.....	Pacific Mail S.S. Co.....	Sao Francisco.
Mar. 31....	Limari.....	South American S.S. Co.....	Valparaiso.				
April 1....	Chottoooga.....	United States Navy.....	Corinto.				

*Other than vessels passing through the Canal.

(Continued from page 293.)

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal, and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailing via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails.	Arrives.
Almirante.....	U. F. C. Mar. 24.....Mar. 31
Panama.....	P. R. R. Mar. 25.....Mar. 31

Pastores.....	U. F. C. Mar. 27....April 4
Zacapa.....	U. F. C. Mar. 31....April 7
Allianca.....	P. R. R. April 1....April 7
Calamares.....	U. F. C. April 3....April 11
Carrillo.....	U. F. C. April 7....April 14
Colon.....	P. R. R. April 8....April 14
Santa Marta.....	U. F. C. April 1....April 8
Advance.....	P. R. R. April 2....April 9
Metapan.....	U. F. C. April 5....April 13
Almirante.....	U. F. C. April 8....April 15
Panama.....	P. R. R. April 10....April 16
Pastores.....	U. F. C. April 12....April 19
Zacapa.....	U. F. C. April 15....April 22
Allianca.....	P. R. R. April 17....April 23

NEW ORLEANS TO CRISTOBAL-COLON.

Turrialba.....	U. F. C. Mar. 24....Mar. 31
Heredia.....	U. F. C. Mar. 27....April 1
Abogarez.....	U. F. C. Mar. 31....April 6
Parismina.....	U. F. C. April 3....April 8
Atenas.....	U. F. C. April 6....April 13
Cartago.....	U. F. C. April 10....April 16

CRISTOBAL-COLON TO NEW ORLEANS.

Cartago.....	U. F. C. April 1....April 6
Turrialba.....	U. F. C. April 1....April 8
Heredia.....	U. F. C. April 8....April 13
Abogarez.....	U. F. C. April 8....April 15
Parismina.....	U. F. C. April 15....April 20
Atenas.....	U. F. C. April 15....April 22



The Canal Record

Official publication of The Panama Canal.

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Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,

Isthmus of Panama.

NOTES OF PROGRESS.

Severe Norther In Limon Bay.

The second norther of the dry season just coming to a close blew into Colon Harbor on Saturday, April 3, and continued until evening of Monday, April 5. The high winds and heavy seas swept the surveying yacht *Carnegie* from her anchorage in the outer harbor and carried her aground, but she was pulled off by the seagoing suction dredge *Caribbean*. No other considerable damage was done to shipping.

Further damage was done to the trestle of the East Breakwater in Limon Bay, which had been badly damaged by the norther of February 8-10, 1915. In the first storm, a section of trestle 4,200 feet long, lying beyond fill for a relay station 1,600 feet from shore, and extending to the site of the proposed breakwater proper, had been entirely swept away; beyond the outer end of this section, for a distance of 2,100 feet, the trestle still retained the decking but for 1,600 feet beyond that, only the piles had been left. The storm of April 3 added to this damage by sweeping the decking off of all but about 160 feet of the 2,100-foot section which had retained its decking; washing out numbers of piles in the bents in this section; and doing further damage to those piles still standing in the outer 1,600-foot section of the breakwater proper. It also washed away about 364 feet of single-track trestle which had been built in the gap between the first relay station and the breakwater proper, in the reconstruction of trestle, and tore the decking off about 300 feet at the outer end of the double-track trestle. Between this point and one about 1,100 feet from shore, the trestle was considerably damaged, but from the 1,100-foot point to shore it remains intact.

The West Breakwater, extending from Toro Point, was damaged slightly by the waves, some of the armor rock being swept from place. The mole at the new Cristobal pier suffered considerably from undermining, and construction forces are now dumping heavy rock on the sea side to repair the damage.

The Chief Hydrographer reports this to

have been the most severe and intense storm in Limon Bay since the American occupation. The wind blew as high as 46 miles per hour.

Freshet on the Chagres River.

Following heavy rainfall above Alhajuela, the Chagres River started rising at Alhajuela at 4 p. m., on Saturday, April 3, from elevation 91.60, and in five hours reached its crest at elevation 102.35 feet. The discharge at this elevation was 27,050 cubic feet per second.

The river fell to elevation 96.00 feet, when a second rise started, which attained a crest at elevation 102.0 in the morning of the 4th. The river retained that elevation for an hour; its discharge was 26,000 cubic feet per second or a total of 93,600,000 cubic feet for that hour.

The river fell very slowly, reaching a height of 94.0 at midnight of the 5th. The mean discharge of the freshet for a 56-hour period was 12,215 cubic feet per second, or a little less than the discharge of one spillway gate. Owing to the excessive rains over the lake watershed the Gatun Spillway was operated extensively during this rise, five gates being open part of the time, effecting a maximum discharge of 64,015 cubic feet per second.

Floating Cranes to be Fitted with Salvaging Pumps.

The two new 250-ton floating cranes *Ajax* and *Hercules* are to be fitted upon with pumping systems to increase their effectiveness in the salvaging of stranded or sunken vessels. In addition to the installation of a steam-driven pump with an 8-inch suction for pumping out the hold of the pontoon of the crane, and for service in case of fire, each is to be provided with an electrically driven centrifugal pump with 6-inch suction, a similar pump with 10-inch suction, and one with 12-inch suction; and also a steamdriven duplex pump, 16 by 22 by 18 inches.

All of the pumps required for this work are now available in the store of retired equipment, but it will be necessary to purchase two 125-horsepower motors, one 85-horsepower motor, and two 40-horsepower motors. In all, the total expenditure for the installation is to be about \$5,000.

The need of such equipment was shown in the recent efforts to pump out the stranded *Blanche E. Pendleton* in Limon Bay with equipment from the dredging fleet. It is believed that upon the completion of the cranes with this auxiliary equipment, they will form a salvaging outfit fully capable of meeting any ordinary demands.

Panama Canal Flag.

A blue flag bearing the letters "P. C." in white has been authorized for the Marine Division equipment. It will be flown at the bows of launches when on official duty and on dress occasions, and at the foremasthead of tugs on duty.

STATUS OF CANAL PORTS

Politically American but Foreign with Respect to Trade and Immigration—Local Regulations.

The ports of Cristobal and Balboa at the terminals of the Canal though situated in the Canal Zone, over which the United States has, according to the decision of the Supreme Court of the United States, "sovereignty and proprietorship," are foreign ports with respect to trade and immigration.

This was established by an Act of Congress approved March 2, 1905, which provided "That all laws affecting imports of articles, goods, wares, and merchandise, and entry of persons into the United States from foreign countries shall apply to articles, goods, wares, and merchandise, and persons coming from the Canal Zone, Isthmus of Panama, and seeking entry into any State or Territory of the United States or the District of Columbia."

These ports are excluded by that Act from the coastwise trade of the United States. They could become coastwise ports only by another act of Congress, extending such status to them; and in view of the international relations of the Canal, such an act is not likely to be passed.

From the foregoing it follows that vessels coming through the Canal in the United States coastwise trade are not allowed to take on additional cargo at either of the terminals. Such vessels, having cleared under the regulations governing the coastwise trade, if allowed to take additional cargo at the Canal would be engaging in coastwise and foreign trade on the same voyage, which is contrary to the law of the United States. Coastwise vessels passing through the Canal are in a status of being "sealed" with respect to cargo. Individual exceptions to this rule have been made recently, by special agreement of authorities in Washington, to the extent of allowing coastwise vessels to discharge at the Canal cargo consigned to the United States Government. This is held to involve no possibility of frauds on the import customs of the United States. Such possibility in other cases has been the primary basis for the distinction between coastwise and foreign trade.

Politically the Canal ports are American and all general matters of government such as, for instance, the maintenance of neutrality are under the same rules as apply to United States ports. More specific matters of administration are carried out under separate local rulings, based fundamentally on practices in the United States but modified to meet local conditions.

The administration of the Canal ports with respect to the entrance and clearance of vessels involves the two primary matters of quarantine regulations and customs regulations. The detailed duties of the Health Department and the Bureau of Customs have been set forth in circulars, previously pub-

lished in THE CANAL RECORD and otherwise circulated among shipping interests.

The quarantine regulations, while designed fully to protect the sanitation of the Canal and its terminal ports, require nothing that is extraordinary or beyond the advanced practices of enlightened countries. The Bureau of Customs is charged with the entry and clearance of vessels at the ports of the Canal Zone; the enforcement of the laws applying to importations into the Canal Zone, and of the immigration laws, except as these are a part of the quarantine regulations; the certification of invoices covering shipments from the Canal Zone to the United States; and the performance of such services to seamen as are commonly rendered by shipping commissioners in American ports, or by American consuls in foreign ports.

Vessels using the Canal, with through clearance from port of departure for port of final destination, which is the case with the majority of the vessels using the route, and not stopping at either terminal port, are not required to enter or clear. A vessel that stops at either or both terminal ports will be required to enter, and clearance will be issued from the last port at which the vessel stops. Coming alongside a Canal wharf for taking on fuel or supplies, without transfer of cargo, is not regarded as "stopping" in the sense of this provision. Passengers are allowed to land and reembark without further restrictions than those imposed by the quarantine and customs regulations on all immigrants, transient or permanent. In other words, as the Canal is regarded primarily as a means of shortening transit, nothing is required, further than for the protection of the public health and interest, that may occasion delay to vessels.

Notice to Mariners.

For the benefit of mariners making the Canal, attention is called to the fact that the following notices to mariners, originally issued by The Panama Canal, have been included in the volumes of "Notices to Mariners," Nos. 1 to 52, inclusive, published by the Hydrographic Office at Washington under the authority of the Secretary of the Navy:

	Para- Page.	graph.
Almirante Bay, Cape Toro Light, characteristic.....	802	2625
Canal Zone—		
Balboa—		
Anchorage limits.....	689	2256
Dumping grounds, buoys to be established.....	1092	3536
Canal open to commerce.....	857	2797
Colon Harbor—		
Coco Solo Point, East Breakwater construction, lights and buoy established.....	1061	3440
Gas buoy discontinued.....	1090	3530
Panama Canal approach, gas buoys temporarily established.....	7	24
West Breakwater Light established, light buoy discontinued.....	1062	3441
West Breakwater—		
Lights destroyed.....	777	2539
Lagarto, reef reported to northward.....	1111	3599
Limon Bay—		
Cristobal Harbor, buoys established, directions.....	1062	3442
Shoal, caution.....	1228	3992
Panama Canal, information concerning payment of tolls and other charges.....	1154	3745
Panama Canal, new chart.....	1111	3600

Such local notices to mariners are published as issued in THE CANAL RECORD, and are included in the volume of "Sailing Directions and General Information," also published by The Panama Canal.

DISTANCESAVED BY CANAL.

New York and San Francisco Nearer by Three-fifths of Former Distance.—Other Striking Instances.

From Colon, on the Atlantic side of the Isthmus of Panama, to Balboa, on the Pacific side, the distance by water, around South America, is 10,500 nautical miles. Through the Canal that distance is reduced to less than 44 miles.

The difference in length of these routes, 10,456 miles, represents the maximum distance that can be saved to a vessel by use of the Canal. This maximum is more interesting geographically than commercially because vessels bound for the Pacific coast by way of the Strait of Magellan would not skirt the entire Atlantic coast of South America, but would strike across the Caribbean, if from the United States, or the central Atlantic, if from Europe, and proceed by the most direct route consistent with commercial advantage. But the saving is not purely hypothetical. The tug *Reliance*, once employed in the Atlantic entrance of the Canal, was transferred to the Pacific entrance by way of Magellan. The voyage required 126 days, and the *Reliance* has since several times made the transit from ocean to ocean in one day, in passing back and forth between Colon and Balboa by way of the Canal.

What counts in the commercial value of the Canal is not the distance that could be saved but the distances that are saved, by vessels substituting the Canal route for the earlier 'round-the-continent route in regular trade. Following are some of the savings on great trade routes, between important areas:

The great United States Atlantic port of New York, for instance, is nearer to the great Pacific port of San Francisco, through the use of the Canal, by 7,873 nautical miles. The distance of 13,135 miles by Magellan has been reduced to 5,262 miles by the Canal. The water distance between these ports is two-fifths what it used to be. Compared in terms of the overland route between these cities, it is about as if a man who wished to travel from New York to San Francisco were magically transported in an instant to Denver, Colorado, there to begin his railroad trip. Three-fifths of the way would be saved before he started.

So far in the use of the Canal, over 40 per cent of the vessels which have passed through it have been engaged in the coastwise trade of the United States—each of them saving about 7,800 miles on each trip. If their average speed be taken at 10 knots, they have averaged

a saving of over a month at sea on each voyage from coast to coast. Where formerly the round trip of a 10-knot vessel required about 55 days actually steaming, the time at sea for the same trip for the same vessel is now reduced to about 22 days.

The next heaviest traffic through the Canal is between the Pacific coast of the United States and Europe. The Canal makes San Francisco nearer to Liverpool by 5,666 miles, a saving of two-fifths of the old journey by Magellan. The distance between San Francisco and Gibraltar has been reduced from 12,571 miles to 7,621 miles, a saving of 4,950 miles or 39 per cent of the former distance.

From San Francisco to Buenos Aires, via Valparaiso and Magellan, is approximately 7,610 miles; which is shorter than the route through the Canal, by which the distance is 8,941 miles. To Rio Janeiro, the distance via Magellan is 8,609 miles; by the Canal, 7,885 miles. To Pernambuco, on the eastern promontory of South America, the distance via Magellan is 9,748 miles; via the Canal, 6,746 miles. To Para, the distances via Magellan and via the Canal are 10,852 and 5,642 miles, respectively.

From San Francisco to Freetown, on the west coast of middle Africa, the distance by the most practicable former route, using the Strait of Magellan, is 11,380 miles. Through the Canal and by way of the island of Barbados, the distance is 7,277 miles.

With reference to the trade between the Atlantic coast of the United States and the west coast of South America, New York is nearer to Valparaiso by 3,717 miles by virtue of the Canal; to Iquique, one of the great nitrate ports, by 4,139 miles, and to Guayaquil by 7,405 miles. From New York to Guayaquil the present distance of 2,765 miles is approximately 27 per cent of the former distance, 10,270 miles.

As to the Far East, New York is nearer to Yokohama by 3,768 miles than formerly by way of the Suez Canal, but the latter route is 18 miles shorter than the Panama route for vessels plying between New York and Hongkong. New York is 41 miles nearer Manila by Panama than by Suez, and 3,932 miles nearer Sydney by Panama. New York is now, by virtue of the Panama Canal, nearer than Liverpool to Yokohama by 1,880 miles, and nearer than Liverpool to Sydney by 2,424 miles.

The foregoing are typical instances of the changes of routes effected by the opening of the Canal. Detailed tabulations of distances are given in the tables on the opposite page.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Selitaire, Theodore, alias Selites, Theodore	24019	Martinique....	Panama.....	Dredging Div...	Mar. 16, 1915
Gallimore, William.....		Jamaica.....	Panama.....	Fortifications...	Mar. 31, 1915
Edwards, James.....	90834	Barbados.....	Colon.....	P. R. R.....	Mar. 31, 1915
Brown, Charles J.....	15785	U. S. A.....	Cristobal.....	P. R. R.....	Mar. 12, 1915

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z., All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,

Administrator of Estates.

SOME OF THE REDUCTIONS IN SEA COURSES EFFECTED BY THE PANAMA CANAL.

REDUCTION (IN NAUTICAL MILES) EFFECTED BY THE PANAMA CANAL IN LENGTH OF ALL-WATER ROUTES BETWEEN PORTS OF THE ATLANTIC-GULF SEABOARD OF THE UNITED STATES AND PACIFIC PORTS, AMERICAN AND FOREIGN.

To—	From—															Remarks.
	Port-land (Me.)	Boston.	New York.	Phila-delphia.	Balti-more.	Nor-folk.	Charles-ton.	Savan-nah.	Jack-son-ville.	Port Tampa.	Pen-sacola.	Mo-bile.	New Orleans.	Ga-ves-ton.		
Sitka.....	7,663	7,676	7,873	7,948	8,020	8,020	8,234	8,267	8,301	8,748	8,821	8,834	8,868	8,940	Via San Francisco. Difference between Panama and Magellan routes.	
Port Townsend.....	7,663	7,676	7,873	7,948	8,020	8,020	8,234	8,267	8,301	8,748	8,821	8,834	8,868	8,940	Do.	
Portland, Oreg.....	7,663	7,676	7,873	7,948	8,020	8,020	8,234	8,267	8,301	8,748	8,821	8,834	8,868	8,940	Do.	
San Francisco.....	7,663	7,676	7,873	7,948	8,020	8,020	8,234	8,267	8,301	8,748	8,821	8,834	8,868	8,940	Do.	
San Diego.....	7,673	7,686	7,883	7,958	8,030	8,030	8,244	8,277	8,311	8,758	8,831	8,844	8,878	8,950	Do.	
Acapulco.....	7,871	7,884	8,081	8,156	8,228	8,228	8,442	8,475	8,509	8,956	9,029	9,042	9,076	9,148	Do.	
San José de Guatemala.....	8,125	8,138	8,335	8,410	8,482	8,482	8,696	8,729	8,763	9,210	9,283	9,296	9,330	9,402	Do.	
Honolulu.....	6,400	6,413	6,610	6,685	6,757	6,757	6,971	7,004	7,038	7,485	7,558	7,571	7,605	7,677	Do.	
Guayaquil.....	7,195	7,208	7,405	7,480	7,552	7,552	7,766	7,799	7,833	8,280	8,353	8,366	8,400	8,472	Do.	
Callao.....	6,040	6,053	6,250	6,325	6,397	6,397	6,611	6,644	6,678	7,125	7,198	7,211	7,245	7,317	Do.	
Iquique.....	4,929	4,942	5,139	5,214	5,286	5,286	5,500	5,533	5,567	6,014	6,087	6,100	6,134	6,206	Do.	
Valparaiso.....	3,537	3,550	3,747	3,822	3,894	3,894	4,108	4,141	4,175	4,622	4,695	4,708	4,742	4,814	Do.	
Coronel.....	3,086	3,099	3,296	3,371	3,443	3,443	3,657	3,690	3,724	4,171	4,244	4,257	4,291	4,363	Do.	
Yokohama.....	3,353	3,435	3,768	3,938	4,116	4,116	4,575	4,649	4,771	5,585	5,658	5,671	5,705	5,777	Difference between routes via Panama, San Francisco, and Great Circle, and via Suez, Colombo, Singapore, Hongkong, and Shanghai.	
Shanghai.....	1,461	1,543	1,876	2,046	2,224	2,224	2,683	2,757	2,879	3,693	3,766	3,779	3,813	3,885	Difference between routes via Panama, San Francisco, Yokohama, and via Suez, Colombo, Singapore, and Hongkong.	
Hongkong.....	1,433	1,351	18	152	330	330	789	863	985	1,799	1,872	1,885	1,919	1,991	Difference between routes via Panama, San Francisco, Yokohama, and Shanghai, and via Suez, Colombo, and Singapore.	
Manila.....	1,374	1,292	41	211	389	389	848	922	1,044	1,858	1,931	1,944	1,978	2,050	Difference between routes via Panama, San Francisco, and Yokohama, and via Suez, Colombo, and Singapore.	
Adelaide.....	1,424	1,483	1,746	1,873	2,000	2,000	2,352	2,412	2,489	3,138	3,211	3,224	3,258	3,330	Difference between routes via Panama, Tahiti, Sydney, and Melbourne, and via St. Vincent and Cape of Good Hope.	
Melbourne.....	2,448	2,507	2,770	2,897	3,024	3,024	3,376	3,436	3,513	4,162	4,235	4,248	4,282	4,354	Difference between routes via Panama, Tahiti, and Sydney, and via St. Vincent, Cape of Good Hope, and Adelaide.	
Sydney.....	3,610	3,669	3,932	4,059	4,186	4,186	4,538	4,598	4,675	5,324	5,397	5,410	5,444	5,516	Difference between routes via Panama and Tahiti and via St. Vincent, Cape of Good Hope, Adelaide, and Melbourne.	
Wellington.....	2,283	2,296	2,493	2,568	2,640	2,640	2,854	2,887	2,921	3,368	3,441	3,454	3,488	3,560	Difference between routes via Panama and Tahiti and via Strait of Magellan.	

¹ Distance less via Suez.

REDUCTION (IN NAUTICAL MILES) EFFECTED BY THE PANAMA CANAL IN DISTANCES FROM EUROPEAN PORTS TO THE PORTS OF THE WEST COAST OF AMERICA AND TO NEW ZEALAND.

To—	Via—	From—										Remarks.
		Liverpool.		Hamburg.		Antwerp.		Bordeaux.		Gibraltar.		
		Dis- tance	Less via Panama	Dis- tance	Less via Panama	Dis- tance	Less via Panama	Dis- tance	Less via Panama	Dis- tance	Less via Panama	
Sitka.....	Magellan... Panama....	14,804 9,138	5,666	15,185 9,657	5,528	14,923 9,395	5,528	14,564 9,188	5,376	13,873 8,923	4,950	Via San Francisco.
Port Townsend.....	Magellan... Panama....	14,272 8,606	5,666	14,653 9,125	5,528	14,391 8,863	5,528	14,032 8,656	5,376	13,341 8,391	4,950	Do.
Portland, Oreg.....	Magellan... Panama....	14,152 8,486	5,666	14,533 9,005	5,528	14,271 8,743	5,528	13,912 8,536	5,376	13,221 8,271	4,950	Do.
San Francisco.....	Magellan... Panama....	13,502 7,836	5,666	13,883 8,355	5,528	13,621 8,093	5,528	13,262 7,886	5,376	12,571 7,621	4,950	
San Diego.....	Magellan... Panama....	13,110 7,434	5,676	13,491 7,953	5,538	13,229 7,691	5,538	12,870 7,484	5,386	12,179 7,219	4,960	
Acapulco.....	Magellan... Panama....	11,891 6,017	5,874	12,272 6,536	5,736	12,010 6,274	5,736	11,651 6,067	5,584	10,960 5,802	5,158	
San José de Guatemala...	Magellan... Panama....	11,605 5,477	6,128	11,986 5,996	5,990	11,724 5,734	5,990	11,365 5,527	5,838	10,674 5,262	5,412	
Honolulu.....	Magellan... Panama....	13,679 9,276	4,403	14,060 9,795	4,265	13,798 9,533	4,265	13,439 9,326	4,113	12,748 9,061	3,687	
Guayaquil.....	Magellan... Panama....	10,582 5,384	5,198	10,963 5,903	5,060	10,701 5,641	5,060	10,342 5,434	4,908	9,651 5,169	4,482	
Callao.....	Magellan... Panama....	9,980 5,937	4,043	10,361 6,456	3,905	10,099 6,194	3,905	9,740 5,987	3,753	9,049 5,722	3,327	
Iquique.....	Magellan... Panama....	9,510 6,578	2,932	9,891 7,097	2,794	9,629 6,835	2,794	9,270 6,628	2,642	8,579 6,363	2,216	
Valparaiso.....	Magellan... Panama....	8,747 7,207	1,540	9,128 7,726	1,402	8,866 7,464	1,402	8,507 7,257	1,250	7,816 6,992	824	
Coronel.....	Magellan... Panama....	8,502 7,413	1,089	8,883 7,932	951	8,621 7,670	951	8,262 7,463	799	7,571 7,198	373	
Wellington.....	Suez.....	12,989	1,564	13,353	1,409	13,091	1,409	12,732	1,257	11,702	489	Suez route via Aden, Colombo, King George Sound, and Mel- bourne.
	Panama....	11,425		11,944		11,682		11,475		11,213		Panama route via Tahiti.

ENGINEER SERVICE TRANSFERS.

Further Information Concerning Transfer of Canal Employees to United States.

In line with the several amendments to the Civil Service rules by Executive Order, designed to facilitate the transfer of Panama Canal employees to the classified service in the United States, previously published in THE CANAL RECORD, the following is published for the information of all who may be desirous of transferring to the Engineer Department at Large:

WAR DEPARTMENT,

OFFICE OF THE CHIEF OF ENGINEERS,

CIRCULAR No. 4: Washington, February 25, 1915.

1. The following regulations governing transfers from the Panama Canal Service to the Engineer Department at Large are published for the information and guidance of the Corps of Engineers.

By Executive Order of January 19, 1915, section 12 of Rule X was amended to read as follows:

12. A citizen of the United States in the service of the Panama Canal on or before January 1, 1915, in an excepted position other than that of clerk paying not more than \$75 in gold per month may be transferred without examination to a position in the competitive classified service, provided:

(a) This section shall not apply to a person appointed to a competitive position in accordance with the civil service rules, his transfer to be governed by the general provisions of the rules.

(b) This section shall not apply to a person appointed without examination to perform the duties of a clerk of any grade, bookkeeper, stenographer, typewriter, surgeon, physician, trained nurse, or draftsman.

(c) He must have rendered at least two years' service in a position above the grade of mere unskilled laborer in the service of The Panama Canal or the Panama railroad by transfer from the Canal.

(d) He may be transferred to a position of no higher grade requiring similar qualifications, or to a position of a lower grade for which he is qualified.

(e) He must be specially recommended by the Governor of the Panama Canal by reason of efficient service and satisfactory conduct.

(f) If separated from the service the requisition for transfer must be made within three years from the date of separation, and if he has been separated more than one year evidence of continuing good character and efficiency may be required.

The foregoing supersedes the proviso in paragraph 12 of Civil Service Rule X, respecting transfers from the Isthmian Canal Service.

2. The designations affected by the foregoing Executive Order include the following: Blacksmith, boiler-maker, cable splicer, calker, carpenter, car-repairer, cranesman, drillrunner or drillman, engineman (which includes all steam engineers not requiring a license from the Office of the Steamboat Inspection Service), engineers, foreman of all the mechanical trades, ironworker, leverman, telephone or telegraph linemen, machinist, master of dredge (not seagoing), mate, operator, painter, pipe-fitter, riveter, trainman, and wireman and certain other persons holding positions excepted from examination.

3. For the purpose of facilitating the transfer of employees affected by this order the following instructions are published for their guidance in making application for transfer.

Application should be made direct to the employing officer of the district where employment is desired, in which the applicant should state the designation under which his service was rendered on the Isthmus, the length of service and salary received, qualifications and experience other than on the Isthmus, salary expected, age, and any other facts tending to show fitness for the position for which application is made. Address The District Engineer Officer.

UNITED STATES ENGINEER OFFICES.

Baltimore, Md., 309 Customhouse.
Boston, Mass., 25 Pentertown Square, Room 1017.
Buffalo, N. Y., 540 Federal Building.
Charleston, S. C., Customhouse.
Chattanooga, Tenn., Municipal Building.
Chicago, Ill., 508 Federal Building.
Cincinnati, Ohio, (1) 405 Customhouse.
Cincinnati, Ohio, (2) 415 Customhouse, P. O. Box 716.

Cleveland, Ohio, Federal Building, Public Square.
Dallas, Tex., 308 Federal Building, P. O. Lock Drawer 1092.

Detroit, Mich., (1) 337 Federal Building.
Detroit, Mich., (2) 211 Old Customhouse.
Duluth, Minn., Engineer Building, Canal Park.

Galveston, Tex., Trust Company Building, Post Office and Tremont Streets.

Grand Rapids, Mich., 416 Federal Building.
Honolulu, Hawaii, McCandless Building.
Jacksonville, Fla., Masonic Building, P. O. Drawer 45.

Kansas City, Mo., Postal Telegraph Building.
Little Rock, Ark., Bankers Trust Building.
Los Angeles, Cal., 723 Central Building, Sixth and Main Streets.

Louisville, Ky., 425 Customhouse, P. O. Box 72.
Manila, P. I., P. O. Box 155.

Memphis, Tenn., Customhouse, P. O. Box 1027.
Milwaukee, Wis., Customhouse, P. O. Drawer 7.

Mobile, Ala., 352 Government Street, P. O. Box 976.
Montgomery, Ala., Bell Building, P. O. Box 763.

Nashville, Tenn., Customhouse.
New London, Conn., Post Office Building.

New Orleans, La., (1) 326 Customhouse, P. O. Lock Box 493.

New Orleans, La., (2) Q and C Building.
Newport, R. I., 284 Thames Street.

New York City, (1) 710 Army Building.
New York City, (2) 707 Army Building.

Norfolk, Va., 2 Customhouse, P. O. Box 283.
Philadelphia, Pa., 815 Witherspoon Building, 1319 Walnut Street.

Pittsburgh, Pa., 2111 Farmers Bank Building.
Portland, Me., 537 Congress Street, P. O. Box 831.

Portland, Oreg., (1) 802 Couch Building.
Portland, Oreg., (2) 321 Customhouse.

Rock Island, Ill., Federal Building.
St. Louis, Mo., 428 Customhouse, P. O. Box 1450, Central Station.

Mississippi River Commission:
President, 1322 International Life Building.

Secretary, 1311 International Life Building.
St. Paul, Minn., Customhouse, P. O. Box 634.

San Francisco, Cal., (1) 401 Customhouse.
San Francisco, Cal., (2) 414 Customhouse.

San Francisco, Cal., (3) 405 Customhouse.
Savannah, Ga., Post Office Building.

Seattle, Wash., 602 Burke Building, P. O. Box 1809.
Vicksburg, Miss., 218 Post Office Building, P. O. Drawer 421.

Washington, D. C., 305 Southern Building.
Washington, D. C., Public Buildings and Grounds,

1729 New York Avenue NW.
Wheeling, W. Va., 305 Post Office Building, P. O. Box 75.

Wilmington, Del., Old Federal Building, Sixth and King Streets, P. O. Drawer 968.

Wilmington, N. C., Post Office Building, P. O. Drawer 813.

Yellowstone Park, Wyo.
By command of the CHIEF OF ENGINEERS:

E. EVELETH WINSLOW,
Lieut. Col., Corps of Engineers.

Fighting between Panamanians and American Soldiers.

As a result of a series of disturbances which took place in Colon between American soldiers and police and citizens of Colon, on Friday afternoon, April 2, one American soldier, Corporal Maurice Langdon, of the 21st Company of Coast Artillery, was shot and mortally wounded, three other American soldiers received bullet wounds, eight soldiers were slightly injured by flying missiles, and seven Panamanian policemen and two Panamanian civilians were injured by being struck with stones or other missiles. A first fight started at the corner of 10th and Cash Streets, at about 5 p. m., and a second fight occurred on 11th Street and Hudson Lane at about 5.20, during which Corporal Langdon, who was in charge of a patrol squad, was killed. One of the wounded American soldiers was shot while standing on the rear platform of a special train, by a Panamanian policeman who was standing in a vacant lot in the vicinity.

Colonel Chamberlain, Inspector-General of General Wood's staff, is conducting the investigation for the American military authorities, in which Panama is represented by Dr. Galindo. Captain Fulton is representing the American military authorities in the investigation being conducted by the Panamanian Government, under Governor Arcia of Colon. Captain Mitchell, Chief of Police, is investigating on behalf of The Panama Canal.

NEW BUILDINGS AUTHORIZED.

New Type of Bachelor Quarters, 120 Family Apartments, and Permanent Hospital Buildings.

In addition to extensive construction of quarters and service buildings and municipal improvements for the Army posts on the Canal Zone, a recently adopted building program authorizes the expenditure of \$60,000 for bachelor quarters for Canal employees, \$375,000 for family quarters for Canal employees, \$150,000 for one unit ward group in Ancon Hospital, and \$177,000 for a new hospital at Colon. The amount appropriated for quarters for the Army on the Canal Zone is \$1,290,000.

The bachelor quarters will be of concrete and of a different type from any previously built on the Canal Zone. The plans are now in the state of preliminary sketches, and it has not been determined if the quarters are to be built in one house of three stories or two houses of two stories. They are to be situated near the Sosa Hill end of Balboa Prado.

The family quarters are to be erected in the Balboa district and will provide for 120 families. There will be 10 four-family concrete houses, at an estimated cost of \$190,000; 10 four-family frame houses, to cost \$50,000; 15 two-family frame houses, to cost \$60,000; and 10 one-family frame houses, to cost \$25,000. The concrete quarters will be erected in the new townsite of Balboa, alongside the concrete quarters already constructed, and the frame houses will be built at Balboa Heights, East Balboa, and on the road toward the Balboa radio station.

The one unit ward group to be constructed at Ancon Hospital will consist of two two-story ward buildings, connected by a central administrative and general service building, also two stories high. The ward buildings will be about 137 feet long by 43 feet wide, and the central part will have plan dimensions of approximately 89 feet by 30 feet. The wards will accommodate a total of 116 ward patients, in addition to those in private rooms, and allow to each bed 100 square feet of floor space. This group will occupy approximately the site of the present wards Nos. 1, 2, 3, and 4, on the hillside overlooking Wards 11 and 12 and the Catholic chapel. The buildings will be of concrete and will be the first of the permanent buildings in which the hospital is ultimately to be installed.

The construction at Colon Hospital will be a single concrete group, consisting of four buildings, connected by arcades. An administration building will be flanked on right and left by wards, and a kitchen and general service building will be located in the rear of the central part. The entire group will be about 338 feet long. It will be situated on the site now occupied by buildings Nos. 17 and 19. Wards A to I, opposite this site and built over the water along the shore of the ocean, will be torn down. Wards H and J, also over the water, will be used as nurses' quarters. The detailed plans for this construction have not been prepared.

Quarters for Silver Employees near Pacific Locks.

The Chief Quartermaster, the Constructing Quartermaster, and the Resident Engineer of the Division of Municipal Engineering have been appointed a committee to investigate and report upon the number of quarters required for silver employees in the vicinity of Pedro Miguel and Miraflores.

OFFICIAL CIRCULARS.

Rules Governing Rented Quarters.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 20, 1915.

CIRCULAR NO. 627-6:

1. Circular No. 627-1, dated July 17, 1914, is hereby canceled and the following rules will govern the assignment and handling of quarters on a rental basis:

2. When family quarters are assigned an employee he will be given nine weeks from date stated in tender in which to occupy the quarters, but this does not apply in case of transfer.

3. Services of employees discharged or resigned, securing immediate employment in some other department or division, are considered continuous as far as quarters are concerned, and they may hold quarters or have their applications remain on the list as of original date. Cases of this nature arising, however, should be referred to the Chief Quartermaster.

4. Whenever by reason of temporary decrease of work, or other cause, employees have been furloughed without pay for a period not exceeding 30 days, they will retain the rights of quarters during that time.

5. When an employee's services are terminated he will be expected to vacate quarters within two weeks from the date of termination of service.

6. Receipts for rent will be given on prescribed forms, and must be shown on demand to the properly authorized representatives of The Panama Canal.

7. The allowance of furniture for regular family quarters will be as follows:

1 range	2 center tables	1 kitchen table
1 double bed	3 wicker rockers	1 dining table
2 kitchen chairs	1 refrigerator	1 sideboard
6 dining chairs	1 double mattress	1 dresser
1 chiffonier		

In houses for which the rental is \$25, or more, per month the following additional articles are authorized:

3 dining chairs	1 parlor desk	1 parlor wicker
1 chiffonier	1 porch swing	1 rocker
2 towel racks	1 serving table	1 Morris chair
2 parlor chairs	1 dresser	1 porch double seat.

Employees occupying nonhousekeeping quarters will be given such furniture as may be available but in no case more than is provided above for regular family quarters.

8. The issue of beds, mattresses, and one dresser in excess of this allowance is authorized to families with children. Employees moving from one house to another in the same district will be permitted to take with them, at their own expense, if they so desire, beds, mattresses, and refrigerators.

9. When an employee living in married quarters desires to use his own furniture exclusively, a reduction of \$2 per month will be made in the rent. No reduction will be made unless all Panama Canal furniture, including refrigerators, but excepting stoves, is released.

10. Applications for transfers of quarters within a district must be filed in writing with the district quartermaster, and the rules governing original assignment will be applied to transfers within a district. Applications for transfer from without a district will be placed on the assignment list according to date of employee's last entrance into service.

11. A bachelor quartered elsewhere than in the immediate vicinity of his work will not be entitled to a reduction in rent, but may be granted free transportation between his quarters and official station if no labor train is available and if no quarters are available in the district in which he works.

12. An employee whose duties require him to be quartered at more than one town shall pay rent only for the quarters in the town considered his headquarters, and when this can not be determined, he shall pay only the higher rental. When family quarters are occupied in such a case, the rate for the family quarters will govern.

13. An employee occupying bachelor quarters in the immediate vicinity of his work and holding an assignment to family quarters elsewhere, solely for his convenience and at his request, will be charged full rental for both quarters. Such employees, however, will hereafter be given a weekly round-trip pass to visit their families, if they so desire.

14. An employee, who is regularly assigned to family quarters at his place of work will not be required to pay rent for bachelor quarters while awaiting assignment to family quarters at a new station to which he is permanently transferred. If transferred temporarily for the good of the service no additional rental will be charged for the quarters occupied temporarily.

15. The wife constitutes the family of an employee, and no consideration can be given applications for family quarters for occupancy by other members of a family than the wife except from widows or widowers having dependent children residing with them; unless there are no other applicants on file.

16. A widow without children can hold quarters after

death of husband until arrangements can be made for her departure.

17. When employees with dependent relatives, other than widows and widowers with dependent children, are assigned family quarters as a concession, they will not be permitted to transfer to other quarters except in the absence of other applicants entitled to the quarters.

18. Family quarters may, with the approval of the Chief Quartermaster, be assigned to bachelors with dependent relatives if there are no other applications on file for the quarters. Houses coming under the special class, as provided in circular No. 627-5, may be assigned to bachelors by the direction of the Governor.

19. Exchange of quarters will be permitted only when the rights of no other employee will be interfered with.

20. All living quarters distinctly and definitely within hospital grounds shall be regarded as for the use of hospital tenants, doctors, nurses, etc., but the assignment of same shall remain under the jurisdiction of the Chief Quartermaster.

21. Applicants for hospital quarters can not place applications for quarters outside of hospital grounds.

22. No alterations or additions will be made to any house by the occupant without the approval of the Chief Quartermaster, and then only at his own expense.

23. Aliens, whether employed in the United States or on the Isthmus, will not be entitled to gold family quarters until all applicants have been assigned.

GEO. W. GOETHALS,
Governor.

Charges for Electric Current.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 15, 1915.

CIRCULAR NO. 676-3 (Superseding Cir. No. 676):

For the information of all concerned the following schedule of charges for electric current supplied by The Panama Canal is published:

FOR METERED SERVICE.

1. To departments and divisions of The Panama Canal and to the Panama railroad the charge shall be the actual cost to the Electrical Division for the district concerned, as determined from month to month by the Cost Accountant.

2. To other departments and bureaus of the United States Government the charge shall be the actual cost to The Panama Canal for all districts, as determined from month to month by the Cost Accountant.

3. To employees of The Panama Canal and the Panama railroad, religious institutions, and to social and fraternal organizations of employees in the Canal Zone, the charge shall be an arbitrary rate that shall be adjusted from time to time to approximate as closely as practicable to the actual cost to The Panama Canal, as determined by the Cost Accountant. For the present this rate shall be two cents per kilowatt-hour.

4. To individuals (nonemployees) and companies in the Canal Zone the charge shall be eight cents per kilowatt-hour, except when a different rate is established by special authority of the Governor.

FLAT RATES.

5. To departments and divisions of The Panama Canal and the Panama railroad, other departments and bureaus of the United States Government, employees of The Panama Canal and the Panama railroad for their personal use, religious and charitable institutions, and to social and fraternal organizations of employees in the Canal Zone, the charge for unmetered lighting service shall be \$1 plus 6 times the number of 16-candlepower equivalents, in cents per month, and for electrical appliances other than lights, such as stoves, irons, toasters, water heaters, etc., rates to be fixed from time to time by the Electrical Engineer with the approval of the Governor, dependent upon the cost of production of power, and the current consumption and probable number of hours of use of the appliance.

6. To individuals (nonemployees) and companies in the Canal Zone, and to employees of The Panama Canal and the Panama railroad for commercial use, the charge for unmetered lighting service shall be 75 cents per month per 16-candlepower equivalent, and for electrical appliances other than lights, rates to be fixed from time to time by the Electrical Engineer with the approval of the Governor, dependent upon the cost of production of power and the current consumption and probable number of hours of use of the appliance.

7. Circular No. 676 is hereby revoked.

GEO. W. GOETHALS,
Governor.

Transfer of Telephone and Signal Department from Panama Railroad to Electrical Division.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 26, 1915.

CIRCULAR NO. 660-25:

1. Effective April 1, 1915, all work in connection

with the construction, operation, and maintenance of telephone lines, the construction and maintenance of telegraph lines, and the construction and maintenance of railway signals and appurtenances thereto, heretofore performed by the Telephone and Signal Department under the Panama Railroad Company, will be consolidated with the Electrical Division under The Panama Canal.

2. All work to be done for the Panama Railroad Company by the Electrical Division of The Panama Canal on account of the construction, operation, and maintenance of telephones, telegraph, and railway signals, will be billed on monthly accounts to the Panama Railroad Company.

3. All the forces of the above organization will be transferred, effective on that date.

GEO. W. GOETHALS,
Governor, The Panama Canal,
President, the Panama Railroad Company.

In Charge of Work at Coco Solo.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 29, 1915.

To all concerned—Effective March 31, and until Supervisor C. C. Suedeker returns from leave, General Foreman Arman Smith will be in local charge of all outside work, and Mr. M. J. Driscoll will be in charge of all office work at Coco Solo, connected with the East Breakwater, both reporting to me.

H. H. ROUSSEAU,
Engineer of Terminal Construction.

Bunker Coal Ordered but Not Taken.

THE PANAMA RAILROAD,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., March 30, 1915.

CIRCULAR NO. 40:

All concerned—Effective May 1, 1915, a charge will be made to reimburse the Panama Railroad Company for the expense of handling any bunker coal ordered but not taken by steamers, at the rate of 25 cents per ton when cars are switched and 50 cents per ton when delivered in lighters.

C. H. MOTSETT,
Superintendent.

Approved:
GEO. W. GOETHALS,
President.

Accountable Official.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,

BALBOA HEIGHTS, C. Z., March 31, 1915.

CIRCULAR NO. 86:

Effective April 1, 1915, Capt. W. H. Rose, an accountable official of The Panama Canal, is also designated an accountable official of the Panama railroad, and as such will account for all nonexpendable property heretofore in the service of the Division of Telephones and Signals of the Panama railroad.

H. A. A. SMITH,
Auditor, The Panama Canal.
Approved:
GEO. W. GOETHALS,
Governor.

Act of Congress.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 22, 1915.

CIRCULAR NO. 600-15:

PUNTA MALA AND BONA ISLAND LIGHTS.

The extracts from an Act of Congress quoted below are published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

AN ACT to authorize aids to navigation and other works in the Lighthouse Service, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of Commerce is hereby authorized to establish, provide, or improve the following aids to navigation and other works in the Lighthouse Service, under the Department of Commerce, in accordance with the respective limits of costs hereinafter respectively set forth, which shall in no case be exceeded.

* * * * *

PANAMA CANAL.

Two lights on the Pacific coast, necessary as aids to navigation near the Pacific entrance to the Panama Canal, at a total cost not exceeding \$48,000; one of them at Punta Mala, the other at Bona Island.

And for the construction of these two aids the Secretary of Commerce may, by satisfactory arrangement with the Governor of The Panama Canal, have them constructed and maintained through the Panama Canal force.

* * * * *

Approved, March 3, 1915.

Act of Congress.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 24, 1915.

CIRCULAR No. 600-20:

RELIEF AND PROTECTION OF AMERICAN SEAMEN—EXPOSITION IN PANAMA.

The extracts from an Act of Congress quoted below are published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

AN ACT making appropriations for the Diplomatic and Consular Service for the fiscal year ending June 30, 1915.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums be, and they are hereby, severally appropriated, in full compensation for the Diplomatic and Consular Service for the fiscal year ending June 30, 1916, out of any money in the Treasury not otherwise appropriated, for the objects hereinafter expressed, namely:

RELIEF AND PROTECTION OF AMERICAN SEAMEN.

Relief and protection of American seamen in foreign countries, and shipwrecked American seamen in the Territory of Alaska, in the Hawaiian Islands, Porto Rico, the Panama Canal Zone, and the Philippine Islands, \$20,000.

EXPOSITION IN CITY OF PANAMA.

That the President be, and he is hereby, authorized to accept an invitation extended by the Government of Panama to the Government of the United States to participate in an exposition to be held in the city of Panama; and the sum of \$25,000 be, and the same is hereby, appropriated, out of any money in the Treasury not otherwise appropriated, to enable suitable participation in said exposition by this country, for an appropriate exhibit of the arts, industries, manufactures, products of the soil, mines, and waters of the United States, and, as far as practicable, of the functions of the General Government, and an exhibit of such other articles as the President may direct, including an exhibit relating to the Panama Canal.

Approved, March 4, 1915.

Act of Congress.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 22, 1914.

CIRCULAR No. 600-16:

FUNDS FOR MARINE BARRACKS REAPPROPRIATED—RADIO STATIONS.

The extracts from an Act of Congress quoted below are published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

AN ACT making appropriations for the naval service for the fiscal year ending June 30, 1916, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums be, and they are hereby, appropriated, to be paid out of any money in the Treasury not otherwise appropriated, for the naval service of the Government for the year ending June 30, 1916, and for other purposes:

PUBLIC WORKS, BUREAU OF YARDS AND DOCKS.

That the appropriation of \$400,000 for erection on the Isthmus of Panama of barracks, quarters, and other buildings for accommodation of marines, contained in the Act of March 4, 1913, is hereby reappropriated, and \$200,000 thereof made available for the erection of marine barracks at Mare Island, California, and \$200,000 thereof made available for the erection of marine barracks at Norfolk, Virginia.

BUREAU OF STEAM ENGINEERING.

High-power radio stations: Toward the purchase and preparation of necessary sites, purchase and erection of towers and buildings, and the purchase and installation of machinery and apparatus of high-power radio stations (cost not to exceed \$1,500,000), to be located as follows: One in the Isthmian Canal Zone, one on the California coast, one in the Hawaiian Islands, one in America Samoa, one on the island of Guam, and one in the Philippine Islands, \$400,000, to be available until expended.

Approved, March 3, 1915.

Act of Congress.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 24, 1915.

ARMY SERVICE IN CANAL ZONE—HOSPITAL CARE FOR GARRISONS.

CIRCULAR No. 600-19:

The extracts from an Act of Congress quoted below are published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

AN ACT making appropriations for the support of the Army for the fiscal year ending June 30, 1916.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums be, and they are hereby, appropriated, out of any money in the Treasury not otherwise appropriated, for the support of the Army for the year ending June 30, 1916.*Provided further,* That on and after October 1, 1915, no officer or enlisted man of the Army shall, except upon his own request, be required to serve in a single tour of duty for more than two years in the Philippine Islands, nor more than three years in the Panama Canal Zone, except in case of insurrection or of actual or threatened hostilities.HOSPITAL CARE, CANAL ZONE GARRISONS: For paying The Panama Canal such reasonable charges, exclusive of subsistence, as may be approved by the Secretary of War for caring in its hospitals for officers, enlisted men, military prisoners, and civilian employees of the Army admitted thereto upon the request of proper military authority: *Provided,* That the subsistence of the said patients, except commissioned officers and acting dental surgeons, shall be paid to said hospitals out of the appropriation for subsistence of the Army at the rates provided therein for commutation of rations for enlisted patients in general hospitals, \$45,000.

Approved, March 4, 1915.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores are open during the following hours: From 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m., but the Balboa store is open from 2.30 to 6 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective April 8, 1915:

FRESH MEATS.	Price.
Prices unchanged since last publication.	
MISCELLANEOUS.	
Pork—Hams, fresh, per pound.....	23
Shoulders, fresh, per pound.....	\$19
Loin, chop, or roast, per pound.....	18
Pigs' feet, fresh, each.....	8
Pigs' head, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23
Ox tails, per pound.....	11
Brains, calves' per pound.....	12
Calves' head, each.....	80
Kidneys, beef, per pound.....	10
Livers—Beef, per pound.....	11
Calf, each.....	\$70
half, each.....	\$35
Oysters, fresh, per pkt.....	30
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	10
Frankfurter, per pound.....	13
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	10
Pork, per pound.....	15
Sweetbread, beef, per pound.....	20
Eggs, fresh, per dozen.....	\$26
per ½ dozen.....	\$13
Bluefish, per pound.....	15
Halibut, fresh, per pound.....	7
Salmon, per pound.....	6
Yeast, per pound.....	31
per cake.....	2
POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound	29
Chickens—Fancy, roasting, corn fed, per pound	26
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	25
Capons, per pound.....	32
Broilers, milk fed, per pound.....	\$34
Broilers, corn fed, per pound.....	28
Turkeys, per pound.....	28
Squabs, each.....	40
Geese, per pound.....	23
Grouse, each.....	1.00
Mallard ducks, 2 to 2½ pounds, each.....	2.35
Pheasants, each.....	1.35

CURED AND PICKLED MEATS.

Price.

No changes.

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	\$41
Sheffield Farms, extra fancy, per lb....	58
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	\$22
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield, per quart.....	**15
Fermillac, bottle.....	**25
Ice cream, quart.....	125
½-gallon.....	150
Cream, 30 per cent, quart.....	**52
pint.....	**29
½ pint.....	**17

VEGETABLES.

Beets, per pound.....	3
Cabbage, per pound.....	2
Carrots, per pound.....	2
Celery, per head.....	15
Lettuce, per pound.....	7
Onions, per pound.....	2
Parsley, per pound.....	10
Parsnips, per pound.....	12½
Plantains, per dozen.....	12
Peppers, per pound.....	17
Potatoes, white, per pound.....	2
Spinach, per pound.....	11
Turnips, per pound.....	2
Tomatoes, per pound.....	11
Squash, new summer, per pound.....	10
Yams, tropical, per pound.....	2½

FRUITS.

Apples, per pound.....	5
Cranberries, fresh, per pound.....	6
Grape fruit—Select, each.....	5
Tropical, each.....	3½
Lemons, per dozen.....	\$10
Oranges—Select, each.....	2
Tropical, per dozen.....	12
Coconuts, each.....	4
Bananas, per bunch.....	38
Bananas, each.....	1
Apples, evaporated, per pound.....	*12
Apricots, evaporated, per pound.....	15
Pears, evaporated, per pound.....	23
Pineapples, each.....	12
Figs, dried, 12-oz package.....	14
Figs, dried, 5-oz package.....	5

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective April 5, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Triscuit, tin.....	.18	.24
Tea, black, E. B., tin.....	.87	.80
Gherkins, spiced, keg.....	2.90	2.55
Soap, salt water, cake.....	.07	.05
Chamois skins, ea.....	.35	.31
Bags, hot water, ea.....	.86	.79
Bedsprings, ea.....	1.05	.90
Hats, U. S. A., white, ea.....	.45	.42
Shirts, negligee, ea.....	.87	.78
Pants, khaki, riding, pr.....	2.10	2.35
Mop heads, ea.....	.15	.11
Can openers, ea.....	.04	.07
Freezers, 3-quart, ea.....	2.20	2.00
Table sets, set.....	.77	.68
Trunks, 38", ea.....	12.70	13.15
Suit cases, 24", ea.....	17.55	18.10

Additions to Stock.

Biscuits, fig newton, pkg.....	.09
Vagex Cubas, pkg.....	.10
Curtain, madras, yd.....	.17
Woven shepherd checks.....	.12
Cloth, Premier, 36", yd.....	.14
Cloth, Ramapo, 36", yd.....	.33
Cloth, Monogram, 36", yd.....	.16
Curtain, Swiss, yd.....	.13
Silk and cotton novelties, yd.....	.18
Silk and cotton novelties, yd.....	.19
Muslin, twilled, 36", yd.....	.13
Overalls, with bibs, pr.....	.92
Spoons, basting, aluminum, ea.....	.14
Rolling pins, 2½" x 11", ea.....	.15
Sugar bowls, 30's, Y-2715, ea.....	.89
Sugar bowls, 30's, Y-6923, ea.....	.89
Egg cups, 7881, ea.....	.11
Pitchers, 36's, Y-2715, ea.....	.43
Pitchers, 36's, Y-6923, ea.....	.43
Plates, cake, 7881, ea.....	.26
Tea pots, 18's, Y-2715, ea.....	1.45
Tea pots, 18's, Y-6923, ea.....	1.45

JOINT LAND COMMISSION.

Rule of Dismissal.

In the matter of sundry claims, rule of dismissal No. 176, docket numbers as shown, March 23, 1915.—With reference to the following claims, the evidence before the Commission is that settlement therefor has been made by the United States:

Claimant	Dkt No.	Tax Nos.	Date of Payment
Angel de Castro.....	1916	1409	1-25-15
Tong Chong.....	1930	724	1-16-15
Manuel Sosa.....	1947	1382, 1383, 1395, 1396, 1435, 1436, 1437.	1-18-15
Manuela C. Angulo...	1950	1372	1-26-15
Felix Moreno.....	1950	1610, 1212	1-12-15
Concepción Rodriguez.	2533	907	2-15-15
Dr. Julio Arjona A....	2665		1-27-15
Mrs. Julia de Cochez...	2802	1211	2-18-15
Chee Yip.....	2885	745, 744	1-19-15
Joseph Peterson.....	3546	522	10-30-14

In view of the above settlements, no further action is necessary by the Commission, and the foregoing claims are therefore dismissed.

JORGE E. BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Notice.

Following is a calendar of claims set for hearing for the week ending April 10: Tuesday, April 6—Dockets 10 and 11, Camille Lepel; docket 404, Manuel Jacome; docket 407, Peter Modis (Moore). Wednesday, April 7—Docket 429, Antonio Rodriguez; dockets 436, 1371, and 1490, Santana Melendez; docket 437, Daniel Barela; docket 438, José Monte. Thursday, April 8—Docket 441, Juan R. Rodriguez; docket 444, Leonardo Funon; docket 446, Petra Padilla; docket 450, Juan B. Hurtado. Friday, April 9—Docket 452, Antonio de Leon; docket 543, Doroteo Valle; docket 454, Gumersinda Villareal; docket 457, Juan José de Leon.

WILLIAM TAYLOR,
Secretary.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., April 5, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressee:

Alexander, Joseph G.	Karnegieser, William
Altman, Mal	Merheris, John
Bearup, A. H. (paper)	Murray, Maj. Peter
Berger, Mrs. M. E.	Myers, David C.
Burton, Jno.	Nance, N. W.
Cantor, Louis J.	Nehls, Captain (paper)
Chaffin, Judge Wm.	Rankin, H. L.
Connolly, Patrick A.	Royse, T. E.
Cook, L. V.	Sawyer, Samuel
Cooper, Jim	Shepard, H. C. (2)
Dennis, J. C. (2)	Slaton, Sergt. R. M.
Duncan, Capt. Wm. A. (2)	Smith, Ethan
Flinn, Orris	Stevens, Miss, care Mechan-
Heenan, Orville	ical Division.
Hennessey, Walter J.	Taylor, James W.
Holt, Miss Vlvian B. (2)	Wehl, Grace Wheeler
Jones, Mrs. E. M.	Wilson, Mrs. S. E.

Rainfall from March 1 to 31, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa .....	.....	.....	.....
Balboa Heights .....	.....	.....	.....
*Miraflores	03	23 & 24	.07
Pedro Miguel .....	.22	24	.22
Rio Grande .....	.15	24	.19
<i>Central Section—</i>			
Culebra .....	.07	24	.09
*Camacho .....	.83	20	.88
Empire .....	.18	20	.24
Gamboa .....	.01	22 & 25	.02
*Juan Mina .....	.16	20	.20
Alhajuela .....	.03	4	.04
*El Vigia .....	.03	23	.06
Frijoles .....	.42	18	.69
*Trinidad .....	.44	3	1.15
*Monte Lirio .....	.30	3 & 26	.76
<i>Atlantic Section—</i>			
Gatun .....	.21	18	.90
*Brazos Brook .....	.24	11	.96
Colon .....	.44	20	1.71

*Standard rain gage—readings at 5 p. m.

Automatic rain gage at unstarred stations—values midnight to midnight.

†Several dates.

SHIPPING INFORMATION.

Tide Predictions.

Panama tide predictions for the next five weeks are given in the following table:

APRIL.				
DATE.	Time and height of high and low water.			
Wed., April 7.....	3:02	9:15	15:34	21:41
	1.9	12.8	3.3	12.6
Thurs., April 8.....	4:11	10:35	16:49	23:08
	2.8	12.2	3.9	12.0
Fri., April 9.....	5:26	12:03	18:07	.....
	3.2	12.2	3.8	.....
Sat., April 10.....	0:34	6:36	13:15	19:14
	12.0	3.0	12.8	3.1
Sun., April 11.....	1:42	7:37	14:10	20:09
	12.6	2.6	13.5	2.3
Mon., April 12.....	2:34	8:27	14:55	20:55
	13.2	2.1	14.1	1.6
Tues., April 13.....	3:18	9:11	15:32	21:35
	13.8	1.7	14.5	1.0
Wed., April 14.....	3:54	9:50	16:06	22:12
	14.2	1.4	14.8	0.7
Thurs., April 15.....	4:28	10:27	16:37	22:47
	14.4	1.3	14.8	0.6
Fri., April 16.....	4:58	11:03	17:08	23:23
	14.4	1.4	14.7	0.7
Sat., April 17.....	5:33	11:39	17:40	.....
	14.1	1.8	14.3	.....
Sun., April 18.....	0:00	6:06	12:15	18:12
	1.1	13.7	2.3	13.8
Mon., April 19.....	0:37	6:40	12:53	18:45
	1.6	13.1	2.9	13.2
Tues., April 20.....	1:16	7:16	13:35	19:23
	2.3	12.5	3.6	12.6
Wed., April 21.....	2:00	7:59	14:22	20:07
	3.0	11.9	4.2	11.9
Thurs., April 22.....	2:50	8:50	15:18	21:04
	3.6	11.5	4.7	11.4
Fri., April 23.....	3:48	9:56	16:24	22:15
	3.9	11.3	4.7	11.2
Sat., April 24.....	4:52	11:06	17:29	23:31
	3.9	11.7	4.2	11.5
Sun., April 25.....	5:52	12:09	18:28	.....
	3.4	12.4	3.2	.....
Mon., April 26.....	0:37	6:48	13:04	19:23
	12.3	2.6	13.5	1.9
Tues., April 27.....	1:32	7:40	13:52	20:11
	13.3	1.7	14.7	0.6
Wed., April 28.....	2:22	8:29	14:38	20:58
	14.4	0.7	15.8	-0.5
Thurs., April 29.....	3:09	9:14	15:31	21:43
	15.4	-0.1	16.7	-1.4
Fri., April 30.....	3:54	10:02	16:08	22:30
	16.1	-0.6	17.1	-1.8

MAY.				
DATE.	Time and height of high and low water.			
Sat., May 1.....	4:40	10:48	16:54	23:17
	16.5	-0.7	17.2	-1.8
Sun., May 2.....	5:26	11:36	17:40	.....
	16.3	-0.4	16.8	.....
Mon., May 3.....	0:05	6:14	12:26	18:29
	-1.3	15.9	0.2	15.9
Tues., May 4.....	0:54	7:05	13:19	19:22
	-0.5	15.1	1.2	14.8
Wed., May 5.....	1:49	8:02	14:17	20:21
	0.6	14.1	2.2	13.5
Thurs., May 6.....	2:47	9:05	15:23	21:30
	1.7	13.2	3.1	12.5
Fri., May 7.....	3:51	10:18	16:32	22:45
	2.6	12.7	3.5	11.9
Sat., May 8.....	4:59	11:34	17:42	.....
	3.2	12.5	3.5	.....
Sun., May 9.....	0:07	6:05	12:40	18:45
	11.8	3.4	12.7	3.2
Mon., May 10.....	1:13	7:03	13:35	19:39
	12.1	3.2	13.1	2.6
Tues., May 11.....	2:06	7:54	14:20	20:24
	12.6	2.9	13.4	2.1
Wed., May 12.....	2:49	8:38	14:58	21:05
	13.0	2.6	13.8	1.6
Thurs., May 13.....	3:28	9:19	15:34	21:43
	13.4	2.3	14.0	1.2

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used in Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

*Every Monday to New York for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE—The sailing on Monday, May 3, will not land mail in New York until Tuesday of the following week; hence despatches on that date will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7.10 a. m., connects with the despatches for the sailing on May 3.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun, and Miraflores Lakes for the week ending midnight, Saturday, April 3, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Mar. 28.....	125.40	91.60	86.78	86.72	54.10
Mon., Mar. 29.....	125.30	91.54	86.77	86.69	54.06
Tues., Mar. 30.....	125.30	91.50	86.74	86.67	54.00
Wed., Mar. 31.....	125.25	91.50	86.68	86.64	54.00
Thurs., April 1.....	125.20	91.78	86.64	86.65	53.90
Fri., April 2.....	125.95	92.08	86.78	86.65	54.00
Sat., April 3.....	140.75	102.40	86.90	86.88	53.97
Heights of low water to nearest foot.....	125.0	91.0			

March Rainfall for Three Years.

STATIONS.	1913	1914	1915	Station Av.	Years of record	Rail's days '15
<i>Pacific Section—</i>	<i>Ins.</i>	<i>Ins.</i>	<i>Ins.</i>	<i>Ins.</i>		
Balboa.....	.00	.00	.06	.68	16	0
Balboa Heights.....	.43	T	T	.67	17	0
Miraflores.....	.00	.00	.07	.52	7	3
Pedro Miguel.....	.00	.02	.22	.30	8	1
Rio Grande.....	.30	T	.19	.28	11	2
<i>Central Section—</i>						
Culebra.....	.57	.01	.09	.63	25	2
Camacho.....	.00	.00	.88	.48	9	2
Empire.....	.22	T	.24	.35	10	3
Gamboa.....	.08	.02	.02	.76	31	2
Juan Mina.....	.36	.02	.20	.17	5	3
Alhajuela.....	.08	.05	.04	.55	16	2
El Vigia.....	.10	.14	.06	.53	7	3
Frijoles.....	.29	.40	.69	.37	4	8
Trinidad.....	1.11	.71	1.15	2.35	8	6
Monte Lirio.....	.60	1.19	.76	2.67	8	4
<i>Atlantic Section—</i>						
Gatun.....	1.01	.96	.90	2.38	11	12
Brazos Brook.....	.71	1.21	.96	2.48	9	15
Colon.....	.79	.91	1.71	1.63	46	12

Fuel and Supplies.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Cristobal or Balboa from plants of The Panama Canal, or from the private corporations which have tanks at the terminals. The present price for fuel oil supplied by The Panama Canal is \$1.25 per barrel of 42 gallons. The prices made by the corporations may be obtained on application to them.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock, with a minimum charge of \$3. Vessels may take up from the fresh water sections of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

(Continued on page 302.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m. April 4, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Mar. 29	Aysen	Chilean	South American S.S. Co.	Cristobal	Valparaiso	Ballast		4,593	3,042
Mar. 30	Jamaica	British	Pacific Steam Nav. Co.	Cristobal	South ports	General cargo	506	1,170	620
Mar. 30	Hawaiian	American	American-Hawaiian Line	New York	Los Angeles	General cargo	7,490	5,903	4,193
Mar. 30	Greystoke Castle	British	Greystoke Castle S.S. Co.	New York	Vladivostok	Barbed wire	5,600	4,488	3,440
Mar. 30	Buenaventura	American	Isthmian S.S. Co.	New York	Buenaventura	General cargo		5,483	3,908
Mar. 31	Coya	British	W. R. Grace & Co.	New York	Manta, Ecuador	General cargo	4,300	3,222	2,216
Mar. 31	Northern Pacific	American	Great Northern S.S. Co.	Philadelphia	San Francisco	General cargo	1,200	10,868	6,485
Mar. 31	Inverlay	British	American-Australian Line	New York	Auckland	General cargo	7,700	5,303	3,843
Mar. 31	Peru	British	Pacific Steam Nav. Co.	Cristobal	Guayaquil	General cargo	1,723	4,038	2,626
Mar. 31	Luz Blanca	British	London Pacific Petroleum Co.	La Pallice	Ballast			5,147	3,260
Mar. 31	Honolulu	American	American-Hawaiian Line	New York	San Francisco	General cargo	7,510	7,661	5,493
April 2	Donax	British	Anglo Saxon Petroleum Co.	Portsmouth	Los Angeles	Oil	4,502	3,892	2,755
April 3	Hattie Luckenbach	American	Luckenbach Line	New York	San Francisco	General cargo	6,500	5,866	4,222
April 4	Panama	American	Panama R.R. S.S. Line	New York	Balboa	General cargo	2,000	5,866	4,222

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Mar. 29	De Soto	American	Standard Oil Company	Paia	New York	Ballast		7,145	4,477
Mar. 29	Strathdene	British	Strath Line	Antofagasta	Genoa	Nitrates	6,560	4,784	3,540
Mar. 30	Henrik Ibsen	Norwegian	V. Torkildsen	Iquique	New York	Nitrates	7,500	5,098	3,646
Mar. 30	Lord Erne	British	Irish Shipowners	Melbourne	Boston	Wool, general	5,000	4,676	3,368
Mar. 30	Siam	Danish	East Asiatic Co.	Valparaiso	Copenhagen	Nitrates, general	8,750	7,063	5,305
Mar. 31	Advance	American	Panama Railroad S.S. Line	Balboa	New York	General cargo	2,005	2,965	2,161
Mar. 31	Waturus	American	J. L. Severance	Balboa	Kingston	Yacht		607	304
Mar. 31	Chincha	American	W. R. Grace & Co.	Salaverry	New York	Nitrates, general	8,564	6,430	4,624
April 1	Frederick Luckenbach	American	Luckenbach Line	San Francisco	New York	General cargo	3,200	3,006	2,042
April 2	Bradford	American	Standard Oil Co.	Tocopilla	New York	Crude oil	8,087	7,236	5,398
April 2	Kingsway	British	Palin, Evans & Co.	Callao	Jamaica	Ballast		4,063	2,912
April 3	Dunraven	British	E. Thomas, Radcliffe & Co.	Victoria	Jamaica	Orders, lumber	3,672	3,589	2,516
April 3	Ohioan	American	American-Hawaiian Line	Seattle	Boston	General cargo	7,300	6,844	4,699

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
April 4	Celia	W. R. Grace & Co.	Norfolk
April 4	City of Bristol	Ellerman Lines	New York
April 5	Harry Luckenbach	Luckenbach Line	New York
April 6	Craster Hall	Hall Line	New York

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
April 5	Santa Catalina	W. R. Grace & Co.	Portland
April 5	Texan	American-Hawaiian Line	Honolulu

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
Mar. 29	Triton	Dutch Royal Mail	Amsterdam
Mar. 31	Napierian	Leyland Line	Liverpool
April 1	Ocland	Earn Line	Norfolk
April 2	Alexandrian	Leyland Line	Liverpool
April 3	Wilhelmina	Bluefields	Bluefields
April 4	Savoia	La Veloce	Genoa

*DEPARTURES.

Date	Vessel	Line	To
April 1	Napierian	Leyland Line	Galveston
April 2	Triton	Dutch Royal Mail	Puerto Barrios
April 3	Alexandrian	Leyland Line	Mobile

*EXPECTED ARRIVALS.

April 8	Chiswick	Earn Line	Norfolk
April 9	Buenos Aires	Barcelona Transatlantic Co.	Barcelona
April 14	Musician	Harrison Line	Liverpool

*EXPECTED DEPARTURES.

April 8	Savoia	La Veloce	Genoa
April 14	Buenos Aires	Barcelona Transatlantic Co.	Barcelona
	Musician	Harrison Line	

*Other than vessels passing through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Mar. 30	Urubamba	Peruvian S.S. Co.	Callao
Mar. 31	Challamoooga	United States Navy	Corinto
April 4	San Jose	Pacific Mail S.S. Co.	San Francisco

*DEPARTURES.

Mar. 29	Ucayali	Peruvian S.S. Co.	Peru
Mar. 30	Pennsylvania	Pacific Mail S.S. Co.	San Francisco
April 4	Urubamba	Peruvian S.S. Co.	Callao

*EXPECTED ARRIVALS.

	Limari	South American S.S. Co.	Valparaiso
	Aztec	Pacific Mail S.S. Co.	San Francisco
	Hualtaga	Peruvian S.S. Co.	Callao

*EXPECTED DEPARTURES.

April 8	San Jose	Pacific Mail S.S. Co.	San Francisco
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*Other than vessels passing through the Canal.

(Continued from page 301.)

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Balboa Heights;" in the United States, "Pancanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C." for delivery in the United States.

Sallings of Vessels in Regular Service with the Isthmus.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal, and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailing via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

<i>Sails.</i>		<i>Arrives.</i>		Carrillo.....	U. F. C.	April 22.....	April 29
NEW YORK TO CRISTOBAL-COLON.				Colon.....	P. R. R.	April 24.....	May 30
Zacapa.....	U. F. C.	Mar. 31.....	April 7	Tenadores.....	U. F. C. <td>April 26.....</td> <td>April 3</td>	April 26.....	April 3
Allianca.....	P. R. R.	April 1.....	April 7	NEW ORLEANS TO CRISTOBAL-COLON.			
Calamares.....	U. F. C.	April 3.....	April 11	Parismina.....	U. F. C.	April 3.....	April 8
Carrillo.....	U. F. C.	April 7.....	April 14	Atenas.....	U. F. C.	April 6.....	April 13
Colon.....	P. R. R.	April 8.....	April 14	Cartago.....	U. F. C.	April 10.....	April 15
Tenadores.....	U. F. C.	April 10.....	April 18	Turrialba.....	U. F. C.	April 13.....	April 20
Santa Marta.....	U. F. C.	April 14.....	April 21	Heredia.....	U. F. C.	April 17.....	April 22
Advance.....	P. R. R.	April 15.....	April 22	Abangarez.....	U. F. C.	April 20.....	April 27
Metapan.....	U. F. C.	April 17.....	April 25	Parismina.....	U. F. C.	April 24.....	April 29
Almirante.....	U. F. C.	April 21.....	April 28	CRISTOBAL-COLON TO NEW ORLEANS.			
Panama.....	P. R. R.	April 22.....	April 28	Heredia.....	U. F. C.	April 8.....	April 13
CRISTOBAL-COLON TO NEW YORK.				Abangarez.....	U. F. C.	April 8.....	April 15
Almirante.....	U. F. C.	April 8.....	April 15	Parismina.....	U. F. C.	April 15.....	April 20
Panama.....	P. R. R.	April 10.....	April 16	Atenas.....	U. F. C.	April 15.....	April 22
Pastores.....	U. F. C.	April 12.....	April 19	Cartago.....	U. F. C.	April 22.....	April 27
Zacapa.....	U. F. C.	April 15.....	April 22	Turrialba.....	U. F. C.	April 22.....	April 29
Allianca.....	P. R. R.	April 17.....	April 23	Heredia.....	U. F. C.	April 29.....	May 4
Calamares.....	U. F. C.	April 19.....	April 26	Abangarez.....	U. F. C.	April 29.....	May 6



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Charges on Deck Loads.

The recent ruling that tolls on vessels using the Canal shall not exceed the equivalent of \$1.25 per net United States register ton makes no modification in the procedure of measurement and levy of tolls, except by this limit on the total amount chargeable. The net Canal tonnage (cargo-carrying capacity in tons of 100 cubic feet) is still the basis of charge, at \$1.20 per Canal ton, and deck loads are still charged for in addition at the rate of \$1.20 per 100 cubic feet. But if the sum of these charges exceeds the product obtained by multiplying the net United States tonnage by \$1.25, the difference is not collectible.

The limitation as to maximum charge may result in allowing deck loads to go through practically without charge. For example, a vessel having a net Canal tonnage of 1,000 and carrying cargo in the hold alone would be assessed at \$1,000 times \$1.20, or \$1,200. Suppose her net United States tonnage to be 980; the product of this by \$1.25 is \$1,225, so the regularly levied Canal tolls, amounting to \$1,200, would be collected.

If the same vessel were carrying deck load, say 200 tons, the levy would be at \$1.20 per ton on 1,000 plus 200, or \$1,440. But as this is in excess of the product of 980 by \$1.25, or \$1,225, only the latter amount may be collected. In other words, whether the vessel carries deck load or not, the total charges may not exceed \$1.25 per net United States ton.

The ruling may be summarized in this way: Whichever of these two products—
(Panama Canal net tonnage + deck load) \times \$1.20, or
(United States net tonnage) \times \$1.25,
is the less, will be collected.

Increasing Service to the Far East.

The Commonwealth and Dominion Line, Ltd., is developing an extensive service from New York to the Far East and Australia and New Zealand through the Canal with vessels which were formerly operated around the Cape of Good Hope.

Four subsidiary lines are being used by the Commonwealth and Dominion Line in this service. They are the Indra Line, the Star Line, the Port Line, and the Tyser Line,

each of which has its own fleet. The Indra Line operates between New York and the Far East, and the three other lines between New York and Australia and New Zealand. Vessels of the Indra Line and the Star Line have already passed through the Canal, and one of the Port Line, the *Port Curtis*, is now on the way, due to arrive at Cristobal on April 20.

The fleet of the Indra Line, which is also known as the American-Australian Line, consists of the *Hawkes Bay*, *Indrabarah*, and *Indralemo*; that of the Star Line of the *Star of Australia*, *Star of England*, *Star of India*, *Star of Scotland*, and *Star of Victoria*; that of the Port Line of the *Port Albany*, *Port Augusta*, *Port Curtis*, *Port Hunter*, *Port Kemble*, *Port Lincoln*, *Port Macquarie*, *Port Phillip*, and *Port Pirie*; and that of the Tyser Line of the *Makarini*, *Marere*, *Mimiro*, *Muritai*, *Nerehana*, *Niwaru*, and *Whakarua*.

New Timetable for Panama Railroad.

Passenger train timetable No. 22 for the Panama railroad, which will go into effect at 12.01 a. m., Sunday, April 18, is published on page 305 in this issue of THE CANAL RECORD.

The new timetable makes no changes in the main line trains, between Colon and Panama. The Panama-Las Cascadas shuttle service is continued as before except for these two changes: From Panama, the train leaving at 10.40 p. m., heretofore operated on Sunday only, will be extended to run daily except Saturday; and from Las Cascadas, one new train is added, to leave Las Cas Cascadas at 11.40 p. m. daily except Saturday, arriving at Panama at 12.30 in the morning.

The addition of the 10.40 p. m. daily train has been made for the personal convenience of the Army and Canal forces stationed between Las Cascadas and Panama, and with the idea of making this additional service selfsupporting, it has been ruled that complimentary transportation will not be accepted on this train (No. 42). This ruling prohibits the use of card passes or complimentary trip passes on this train.

New Coastwise Passenger Service through the Canal.

The passenger steamship *Kroonland*, which passed through the Canal on February 2 on a tour around South America with a party of business men, and is the largest ship to have used the Canal to date, is to be operated with her sister ship, the *Finland*, in a regular coastwise passenger service between New York and San Francisco, via Los Angeles and San Diego. This service is scheduled to begin with the sailing of the *Finland* from New York on May 1. Sailings are to be made each way every 21 to 25 days. The scheduled time at sea on each trip is 16 days, which, allowing eight hours for the transit of the Canal, means traveling about 335 miles a day, a speed of approximately 14 knots.

RECEIPTS AND EXPENSES.

Toll Earnings Have Not Equalled Cost of Operation and Maintenance.

Up to March 1, 1915, the earnings of tolls on vessels using the Canal fell short of meeting the expenses of operation and maintenance of the Canal by \$261,098.09.

From the beginning of the present fiscal year, on July 1, 1914, to March 1, 1915, a period of eight months, the total expenditure attributed to operation and maintenance was \$2,595,613.33. The total earnings of tolls in the period were \$2,334,515.24. In other words, on a business requiring the expenditure of \$2,595,613.33 the Government has lost approximately 10 per cent.

Detailed analysis of the receipts and expenditures for the months of January and February, 1915, and for the entire 8-month period, are given in the table below. For the purposes of general information, it may be stated here that operation and maintenance include all the diversified expenditures necessary for keeping the Canal open and in order, and the work of handling vessels through; and to such expenditures have been added a prorated part of the expenses of the civil government, of the sanitary work, and of general administration. These three latter items have amounted to \$574,570.82 during the period. Over a third of the total overhead expense of The Panama Canal is assigned to operation and maintenance.

Operation and maintenance proper are summarized under the following heads: Admeasurement of vessels, local inspection, aids to navigation, pilotage, damages to vessels, maintenance of transportation tracks, Gatun Locks, Gatun Spillway, Gatun Dam, Pedro Miguel Lock, Pedro Miguel Dam, Miraflores Locks, Miraflores East Dam and Spillway, Miraflores West Dam, dredging, and maintenance of Gatun Lake, Gatun-Mindi Levee, and Naos Island Breakwater. The total cost of the work in Culebra Cut attributed to operation and maintenance is \$1,012,695.39. This includes the work north of Gold Hill, where the channel was once opened, but not the work at Cucaracha slide, which has been considered construction work, as the channel was not clear on July 1.

It will be noted that the Canal was opened to oceangoing vessels on August 15, 1914, a month and a half after the beginning of the fiscal year. Toll collections prior to August 15 amounted to \$11,610.69. However, until August 15 a part of the charges since attributed to operation and maintenance were charged to construction. The total cost of operation and maintenance for the months of July, August, and September was \$595,225. The table given below is designed to show, as accurately as they may be distributed, the actual cost of maintaining and operating the Canal during the 8-month period. This period includes the first six months of commer-

cial operation, as well as a month and a half prior to the opening, and half a month following the completion of six months' commercial operation, which fell on February 15, 1915.

Tolls earned during March, 1915, amounted to \$560,784.96. The cost of operation and maintenance has not been summarized, but it is estimated that it will be approximately \$425,000. This would carry the total for nine months to about \$3,020,000, as against toll earnings of \$2,894,300.20, and reduce the loss to approximately \$125,000 or \$130,000, about four per cent of the expenditure for operation and maintenance.

Detailed summary of the various items of expenditure included under operation and maintenance, for January and February, and the aggregate for the eight months to March 1, is given in the following table:

ITEMS.	Month of February, 1915	Month of January, 1915	Total since July 1, 1914
Civil Government, proportion.....	20,164.53	21,412.95	152,365.30
Health Department, proportion.....	19,128.60	24,243.53	163,237.49
Administration, proportion.....	81,146.00	90,590.64	574,570.82
Operation and Maintenance:			
Admeasurement of vessels.....	957.16	843.69	6,607.91
Local inspection.....	380.66	299.73	2,467.36
Aids to navigation.....	4,856.27	4,343.23	31,137.69
Pilotage.....	7,075.80	6,405.48	35,248.10
Damages to vessels.....	1,055.19	201.04	1,448.46
Maintenance of transportation tracks.....	4,824.90	3,696.83	23,889.58
Gatun Locks—			
Superintendence.....	1,731.09	1,697.92	12,393.06
Operation.....	7,865.30	6,066.66	68,114.63
Maintenance of operating machinery and equipment.....	3,681.15	3,577.83	21,261.67
Main enance and care of emergency dams.....	1,280.89	3,307.61	9,192.29
Maintenance of gates.....	48.18	232.75	2,721.89
Maintenance of valves.....	242.78	5.00	785.50
Maintenance of towing track system.....	745.25	351.97	4,357.50
Maintenance of towing locomotives, lines, and hawsers.....	823.27	2,635.09	8,580.18
Maintenance of lighting and telephone system.....	228.17	318.20	2,021.08
Maintenance of power control and lighting cables.....	26.81	32.65	255.01
Maintenance of structures.....	2,327.02	3,469.10	16,805.24
Maintenance of backfill.....	2,370.77	986.47	6,182.03
Miscellaneous supplies and expenses.....	149.81	171.18	2,042.29
Gatun Spillway—			
Operation.....	66.49	86.21	737.42
Maintenance of operating machinery and equipment.....			1,030.51
Maintenance of gates and caissons.....			2,307.00
Maintenance of structures.....	755.28	2,192.60	4,757.02
Gatun Dam, maintenance.....	4,073.89	1,472.43	16,327.08
Pedro Miguel Lock—			
Superintendence.....	1,863.70	1,728.90	10,064.22
Operation.....	5,329.25	6,175.53	55,439.43
Maintenance of operating machinery and equipment.....	2,251.64	3,429.75	14,954.69
Maintenance and care of emergency dams.....	640.32	483.09	5,428.57
Maintenance of gates.....		202.85	1,090.77
Maintenance of valves.....	21.19	2.50	117.17
Maintenance of towing track system.....	1.96		95.19
Maintenance of towing locomotives, lines, and hawsers.....	797.30	2,169.02	5,506.72
Maintenance of lighting and telephone system.....	129.60	136.43	1,139.56
Maintenance of power control and lighting cables.....	9.36	122.35	876.13
Maintenance of structures.....	1,114.23	617.81	4,991.16
Maintenance of backfill.....	3,243.27	3,347.75	11,362.16
Miscellaneous supplies and expenses.....	117.64	148.23	1,075.93
Pedro Miguel Dam, maintenance.....			42.00
Miraflores Locks—			
Superintendence.....	1,848.58	1,970.79	12,018.83
Operation.....	7,025.83	7,438.32	70,059.93
Maintenance of operating machinery and equipment.....	895.53	2,074.74	12,125.74
Maintenance and care of emergency dams.....	362.41	346.32	4,712.50
Maintenance of gates.....	2,503.20	9,046.35	20,889.49
Maintenance of valves.....	4,602.05	1,580.40	8,063.12
Maintenance of towing track system.....	79.92	222.29	1,045.17
Maintenance of towing locomotives, lines, and hawsers.....	837.04	1,339.83	4,921.66
Maintenance of lighting and telephone system.....	109.19	72.79	1,333.67
Maintenance of power control and lighting cables.....	4.00	13.80	135.48
Maintenance of structures.....	830.58	797.44	6,223.99
Maintenance of backfill.....	2,582.78	1,918.75	9,170.37
Miscellaneous supplies and expenses.....	287.70	311.25	2,221.71
Miraflores East Dam and Spillway—			
Operation.....		16.55	651.50
Maintenance of operating machinery and equipment.....	63.39	74.77	4,840.25
Maintenance of gates and caissons.....	100.87	496.03	3,000.99
Maintenance of structures.....	276.89	30.45	597.36
Miraflores West Dam, maintenance.....			377.17
Dredging—			
Atlantic entrance.....	20,376.08	20,993.17	100,718.76
Culebra Cut.....	181,873.83	187,922.63	1,012,695.39
Pacific entrance.....			4,978.80
Maintenance of Gatun Lake.....	1,493.21	1,154.07	8,776.17
Gatun-Mindi Levee, maintenance.....	323.46		22,564.96
Naos Island Breakwater, maintenance.....			461.93
Total, operation and maintenance.....	408,001.26	435,025.74	2,595,613.33
Tolls earned.....	383,904.96	419,037.12	2,334,515.24
Expenses in excess of tolls earned.....	24,096.30	15,988.62	261,098.09

MAGNETIC SURVEY OF EARTH

Yacht "Carnegie" Passes through the Canal on Work of Value to Navigators.

The yacht *Carnegie*, which is engaged in a magnetic survey of the oceans, sailed from Balboa on Monday, April 12, after passing through the Canal from the Atlantic Ocean. The next port will be Honolulu, but the later course of the cruise will be mostly through the south Pacific, followed by circumnavigation of the south pole as far down in the antarctic regions as the ice will allow.

The *Carnegie* is owned by the Carnegie Institution of Washington, D. C., and operated by the Department of Terrestrial Magnetism of that foundation. The department is conducting a magnetic survey of the earth, begun in 1904 and now about three-fourths completed. This is carried out on land and sea simultaneously. The land parties, in some 40 expeditions, have traveled over 800,000

miles, making observations at about 3,000 stations, in 107 countries and island groups but mostly in Africa, Asia, and Australia, where the least surveying of the sort had been done; and the ships of the Institution have been over all the oceans, between latitudes about 50° north and 50° south, traveling over 175,000 miles, with observations every 100 to 200 miles. By the time the survey is completed the parties will have traveled an aggregate distance equivalent to 50 times around the world.

The observations taken by the staff of the *Carnegie* embrace the three magnetic elements, familiar to navigators—the magnetic declination, or "variation of the compass," the horizontal dip, and the intensity of the magnetic field. In addition studies are made of atmospheric electricity and various magnetic conditions, especially as these differ from conditions predicated by previous surveys or by theories.

The work is international and data are furnished to various governmental hydrographic offices for the correction of the charts published by them. Those of value and importance to mariners are available for their use within from two to four months from time of observation. It is not unusual for the *Carnegie* to afford corrections as great as 2° to the charted magnetic variation, even after taking into consideration the periodic and secular changes. From the time of the first magnetic survey, by Halley in 1698, to the present, no such comprehensive scheme of accurate surveying has been undertaken, and many areas visited by the *Carnegie* have practically not been surveyed before. Last summer, for instance, the vessel went as far north as 79° 52.3', in the eastern Atlantic, and recorded facts not previously known. At one point the dip observed was as high as 81.3°, and the value of the horizontal intensity was .081 c. g. s. unit.

In addition to the immediate practical value of the work to mariners, the data collected will be of service in the effort to determine the causes of magnetic phenomena, especially of diurnal variation of the compass, and magnetic and electric storms; and in the project of establishing a kind of worldwide magnetic datum from which it may be possible to reckon changes ahead.

Accuracy is the keynote of the work of the *Carnegie*. The vessel is nonmagnetic, being built throughout of wood, with locust spikes, and sheathed below the water line with copper plating; and all the fixtures are of nonmagnetic material. Oil lights are used; all the stoves, and even the auxiliary engine, are of copper; the 1,400-pound anchors are of bronze. Such few items of magnetic substances as can not be dispensed with, like the tin cans for food, are stowed far aft and below where their influence is negligible. The instruments have been made with extreme care. Time is taken from the mean of the readings of six chronometers. Every observation is made by two separate methods, and each of these is conducted by two observers; at every station a total of 400 readings is taken for each phenomenon.

The vessel is 155½ feet long over all, or 20 feet longer than the Canal tug *Reliance*. The length at load water line is 128 feet four inches, and the beam is 33 feet, with a draft of 13½ feet. The crew consists of 23, including six scientists. The vessel is frequently at sea for several months at a time.

PANAMA RAILROAD COMPANY.

(PASSENGER TRAIN TIME TABLE NO. 22—IN EFFECT APRIL 18, 1915.)

SOUTHWARD.

STATIONS.	Miles from Colon	DAILY.								Daily except Sunday	Saturday only	Daily except Saturday	SUNDAY ONLY.		
		31	3	33	5	35	37	39	7				51	53	11
Leave.		A. M.	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	P. M.	P. M.
Colon.....	0	.....	7.15	.....	11.05	.....	.....	.....	5.10	.....	11.35	.....	.....	.....	9.30
Mount Hope.....	1.57	.....	\$7.20	.....	\$11.10	.....	.....	.....	\$5.15	.....	\$11.40	.....	.....	.....	\$9.35
Gatun.....	6.79	.....	\$7.30	.....	\$11.20	.....	.....	.....	\$5.25	.....	\$11.50	.....	.....	.....	\$9.45
Monte Lirio.....	14.48	.....	\$7.45	.....	\$11.35	.....	.....	.....	\$5.40	.....	\$12.06	.....	.....	.....	\$10.00
Frijoles.....	20.92	.....	\$7.56	.....	\$11.46	.....	.....	.....	\$5.51	.....	\$12.17	.....	.....	.....	\$10.11
Darien.....	25.27	.....	\$8.03	.....	\$11.53	.....	.....	.....	\$5.58	.....	\$12.24	.....	.....	.....	\$10.18
Gamboa.....	30.26	.....	\$8.14	.....	\$12.04	.....	.....	.....	\$6.09	.....	\$12.35	.....	.....	.....	\$10.29
New Culebra.....	35.19	.....	\$8.30	.....	\$12.15	.....	.....	.....	\$6.20	.....	\$12.46	.....	.....	.....	\$10.40
Las Cascadas.....	47.93	7.00	.....	10.40	.....	1.10	4.50	6.05	.....	7.20	.....	11.40	1.40	9.15	.....
Empire.....	45.64	\$7.05	.....	\$10.45	.....	\$1.15	\$4.55	\$6.10	.....	\$7.25	.....	\$11.45	\$1.45	\$9.20	.....
Culebra.....	44.65	\$7.10	.....	\$10.50	.....	\$1.20	\$5.00	\$6.14	.....	\$7.30	.....	\$11.50	\$1.50	\$9.25	.....
Paraiso.....	40.95	\$7.25	.....	\$11.05	.....	\$1.35	\$5.15	\$6.28	.....	\$7.45	.....	\$12.05	\$2.05	\$9.40	.....
Pedro Miguel.....	40.24	\$7.28	\$8.44	\$11.08	\$12.29	\$1.38	\$5.18	\$6.30	\$6.34	\$7.48	\$12.58	\$12.08	\$2.08	\$9.43	\$10.53
Miraflores Locks.....	42.35	\$7.34	\$8.50	\$11.14	\$12.35	\$1.44	.....	.....	\$6.40	\$7.54	1.04	\$12.14	\$2.14	\$9.49	\$10.59
Corozal.....	44.24	\$7.39	\$8.54	\$11.19	\$12.39	\$1.49	.....	.....	\$6.44	\$7.59	\$1.09	\$12.19	\$2.19	\$9.54	\$11.04
Balboa Heights.....	46.52	\$7.45	\$9.00	\$11.25	\$12.45	\$1.55	.....	.....	\$6.50	\$8.05	\$1.15	\$12.25	\$2.25	\$10.00	\$11.10
Panama.....	47.61	7.50	9.05	11.30	12.50	2.00	.....	.....	6.55	8.10	1.20	12.30	2.30	10.05	11.15
		A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	A. M.	P. M.	P. M.
		31	3	33	5	35	37	39	7	41	9	43	51	53	11
		DAILY.								Daily except Sunday	Sunday only	Daily except Saturday	SUNDAY ONLY.		

NORTHWARD.

STATIONS.	Miles from Colon	Mixed Daily	DAILY.								Saturday only	Daily except Saturday	SUNDAY ONLY.		
			30	4	32	6	34	36	38	8	40	10	42	52	12
Leave.		A. M.	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	P. M.
Panama.....	47.61	4.50	7.10	8.30	11.00	12.10	3.05	.....	.....	5.05	.....	11.30	10.40	12.40	9.25
Balboa Heights.....	46.52	\$4.55	\$7.15	\$8.35	\$11.05	\$12.15	\$3.10	.....	.....	\$5.10	.....	\$11.35	\$10.45	\$12.45	\$9.30
Corozal.....	44.24	\$5.02	\$7.21	\$8.41	\$11.12	\$12.21	\$3.16	.....	.....	\$5.16	.....	\$11.41	\$10.51	\$12.51	\$9.36
Miraflores Locks.....	42.35	\$5.07	\$7.26	\$8.46	\$11.16	\$12.26	\$3.21	.....	.....	\$5.21	.....	\$11.46	\$10.56	\$12.56	\$9.41
Pedro Miguel.....	40.24	\$5.19	\$7.33	\$8.53	\$11.23	\$12.33	\$3.28	5.33	\$5.28	6.45	\$11.53	\$11.03	\$1.03	\$9.48	.....
Paraiso.....	40.95	\$5.22	.....	\$8.56	.....	\$12.36	\$3.31	\$5.36	.....	\$6.48	.....	\$11.06	\$1.06	.....	.....
Culebra.....	44.65	\$5.55	.....	\$9.10	.....	\$12.50	\$3.45	\$5.50	.....	\$7.02	.....	\$11.19	\$1.19	.....	.....
Empire.....	45.64	\$6.28	.....	\$9.15	.....	\$12.55	\$3.50	\$5.55	.....	\$7.07	.....	\$11.24	\$1.24	.....	.....
Las Cascadas.....	47.93	6.35	.....	9.20	.....	1.00	3.55	6.00	.....	7.12	.....	11.29	1.29	.....	.....
New Culebra.....	35.19	.....	\$7.45	.....	\$11.35	.....	.....	.....	.....	\$5.40	.....	12.06	.....	.....	10.01
Gamboa.....	30.26	.....	\$7.55	.....	\$11.45	.....	.....	.....	.....	\$5.50	.....	\$12.16	.....	.....	\$10.11
Darien.....	25.27	.....	\$8.07	.....	\$11.57	.....	.....	.....	.....	\$6.02	.....	\$12.28	.....	.....	\$10.22
Frijoles.....	20.92	.....	\$8.14	.....	\$12.04	.....	.....	.....	.....	\$6.09	.....	\$12.34	.....	.....	\$10.29
Monte Lirio.....	14.48	.....	\$8.25	.....	\$12.15	.....	.....	.....	.....	\$6.20	.....	\$12.45	.....	.....	\$10.40
Gatun.....	6.79	.....	\$8.40	.....	\$12.30	.....	.....	.....	.....	\$6.35	.....	\$1.00	.....	.....	\$10.55
Mount Hope.....	1.57	.....	\$8.50	.....	\$12.40	.....	.....	.....	.....	\$6.45	.....	\$1.10	.....	.....	\$11.05
Colon.....	0	.....	8.55	.....	12.45	.....	.....	.....	.....	6.50	.....	1.15	.....	.....	11.10
		A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	P. M.	A. M.	P. M.	P. M.
		30	4	32	6	34	36	38	8	40	10	42	52	12	
		Mixed Daily	DAILY.								Sunday only	Daily except Saturday	SUNDAY ONLY.		

s Stop. f Flag stop.

Removing Part of Old "American Wharf" in Panama.

Forces of the Panama Railroad Company began on Monday, April 12, the removal of the outermost 100 feet of the old "American wharf," belonging to the company, in the harbor of Panama. This is done to save the section from falling down. This timber structure and the "English wharf" to the north of it are relics of the early days of the railroad and formed the Pacific terminal until the erection of the steel wharf at Balboa in 1899, alongside the channel dredged by the French canal forces. Cargo was transferred to and from vessels in lighters. The American wharf is 795 feet long and 68 feet wide, and the English wharf is 300 feet long by 47 feet wide.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Toppa, Edwin.....	34126	Barbados.....	Colon.....	Municipal Eng..	April 1.
Wood, Joseph.....	.....	U. S. A.....	Cristobal.....	C. J. Alberts, contractor.	April 5.

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,

Administrator of Estates.

IMMIGRATION AND EMIGRATION

For First Time In 20 Months Immigration to Isthmus Exceeds Emigration.

Immigration to the Isthmus exceeded emigration from it during the month of March, 1915. This is the first time that such has occurred since June, 1913, when there began an exodus of Canal employees released by the approaching completion of the work, and of others who had lived on the Isthmus during the heyday of the construction period. The progress of the exodus, amounting to almost 25,000 people, is shown by the following summary of net emigration by months, taken from the monthly reports of the quarantine officers:

MONTH.	No. each month.	Total since July 1, 1913.
July, 1913.....	1,129	1,129
August.....	1,844	2,973
September.....	2,485	5,458
October.....	2,430	7,888
November.....	2,037	9,925
December.....	1,970	11,895
1914.....		
January.....	1,382	13,277
February.....	292	13,569
March.....	397	13,966
April.....	1,417	15,383
May.....	626	16,009
June.....	283	16,292
July.....	405	16,697
August.....	701	17,398
September.....	1,155	18,553
October.....	1,990	20,543
November.....	537	21,080
December.....	1,328	22,408
1915.....		
January.....	804	23,212
February.....	1,561	24,773

The net emigration for the 20 months has averaged 1,223.65 per month, or about 40 persons each day.

The excess of immigration over emigration during March, 1915, is due to the arrival of 1,471 American soldiers. Counting them, the excess was 654; without them, there would have been an excess of emigration over immigration amounting to 817 persons.

In this connection, it is noted that the force at work on the Canal and Panama railroad, including the forces of contractors, on June 25, 1913, was 42,262; and the force on February 24, 1915, was 23,445 men. This is a decrease of 18,817 in 20 months, an average of 940.85 per month, or about 31 per day.

March was a busy month for the Canal quarantine officials. Two hundred and thirteen vessels were inspected, as compared with 149 during the preceding month, and 18,169 persons were examined, as compared with 13,632 in February and 14,119 in January. Further details of the movements of persons through the ports are given in the following consolidated report of quarantine operations at the ports of Balboa-Panama and Cristobal-Colon for the month of March:

Number of vessels inspected and passed.....	205
Number of vessels held at quarantine.....	8
Total.....	213
Number of vessels fumigated on arrival.....	7
Number of vessels fumigated on departure.....	2
Total.....	9
Number of crew examined.....	12,155
Number of passengers examined (including 1,471 U. S. troops).....	6,014
Total.....	18,169
Number of persons vaccinated at ports of arrival because of compulsory vaccination law.....	569
Number of persons vaccinated at ports of departure or enroute because of compulsory vaccination law.....	1,410
Total.....	1,979

Number of persons held in quarantine at the detention houses to complete period of incubation of yellow fever and plague.....	379
Number of persons held in quarantine on board vessels to complete period of incubation of yellow fever and plague.....	1,085
Total.....	1,464
Number of persons landed from foreign ports:	
Cabin.....	2,258
Steorage.....	2,132
Total.....	4,390
Number of persons embarked for foreign ports:	
Cabin.....	2,070
Steorage.....	1,666
Total.....	3,736
Number of persons arriving from coast towns on small launches and sailing craft.....	1,875
Number of persons sailing for coast towns on small launches and sailing craft.....	2,485
Apparent decrease for month from coast towns.....	610
Apparent decrease for month from foreign ports:	
Cabin (increase).....	188
Steorage (decrease).....	534
Total.....	346
Number of immigrants recommended for deportation.....	11
Number of bills of health issued of viséed.....	213
Total number of persons landed.....	6,265
Less number for Pacific ports.....	191
Total number of persons sailing.....	6,221
Total apparent decrease for month.....	147

New Quarantine Landing at Balboa.

In connection with the new quarantine station at Balboa, a permanent landing for passengers is being constructed on the southern side of Balboa dump. It will be floating landing, using a steel pontoon anchored in 22 feet of water and connected to the shore by a trestle. The trestle is to be 569 feet long by 11 feet wide at the deck, and the floor is to be 14.5 feet above mean sealevel. At the sea end will be a 90-foot steel bridge gangway, hinged to the trestle and resting at its outer end on the floating pontoon. This gangway will be exactly like the one in use at the small boat landing at Dock 17 in Balboa Harbor. The

supports of the trestle will be bents spaced from 21 to 24 feet apart and consisting each of two 14-inch pipe piles, driven on a batter of one on 12 and filled with reinforced concrete. In each span the piles will be connected by a heavy brace at mean sealevel and by a cap of reinforced concrete, two feet four inches wide by four feet deep. Three well braced tower bents of 10-foot spans will be erected at equal intervals for securing greater rigidity. The floor will be a 6-inch reinforced concrete slab, resting on two I-beam stringers enclosed in concrete, and a suitable railing will be erected along the sides.

The construction of the approach was let by contract, award being made to Mr. A. P. Cray. Work was begun last week and it is expected that the landing will be finished in June.

Old Pacific Division Office Building Abandoned.

The section of the drafting force of the Division of Terminal Construction which had been occupying the old Pacific Division office building at Corozal, moved last week into the general drafting room in the Administration Building at Balboa Heights. The abandoned office building will be turned over to the Army.

This move marks the ultimate step in the dissolution of the three great construction divisions, the Atlantic, Central, and Pacific, which were formed on July 1, 1908, to handle the task of excavating the Canal channel, building the dams, and placing the concrete for the locks and spillways. The Central Division was abolished on October 10, 1913, the day of the blowing up of the Gamboa dike. The Pacific division was abolished on December 12, 1912, its remaining work being taken over by a newly created Fifth Division, which lasted until February 1, 1914, on which date it and the Atlantic Division were abolished. The Central Division office building was abandoned in November, 1913, and the Atlantic Division building was abandoned in September, 1914.

WEATHER CONDITIONS, CANAL ZONE, MARCH, 1915.

The rainfall for the month was below the average at all stations except Camacho, Juan Mina, Frijoles, and Colon. Monthly totals ranged from zero at Balboa to 1.71 inches at Colon. The maximum amount of rainfall recorded on any one day was 0.83 inches, at Camacho reservoir on the 20th.

The estimated rainfall over the Chagres River basin was 36 per cent below the average, or 1.02 inches against a 14-year average of 1.60 inches.

The average air temperature on both coasts was above normal, the daily excess being approximately one degree Fahrenheit on the Pacific coast and two degrees Fahrenheit on the Atlantic coast. The average temperature at Colon was the highest on record for the month of March. The atmospheric pressure and wind movement were below the average, while the relative humidity and daytime cloudiness were above normal at both coast stations.

No fogs were observed during the month at either coast station and only a few were observed at interior stations, all of which were dissipated before 7.30 a. m.

Elevations of Gatun Lake in feet above mean sealevel:

Mean for the month, 86.82; maximum, 86.98, on the 8th; minimum, 86.60, on the 31st; evaporation from the lake surface, 6,698 inches.

Conditions at the entrances to the Canal may be summarized as follows:

STATIONS.	Press're (reduced to mean of 24 hourly.)	Temperature.						Mean relative humidity.	Precipitation.			Wind.				
		Mean.	Maximum.	Date.	Minimum.	Date.	Total inches.		Station average.	Days of .01 inch or more.	Total movement (miles.)	Prevailing direction.	Max. velocity in (miles.)	Direction.	Date.	
Colon	29.860	82.6	89	Mar. 5	76	Mar. 18	86	1.71	1.63	12	10,492	N.	32	N. E.	Mar. 24	
* Balboa Heights . . .	29.842	83.0	93	Mar. 19	71	Mar. 9	82	T	.67	0	7,086	N.	27	N. W.	Mar. 30	

*Formerly Ancon.

OFFICIAL CIRCULARS.

Rental of Quarters of Nonemployees.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 25, 1915.

CIRCULAR No. 627-7:

1. As provided in paragraph 15 of Circular No. 627-3, dated February 24, 1915, the following surcharges will be added to the regular schedule of rentals when quarters are rented to other than employees of The Panama Canal and Panama Railroad Company:

(a) Contractors and their employees, officers and enlisted men of the Army, Navy, and Marine Corps, officers and employees of other branches of the United States Government:

Bachelor quarters..... 50 per cent.
Family quarters..... 80 per cent.

(b) Outside parties who have no connection with The Panama Canal or Panama Railroad:

Bachelor quarters..... 125 per cent.
Family quarters..... 250 per cent.

3. No charge will be made for electric current in quarters when the above surcharges are added to the rental.

4. The above surcharges will be remitted when quarters are rented to officers and enlisted men of the Army, Navy, and Marine Corps or other branches of the United States Government, and the repairs to the buildings occupied are made by the interests occupying same, but charge will be made for electric current in such cases. No surcharge will be added to the rental of quarters which may be assigned to ministers or representatives of charitable organizations, but charge will be made for electric current in such quarters.

5. This circular will not give any of the above-mentioned classes of nonemployees any rights to assignments to quarters. Bachelor quarters, if available, may be rented to any of the above classes, except that assignments under (b) will only be made with the approval of the Chief Quartermaster. Assignments of family quarters to any nonemployee will only be made with the approval of the Governor.

6. It is directed that when contracts are made, in connection with which it is probable the contractor will desire to rent quarters, the contract will carry provision that quarters, if available, will be rented at the rates provided. It is also directed that when bids are asked for covering service or the furnishing of supplies in connection with which it is probable the contractor will desire to rent quarters, bidders will be advised that a reasonable number of bachelor quarters can be rented but that family quarters will not be available.

7. The above will apply to both silver and gold quarters.

GEO. W. GOETHALS,
Governor.

Rates for Floating Cranes.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 30, 1915.

CIRCULAR No. 686-4:

1. A rate of \$20 an hour will be charged departments and divisions of The Panama Canal and Panama Railroad, or other branches of the United States Government, for services of the floating cranes *Ajax* and *Hercules*.

2. This rates applies to each of the floating cranes and includes only their regular crew. Any additional force, as well as all towing and similar charges, will be extra at the usual rates.

3. Rates for services for others will be furnished upon application to the Superintendent of the Mechanical Division.

GEO. W. GOETHALS,
Governor.

Placing Cars for Delivery.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 8, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

It too frequently happens that cars are picked up from yards and placed for delivery without records being turned in to the terminal trainmaster by the conductors performing the service. There are also frequent cases where delivery is denied by the particular department for which the material is intended, thus bringing about difficulties in the adjustment of bills.

A great deal of this has been charged to conductors of work trains in the exclusive service of some particular department or division, removing cars from the yard without the knowledge of the terminal forces and placing cars for delivery without turning in a record to cover.

Commencing at once, field superintendents or foremen of the various departments or divisions, when detailing a work train crew in their service to pick up a car or cars from any part of the terminal, must give the conductor an order in writing properly indicating the de-

partment or division for which the service is to be performed, and signed by the field superintendent or foreman issuing the order. Conductors of work trains before removing such cars must present this order to the yard office for their approval and record, and in addition will turn in at the close of each day's service switching list, form AI-385, showing a full and complete record of all cars moved or handled, viz: Car number, contents, where from, where to, time placed, and whom for. Conductors engaged in yard or roustabout service, both Panama railroad and Panama Canal, will likewise make record and turn in at the close of each day's service, a complete list of all cars moved from any part of the terminal and later placed for delivery.

GEO. W. GOETHALS,
Governor, The Panama Canal,
President, the Panama Railroad Company.

New Form of Application for Quarters.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 6, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

There is being forwarded to you under separate cover, a supply of form 1694-1 combination application for family and bachelor quarters.*

You will please instruct each employee in your department or division, who now has on file an application for family quarters, to fill out this form in duplicate, and after completion by head of division, forward the original to the district quartermaster concerned and a copy to this office.

Heads of divisions in answering questions 9 and 10 will please be as explicit as possible.

By direction of the Governor.

C. A. MCLIVAIN,
Executive Secretary.

*Following is the form of application blank:
Application for Family Quarters.

Bachelor
Date.....
1. Name..... P. O. Address.....
2. Are you married now?..... How many children?.....
.....
(To be filled out for family quarters only.)
3. Department..... Division.....
4. Salary..... Date last service began.....
.....
5. Working at..... Employed as.....
6. Desire quarters at.....
Rental to be not over \$.... or less than \$.... per month.
7. Where is your family now?.....
Signature..... Applicant.

(To be filled out by Head of Division.)

8. Is the applicant's service satisfactory?.....
9. How long will his employment last?.....
10. Is his position in permanent organization?.....
Signature..... Head of Division.

EXECUTIVE OFFICE.

11. The service record of this employee as given above is correct.

Signature.....
Chief Clerk, Executive Office.

Executive Order.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 7, 1915.

CIRCULAR No. 601-42:

REINSTATEMENT OF DR. EDWARD P. BEVERLEY.

The Executive Order quoted below is published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

The year limit upon eligibility for reinstatement is hereby waived to permit the reinstatement of Dr. Edward P. Beverley as a physician in The Panama Canal service.

Dr. Beverley's reinstatement by Executive Order is recommended by Gen. Geo. W. Goethals, Governor of The Panama Canal. Dr. Beverley entered the service on July 6, 1904; served through the period when tropical diseases were prevalent, and by his efficient service was successively promoted until he held one of the highest positions therein at the close of his service, December 15, 1913, being rated as "excellent" in both conduct and character of work. Necessity for a change of climate required his resignation, but he has recovered from the effects of his long residence in the tropics and desires to return to work on the Isthmus.

The Civil Service Commission concurs in recommending this order.

WOODROW WILSON.

THE WHITE HOUSE,
March 23, 1915.

Danger to Railroad Employees at Corozal.

PANAMA RAILROAD COMPANY,

OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., April 3, 1915.

TRANSPORTATION BULLETIN No. 160:

All concerned—Attention is called to the fact that the new passenger station at Corozal will not clear a man on the side of cars on the east side of the northbound main track; likewise on connection south end of commissary siding.

Employees are warned to refrain from placing themselves on the east side of cars while passing or working in the vicinity of this station on the northbound main.

C. H. MOTSETT,
Superintendent.

No Complimentary Transportation on Train No. 42.

PANAMA RAILROAD COMPANY,

OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., April 8, 1915.

All concerned—No complimentary transportation, either in the form of card passes or trip passes will be accepted for transportation on train No. 42 which will leave Panama 10.40 p. m. daily, except Saturday, on new timetable No. 22, which becomes effective Sunday, April 18, 1915.

C. H. MOTSETT,
Superintendent.

Magistrate for District of Cristobal.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 6, 1915.

To all concerned—Effective April 10, 1915, and during the absence on leave of Judge John W. Thompson, Mr. E. W. Bucklin will perform the duties of magistrate for the District of Cristobal.

GEO. W. GOETHALS,
Governor.

Deputy Collector.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 18, 1915.

CIRCULAR No. 661-15:

1. Mr. Elwood P. Sine is hereby appointed Deputy Collector of The Panama Canal, and Acting Collector of The Panama Canal during such periods as he may be designated by the Governor of The Panama Canal to perform the duties of the office of Collector during the Collector's absence or disability.

2. Before entering upon his duties as Acting Collector he will give two bonds in the sum of \$100,000 each, such bonds to contain the same conditions as the bonds given by the Collector.

GEO. W. GOETHALS,
Governor.

Rates of Pay—Silver Roll.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 6, 1915.

CIRCULAR No. 666-4:

REEMPLOYMENT.

1. Paragraph 4 of Circular No. 666 (Rev.) reads:

If a silver employee is discharged for unsatisfactory service or misconduct, with no objections to reemployment, he may be reemployed only at a lower rate of pay than that previously received and may not be promoted to his old rate under six months; if he quits voluntarily, with no objections to reemployment, he may be reemployed only at a lower rate of pay than previously received and may not be promoted to his old rate under two months.

2. The above rule is modified to the extent that if a silver employee quits voluntarily after having given five days notice, he may be reemployed at the same rate previously received, or at the entrance rate of any position for which he is qualified, even though such entrance rate be higher than his old rate.

GEO. W. GOETHALS,
Governor.

Subsistence for Employees on Floating Equipment of Dredging Division.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 5, 1915.

CIRCULAR No. 680-1:

Circular No. 680 is hereby amended by eliminating paragraph (b) of section 4, and substituting therefor the following:

(b) The Dredging Division will, before the time slips for employees on the "Extra list" are forwarded to the Chief Timekeeper, indicate thereon whether subsistence was or was not furnished to each man carried on such time slip.

GEO. W. GOETHALS,
Governor.

SHIPPING INFORMATION.

May Weather Probabilities.

The following weather conditions may be expected to prevail at the Canal entrances during the month of May, 1915. Predictions are based on the records at Ancon and Colon for the past seven and eight years, respectively.

Winds—With the beginning of the rainy season there will be a marked decrease in the wind movement on both coasts. Northerly winds will prevail at the Atlantic entrance to the Canal, although variable winds may be expected with the change of the season. An average hourly velocity of about eight miles an hour may be expected and a maximum velocity of 36 miles an hour may occur during a thunder squall.

Over the interior and on the Pacific coast the prevailing direction of the wind will be from the northwest, with an average hourly movement of about six miles an hour. The maximum wind velocity is not likely to be above 27 miles an hour.

Rain—On the Isthmus the month of May marks the transition from dry season weather to rainy season conditions. Heavy showers can be expected at both coast stations and over the interior. The station averages at Ancon and Colon are 8.81 inches and 12.77 inches, respectively, while the average number of rainy days (one on which 0.01 inch or more of rain is measured) is 20 and 23 for the abovenamed stations. The average number of days in May on which the rainfall equalled or exceeded one inch (1.00) has been three at the Pacific entrance and six at the Atlantic entrance to the Canal.

Fogs—No fogs are likely to occur on the Pacific coast and few fogs, if any, may be expected at the Atlantic entrance. Over the Culebra Cut section of the Canal night and early morning fogs are likely to occur quite frequently, but under the present operating conditions they will not affect navigation. The average number of nights with fog at Culebra for the month of May has been 22, 65 per cent of which have been light. Practically all of the fogs may be expected to lift or become dissipated by 8.30 a. m.

Temperature—An average shade air temperature of 81° Fahrenheit may be expected at both Atlantic and Pacific entrances. On the Atlantic coast the temperature is not likely to rise above 91° Fahrenheit or fall below 71° Fahrenheit, while on the Pacific coast the maximum air temperature is not likely to exceed 96° Fahrenheit, or the minimum fall lower than 69° Fahrenheit. The mean daily range in temperature will probably be about 9° Fahrenheit at the Atlantic entrance and about 15° Fahrenheit at the Pacific entrance.

Barometric pressure—Except for the well marked diurnal change, changes in atmospheric pressure on the Isthmus are very slight and of little value in forecasting weather conditions. The average May sealevel pressure is 29.85 inches. A maximum atmospheric pressure of more than 29.97 inches, or a minimum pressure of less than 29.71 inches, is not likely to occur at either entrance to the Canal.

Storms—Thunder squalls may be expected during the month at both Canal entrances. During these storms comparatively high wind velocities may be attained, but the storms are of too short duration to cause a rough sea. The average numbers of days with thunderstorms on the Atlantic and Pacific coasts are

13 and 16, respectively. Generally cloudy weather can be expected during the month of May over both coasts.

Tides—Owing to the fact that the average tidal range at Colon is less than one foot, and the maximum range approximately two feet, tidal fluctuations need not be considered in navigating the Atlantic entrance to the Canal.

At the Pacific entrance the average tidal range is about 13 feet, although a maximum range of 20 feet may occur.

Tide Predictions.

Panama tide predictions for the next five weeks are given in the following table:

APRIL.				
DATE.	Time and height of high and low water.			
Wed., April 14.....	3:54	9:50	16:06	22:12
	14.2	1.4	14.8	0.7
Thurs., April 15....	4:28	10:27	16:37	22:47
	14.4	1.3	14.8	0.6
Fri., April 16.....	4:58	11:03	17:08	23:23
	14.4	1.4	14.7	0.7
Sat., April 17.....	5:33	11:39	17:40	.....
	14.1	1.8	14.3	.....
Sun., April 18.....	0:00	6:06	12:15	18:12
	1.1	13.7	2.3	13.8
Mon., April 19.....	0:37	6:40	12:53	18:45
	1.6	13.1	2.9	13.2
Tues., April 20.....	1:16	7:16	13:35	19:23
	2.3	12.5	3.6	12.6
Wed., April 21.....	2:00	7:59	14:22	20:07
	3.0	11.9	4.2	11.9
Thurs., April 22....	2:50	8:50	15:18	21:04
	3.6	11.5	4.7	11.4
Fri., April 23.....	3:48	9:56	16:24	22:15
	3.9	11.3	4.7	11.2
Sat., April 24.....	4:52	10:06	17:29	23:31
	3.9	11.7	4.2	11.5
Sun., April 25.....	5:52	12:09	18:28	.....
	3.4	12.4	.....	.....
Mon., April 26....	0:37	6:48	13:04	19:23
	12.3	2.6	13.5	1.9
Tues., April 27.....	1:32	7:40	13:52	20:11
	13.3	1.7	14.7	0.6
Wed., April 28.....	2:22	8:29	14:38	20:58
	14.4	0.7	15.8	-0.5
Thurs., April 29....	3:09	9:14	15:31	21:43
	15.4	-0.1	16.7	-1.4
Fri., April 30.....	3:54	10:02	16:08	22:30
	16.1	-0.6	17.1	-1.8

MAY.

DATE.	Time and height of high and low water.			
Sat., May 1.....	4:40	10:48	16:54	23:17
	16.5	-0.7	17.2	-1.8
Sun., May 2.....	5:26	11:36	17:40	.....
	16.3	-0.4	16.8	.....
Mon., May 3.....	0:05	6:14	12:26	18:29
	-1.3	15.9	0.2	15.9
Tues., May 4.....	0:54	7:05	13:19	19:22
	-0.5	15.1	1.2	14.8
Wed., May 5.....	1:49	8:02	14:17	20:21
	0.6	14.1	2.2	13.5
Thurs., May 6.....	2:47	9:05	15:23	21:30
	1.7	13.2	3.1	12.5
Fri., May 7.....	3:51	10:18	16:32	22:45
	2.6	12.7	3.5	11.9
Sat., May 8.....	4:59	11:34	17:42	.....
	3.2	12.5	3.5	.....
Sun., May 9.....	0:07	6:05	12:40	18:45
	11.8	3.4	12.7	3.2
Mon., May 10....	1:13	7:03	13:35	19:39
	12.1	3.2	13.1	2.6
Tues., May 11....	2:06	7:54	14:20	20:24
	12.6	2.9	13.4	2.1
Wed., May 12.....	2:49	8:38	14:58	21:05
	13.0	2.6	13.8	1.6
Thurs., May 13....	3:28	9:19	15:34	21:43
	13.4	2.3	14.0	1.2
Fri., May 14.....	4:03	9:58	16:07	22:20
	13.7	2.2	14.2	1.0
Sat., May 15.....	4:37	10:35	16:41	22:58
	13.8	2.1	14.2	1.0
Sun., May 16.....	5:10	11:14	17:15	23:35
	13.8	2.3	14.0	1.2
Mon., May 17.....	5:45	11:52	17:49	.....
	13.5	2.5	13.7	.....
Tues., May 18.....	0:13	6:22	12:32	18:24
	1.5	13.3	2.9	13.3
Wed., May 19.....	0:54	6:59	13:14	19:03
	1.9	12.9	3.3	12.9

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used in Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun, and Miraflores Lakes for the week ending midnight, Saturday, April 10, 1915:

DAY AND DATE.	STATIONS.				
	Vigla.	Alhajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., April 4.....	139.60	102.00	86.74	86.69	53.96
Mon., April 5.....	131.50	96.50	86.58	86.49	53.81
Tues., April 6.....	128.30	94.12	86.55	86.47	53.90
Wed., April 7.....	127.15	93.11	86.52	86.49	53.86
Thurs., April 8.....	126.90	92.82	86.48	86.48	53.82
Fri., April 9.....	126.63	92.57	86.55	86.48	53.84
Sat., April 10.....	126.50	92.39	86.51	86.47	53.89
Heights of low water to nearest foot.....	125.0	91.0			

Rainfall from April 1 to 10, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>			
Balboa.....	1.39	4	1.44
Balboa Heights.....	1.38	4	1.47
*Miraflores.....	1.29	4	1.37
Pedro Miguel.....	1.02	4	1.26
Rio Grande.....	1.24	4	1.46
<i>Central Section—</i>			
Culebra.....	1.78	4	2.16
*Camacho.....	1.68	4	2.53
Empire.....	2.14	4	2.69
Gamboa.....	2.04	4	3.68
*Juan Mina.....	2.05	4	3.87
Alhajuela.....	1.98	2	4.71
*El Vigia.....	1.69	4	3.54
Frijoles.....	5.13	3	8.47
*Trinidad.....			
*Monte Lirio.....	5.40	3	7.45
<i>Atlantic Section—</i>			
Gatun.....	7.64	3	9.54
*Brazos Brook.....	5.27	3	7.87
Coloa.....	4.98	3	6.45

*Standard rain gage—readings at 5 p. m.

Automatic rain gage at unstarred stations—values midnight to midnight.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., April 12, 1914.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressees:

Ahlfont, A. G.	Johnston, Francis M.
Barth, Miss Minnie	Jones, Arthur
Birkland, O.	Luwall, Miss Eva
Black, B. A.	McLeod, Jimmie
Bowie, William R.	Marshall, John
Browne, Mrs. R. Crawford	Mehlhop, G. E.
Caldwell, J. G.	Melbourne, Victor
Clement, James R.	O'Connell, Mrs. H. C.
Coke, Frank	Parsons, F. E.
Cubic, John	Pender, B. D.
DeLeon, H. G.	Pfisterer, Capt. A.
Dennis, J. C. (2)	Price, Thos. J.
Dew, Michael	Purinton, Frank
Donahue, Arthur	Salveson, William
Doying, W. A. E.	Senhouse, Joseph
Forbes, Sherman Grey	Smith, Freeman W.
Fulton, J. M.	Spruance, Fred Davis
Glenester, Miss Catherine	Spurling, Walter E.
Harwood, Mr. and Mrs. R.	Sutton, James R.
Jacques, Alvin B.	Viall, Mr. and Mrs. H. H.
Jenkins, Elvis L.	Willett, Mrs. A.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

*Every Monday to New York for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.

(Continued on page 310.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m. April 11, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
April 5....	<i>Celia</i>	British.....	W. R. Grace & Co.....	Norfolk.....	Valparaiso.....	General cargo.....	6,000	5,852	4,377
April 5....	<i>City of Bristol</i>	British.....	Ellerman Lines, Ltd.....	New York.....	Vladivostok.....	General cargo.....	10,000	8,052	6,119
April 6....	<i>Harry Luckenbach</i>	American.....	Luckenbach S.S. Co.....	New York.....	Los Angeles.....	General cargo.....	3,100	3,001	2,788
April 6....	<i>Oceana</i>	Swedish.....	East Asiatic Co.....	Savannah.....	Tal Tal.....	Ballast.....		3,655	2,526
April 7....	<i>Carnegie</i>	American.....	Carnegie Institution.....	New York.....	Balboa.....	Ballast.....		328	110
April 7....	<i>Craster Hall</i>	American.....	C. G. Dunn & Co.....	New York.....	Buenaventura.....	General cargo.....	6,208	4,882	3,552
April 10....	<i>Ranella</i>	British.....	Anglo Saxon Petroleum Co.....	New Orleans.....	Honolulu.....	Kerosine.....	6,400	5,955	4,281

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

April 5....	<i>Santa Catalina</i>	American.....	W. R. Grace & Co.....	Portland.....	New York.....	Lumber, general.....	7,500	6,657	4,409
April 5....	<i>Texan</i>	American.....	American-Hawaiian Line.....	Honolulu.....	Phila., New York.....	Sugar, pines.....	11,600	8,984	6,683
April 7....	<i>Paleno</i>	Chilean.....	South American S.S. Co.....	Valparaiso.....	Cristobal.....	General cargo.....	1,200	3,639	2,537
April 8....	<i>Panama</i>	American.....	Panama R.R. S.S. Line.....	Balboa.....	New York.....	General cargo.....		5,866	4,222
April 8....	<i>Cairnross</i>	British.....	Cairns, Nobles & Co.....	Port Stanley.....		Ballast.....		5,227	3,808
April 8....	<i>Kenkon Maru</i>	Japanese.....		Portland.....	Avonmouth.....	General lumber.....	6,000	5,141	3,765
April 8....	<i>Crown of Seville</i>	British.....	Prentiss, Serviss & Henderson.....	San Francisco.....	London.....	General cargo.....	8,600	7,684	5,465
April 9....	<i>Oriana</i>	British.....	Pacific Steam Nav. Co.....	Valparaiso.....	Liverpool.....	General cargo.....	4,041	8,402	5,044
April 10....	<i>Salvador</i>	British.....	Salvador Railway.....	Salina Cruz.....	Cristobal.....	General cargo.....	1,243	1,190	692
April 10....	<i>Kish</i>	British.....	Clyde Shipping Co.....	Tumaco.....	Colon (orders).....	Flour.....	4,623	5,422	3,853
April 10....	<i>Queen Maud</i>	British.....	Thos. Dunlop & Son.....	Antofagasta.....	Colon (orders).....	Nitrates.....	4,153	4,784	3,461
April 10....	<i>Lewis Luckenbach</i>	American.....	Luckenbach S.S. Co.....	San Francisco.....	New York.....	General, lumber.....	4,653	4,599	3,492

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
April 10....	<i>Strathesk</i>	C. G. Dunn & Co.....	Philadelphia.
April 10....	<i>Cape Finisterre</i>	Pacific Steam Nav. Co.....	United Kingdom.
April 11....	<i>Orissa</i>		

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
April 5....	<i>Hartington</i>	Harrison Line.....	

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
April 8....	<i>Chiswick</i>	Earn Line.....	Norfolk.
April 10....	<i>Buenos Aires</i>	Barcelona Transatlantic Co.	Barcelona.

*DEPARTURES.

Date	Vessel	Line	To
April 9....	<i>Wilhelmina</i>	McCreighton.....	Bluefields.
April 8....	<i>Ocland</i>	Earn Line.....	Daiquiri, Cuba.
April 8....	<i>Savoia</i>	La Veloce.....	Cartagena.

*EXPECTED ARRIVALS.

April 13....	<i>Peru</i>	Cie. Generale Trans'tlantique	St. Nazaire.
April 14....	<i>Musician</i>	Harrison Line.....	Liverpool.

*EXPECTED DEPARTURES.

April 13....	<i>Chiswick</i>	Earn Line.....	Daiquiri, Cuba.
April 16....	<i>Peru</i>	Cie. Generale Trans'tlantique	St. Nazaire
April 16....	<i>Musician</i>	Harrison Line.....	

*Other than vessels passing through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

April 7....	<i>Hualaga</i>	Peruvian S.S. Line.....	Callao.
April 8....	<i>Aztec</i>	Pacific Steam Nav. Co.....	San Francisco.

*DEPARTURES.

April 7....	<i>Chattanooga</i>	U. S. Navy.....	Pacific.
April 10....	<i>San José</i>	Pacific Mail S.S.....	San Francisco.

*EXPECTED ARRIVALS.

April.....	<i>Eureka</i>	Pacific Coast Line.....	
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*EXPECTED DEPARTURES.

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*Other than vessels passing through the Canal.

(Continued from page 309.)

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE—T^he sailing on Monday, May 3, will not land mail in New York until Tuesday of the following week; hence despatches on that date will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7.10 a. m., connects with the despatches for the sailing on May 3.

Fuel and Supplies.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 600 and 750 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1, at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Cristobal or Balboa from plants of The Panama Canal, or from the private corporations which have tanks at the terminals. The present price for fuel oil supplied by The Panama Canal is \$1.25 per barrel of 42 gallons. The prices made by

the corporations may be obtained on application to them.

Application for supplies, or for services, should be made to the Captain of the Port, Cristobal or Balboa. Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired; or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case, the vessel has a known representative on the Isthmus, in care of such representative.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Balboa Heights;" in the United States, "Panacanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C." for delivery in the United States.

Sailings of Vessels in Regular Service with the Isthmus.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal, and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailing via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails, Arrives.

NEW YORK TO CRISTOBAL-COLON.

Carrillo.....	U. F. C.	April 7....	April 14
Colon.....	P. R. R.	April 8....	April 14
Tenadores.....	U. F. C.	April 10....	April 18
Santa Marta.....	U. F. C.	April 14....	April 21
Advance.....	P. R. R.	April 15....	April 22
Metapan.....	U. F. C.	April 17....	April 25
Almirante.....	U. F. C.	April 21....	April 28
Panama.....	P. R. R.	April 22....	April 28

CRISTOBAL-COLON TO NEW YORK.

Zacapa.....	U. F. C.	April 15....	April 22
Allianza.....	P. R. R.	April 17....	April 23
Calamares.....	U. F. C.	April 19....	April 26
Carrillo.....	U. F. C.	April 22....	April 29
Colon.....	P. R. R.	April 24....	April 30
Tenadores.....	U. F. C.	April 26....	May 3

NEW ORLEANS TO CRISTOBAL-COLON.

Cartago.....	U. F. C.	April 10....	April 15
Turrialba.....	U. F. C.	April 13....	April 20
Heredia.....	U. F. C.	April 17....	April 22
Abangarez.....	U. F. C.	April 20....	April 27
Parismina.....	U. F. C.	April 24....	April 29

CRISTOBAL-COLON TO NEW ORLEANS.

Parismina.....	U. F. C.	April 15....	April 20
Atenas.....	U. F. C.	April 15....	April 22
Cartago.....	U. F. C.	April 22....	April 27
Turrialba.....	U. F. C.	April 22....	April 29
Heredia.....	U. F. C.	April 29....	May 4
Abangarez.....	U. F. C.	April 29....	May 6



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50, United States currency, per annum, in all other countries.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Increasing Coaling Facilities.

The new Canal collier *Ulysses*, built by the Maryland Steel Company, of Sparrows Point, Md., under a contract entered into in March, 1914, has been undergoing acceptance tests and is expected to arrive at Colon in service by the end of this month. The vessel's sister ship, the *Achilles*, was launched on February 6 and will probably also be completed well in advance of the contract time of 16 months. Both will be used in regular service to the Isthmus, carrying each about 12,000 tons of coal per trip, in addition to the bunker coal required for a round voyage between Norfolk and Colon.

In anticipation of the coming of the new colliers, the channel at the Brown hoist wharf, at the entrance to the Mount Hope dry dock, and part of the French canal opposite the dry dock slip are being dredged to greater width, to allow the handling of the new vessels with entire security. Projects looking to increased speed in handling and rehandling coal at this wharf and the adjoining Dock 14 are under consideration by the authorities.

In step with the increasing purchases of coal by vessels using the Canal, and pending the readiness of the large permanent coal handling plant at Cristobal for partial use, probably in September or October, the facilities for handling coal to vessels from lighters are being extended at both Cristobal and Balboa. Three more barges of 500 tons capacity each are now being placed in order for transfer to the Cristobal service from the Dredging Division, and one barge of 300 tons capacity is to be added to the equipment at Balboa. This will give an immediate capacity of 2,600 tons on the water at Cristobal and 1,100 tons at Balboa, in addition to the facilities for supplying from cranes and cars on the wharves. One of the barges transferred to the Cristobal service is to be equipped with a boiler and 3-drum hoisting engine complete and with a boom capable of handling a 2½ or 3-ton clamshell bucket. A second barge is to be equipped with generator sets, central mast, and two booms for the suspension of two Demayo coal conveyors having a capacity

of delivering 75 tons per hour each. The equipment will enable the two barges not only to discharge from their own bottoms but also to unload other barges lying alongside as well.

Further facilities will be provided by the purchase, recently authorized, of six 500-ton self-contained barges of a type used by the Navy. Four of these will be added to the fleet at Cristobal and two to that at Balboa.

Coal supplied to vessels at Balboa during the month of March amounted to 4,568 tons; at Cristobal, to 20,261 tons. Deliveries in February were about 3,000, and 17,672½ tons, respectively.

First Whole Cargo of Zinc through the Canal.

The steamship *Sydic*, passing through the Canal from the Pacific to the Atlantic on April 12, carried the first whole cargo of zinc ore or concentrate through the Canal. This shipment consisted of 6,502½ tons of concentrate, or ore reduced by calcination, shipped from Port Pirie, Australia, for Galveston.

Recovering Piledrivers in Limon Bay.

Lines have been placed by the Mechanical Division's diver about piledrivers Nos. 103 and No. 104, lost off the East Breakwater in Limon Bay during the northern of February 9, and the floating crane *Hercules* will probably be used during the coming week to raise them. The crane will not be used in rough water because of the difficulty in turning it; but it is pointed out that there is no danger of its tipping over, by virtue of its wide pontoon and the construction which has placed its center of gravity about 14 feet above the water line, and made its metacentric height approximately 60 feet.

Sightseeing Passenger Service through the Canal.

The steamers of the Panama Railroad Steamship Line, sailing through the Canal every week, are carrying adults through the Canal for \$6, and children under 12 years of age at half-rate. Panama Canal and Panama railroad employees, and their families, are given a one-third reduction from the rates for nonemployees. The fares include meals aboard the ship and berth when necessary.

On their trips through the Canal, the ships are all scheduled to sail at 7 in the morning and arrive at the opposite terminal port at about 5.30 in the afternoon. Ships sail from Cristobal every Saturday or Sunday, and from Balboa every Wednesday or Thursday. The exact day of sailing in any week may be ascertained by telephoning to the receiving and forwarding agent at Cristobal or Balboa or the office of the Superintendent of the Panama railroad.

The steamship *Leonidas* of the United States Navy, employed in coast survey work by the Hydrographic Office, arrived at Cristobal on Monday, April 19, after a survey of the Mosquito Coast.

CANAL TRAFFIC ANALYZED.

From Masters' Declarations of Cargo—Origin and Destination of Principal Items in February.

An analysis of the traffic through the Canal during the month of February, based on the cargo declarations furnished to The Panama Canal by the masters of vessels making the transit, is published herewith. Similar analyses are to be prepared for the successive months and published regularly in THE CANAL RECORD.

The summary is not compiled directly from the ships' manifests, and accordingly entire accuracy can not be assured. Under the customs regulations originally adopted for the transit of vessels through the Canal, every vessel was required to furnish a copy of the manifest, which shows the nature, quantity, port of origin, and destination of all items of cargo. Various steamships companies protested against this as an onerous exaction, and the ruling was waived with respect to through vessels. In lieu of furnishing a copy of the manifest, each master was to make out a cargo declaration on a form furnished by The Panama Canal, showing kinds and quantities of cargo carried, and points of origin and destination. The form names 90 of the commodities likely to be carried through the Canal and has spaces for other items if they occur.

Each form bears these instructions: "A copy of this form will be handed to the master of each vessel arriving at Balboa or Cristobal for passage through the Canal. It should be filled in while the vessel is in transit and delivered to the pilot at the opposite terminal port. Accurate information is desired concerning cargo that is important on account of its tonnage or value, but it is not expected that small and unimportant items of cargo will be entered separately on the list. State quantity in tons of 2,240 pounds if possible, but if other unit of measurement is used, indicate clearly what it is."

During the month of February the declarations embraced shipments of 65 different commodities, as shown in the tabulation below. A check on their completeness and accuracy is given by comparison with the previously published summary of traffic in February (see THE CANAL RECORD of March 24, 1915), in which the cargo is summarized from the total cargo on each ship, taken from the manifest by the boarding officer. The sum of the parts, taken from masters' declarations, approaches within one per cent of the sum of the totals, as given by the manifests. The relatively slight discrepancy between the two might be accounted for by the omission, from the cargo declarations, of "small and unimportant items of cargo," of which it is not expected that they "will be entered separately on the list."

In the tabulation below, the items are divided between Atlantic-to-Pacific and Pa-

cific-to-Atlantic. Of the 65 items, 14 had an aggregate tonnage of over 5,000 each. They were barley, coal, flour, "general cargo," iron ore, iron and steel manufactured goods, machinery, railroad material, nitrates, refined petroleum, seed, sugar, and wheat. These 14 items amounted to 384,005 tons, 91 per cent of all cargo passing through during the month.

All of the barley, 33,076 tons, was shipped from San Francisco; and all went to Great Britain except 5,249 tons to Copenhagen, and 2,500 tons to Rotterdam.

Coal was in two cargoes, 3,214 tons from Glasgow and 1,828 tons from Norfolk, both to San Francisco.

Of flour, four tons were shipped from the United States to Central American ports on the Pacific, and 9,328 tons, in two cargoes, from Pacific ports of the United States to Rotterdam.

"General cargo" is an expression covering a multitude of omissions of explicit information. In the westbound traffic, 61,993 tons were so classed. Of this, 36,559 tons were shipped in the coastwise trade of the United States, from New York and Philadelphia to San Diego, Los Angeles, San Francisco, and Puget Sound. Forty tons were shipped from Europe to the United States; 3,976 tons from Europe and the United States to South America; 3,220 tons from New York to Australia and New Zealand; and 11,139 tons from New York to Vladivostok. In the eastbound traffic, 54,027 tons were handled in the coastwise trade of the United States; 4,971 tons from South America to Europe; 1,562 tons from South America to New York. From Japan and China, 365 tons were carried to Denmark, and 2,275 tons to New York.

Iron ore consisted of 19,850 tons, from Cruz Grande to Philadelphia.

Lumber consisted of 5,600 tons from Raymond, Wash., to New York; 130 tons from Punta Arenas to New York; and 1,158 tons from Tacoma and Seattle to Liverpool.

Manufactured goods of iron and steel amounting to 19,968 tons were distributed as follows: Five hundred and six tons from Europe to South and Central America; 10,500 tons from New York to the Far East; and 9,022 tons in the coastwise trade of the United States.

Machinery included 464 tons from Chile to New York; 2,732 tons from Lubeck to South America; nine tons from Europe to Central America; 86 tons from Glasgow to San Francisco; 1,200 tons from New York to Australia; and 670 tons from New York and Philadelphia to California.

Railroad material consisted of 181 tons from Denmark to South America; 600 tons from New York to Honolulu; 2,500 tons from New York to Australia; 1,200 tons from New York to Yokohama; and 3,188 tons from Pensacola to Straits Settlements.

The 48,076 tons of nitrates shipped from Antofagasta, Calita Buena, Mejillones, and Tocopilla were distributed as follows: To Europe, 28,350 tons; to the United States, 19,726 tons.

Refined petroleum amounted to 26,343 tons, all from the United States, distributed as follows: Eleven thousand five hundred and five tons to Japan; 9,200 tons to Shanghai; 5,500 tons to the Philippines; 122 tons to San Francisco; and 16 tons to Central America.

Seed amounted to 6,088 tons; 21 from Liverpool to Seattle; 17 from Seattle to Liverpool; 50 from Los Angeles to Galveston; and 6,000 (sesame seed) from Shanghai to Aarhus.

Sixty-two tons of sugar were handled in the Central American local trade, westbound; the eastbound traffic consisted of 32,805 tons. Of this, 28,644 tons came from Hawaii to New York; 3,000 tons from Yokohama to New York; 1,141 tons from Peru to New York; and 20 tons from Central American ports to Colon, for transshipment to Europe.

Wheat amounted to 37,416 tons, all from Portland, Oreg., Seattle, and Tacoma; 17,827 tons were consigned to England, 12,196 tons to Capetown, and 7,393 tons to Algiers and Marseilles.

A summary of the traffic in all the 65 commodities named during the month is given herewith:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
	Tons.	Tons.	Tons.
Antimony (ore).....		260	260
Asphalt.....	150		150
Barley.....		33,076	33,076
Beans.....		1,745	1,745
Beans, lima.....		55	55
Beans, vanilla.....		6	6
Borax.....	120		120
Cacao.....	25	1,933	1,958
Canned goods.....	1,498	2,556	4,054
Cement.....	1,209		1,209
Chemicals.....	994		994
Chestnuts.....	11		11
Coal.....	5,042		5,042
Coffee.....		940	940
Coke.....	3		3
Copper.....	1		1
Copper ore.....		1,663	1,663
Cotton.....	4,064		4,064
Croscote.....	315		315
Earthenware.....	177		177
Explosives.....	163		163
Flour.....	4	9,328	9,332
Fruit, dried.....	10	158	168
General cargo.....	61,993	63,236	125,229
Glass.....		19	19
Iodine.....		25	25
Iron.....	1,405		1,405
Iron ore.....		19,850	19,850
Ivory nuts.....		280	280
Liquors.....	1,417	78	1,495
Live stock.....	(2 dogs)		
Lumber.....		6,888	6,888
Manufactured goods of iron and steel.....	19,968		19,968
Machinery.....	4,697	464	5,161
Railroad material.....	8,669		8,669
Textiles.....	1,530		1,530
Miscellaneous.....	2,103		2,103
Marble.....	114		114
Nitrates.....		48,076	48,076
Oats.....		2,022	2,022
Oil, crude.....	269	2,300	2,569
Oil, lubricating.....	280		280
Oils, vegetable.....	455	1,450	1,905
Panama hats.....		14	14
Petroleum, refined.....	26,343		26,343
Phosphates.....	9		9
Rags.....	100		100
Rice.....	620	607	1,227
Rolled oats.....		116	116
Rubber.....		1	1
Salt.....	162		162
Scrap metal.....		15	15
Seed.....	21	6,067	6,088
Silver ore.....		663	663
Skins and hides.....	2	101	103
Sugar.....	62	32,805	32,867
Tallow.....		57	57
Tea.....	72	237	309
Textiles, misc.....		90	90
Tin.....	685		685
Tobacco.....	130		130
Wheat.....		37,416	37,416
Wines.....	257		257
Wire fencing.....	400		400
Wool.....	2	193	195
Total.....	145,551	274,730	420,281

Labor Trains Discontinued on West Side of Canal.

Labor train service on the west side of the Canal was discontinued on April 12. The former service between Balboa and Culebra now ends at Paraiso, but the schedule of trains on the Balboa-Paraiso section is the same as before.

LIGHTS IN BAY OF PANAMA.

Additional Aids at Punta Mala and Bona and Taboguilla Islands.

In conformance with the Act of Congress, approved on March 3, authorizing the construction of additional "lights on the Pacific coast, necessary as aids to navigation near the Pacific entrance to the Panama Canal," preparations are being made for the quick erection of a light at Punta Mala, at the entrance to the Bay of Panama, one on Bona Island, and one on Taboguilla Island, along the approach to the Canal.

For the inclusion of these important new lights, the sailing directions for making the Canal from the Pacific have been revised. The following notice to mariners, published as Circular No. 643-13, contains the most recent information.

GENERAL INFORMATION AND SAILING DIRECTIONS, PANAMA CANAL.

Lights to be established.—Lights discontinued.—Anticipating the revised edition of "Sailing Directions and General Information Relating to the Panama Canal," soon to be issued, the establishment of new lights, and the discontinuance of others, the following extracts and advance information in relation thereto are published:

General directions for vessels from northern ports.—Vessels bound for the Panama Canal from the north Pacific ports, will make Montuosa Island, from which they will lay a course to pass Jicarita Island, which is immediately to the southwest of and near Jicarón Island, and from thence pass not less than 5 miles to the southward of Mariato Point, which is the western cape of the large peninsula to the westward of the Gulf of Panama, of which Cape Mala is the eastern point.

The whole coast between Mariato Point and Cape Mala should be given a berth of at least 5 miles, as it is none too well surveyed, and the charts show indications of possible dangers inside of these limits, particularly between Mariato Point and Morro Puercos.

Currents.—Between Jicarón Island and Cape Mala, the currents are strong and variable, and not very well known, hence vessels should make due allowance for any apparent error in reckoning, and allow a wide safety margin in laying their courses. Along the shores, particularly in the vicinity of the capes and headlands, strong tide rips are frequently noticed.

Morro Puercos.—Morro Puercos is 27 miles east of Mariato Point; it is a lofty headland forming the termination of the range of high coast land.

Dangers.—About 4 miles westward of the point and one mile offshore, there is a reef above water, with a 3-fathom patch outside of it.

There is a 5-fathom spot $3\frac{1}{2}$ miles S. 75° E. from Morro Puercos, which should be given a good wide berth.

Between Morro Puercos and Cape Mala, a distance of 30 miles, the coast recedes to the northward and well outside of a line joining the two points lie the North and South Frailes.

In the vicinity of Bona Island soundings of 20 fathoms may be obtained, and from there to Taboguilla Island it shoals gradually to 15 fathoms, and from there to the Canal entrance to about 7 fathoms; and, if at night or during a heavy rain or thick weather, if there be any doubt about a vessel's position, she should anchor and wait for it to clear.

There is deep water close to Bona, Urava, and Taboguilla Islands, with no outlying dangers, and if they be given a berth of 2 miles, it insures safety. There is a submerged rock with about 3 feet of water over it at low water, just to seaward of a tangent joining the eastern sides of Taboguilla and Urava Islands, about half-way between them. With this exception there is no danger of any kind.

North and South Frailes.—There are two low, barren, flat-topped islets, of which the southern lies $11\frac{1}{2}$ miles S. 49° W. from Cape Mala, and the northern $2\frac{1}{2}$ miles inshore, N. 28° W., from the southern. A reef extends about 200 yards off the northwest point of the southern islet, but with this exception they are steep-to and clear of outlying dangers. Although a good mark for Cape Mala in clear weather, at night or in thick or cloudy weather, they are dangerous, so that after passing Morro Puercos, a course should be laid to pass at least 5 miles outside of South Fraile, and from thence to a point not less than 5 miles off Cape Mala.

Red sector.—The Frailes will be covered by the southwesterly red sector from Cape Mala Light, when it shall have been completed.

General direction for vessels from southern ports.—Vessels from South American ports should make Cape Mala after the light shall have been established.

Gulf of Panama.—The Gulf of Panama lies to the southward of and in the bight formed by the curvature

of the Isthmus of the same name, between Piñas Point on the east and Cape Mala on the west, the distance between them being about 105 miles; from the entrance to the head of the bay, where the ports of Balboa and Panama are situated, it is about 90 miles.

Soundings—Soundings of 1,000 fathoms or more extend to within 5 miles of the entrance, and to the coasts outside, but immediately upon entering the gulf it shoals rapidly to less than 100 fathoms, and then more or less gradually until the head of the bay is reached.

Currents—There is a current of variable strength, but fairly constant in direction, setting to the westward across the head of Panama Bay, and thence to the southward between Taboga Island and the mainland. This current, when combined with the ebb tide, has a velocity of from 1 to 2 knots at the time of spring ebbs between and to the westward of Taboga and Otoque Islands. It reduces the velocity of the flood current and its strength is less over the same area. Between Taboga and Otoque Islands the tidal currents, both flood and ebb, vary greatly in direction at different stages of the tide, and cross currents, flowing east or west, are frequently encountered near the shores of the islands and in the vicinity of Valladolid Rock.

In the vicinity of Chame Point, tide rips have been observed. Between Cape Mala and Bona Island vessels are frequently set out of their course by the currents and in thick weather it would be better to lay a course to pass 5 miles east of the latter. With a steady south-east wind, the current is westerly, and vessels should be more particular to set a course to keep well clear of Bona Island.

General directions for all vessels—After passing Cape Mala, vessels should lay a course to pass 5 miles to the eastward of Bona Island, as this will ordinarily be sufficient to counteract any westerly set due to current in the Gulf of Panama, but even with this allowance, vessels will sometimes find themselves well to the westward of a line joining Cape Mala and Bona Island. But there is ample water to pass within $\frac{1}{2}$ mile of Bona Island, if so desired. The distance between these points is 70 miles. From Bona Island to Taboguilla, a distance of 15 miles, the course should be laid to pass 2 miles to the eastward of the latter, then round it, keeping it about 2 miles in the port beam until its north end bears SW., from which point the entrance lighted buoys of the Canal will bear about NW. distant 4 miles.

Caution—Bona and Taboguilla Islands should invariably be left to the westward for vessels approaching or leaving the Canal, for while a channel exists inshore of Bona and Taboga Islands, it is more or less obstructed, and a vessel would have to change course repeatedly, and pass close to several dangers which are avoided by keeping in the open water to the eastward of the several groups of islands; besides which, there is no distance saved by going inside.

Lights discontinued—During the construction period small lantern lights were maintained on Chame Point, Melones Island, Commission Rock buoy, Tortolita Island, and Changarmi Island, to mark the inshore channel for the use of small Canal craft, but these have all been discontinued.

Lights established, west shore, Gulf of Panama—The Republic of Panama has recently established a number of small lights on the western shore of the Gulf of Panama, from Mensabé, which is about 25 miles to the northward of Cape Mala, to the city of Panama, for the use of small steamers and vessels engaged in the local coastwise trade, but they should not be depended upon by large seagoing vessels using the Panama Canal. But should a vessel be set inshore to the westward, out of her course, between Cape Mala and Bona Island, they might act as a warning, particularly when coupled with soundings under 20 fathoms, to immediately change course to the eastward.

Their situation and characteristics are as follows:

Mensabé Light, No. 10—About 25 miles to the northward of Cape Mala, about halfway between Iguana Island and Villa Island, on the north side of the entrance to Mensabé, on the edge of the reef; red, flashing; light 0.3 seconds, eclipsed 2.7 seconds, visible 9 miles.

Chitre Light, No. 9—Between Lisa and Estero Point, on the south bank of Rio la Villa; white, flashing; light 0.3 seconds, eclipsed 2.7 seconds, visible 10 miles.

Agua Dulce Dolphin Light, No. 7—On Banco Negro, about 2 miles off the mouth of Rio Dulce; pile structure, flashing, white; light 0.3 seconds, eclipsed 2.7 seconds, visible 10 miles.

Agua Dulce Light, No. 8—In the mouth of Rio Dulce, north bank; flashing, white, with green sectors; light 0.3 seconds, eclipsed 2.7 seconds, visible 5 miles.

Puerto Pasada Light, No. 6—In the mouth of Estero Viejo; white, flashing; light 0.3 seconds, eclipsed 2.7 seconds, visible 5 miles.

Anton Point Light, No. 5—On Anton (or Antoine) Point; flashing, white; light 0.3 seconds, eclipsed 0.7 seconds, visible 5 miles.

San Carlos Light, No. 4—Immediately to the northward of Calabaza Point, entrance Rio Mata Ahogada, north bank; flashing, white; light 0.3 seconds, eclipsed 0.7 seconds, visible 5 miles.

Taboga Island Light, No. 3—At the northern point of the western side of Taboga Island, visible from Naos Island (N. 20° E. approximately) through west to cover Valladolid Rock (S. 10° W. approximately), obscured through remainder of arc to the eastward; flashing, green; light 0.3 seconds, eclipsed 2.7 seconds, visible 9 miles.

Gas Buoy, No. 1—Painted black, replaces the red nun buoy which marked Knocker Rock, west side of Panama Harbor, with S. E. bastion, Panama City, bearing 280° (W. by N.) distant about $\frac{1}{2}$ mile; flashing, white; light 0.3 seconds, eclipsed 2.7 seconds.

Lights to be established—In addition to the lights already in operation above mentioned, and those that mark the dredged channel on the Pacific side of the Canal, it is proposed to establish additional ones at Cape Mala, Bona Island, and Taboguilla island at the eastern entrance to and in the Gulf and Bay of Panama; it is hoped that they will be completed by July, 1915. The following characteristics are proposed for these lights; all bearings are true:

Cape Mala Light (recommended)—First order, flashing, white, with two red sectors; light 5 seconds, eclipsed 15 seconds, at an elevation of 140 feet, visible 18 miles, through the following arcs and with the following colors:

Visible from 340° (N. 20° W.) to 245° (S. 65° W.) through East.

Red sector from 340° (N. 20° W.) to 20° (N. 20° E.).

White sector from 20° (N. 20° E.) to 215° (S. 35° W.).

Red sector from 215° (S. 35° W.) to 245° (S. 65° W.).

Obscured from 245° (S. 65° W.) to 340° (N. 20° W.) through West.

The structure will be a skeleton steel tower, with battens on two sides, all painted white, so that it may be used as a daymark.

Caution—The red sector to the northward covers Iguana Island and reef, and vessels standing to the southward leaving the Canal, which find themselves in it should immediately change course to the eastward until the light shows white.

The red sector to southwestward covers North and South Fraile Rocks which are distant about 12 miles from Cape Mala, and vessels bound for the Canal which find themselves in this red sector should immediately change course to southeast until the light shows white. This light will be the principal fix for vessels entering or leaving the Gulf of Panama.

The approximate position of the light will be Latitude 7° 27' 30" N.; Longitude 79° 59' 30" W.

Cape Mala—Cape Mala is the southeast point of Los Santos Province, Republic of Panama, at the western entrance to the Gulf of Panama, about 90 miles from the entrance to the Canal; the land in its immediate vicinity is low, sloping up very gradually toward the higher land in the interior, but has no distinctive marks or features that would assist in recognizing it. There are low cliffs along the water front, with outlying ledges, over which the sea breaks at times; there is deep water close inshore, but it is recommended that vessels approach the coast in this vicinity not closer than 5 miles.

Bona Island Light (recommended)—Third order, flashing, white; light 3 seconds, eclipsed 10 seconds, at an elevation of 700 feet, visible 15 miles through the following arc:

Visible from 350° (N. 10° W.) to 250° (S. 60° W.) through East.

Obscured from 250° (S. 60° W.) to 350° (N. 10° W.) through West.

The structure will be a low white skeleton steel tower, about 15 feet high, inconspicuous as a daymark, on the highest point of Bona Island.

The principal object of the light will be to enable a vessel to fix her position after passing Cape Mala, when bound for the Canal.

The course from Cape Mala leads to the eastward of and past Bona Island, and around Taboguilla, but vessels are sometimes set inshore to the westward between Cape Mala and Bona Island, hence the necessity

for the light to have a full arc to the southward and westward.

It will also be of use to vessels bound to the southward, after having left the Canal and rounded Taboguilla, when it should be plainly visible.

The approximate position of the light will be Latitude 8° 34' 30" N.; Longitude 79° 35' 30" W.

Caution—On account of the great height of this light, it may sometimes be invisible on account of the mist or haze.

Bona Island—Bona Island is on the western side of Panama Bay, about 20 miles from the entrance of the Canal, and 70 miles from Cape Mala; it is the most southern of the Otoque group. It is a small round island, about $\frac{1}{2}$ mile in diameter, with a single peak 685 feet high; it is wooded, and both the island itself and the shore line are very steep and precipitous. There are two conspicuous islands immediately to the southward of Bona Island, and connected with it at low water, 145 and 175 feet high, respectively. The most southern one of the two is the highest, and its top is covered with green brush and vegetation, but its sides are white, while the northernmost is white all over.

Bona and Otoque Islands are blended and appear as one when approaching from the southward or northward.

Taboguilla Island light (recommended)—Fourth order, flashing, white, with red sector; light 2 seconds, eclipsed 5 seconds, at an elevation of about 200 feet, visible 12 miles through the following arcs, and with the following colors:

Visible from 0° (N) to 220° (S. 40° W.) through East.

White sector from 0° (N) to 180° (S) through East.

Red sector from 180° (S.) to 220° (S. 40° W.).

Obscured from 220° (S. 40° W.) to 360° (N.) through West.

The structure will be a low white skeleton steel tower, about 15 feet high, inconspicuous as a daymark, on the top of the small haystack-shaped island on the central eastern side of Taboguilla Island, and which apparently joins it when viewed from a distance, but is really separated from it by a smaller rock, between the two. The principal use of the light will be to note the turning point around Taboguilla Island when leaving or approaching the Canal.

The red sector will cover Farallon Rock, and the submerged rock that lies about halfway between Taboguilla and Crava Islands, on a tangent joining their eastern sides.

Caution—Vessels approaching from the southward, after passing Bona Island, should they find themselves in the red sector, should immediately change course to the eastward until the light shows white.

The approximate position of the light will be Latitude 8° 48' 30" N.; Longitude 79° 30' 30" W.

Taboguilla Island—Taboguilla Island is 5 miles to the southward of the entrance to the Canal, and is a very important landmark; it is about one mile long and $\frac{1}{2}$ mile wide, narrowing to a point at its northeastern end. It rises to a peak at a height of 610 feet; it is more or less precipitous around its shore line, and is generally wooded. Its northwestern side is fringed with a reef, which extends about $\frac{1}{2}$ mile offshore at its widest point.

Approaching from the southward, the rock on which the light is situated appears as a low rounded haystack-shaped island, touching its eastern side. From this point the island rises to its highest point towards its eastern end, then slopes irregularly to its southwest point, off which there are three small islands, connected to the main island by a ledge.

The two most western of these islands are about the same size and are haystack shaped, covered with brush.

Directions, anchorage—After rounding Taboguilla Island at a distance of about two miles, when it bears 220° (S.W. $\frac{1}{2}$ S.), the group of islands, including Flamen-co, Naos, and others, will be roughly in range with Ancon Hill bearing 330° (NW. by N.), and if this latter course be followed until San José Rock bears north, distant about $\frac{1}{2}$ mile, a good convenient anchorage will be found in 8 fathoms, soft bottom, off the entrance to the Canal.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Gibbs, Francis	32012	Jamaica	Panama	Municipal Eng.	April 9, 1915.

The estate of the abovenamed deceased employe of The Panama Canal or the Panama Railroad Company is now in process of settlement, and any claims against the estate or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. This name will be published

JOHN K. BAXTER, Administrator of Estates.

HEALTH CONDITIONS IN 1914

Figures Show Improvements.—Summary for Canal Zone, Panama, and Colon.

Copies of the report of the Department of Health of The Panama Canal for the calendar year of 1914, published by the Government Printing Office in Washington, were received on the 1st of last week and a partial distribution has been made to various departments of the organization. Outside parties desiring copies may make application to the Chief Health Officer, Balboa Heights, Canal Zone, setting forth the interest which prompts them to make the request.

A section on the vital statistics of employees of the Government, more than half of whom are living in Panama City, is of general interest. Stating that the health of employees during 1914 was better than in any previous year, the report sets forth that the total admission rate to hospitals for 1914 was 244.49, compared with 351.10 for 1913, and for disease alone 182.57, as compared with 246.91 for 1913.

The total death rate for 1914 was 7.04, as against 8.35 for 1913; and the death rate for disease 4.40, as compared with 5.24 for 1913. The noneffective rate for 1914 was 12.22, compared with 15.97 for 1913.

The changes in the regulations governing sick leave and admission to hospitals, which became effective soon after the reorganization, no doubt had some influence in reducing the admission and noneffective rates, but the fact that the death rate has also fallen decidedly shows that other factors are more important.

With regard to malaria, the death rate has been reduced more than 50 per cent since 1913 (0.16 in 1914, 0.37 in 1913), and the admission rate to hospitals more than 15 per cent (65 in 1914, 76 in 1913). The constantly noneffective rate, hospitals and quarters, which was computed only in the last five months of 1914, was 1.51. This good showing in malaria is attributed in part to the measure requiring patients discharged from the hospital to continue the use of quinine for at least a month and to report to district physicians.

The death rate from pneumonia had increased from 0.83 in 1913 to 0.95 in 1914; all the deaths but one were among the black employees. The increase in the disease is probably due to unusual prevalence of measles and the overcrowded conditions in which the people live in Panama.

The five diseases causing the highest number of hospital admissions, with their rates, were as follows:

Disease.	Admissions.	Rate.
Malaria.....	2,884	65.06
Veneral diseases.....	1,001	22.58
Acute bronchitis.....	197	4.44
Mumps.....	122	2.75
Pneumonia.....	120	2.71

The five diseases causing the highest number of deaths and their rates were as follows:

Disease.	Deaths.	Rate.
Pneumonia.....	42	.95
Tuberculosis.....	40	.90
Nephritis.....	22	.50
Heart, organic disease of.....	16	.36
Malaria.....	7	.16

There were no deaths among Americans from malaria, dysentery, or typhoid fever during the year.

In the latter half of the year a periodic physical examination, including urine and

feces, has been made of all food handlers in the kitchens, mess rooms, and commissaries of The Panama Canal, with the result that one typhoid carrier and a number of cases of contagious diseases were detected and eliminated.

With respect to the conditions in the Canal Zone and the cities of Panama and Colon, the report states that with an average population of 46,379 in the Canal Zone there was a total of 710 deaths during the year; of these, 614 deaths were from disease, giving a rate of 13.24 per thousand, as compared with 14.43 for the year 1913. The death rate from tuberculosis was 1.5; the percentage of all deaths was 10. The death rate is augmented by the enormous infantile death rate among the negroes, due to ignorance and indifference on the part of mothers.

The birth rate, based on the last five months of the year, was 19. The infant mortality, based on the same period, was for white children under one year of age 29 per 1,000, and for colored children 347, with a general average of 252. Of the total deaths from disease, based on the last eight months of the year, the percentage under five years of age was 42.

In New York City during the year 1914 the number of deaths under one year per 1,000 births has been reported as 94. It is said that seven years ago the number of such deaths was 144 to the 1,000; and that 20 years ago the rate was 208 per 1,000.

COLON.

The average number of inhabitants for the year was 23,265, among whom there were 590 deaths; of these, 563 were from disease, giving a rate of 24.20 per 1,000 as compared with 22.74 for the year 1913. The death rates for malaria and dysentery were 0.86 and 0.17, respectively. The death rate for tuberculosis was 3.69, 14 per cent of the entire deaths from all causes.

The birth rate, based on the last five months of the year, was 48.60. The infant mortality for the same period was 194.

Of the total deaths from disease, based on the last eight months of the year, the percentage under five years of age was 43.

PANAMA CITY.

The average population of the city for the year was 53,948, among whom there was a total of 1,863 deaths; of these, 1,772 deaths were from disease, giving a rate of 32.85 per 1,000, as compared with 30.21 for the preceding year. The death rates for malaria and dysentery were 1.91 and 0.69, respectively.

The birth rate, based on the last five months of the year, was 54.52. The infant mortality for the same period was 272.

Of the total deaths from disease, based on the last eight months of the year, the percentage under five years of age was 50.

The high death rate in Panama is due to several causes. It will be noted that 50 per cent of the deaths occurred in children under five years of age; they were due principally to gastrointestinal diseases, the result of ignorance and indifference on the part of mothers. Another factor of importance is the serious overcrowding in the tenement districts, the result of the rapid increase in the population of the city without a corresponding growth in housing facilities. In taking the sanitary census, it was a frequent occurrence to find six or more persons sleeping in one unventilated room, 10 by 10 feet. Tuberculosis gave a death rate of 4.26 and 12 per cent of the total deaths.

There was a small outbreak of beriberi beginning on July 21, with one case; two more cases were reported in August, and 16 in September; in October there were two; November, four; and December, two; about half of the cases were from Chiriqui prison, the remainder were scattered, and a number were brought in from outside localities.

Out of 27 cases of typhoid fever which occurred in Panama, 20 were in the months of February to August, inclusive; nearly three-fourths of all the cases in the Zone and Colon occurred in these same months, and were traceable to sewage-polluted oysters obtained in Panama.

Low Record for Malaria.

The malarial incidence among employees living in the Canal Zone, outside of Cristobal and Toro Point, was lower for the week ending April 17, than for any other week in the history of the Canal, being but six-hundredths of one per cent (.0006).

Renumbering Houses in Ancon-Balboa District.

The houses in the Ancon-Balboa quarter-master's district are being renumbered for the purpose of obtaining greater simplicity in the handling of business, principally by having the number indicate the subdistrict in which the house is located. The various areas are being numbered according to the following scheme:

- 1 to 100—Balboa shops reservation.
- 101 to 200—Balboa Heights (upper). (170 to 200—Army reservation.)
- 201 to 300—Hospital reservation.
- 301 to 400—Upper Ancon, in vicinity of old Administration Building and post-office.
- 401 to 500—Lower Ancon, in vicinity of Hotel Tivoli and Ancon hotel.
- 501 to 600—Bishop's Hollow to Big Tree (lower road.)
- 601 to 700—Balboa Heights (lower).
- 701 to 800—Balboa flats.
- 801 to 900—East Balboa.
- 901 to 1100—La Boca.

Rates of Passenger Transportation for Army.

The Panama Railroad Company has authorized the following rates for passenger transportation for the Army forces stationed on the Canal Zone: Individuals and small parties, 2½ cents per mile per person; train consisting of locomotive, baggage car, and one coach, for a day of eight hours or fraction thereof, \$42; each additional car, \$10; each additional hour, not exceeding four, \$5. On Sundays and holidays, the charge for ordinary train will be increased to \$60, and \$7.50 for each additional hour, with \$10 for each additional car. The various commanding officers will issue regular transportation requests for this service, including that of the half-rate for individuals.

Family Quarters.

Applications for married quarters on file on March 31, 1915, were as follows:

DISTRICT.	List No. 1.	List No. 2.
Ancon.....	26 (12)	360 (92)
Ancon Hospital.....	1 (1)	7
Corozal.....	.....	110 (23)
Paraiso.....	.....	180 (9)
Gatun.....	.....	38 (8)
Cristobal.....	.....	119 (17)
Total.....	27 (13)	814 (149)

NOTE.—The figures in parentheses show the number of applicants already occupying regular or nonhouse-keeping family quarters at stations other than those at which applications are filed.

OFFICIAL CIRCULARS.

Use of Official Business Penalty Envelopes.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., April 8, 1915.

CIRCULAR No. 697:

1. The use of official business envelopes for the transmittal of mail free of postage, under the provisions of Section 496 of the United States Postal Laws and Regulations, is restricted to matters relating exclusively to the official business of the Government, and the covers of all such matter must bear both the official business and penalty stamp. The following paragraphs of Section 496 of the Regulations are quoted herewith:

Paragraph No. 5—* * * Any Department or officer authorized to use the penalty envelopes may inclose them with return address to any person or persons from or through whom official information is desired, the same to be used only to cover such official information, and indorsements relating thereto: * * *

Paragraph No. 7—Whoever shall make use of any official envelope, label, or indorsement authorized by law, to avoid the payment of postage or registry fee on his private letter, packet, package, or other matter in the mail, shall be fined not more than three hundred dollars.

2. Persons writing to officials and departments concerning their private business with the Government, even though they are themselves Government officials or employees, may not use the penalty envelope to transmit their correspondence. Officers desiring official information from or through persons not officers may furnish penalty envelopes or labels to cover the same only with return address printed or written thereon.

3. This information is given on account of the frequent misuse of official business envelopes by employees of The Panama Canal.

GEO. W. GOETHALS,
Governor.

All Accommodations Reserved on "Panama" Sailing May 8.

THE PANAMA CANAL,
OFFICE OF EXECUTIVE SECRETARY,

BALBOA HEIGHTS, C. Z., April 14, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

All accommodations having been reserved on the steamship *Panama*, scheduled to sail from Cristobal on May 8, 1915, no further requests for this sailing should be submitted.

C. A. MCLVAINE,
Executive Secretary.

Shipments to Balboa District.

PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., April 13, 1915.

CIRCULAR No. 48:

To all concerned—Since the opening of the new passenger station at Balboa Heights, a great many shipments intended for Balboa Docks, Balboa Shops, and Balboa Terminal are being simply marked "Balboa," and unloaded at Balboa Heights station. This necessitates a reloading and reshipment to destination. All way bills covering such shipments should read "Balboa Heights," "Balboa Docks," or "Balboa Terminal," and all articles tagged accordingly.

Will you please instruct your forces accordingly?

C. H. MOTSETT,
Superintendent.

Nonexpendable Property.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,

BALBOA HEIGHTS, C. Z., April 10, 1915.

[Supplement No. 4 to list published with Circular No. 656-1.]

HEADS OF DEPARTMENTS AND DIVISIONS AND ACCOUNTABLE OFFICIALS:

The following changes and additions to the list of nonexpendable property, and instructions are published for guidance of all concerned:

Changes—

- Page 5. Brushes, counter duster; eliminate.
- Page 6. Buttons, brass, fire department; eliminate.
- Page 6. Buttons, brass, Zone police; eliminate.
- Page 6. Caps, uniforms; eliminate.
- Page 8. Chevrons, police insignia; eliminate.
- Page 9. Coolers, water; "20th century" carry as "Stands" or "Bodies."
- Page 17. Helmets, police; eliminate.
- Page 36. Urns, coffee; add E.

Additions—

- Balls, signal
- Bodies, fibre, for "20th Century" cooler
- E Boxes, coupon
- Cans, milk
- Clamps, lifting
- Cones, signal
- Cutter, ticket

- Cutters, tobacco plug
- Flags, electric
- E Flags, national
- E Formers, conduit
- E Griddles, electric
- E Jacks, reel
- E Machines, addressing
- E Machines, bakery, of all kinds
- E Machines, flanging
- E Maps, relief
- E Rods, cubic measuring
- Screen and cassette, for X-ray work
- Stands, metal, for "20th Century" cooler
- E Stands, reel
- Stretchers, belt
- Stretchers, hat
- Stretchers, shoe

Items to be considered expendable—

- Bandsaws
- Bowling alleys
- Brushes, floor sweeping
- Lamps, station
- Lamps, street
- Oilers, typewriter
- Plates, colony counting
- Polishers, bowling alley

Instructions for accountable officials—

Form A-278 has been printed and, effective at once, this form only shall be used for the record of distribution of division property, with the understanding that records now kept on form PC 726-Rev. need not be rewritten. The new form should be substituted in such files as additional sheets are required.

Form PC-401, field property record, has been revised and printed in quadruplicate, being now carried in stock under form A-300. This revised form will be used instead of form PC-401, as required in circular No. 656-2.

When an accountable official's record is cleared by invoice to other officials and audited, the file of cards and vouchers will be transferred to the Auditor's office.

Property transferred from one division to another, for which the same official is accountable, should be covered by regular transfer vouchers.

H. A. A. SMITH,
Auditor, The Panama Canal.
Approved: GEO. W. GOETHALS,
Governor.

Charges for Electric Current.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 5, 1915.

CIRCULAR No. 676-4 (Superseding circular No. 676-3):
For the information of all concerned the following schedule of charges for electric current supplied by The Panama Canal is published:

FOR METERED SERVICE.

1. To departments and divisions of The Panama Canal and to the Panama railroad the charge shall be the actual cost to the Electrical Division for the district concerned as determined from month to month by the Cost Accountant.

2. To other departments and bureaus of the United States Government the charge shall be the actual average cost to The Panama Canal for all districts, as determined from month to month by the Cost Accountant.

3. To employees of The Panama Canal and the Panama railroad, religious institutions, and to social and fraternal organizations of employees in the Canal Zone, the charge shall be an arbitrary rate that shall be adjusted from time to time to approximate as closely as practicable to the actual cost to The Panama Canal as determined by the Cost Accountant. For the present this rate shall be two cents per kilowatt-hour.

4. To individuals (nonemployees) and companies in the Canal Zone and to employees of The Panama Canal and Panama railroad for commercial use, the charge shall be eight cents per kilowatt-hour, except when a different rate is established by special authority of the Governor.

FLAT RATES.

5. To departments and divisions of The Panama Canal and the Panama railroad, other departments and bureaus of the United States Government, employees of The Panama Canal and the Panama railroad for their personal use, religious and charitable institutions, and to social and fraternal organizations of employees in the Canal Zone, the charge for unmetered lighting service shall be \$1 plus 6 times the number of 16-candlepower equivalents, in cents per month, for five or more equivalents. For less than five equivalents the charge shall be 25 cents per month per equivalent, with a minimum charge of 50 cents per month. Employees who occupy bachelor apartments shall pay the minimum charge; for electrical appliances other than lights, such as stoves, irons, toasters, water heaters, etc., charges shall be fixed from time to time by the Electrical Engineer with the approval of the Governor, dependent upon

the cost of production of power, and the current consumption and probable number of hours of use of the appliance.

6. To individuals (nonemployees) and companies in the Canal Zone, and to employees of The Panama Canal and the Panama railroad for commercial use, the charge for unmetered lighting service shall be 75 cents per month per 16-candlepower equivalent, and for electrical appliances other than lights, rates to be fixed from time to time by the Electrical Engineer with the approval of the Governor, dependent upon the cost of production of power and the current consumption and probable number of hours of use of the appliance.

BILLS AND PENALTIES.

7. Charges for flat rate electric service are payable on or before the 15th of the month in which the current is supplied. The charges for metered service are payable on or before the 15th of the month following rendition of the service. A penalty of 25 per cent will be added if bills are not paid when due. No deposit to secure the payment of electric current bills will hereafter be required of employees of The Panama Canal or the Panama railroad. Deposits to secure the payment of bills will be required in sums to be fixed by the Auditor from religious institutions, social and fraternal organizations of employees, and from individuals and companies.

8. Circular 676-3 is hereby revoked.

GEO. W. GOETHALS,
Governor.

Approved Projects Uncompleted on March 31, 1915.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 16, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

1. Please forward to this office, in triplicate, on or before April 24, 1915, a list of approved projects uncompleted on March 31, 1915, giving in parallel columns the following information in regard thereto:

1. Project number.
2. Nature of project.
3. Original estimated cost.
4. Cost to March 31, 1915.
5. Cost to complete work after March 31, 1915.
 - (a) Labor.
 - (b) Material, supplies, and equipment.
 - (c) Other charges.

2. In addition, you are requested to furnish for each project a statement classifying the cost of the work to be completed after March 31, in accordance with the following classification:

1. Labor directly employed.
2. Local contract work.
3. Miscellaneous material and supplies.
4. Material and equipment to be ordered on special division requisitions, itemized.
5. Structural steel.
6. Lumber.
7. Cement.
8. Building materials and supplies.
9. Explosives.
10. Coal.
11. Ice.
12. Fuel oil.
13. Subsistence supplies.
14. Incidental expenses, classified by main items.
15. Charges from other divisions:
 - (a) Shop charges.
 - (b) Power.
 - (c) Water.
 - (d) Dredging.
 - (e) Tug service.
 - (f) Utility service, Supply Department.
 - (g) Railroad transportation, other than P. R. R. freight.
 - (h) Rock.
 - (i) Sand and gravel.

3. The appropriations for the completion of the Panama Canal have been made so that they are immediately available. Allotments for the work will be based upon information given in the statements called for above, and will be made from the present appropriations for the construction of the Panama Canal and Panama Canal fortifications, as well as from appropriations for these purposes made for the next fiscal year.

4. Construction divisions should make complete estimates of the cost of work that remains. The operating and maintaining divisions will submit estimates of the expenses to be incurred by them for each project, dividing same between the items listed in paragraph 2 as far as may be practicable.

GEO. W. GOETHALS,
Governor.

Legal Notice.

United States of America } In the District Court
Canal Zone. } Division of Balboa.

Estate of José Alvarez, deceased; Petition for Escheat.
Notice is hereby given that at 9 o'clock a. m., of the 15th day of May, 1915, in the court house at Ancon,

there will be an inquisition into the estate of José Alvarez, who died intestate about the 24th day of October, 1910, possessed of improvements on lands located near Tabernilla, C. Z., for which improvements the Joint Land Commission, in 1913, made an award of \$175 and ordered that the same be paid in the Court of the Canal Zone, pursuant to a petition filed by John K. Baxter, Administrator of Estates, praying that the said sum be escheated in accordance with Sections 779, 780, and 781 of the Code of Civil Procedure of the Canal Zone, at which time and place all persons claiming the said estate, or any interest therein, may appear and be heard before the Court.

E. M. GOOLSBY,
Clerk.

Customs Sale.

Sealed bids will be received at the office of the Chief of the Division of Civil Affairs, Balboa Heights, until 5 p. m., April 30, 1915, and then opened, for the purchase of the following merchandise:

Four Panama hats *ex* steamship *Huasco*, seized at Cristobal, December 19, 1914; eight quart bottles of Slater's V. O. blended Scotch whiskey *ex* steamship *San Juan*, remaining unclaimed at Balboa since October 1, 1913.

Merchandise may be inspected upon application at Room 320, Administration Building, Balboa Heights. Bids should be marked "Bid for the purchase of sized or unclaimed merchandise," and addressed to the Chief of the Division of Civil Affairs, Balboa Heights. Purchasers will be required to pay the import duties to the Republic of Panama. The right to reject any and all bids is reserved.

JOINT LAND COMMISSION.

Notice of Awards.

In the matter of sundry claims, award No. 77, docket numbers as noted, April 12, 1905—An award is hereby made against the United States, in favor of the persons hereinafter named, in the sum of \$978, United States currency.

This award shall be paid to the claimants hereinafter named, in the amounts specified hereinafter, on or before the 12th day of May, 1915, and if payment or tender of payment of any of the items of this award is not made on or before that date, such items shall thereafter bear interest at the rate of six per centum per annum until paid:

Manuel Jacome, docket No. 404—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which the said Jacome may possess or may have possessed on the lands of Peñas Blancas and Vamos Vamos, the sum of \$843.

Antonio Rodriguez, docket No. 429—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which the said Rodriguez may possess or may have possessed on the lands of Buena Vista or near the town of Frijoles, not covered by payment in 1911 of \$86 to one Antonio Rodriguez for property in the Trinidad valley, the sum of \$75.

Petra Padilla, docket No. 446—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which the said Padilla may possess or may have possessed near Bohio, the sum of \$60. Total, \$978, United States currency.

JORGE BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of Dismissal.

In the matter of sundry claims, rule of dismissal No. 177, docket numbers as shown, April 12, 1915—With reference to the following claims, the evidence before the Commission is that settlement therefor has been made by the United States:

Claimant.	Docket No.	Tax No.	Date of Payment.
Barela, Daniel...	437	796 & 814	7-13-14
Gutierrez, Sabina...	1880, 2554	1775	3-22-15
Leon, Antonio de...	452	C-33	10-27-14
Leon, Juan José de...	457		5-19-11
Leonard, John...	1453		12-19-14
Monte, José...	438	3, 5 & 7	1-22-12
Valle, Doroteo...	453		4-17-11

In view of the above settlements, no further action is necessary by the Commission, and the foregoing claims are therefore dismissed.

JORGE BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Launch Service to Taboga.

Week days.—Leave Balboa dredge landing at 5.30 p. m., and Taboga at 6 a. m. *Sundays and holidays*.—Leave Taboga at 6 a. m., Balboa dredge landing at 9.40 a. m. and 5.30 p. m.; leave Taboga at 7.15 p. m. *Fares*—Employees, 25 cents gold each way; nonemployees, 50 cents gold each way, children under 12 years, 15 cents gold each way.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores at Las Cascadas, Empire, and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 p. m., to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

The following retail prices of cold storage provisions will be effective April 22, 1915:

FRESH MEATS.

Prices unchanged since publication in THE CANAL RECORD of April 14.

MISCELLANEOUS.	Price.
Brains, calves', per pound.....	10
Calves' head, each.....	80
Kidneys, beef, per pound.....	10
Livers—Beef, per pound.....	11
Calf, each.....	70
half, each.....	35
Oysters, fresh, per pkt.....	28
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	10
Frankfurter, per pound.....	13
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	10
Pork, per pound.....	15
Sweetbread, beef, per pound.....	20
Eggs, fresh, per dozen.....	28
per 1/2 dozen.....	14
Bluefish, per pound.....	16
Halibut, fresh, per pound.....	7
Salmon, per pound.....	6
Yeast, per pound.....	31
per cake.....	2
Pate de foies gras, per jar.....	50

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound	29
Chickens—Fancy, roasting, corn fed, per pound	26
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	22
Capons, per pound.....	32
Broilers, milk fed, per pound.....	34
Broilers, corn fed, per pound.....	28
Turkeys, per pound.....	28
Squabs, each.....	40
Geese, per pound.....	23
Grouse, each.....	1.00
Mallard ducks, 2 to 2 1/2 pounds, each.....	2.35
Pheasants, each.....	1.35

CURED AND PICKLED MEATS.

Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Mince, "Bologna style," per pound.....	15
Sugar cured, whole, per pound.....	22
Half, per pound.....	24
Sliced, per pound.....	28
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	30
Half boiled, per pound.....	32
Sliced, boiled, per pound.....	38
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	29
Whole piece, per pound.....	28
Strips, whole, per lb.....	22
Sliced, jar.....	27
Sliced, tin.....	27
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	41
Sheffield Farms, extra fancy, per lb.....	58
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	22
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield, per quart.....	215
Fernillac, bottle.....	225
Ice cream, quart.....	125
1/2-gallon.....	150
Cream, 30 per cent, quart.....	252
1 pint.....	229
1/2 pint.....	217

VEGETABLES.

Beets, per pound.....	2
Celery, per head.....	7
Cabbage, per pound.....	4
Carrots, per pound.....	2

Lettuce, per pound.....	Price.
Onions, per pound.....	*8
Parsley, per pound.....	*23
Parsnips, per pound.....	8
Peppers, per pound.....	*3
Plantains, per dozen.....	18
Potatoes, white, per pound.....	12
Spinach, per pound.....	2
Turnips, per pound.....	11
Tomatoes, per pound.....	2
Squash, per pound.....	11
Yams, tropical, per pound.....	2 1/2

FRUITS.

Apples, per pound.....	5
Cranberries, fresh, per pound.....	6
Grape fruit—Select, each.....	5
Tropical, each.....	3 1/2
Lemons, per dozen.....	10
Oranges—Select, each.....	2
Tropical, per dozen.....	9
Coconuts, each.....	10
Bananas, per bunch.....	38
Bananas, each.....	3
Apples, evaporated, per pound.....	12
Apricots, evaporated, per pound.....	15
Pears, evaporated, per pound.....	23
Pineapples, each.....	12
Figs, dried, 12-oz. package.....	14
Figs, dried, 5-oz. package.....	5
Raisins, seedless, package.....	9
table, cluster, per pound.....	19
Currants, cleaned, package.....	12
Prunes, stewing, per pound.....	12

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than 1/2 ham or 1/2 shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective April 16, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Shoes, Boy Scouts, pr.....	2.35	2.60
Shoes, Boy Scouts, pr.....	2.05	2.40
Brushes, camel's hair, 1 1/2", ea.....	.25	.41
Brushes, camel's hair, 2", ea.....	.33	.59
Brushes, camel's hair, 2 1/2", ea.....	.49	.85
EFFECTIVE APRIL 19.		
Sardines, tin.....	.08	.09
Citron peel, lb.....	.22	.19
Blackberry jam, tin.....	.23	.19
Olives, queen, gal.....	1.20	1.10
Rice, second grade, lb.....	.04 1/2	.05
Chamois skin, face, ea.....	.11	.09
Ties, bat wing, ea.....	.32	.35
Bowls, yellow, ea.....	.12	.14
Trunks, ea.....	4.35	4.05

Additions to Stock.

Comfortables, ea.....	1.15
Dimity checks, yd.....	.14
Dimity cords, yd.....	.14
Crepe, raipur, yd.....	.17
Crepe, fleuret, yd.....	.33
Flaxon, colored woven, yd.....	.18
Cloth, honeycomb, yd.....	.14
Cloth, tissue, yd.....	.21
Embroidered, silk, yd.....	.28
Pique, colored, yd.....	.19
Voile, shadow stripes, yd.....	.17
Voile, chiffon, check, yd.....	.20
Voile, barston, yd.....	.37
Boxes, bread, japanned, ea.....	.54
Boxes, bread, japanned, ea.....	.74
Doll carts, ea.....	1.20
Doll carts, ea.....	1.45
Baby carriages, ea.....	9.25
Embroidery edging, yd.....	.03
Embroidery edging, yd.....	.04
Embroidery edging, yd.....	.05
Embroidery edging, yd.....	.08
Embroidery edging, yd.....	.42
Embroidery edging, yd.....	.52

Sale of Diamond Ring.

Sealed bids will be received at the office of the Depot Commissary, Cristobal, Canal Zone, until 3 o'clock p. m., April 30, 1915, when they will be opened in the presence of attending bidders, for one diamond ring. This ring may be inspected on any working day between the hours of 7.30 to 11 a. m., and 1 to 5 p. m., at the office of the Depot Commissary, Cristobal, up to and including April 24, 1915, and from April 24, 1915, to date of opening of bids, at the information desk, Administration Building, Balboa Heights, C. Z., during office hours. Description of the ring may be obtained on request at the office of the Depot Commissary, Cristobal, C. Z. The right is reserved to reject any or all bids.

Bids must be sealed and plainly marked "Proposal to purchase diamond ring," addressed to the Depot Commissary, Cristobal, C. Z.

SHIPPING INFORMATION.

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in the following table:

APRIL.

DATE.	Time and height of high and low water.			
Wed., April 21.....	2:00	7:59	14:22	20:07
	3.0	11.9	4.2	11.9
Thurs., April 22....	2:50	8:50	15:18	21:04
	3.6	11.5	4.7	11.4
Fri., April 23.....	3:48	9:56	16:24	22:15
	3.9	11.3	4.7	11.2
Sat., April 24.....	4:52	11:06	17:29	23:31
	3.4	11.7	4.2	11.5
Sun., April 25.....	5:52	12:09	18:28	.....
	3.4	12.4	3.2	.....
Mon., April 26.....	0:37	6:48	13:04	19:23
	12.3	2.6	13.5	1.9
Tues., April 27.....	1:32	7:40	13:52	20:11
	13.3	1.7	14.7	0.6
Wed., April 28.....	2:22	8:29	14:38	20:58
	14.4	0.7	15.8	-0.5
Thurs., April 29....	3:09	9:14	15:31	21:43
	15.4	-0.1	16.7	-1.4
Fri., April 30.....	3:54	10:02	16:08	22:30
	16.1	-0.6	17.1	-1.8

MAY.

DATE.	Time and height of high and low water.			
Sat., May 1.....	4:40	10:48	16:54	23:17
	16.5	-0.7	17.2	-1.8
Sun., May 2.....	5:26	11:36	17:40	.....
	16.3	-0.4	16.8	.....
Mon., May 3.....	0:05	6:14	12:26	18:29
	-1.3	15.9	0.2	15.9
Tues., May 4.....	0:54	7:05	13:19	19:22
	-0.5	15.1	1.2	14.8
Wed., May 5.....	1:49	8:02	14:17	20:21
	0.6	14.1	2.2	13.5
Thurs., May 6.....	2:47	9:05	15:23	21:30
	1.7	13.2	3.1	12.5
Fri., May 7.....	3:51	10:18	16:32	22:45
	2.6	12.7	3.5	11.9
Sat., May 8.....	4:59	11:34	17:42	.....
	3.2	12.5	3.5	.....
Sun., May 9.....	0:07	6:05	12:40	18:45
	11.8	3.4	12.7	3.2
Mon., May 10.....	1:13	7:03	13:35	19:39
	12.1	3.2	13.1	2.6
Tues., May 11.....	2:06	7:54	14:20	20:24
	12.6	2.9	13.4	2.1
Wed., May 12.....	2:49	8:38	14:58	21:05
	13.0	2.6	13.8	1.6
Thurs., May 13....	3:28	9:19	15:34	21:43
	13.4	2.3	14.0	1.2
Fri., May 14.....	4:03	9:58	16:07	22:20
	13.7	2.2	14.2	1.0
Sat., May 15.....	4:37	10:35	16:41	22:58
	13.8	2.1	14.2	1.0
Sun., May 16.....	5:10	11:14	17:15	23:35
	13.8	2.3	14.0	1.2
Mon., May 17.....	5:45	11:52	17:49	.....
	13.5	2.5	13.7	.....
Tues., May 18.....	0:13	6:22	12:32	18:24
	1.5	13.3	2.9	13.3
Wed., May 19.....	0:55	6:59	13:14	19:03
	1.9	12.9	3.3	12.9
Thurs., May 20.....	1:36	7:40	14:01	19:46
	2.4	12.6	3.6	12.4
Fri., May 21.....	2:22	8:26	14:52	20:38
	2.8	12.4	3.8	12.0
Sat., May 22.....	3:13	9:18	15:50	21:38
	3.1	12.4	3.8	.....
Sun., May 23.....	4:10	10:17	16:50	22:46
	3.2	12.6	3.3	11.9
Mon., May 24.....	5:08	11:19	17:49	23:52
	3.1	13.2	2.6	12.4
Tues., May 25.....	6:07	12:18	18:46	.....
	2.6	13.9	1.6	.....
Wed., May 26.....	0:55	7:03	13:14	19:39
	13.2	1.9	14.8	0.6

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign before the height, in which case subtract it.

The time used in Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday*.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE.—The sailings on Monday, May 3, will not land mail in New York until Tuesday of the following week; hence, despatches on that date will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4 leaving Panama at 7.10 a. m., connects with the despatch for the sailing on May 3.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., April 19, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressees: Calvit, Mr. and Mrs. S. E. Miller, Capt. Wm. H. Campbell, John A. Corbin, Fitz Cutler, Harry Ensminger, Mrs. Lucia Flynn, Frank D. Hermeeter, William Hess, Mrs. J. A. Hines, John A. Holder, T. J. B. Junger, William Malatesta, Frank *Melborune, Victor *Papers.

†Morgan, Mrs. C. W. Morrissey, Mrs. A. Robinson, Fred *Robson, Mrs. Edna Smith, George (2) Spruance, Fred Davis Swathell, A. G. Viens, L. Villafraña, A. Walker, Raymond N. Ware, R. M.

†Package.

Rainfall from April 1 to 17, 1915, inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa	1.39	4	1.44
Balboa Heights	1.38	4	1.50
*Miraflores	1.29	4	1.37
Pedro Miguel	1.02	4	1.26
Rio Grande	1.24	4	1.49
<i>Central Section—</i>			
Culebra	1.78	4	2.20
*Camacho	1.68	4	2.53
Empire	2.14	4	2.73
Gambao	2.04	4	3.92
*Juan Mina	2.05	4	3.87
Alhajuela	1.98	2	4.83
*El Vigia	1.69	4	3.70
Frijoles	5.13	3	8.71
*Trinidad	2.29	3	15.13
*Monte Lirio	5.40	3	8.15
<i>Atlantic Section—</i>			
Gatun	7.64	3	10.14
*Brazos Brook	5.27	3	8.31
Colon	4.98	3	6.52

*Standard rain gage—readings at 5 p. m.

Automatic rain gage at unstarred stations—values midnight to midnight.

†Rainfall to the 10th inclusive.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday April 17, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gambao.	Gatun Lake.	Miraflores Lake.
Sun., April 11.....	139.00	94.29	86.49	86.44	53.85
Mon., April 12.....	127.04	93.30	86.53	86.46	53.92
Tues., April 13.....	126.75	92.74	86.52	86.46	54.00
Wed., April 14.....	126.55	92.72	86.50	86.46	53.95
Thurs., April 15.....	126.25	92.36	86.51	86.46	54.08
Fri., April 16.....	126.00	92.16	86.56	86.44	54.02
Sat., April 17.....	125.90	92.08	86.51	86.43	53.90
Heights of low water to nearest foot	125.0	91.0			

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their

interests in regard to the payment of tolls and minor charges.

Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 450 and 550 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Cristobal or Balboa from the tanks of The Panama Canal or from the private corporations which have tanks at the terminals at the rate of from 1,500 to 2,000 barrels per hour. The present price from The Panama Canal is \$1.25 per barrel; prices made by the corporations may be obtained from them.

Diesel engine oil is for sale by several companies, at approximately 45 shillings per ton of seven barrels.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light, and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly, and no advance notice is required. The following are representative charges for ship's laundry: Trousers and jackets, five cents each; aprons, caps, sheets, tablecloths, napkins, towels, one cent each.

Repairs to vessels may be made to any extent, except turning of the largest crank shafts or longest line shafts, or work requiring dry docking of large vessels.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital treatment, in ward, \$3 per day; in private room, \$6 per day. For American seamen, the charge for treatment in ward is \$1 per day; for foreign seamen, \$1.50 per day.

Application for supplies, or for services, should be made to the captain of the port, Cristobal or Balboa.

Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired; or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case the vessel has a known representative on the Isthmus, in care of such representative.

The cable address of The Panama Canal, on the Isthmus, is "Panama, Balboa Heights;" in the United States, "Panama, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

Sailings of Vessels In Regular Service with the Isthmus.

REGULAR CONNECTIONS WITH CARIBBEAN AND EUROPEAN PORTS.

The United Fruit Company's lines maintain weekly connections, both ways between Cristobal and the following ports: Kingston, Havana, Cartagena, Puerto Colombia, Santa Marta, Port Limon, and Bocas del Toro, and an additional weekly sailing to Bocas del Toro.

The Royal Mail maintains fortnightly service between Colon and Southampton, making the following way ports: Antilla, Jamaica, Cartagena, Puerto Colombia, Puerto Cabello, Trinidad, Barbados, the Azores, and Cherbourg. Its vessels all arrive at Colon on Sunday and sail on Tuesdays.

The Compagnie Generale Transatlantique operates a line, with 28-day sailings, between Colon and Bordeaux, calling at Puerto Colombia, Puerto Cabello, La Guayra, Carupano, Trinidad, Martinique, Guadeloupe, and Santander; and another line, with sailings every 28 days, between Colon and Saint Nazaire, with calls at all the above ports, except Carupano, Trinidad, and Martinique.

The Italian Steam Navigation Company, "La Veloce," maintains a line, with sailings every 28 days, between Colon and Genoa, calling at Puerto Colombia, Curacao, Puerto Cabello, and Barcelona.

The Compania Transatlantica de Barcelona sends a vessels from Colon to Genoa on the 12th day of each

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MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., April 18, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
April 12	Konson	American	American-Hawaiian S. S. Line	New York	Los Angeles	General cargo	10,399	10,553	7,596
April 12	Orissa	British	Pacific Steam Navigation Co.	Liverpool	Valparaiso	General cargo	900	5,597	3,508
April 12	Palena	Chilean	South American S. S. Co.	Cristobal	Balboa	General cargo	1,515	3,639	2,537
April 13	J. L. Luckenbach	American	Luckenbach S. S. Co.	New York	Los Angeles	General cargo	6,000	5,114	3,258
April 13	L. K. Thurlow	American	Crowell and Thurlow S. S. Line	New York	San Francisco	General cargo	4,639	3,441	2,444
April 13	Cape Finisterre	British	Cape Finisterre S. S. Co.	Philadelphia	New Zealand	Petroleum	6,200	4,836	3,765
April 13	Stanley Dollar	American	Dollar Line	Baltimore	Seattle	Coal	1,821	1,840	933
April 14	Strathesk	British	Strathesk S. S. Co.	Newport News	San Francisco	Coal	6,595	4,773	3,565
April 14	Cristobal	American	Panama R. R. S. S. Line	New York	Balboa	Ballast		9,698	7,272
April 15	Indrasamha	British	Indra Line, Ltd.	New York	Honolulu	General cargo	7,150	5,612	4,181
April 15	Salvador	British	Salvador R. R. Co.	Cristobal	Balboa	General cargo	898	1,190	692
April 15	Baikol	Russian	Northern S. S. Co.	New York	Vladivostok	General cargo	2,955	2,397	1,475
April 15	Bravo	Norwegian	Acties Bonheur	Christiania	Los Angeles	General cargo	800	1,548	1,018
April 15	Santa Cecilia	American	W. R. Grace & Co.	New York	Los Angeles	General cargo	6,549	6,747	4,476
April 15	Iowan	American	American-Hawaiian S. S. Line	New York	San Francisco	General cargo	7,644	6,819	4,668
April 16	Jamaica	British	Royal Mail Steam Packet Co.	Cristobal	Balboa	General cargo	258	1,170	620
April 16	Artemis	Dutch	Anglo-Saxon Petroleum Co.	Port Arthur	Sydney	Kerosene	4,587	3,950	2,890
April 17	American	American	American-Hawaiian S. S. Co.	New York	San Diego	General cargo	7,733	5,903	4,153
April 17	Bellgrano	British	Bellgrano S. S. Co., Ltd.	New York	Salaverry	General cargo	7,000	5,103	3,587
April 17	Isthmian	American	American-Hawaiian S. S. Line	Charleston, S. C.	Tocopilla	Ballast		5,677	3,975
April 18	Carolyn	American	Luckenbach S. S. Co.	New York	Los Angeles	General cargo	4,600	3,425	2,322

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

April 12	Sydic	Swedish	Redin, A. B. Transatlantic	Port Pirie	Galveston	Zinc concentrate	4,867	5,418	4,056
April 13	Jamaica	British	Pacific Steam Navigation Co.	Tumaco	Colon	General cargo	744	1,170	620
April 13	Columbia	American	Wilson Bros.	Antofagasta	Barhados	Nitrates	1,678	2,174	1,398
April 14	Thai	Swedish	Redericknebelget Nordstjernan	La Union	Christiania	Coffee, general	1,050	1,474	875
April 16	Peru	British	Pacific Steam Navigation Co.	Guayaquil	Cristobal	Coffee, cocoa, etc.	3,151	4,038	2,626
April 16	Luz Blanca	British	London & Pacific Petroleum Co.	Talara	London	Benzine, kerosene	3,921	5,147	3,268
April 18	Clan Graham	British	Clan Line	Iquique	Philadelphia	Nitrates	4,158	5,338	3,656
April 18	Grena	Norwegian	J. W. Mowinckles	Prisagua	Philadelphia	Nitrates	6,088	7,368	5,073
April 18	Beckenham	British	Watts, Watts & Co.	Cruz Grande	Philadelphia	Iron ore	4,171	4,943	3,508
April 18	Charlton Hall	American	U. S. Steel Products Co.	Pisagua	Wilmington	Ore, nitrates	5,060	5,593	4,217

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
April 15	Colon	P. R. R. S. S. Line	New York
April 18	Edgemont Castle	Lancashire Shipping Co.	New York

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
April 18	Montonan	American-Hawaiian S. S. Co.	Los Angeles
April 20	Bessie Dollar	Dollar Line	

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
April 14	Perou	Cie. Generale Transatlantique	St. Nazaire
April 16	Tabor	Earn Line	Norfolk
April 17	Vulcanus	Dutch Royal Mail	Amsterdam
April 18	Owera (yacht)	P. G. Gerry	Kingston, Ja.

*DEPARTURES.

Date	Vessel	Line	To
April 12	Buenos Aires	Barcelona Transatlantic Co.	St. Nazaire
April 13	Chiswick	Earn Line	Daiquiri, Cuba.
April 18	Perou	Cie. Generale Transatlantique	St. Nazaire

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
April 20	Musician	Harrison Line	Liverpool
April 26	Skulda	Munson Line	Santiago

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
April 22	Tabor	Earn Line	Cuban port
April 24	Vulcanus	Dutch Royal Mail	Amsterdam
	Owera (yacht)	P. G. Gerry	
	Musician	Harrison Line	

*Other than vessels passing through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Date	Vessel	Line	From
April 12	Palena	Chilean S. S. Line	Cristobal
April 14	Newport	Pacific Mail S. S. Co.	San Francisco
April 15	Eureka	Pacific Coast	San Francisco
April 16	Jamaica	Pacific Steam Nav. Co.	Cristobal

*DEPARTURES.

Date	Vessel	Line	To
April 12	Hualago	Peruvian S. S. Line	Callao
April 13	Bertha E. May	H. R. Wood	Callao
April 14	Palena	Chilean S. S. Line	Valparaiso
April 15	Aztec	Pacific Mail S. S. Co.	San Francisco

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
April 17	San Juan	Pacific Mail S. S. Co.	San Francisco

*EXPECTED DEPARTURES.

Date	Vessel	Line	To

*Other than vessels passing through the Canal.

(Continued from page 317.)

month, calling at Puerto Colombia, Curacao, Puerto Cabello, La Guayra, Ponce, San Juan (Porto Rico), Canary Islands, Cadiz, Barcelona, and Marseilles; on the return voyage, with the same calls enroute, the vessels sail from Genoa on the 8th day of each month.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal; and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailing via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails. Arrives.

NEW YORK TO CRISTOBAL-COLON.			
Santa Marta	U. F. C.	April 14	April 21
Advance	P. R. R.	April 15	April 22

Metapan	U. F. C.	April 17	April 25
Almirante	U. F. C.	April 21	April 28
Panama	P. R. R.	April 22	April 28
Pastores	U. F. C.	April 24	May 2
Santa Marta	U. F. C.	April 28	May 5
Albana	P. R. R.	April 29	May 5
Calmares	U. F. C.	May 1	May 9
Zacapa	U. F. C.	May 5	May 12
Colon	P. R. R.	May 6	May 12

CRISTOBAL-COLON TO NEW YORK.

Carrillo	U. F. C.	April 22	April 29
Colon	P. R. R.	April 24	April 30
Tenadores	U. F. C.	April 26	May 3
Almirante	U. F. C.	April 29	May 6
Advance	P. R. R.	May 1	May 8
Metapan	U. F. C.	May 3	May 11
Santa Marta	U. F. C.	May 6	May 13
Panama	P. R. R.	May 8	May 14
Pastores	U. F. C.	May 10	May 17

NEW ORLEANS TO CRISTOBAL-COLON.

Heredia	U. F. C.	April 17	April 22
Abangarez	U. F. C.	April 20	April 27
Parismina	U. F. C.	April 24	April 29
Atenas	U. F. C.	April 27	May 4
Cartago	U. F. C.	May 1	May 6
Turrialba	U. F. C.	May 4	May 11
Heredia	U. F. C.	May 8	May 13

CRISTOBAL-COLON TO NEW ORLEANS.

Cartago	U. F. C.	April 22	April 27
Turrialba	U. F. C.	April 22	April 29
Heredia	U. F. C.	April 29	May 4
Abangarez	U. F. C.	April 29	May 6
Parismina	U. F. C.	May 6	May 11
Atenas	U. F. C.	May 6	May 13
Cartago	U. F. C.	May 13	May 18
Turrialba	U. F. C.	May 13	May 20

CANAL



RECORD

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BALBOA, CANAL ZONE, WEDNESDAY, APRIL 28, 1915.

No. 36.

The Canal Record

Official publication of The Panama Canal.

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Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Arrival of Canal Collier "Ulysses".

The Panama Canal collier *Ulysses* arrived at Cristobal on Tuesday, April 27, with 12,100 tons of coal for the Canal plants, having sailed from Norfolk for Cristobal on Wednesday, April 21.

Pipeline suction dredge No. 4 has been engaged in the entrance to the dry dock slip, excavating to greater depth alongside the coaling wharf beneath the Brown steam hoist, and making the berth ready for the *Ulysses*. Further excavation is to be done later in the French Canal, widening the channel and providing a turning basin. The spoil from the excavation is being utilized in making a fill in swamp land at Mount Hope, opposite the printing plant. The floating crane *Hercules* is to be used on April 29 for removing from the coal berth the wreck of an old "hand clapet" sunk about five years ago, which had not interfered with the navigation of vessels prior to the coming of the *Ulysses*.

Second New Canal Tug Arrives.

The new Canal tug *Gorgona* arrived at Cristobal on Tuesday, April 27, from Port Richmond, N. Y. The *Gorgona* is a sister ship of the *Tavernilla*, which arrived on March 23. Both were built for the Canal service by the Staten Island Shipbuilding Company, under a contract let in June, 1914.

Sailing Vessel from Portland for Great Britain.

The sailing vessel *Birtha* arrived at Balboa in the forenoon of Sunday, April 25, from Portland, Oreg., for transit of the Canal on the way to Falmouth. She is carrying a cargo of 2,246 tons of wheat. The *Birtha* was met about 12 miles down the bay by a tug and taken in tow for passage through the Canal, which was completed on Tuesday, April 27.

Direct Forwarding of Parcels Post Packages.

The Division of Posts has arranged to forward direct from Balboa, through Ancon exchange post-office, ordinary and registered parcels post packages to the countries of Bolivia, Chile, Colombia, Ecuador, and Peru. Parcels for the Atlantic coast of Colombia

will be despatched by way of the Cristobal exchange office.

Before this arrangement was made, parcels post packages for the west coast of South America were despatched by way of the New York exchange office, which resulted in considerable delay and increased cost of transportation.

Heavy Traffic by American-Hawaiian Vessels.

The steamship *Isthmian* of the American-Hawaiian Steamship Line passed through the Canal in ballast on April 17, bound from Charleston to Tocopilla for a cargo of nitrates, with which she will return to the United States. This is the first time that a vessel of the American-Hawaiian Line has gone through the Canal without cargo.

From the opening of the Canal, on August 15, to April 1, vessels of the American-Hawaiian Line had made 94 transits of the Canal, carrying an aggregate of 699,342 tons of cargo. This was an average of 7,440 tons of cargo per vessel. In this trade, 45 vessels passed from the Atlantic to the Pacific with 325,530 tons, and 49 from the Pacific to the Atlantic, with 373,812 tons. All of the westbound vessels were engaged in United States coastwise trade, and all but three of the eastbound were in the coastwise trade; these three were carrying Chilean nitrates to the United States, and their total cargo amounted to 23,599 tons.

The line is the largest single user of the Canal. Its vessels carried over one-fifth of the 3,246,019 tons of cargo which had passed through the Canal to April 1.

The first vessel of the line to enter the Canal was the *Pennsylvanian*, on August 16. The *Pennsylvanian* has passed through the Canal six times. The other vessels of the line which have been through the Canal are, in order of their coming, the *Missourian*, *Arizona*, *Kentuckian*, *Mexican*, *Montanan*, *Nebraskan*, *Virginian*, *Texan*, *Honolulan*, *Columbian*, *Iowan*, *Georgian*, *Dakotan*, *Nevadan*, *Isthmian*, *Alaskan*, *Washingtonian*, *Ohioan*, *Oregonian*, *Panaman*, all of which arrived for the first time before November 1; the *Hawaiian*, arriving on December 3, the *Minnesotan* on March 20, and the *American* on April 17.

Vessels of the line which had been through the Canal six times up to April 1 are the *Pennsylvanian* and the *Montanan*; five times, *Kentuckian*, *Arizona*, *Honolulan*, *Mexican*, *Columbian*, *Iowan*, *Georgian*, *Panaman*; four times, *Texan*, *Virginian*, *Alaskan*, *Dakotan*, *Ohioan*, *Oregonian*; three times, *Nebraskan*, *Nevadan*, *Isthmian*, *Washingtonian*, *Hawaiian*; twice, *Missourian*; once, *Minnesotan*.

Sixty-eight Degree Gasoline.

The Supply Department storekeepers at Balboa, Paraiso, and the dry dock at Cristobal have been authorized to issue 68° gasoline for use with all high-speed gasoline engines without requiring special authorization in each case.

CANAL TRAFFIC IN MARCH.

Exceeds Previous Months in Number of Vessels, Amount of Cargo, and Tolls.

The traffic through the Canal during the month of March was considerably greater than for any preceding month. A total of 136 seagoing vessels passed through the Canal, carrying an aggregate of approximately 635,057 tons of cargo. This is between one-third and two-fifths more vessels than had used the Canal in any preceding month, and 186,100 more tons of cargo than had passed through in a previous month, exceeding previous records by over 40 per cent.

The tolls levied during the month of March amounted to \$606,316.56, bringing the total amount of tolls levied on barges and vessels passing through the Canal to \$2,971,675.29. This has been distributed as follows:

Period.	Amount.
Prior to August 15, 1914	\$ 11,610.69
August 15 to August 31	84,401.80
September 1 to September 30	269,863.00
October 1 to October 31	378,089.12
November 1 to November 30	387,242.40
December 1 to December 31	411,895.44
January 1 to January 31, 1915	419,037.12
February 1 to February 28	403,219.16
March 1 to March 31	606,316.56
Total	2,971,675.29

The total traffic eastbound, or from Pacific to Atlantic, and westbound, from Atlantic to Pacific, are given herewith, in comparison with the movements during previous months:

M'th.	Eastbound.		Westbound.		Total.	
	Ves-sels.	Cargo.	Ves-sels.	Cargo.	Ves-sels.	Cargo.
Aug...	12	57,182	12	49,106	24	106,288
Sept...	30	186,776	27	135,262	57	322,038
Oct...	40	252,288	44	168,069	84	420,357
Nov...	38	242,291	54	206,510	92	448,801
Dec...	57	261,680	42	178,235	99	349,915
Jan...	54	240,875	44	208,082	98	448,957
Feb...	53	274,619	39	149,987	92	424,606
Mar...	80	417,610	56	217,447	136	635,057
T'tl.	364	1,933,321	318	1,312,698	682	3,246,019

Of the 80 eastbound vessels in March, four passed through in ballast. Of the 56 westbound vessels, six were in ballast. For the 126 vessels carrying cargo, the loading was approximately 5,040 tons per vessel, as compared with 4,880 tons in February. The average daily transit of cargo during March was 20,485.7 tons, as compared with 15,164.5 tons in February.

As distributed over the principal trade routes, the shipments were as follows:

Route.	No. Vessels.	Cargo tonnage.
Coastwise, eastbound	29	98,312
Coastwise, westbound	17	96,544
U. S. Pacific coast to Europe	12	109,148
Europe to U. S. Pacific coast	4	7,097
United States to South America	9	53,506
South America to United States	17	100,705
Europe to South and Central Am	9	4,572
So. and Cen. America to Europe	12	66,790
United States to Far East	8	48,499
Far East to United States	3	23,600
Miscellaneous traffic	6	26,274
Vessels without cargo	10	.....
Total	136	635,057

Cargo declarations by the masters of

vessels listed 88 commodities. Distribution of principal commodities was as follows:

Barley amounted to 28,152 tons, shipped to Europe, of which 1,070 tons came from Chile and the remainder, 27,082 tons, from San Francisco. Copenhagen received 14,400 tons, Bergen, 2,361, Liverpool 1,020, and the remainder was shipped subject to later orders.

Coal from Atlantic to Pacific amounted to 31,882 tons; 9,066 tons went from the United States to South America; 11,801 tons from the Atlantic coast to the Pacific coast of the United States; and 11,015 went through from Great Britain to the Pacific Ocean, destination uncertain; 6,300 tons went from Pacific to Atlantic in naval colliers.

Copper included 1,000 tons from Yokohama to New York, 3,400 tons from Tacoma to New York, 2,400 tons from Rosalia to Swansea, and 633 tons from south Pacific ports, of which 533 tons went to Europe and 100 tons to New York.

In the goods classified as general cargo, 108,194 tons passed from the Atlantic to the Pacific, principally from the United States in coastwise trade, and to the Far East and South America. The eastbound general cargo amounted to 74,852 tons, principally general produce of the west coast, shipped to the United States and to Europe.

Lumber amounted to 31,538 tons, of which 212 tons were shipped to the west coast of South America, and 31,326 tons from the west coast of North America. Of this, 9,408 tons went to Great Britain, 75 tons to Copenhagen, and the balance to the United States.

Iron and steel manufactured goods, principally structural material, amounted to 20,884 tons. Two thousand three hundred and ten tons were shipped from the Pacific coast to New York; the remainder, with the exception of 138 tons from Europe, was shipped from the Atlantic seaboard of the United States; 8,557 tons to South America, 9,079 tons to the west coast of the United States, and 800 tons to New Zealand and Australia.

Railroad material to the amount of 350 tons was shipped from Liverpool to San Francisco; 13,960 tons were shipped from New York, 9,040 tons of which went to South America, 2,920 tons to Japan, and 2,000 tons to Wellington.

The 111,025 tons of nitrates shipped from the west coast of South America through the Canal consisted of 31,838 tons to Europe and 79,187 tons to the United States.

Oats included 50 tons from New York to Australia; 6,723 tons from Talcahuano to England, and 389 tons, from United States to England.

Two hundred and seventy tons of crude oil were shipped down the west coast of South America (14 tons from Liverpool and 256 tons from New York), and 5,516 tons were shipped from Peru to Norway, and 228 tons from San Francisco to Stockholm.

Refined petroleum was shipped in small quantities, amounting in all to 729 tons, to the west coast; 3,600 tons to Japan; but the principal movement was to New York, with 5,408 tons from Junin, and 11,803 tons from San Francisco.

Sugar amounted to 44,697 tons, of which 76 tons went to the west coast; 34,117 tons from the Hawaiian Islands to the Atlantic coast of the United States; 7,883 tons from South America to Europe; and 2,621 tons from South America to New York.

Tin to the amount of 6,758 tons was shipped from New York, all but five tons of which, consigned to Talcahuano, were for Los Angeles and San Francisco; unworked tin amount-

ing to 250 tons was shipped from Singapore to New York, and 1,650 tons were shipped from South America to Liverpool.

Detailed analysis of the traffic follows:

Commodity	Atlantic to Pacific	Pacific to Atlantic	Total	Remarks.
	Tons.	Tons.	Tons.	
Alcohol.....	10		10	New York to Australia.
Apples.....		230	230	146 tons, Hawaiian Islands to orders.
Asphalt.....		30	30	San Francisco to Great Britain.
Balsam.....		5	5	Central America to New York and Sweden.
Bark.....		120	120	90 tons, Salaverry to New York; 30 tons, Valparaiso to Europe.
Barley.....		28,152	28,152	See introduction.
Beans.....		369	369	309 tons from San Francisco to Boston.
Beans, lima.....		414	414	200 tons, Singapore to New York; 209 tons, Los Angeles to Charleston.
Beans, vanilla.....		14	14	San Francisco to Copenhagen.
Books.....	5		5	New York to New Zealand and Australia.
Bran.....		500	500	Penco to Copenhagen.
Bristles.....		100	100	Shanghai to New York.
Cakes, cotton seed oil.....		800	800	Valparaiso to Copenhagen.
Candy.....	5		5	New York to New Zealand and Australia.
Cacao.....		1,875	1,875	South Pacific ports to New York and Europe.
Canned goods.....	1,194	3,127	4,321	Mostly North Pacific ports New York and Europe.
Cement.....	3,928		3,928	New York to North and South Pacific ports.
Chemicals.....	1,032	1,009	2,041	New York to Pacific ports; Chile to Europe.
Chrome.....		6,100	6,100	Tahiti to Glasgow.
Coal.....	31,882	6,300	38,182	See introduction.
Cocoa leaves.....		16	16	Salaverry to Colon.
Coconut cake.....		100	100	San Francisco to New York.
Coffee.....	814	5,081	5,895	Between S. America and N. Y. and Europe.
Coke.....	979		979	Norfolk to Gatico.
Copper.....		7,433	7,433	See introduction.
Copper ore.....		1,640	1,640	Salaverry to New York.
Copra.....		1,300	1,300	Manila to New York (600); Tahiti to Glasgow (700.)
Cotton.....	214	263	477	225 tons from Los Angeles to Liverpool.
Electrical supplies.....	91		91	New York to North Pacific ports.
Explosives.....	141		141	New York (25) Gotenburg (116), to North Pacific ports.
Flour.....	737	3,458	4,195	3,258, west coast to Europe.
Fruit, dried.....		5,457	5,457	San Francisco to Europe.
Gasoline.....	99	9,680	9,779	9,680 tons, San Francisco to London.
General cargo.....	108,194	74,852	183,046	See introduction.
Ginger, dry.....		100	100	Hongkong to New York.
Guano.....		15	15	Mejillones to Genoa.
Hay.....		2	2	Tacoma to London.
Hemp.....		500	500	Manila to New York.
Gums and copal.....		500	500	Singapore to New York.
Iodine.....		16	16	Salaverry to New York.
Iron.....	3,391		3,991	New York and Gotenburg (110) to San Francisco and Orient (1,840.)
Iron ore.....		7,300	7,300	Cruz Grande to Philadelphia.
Ivory nuts.....		15	15	Tumaco to Colon.
Lead.....		700	700	San Francisco to New York.
Leather.....	40	61	101	New York to Australia; South America to Europe.
Liquors.....	98		98	New York (77) and Colon to Pacific ports.
Live stock.....		1 horse		Salaverry to New York.
Lumber.....	212	31,326	31,538	See introduction.
Manufactured goods:				
Iron and steel.....	18,574	2,310	20,884	See introduction.
Machinery.....	2,506		2,506	New York to Pacific ports and Orient.
Railroad material.....	14,310		14,310	See introduction.
Textiles.....	1,587		1,587	New York (976) and Europe (621) to Pacific.
Miscellaneous.....	2,959		2,959	New York to North Pacific ports and Australia.
Milk, evaporated.....	69		69	New York to Valparaiso.
Naphtha.....	1,500	2,774	4,274	Philadelphia to Japan; Peru to Norway.
Nitrates.....		111,025	111,025	See introduction.
Nutmegs.....		100	100	Singapore to New York.
Oats.....	50	7,112	7,162	See introduction.
Oil, crude.....	270	5,774	6,044	See introduction.
Oil, lubricating.....	180		180	New York to Chile, Peru, Australia, and New Zealand.
Oils, vegetable.....	309	1,200	1,509	1,200 tons, Manila to New York.
Paint.....	153		153	New York and Virginia to Pacific ports.
Panama hats.....		75	75	South Pacific ports to New York.
Pepper.....		100	100	Singapore to New York.
Petroleum, refined.....	4,329	17,011	21,340	See introduction.
Rice.....	25		25	New York to Ecuador.
Roofing.....	300		300	New York to New Zealand and Australia.
Rubber.....	38	231	269	Pacific ports to N. York (105) and Europe (123)
Salt.....	22		22	New York to San Francisco.
Seed.....		68	68	Salaverry to New York.
Silver.....		7	7	South Pacific ports to Liverpool.
Silver ore.....		72	72	South Pacific ports to New York.
Skins and hides.....		433	433	Manila (100) and Pacific ports to New York (232) and Europe (201.)
Soap.....	26		26	New York to Chile (21) and Australia (5).
Sugar.....	76	44,621	44,697	See introduction.
Tallow.....		315	315	North Pacific ports to New York and London.
Tea.....	2	200	202	Liverpool to Callao; Shanghai to New York.
Textiles, miscellaneous.....	1,812	302	2,114	New York to Vladivostok; Manila to New York.
Tin.....	6,758	1,900	8,658	
Tobacco.....	190		190	New York and Colon to Pacific ports and Australia.
Wax.....	250	6	256	New York to New Zealand and Australia; Valparaiso to Liverpool.
Whalebone.....		10	10	Seattle to Christiania.
Wheat.....		15,751	15,751	Oregon and Washington to Great Britain.
Wines.....	26	2,621	2,647	2,621 tons, San Francisco to New York.
Wire.....	1,624		1,624	New York to Japan, New Zealand and Australia.
Wire fencing.....	5,670		5,670	New York to Vladivostok.
Wood, hard.....	165	75	240	New York to South Pacific ports, New Zealand, Australia; San Francisco to Copenhagen.
Wool.....	1	4,587	4,588	4,291, Melbourne to Boston.
Totals.....	217,447	417,610	635,057	

CANAL WORK IN MARCH.

Monthly Report of the Governor to the Secretary of War.

BALBOA HEIGHTS, C. Z., April 19, 1915.

The Honorable the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of operations on the Isthmus for the month of March, 1915:

Department of Operation and Maintenance.

Lock operation and maintenance—Delivery of material for the chain fenders was completed; the status of their erection remained unchanged throughout the month. The grading of dams and backfill and the planting of grass at the Pacific locks progressed satisfactorily.

The following lockages were made during the month: *Gatun*—139 lockages, 147 vessels; *Pedro Miguel*—132 lockages, 138 vessels; *Miraflores*—132 lockages, 138 vessels.

Electrical Division—The output of the power plants was: Gatun hydroelectric station, 2,606,620 kilowatt-hours; Miraflores steam station, 20,350 kilowatt-hours; Balboa steam station, 3,039 kilowatt-hours.

The output of the Balboa air compressor plant was 172,927,179 cubic feet of free air compressed to 105 pounds.

The electrical work at the Darien substation for the new high power Naval radio station was completed and the station put in service. Construction work was carried on in connection with the installation of the underground conduit system and street lighting systems in the Ancon, Balboa, Gatun, and Cristobal districts; the electrification of the dry dock shops at Mount Hope; the construction of barracks, the headquarters buildings, etc., at Fort Grant; the construction of the new commissary, dispensary, and railroad station at Balboa, of the new Panama railroad freight house in Panama City, and of the new commissary warehouse at Cristobal. The usual operation and maintenance work in connection with electric power and air compressor plants, substations, and transmission lines and the Balboa handling cranes was carried on.

Municipal Engineering Division—In addition to work incident to maintenance, operation, and repairs, work was in progress on the following items of construction: Building a fire wall around the fuel oil tanks at Mount Hope; constructing a concrete reservoir at Gatun; clearing site and installing water and sewer systems for staff headquarters at Balboa Heights; construction of roadways and of water and sewer systems for the Army post on Balboa dump; construction of roads, sidewalks, and parking at Ancon commissary; construction of water and sewer systems and paving street in the stable area of Panama City, and the construction of roads and streets and the making of fill at Balboa. Work on the extension of the Miraflores spillway wall was practically completed. Work was continued on the new Panama waterworks, and the entire system, including the purification plant, was placed in service on March 14.

Meteorology and hydrography—The rainfall was below normal at all stations except Camacho, Juan Mina, Frijoles, and Colon. The monthly totals ranged from a zero at Balboa to 1.71 inches at Colon. The maximum precipitation recorded in any one day was .83 inches, at Camacho on March 20. The estimated rainfall over the Chagres

River basin was 36 per cent below the average, or 1.02 inches against a 14-year average of 1.60 inches. The discharge at Alhajuela was 26 per cent above the 26-year March normal. The elevation of Gatun Lake varied from 86.98 feet on the 8th to 86.60 feet on the 31st of the month, averaging 86.82 feet. Two seismic disturbances were recorded at Balboa Heights, one on the 14th and the other on the 23rd, but no damage resulted from them.

Division of Terminal Construction.

PACIFIC TERMINALS.

Shops—Crane rail erection for building No. 1 was completed, with the exception of placing the 100-pound rails on the girders. The steel for building No. 30, including the potash vat and amounting to 20,628 pounds, was erected and riveted. Practically all discharge and main suction piping for the planing mill exhaust system was completed during the month, and all piping erected has had permanent supports applied. The motors for the blowers have been wired, but the test runs have not been held.

Dry dock—Hand excavation in connection with the work of preparing foundation was continued and amounted to 4,849 cubic yards. Twenty thousand and twenty-one cubic yards of concrete were placed. Of this amount 1,322 cubic yards were classified as reinforced concrete. Two hundred and forty-five thousand one hundred and sixty-five pounds of reinforcing steel, and 22,960 pounds of fixed steel were placed.

Coaling plant—The excavation of the floor of the coal pocket was completed, as well as all the riprapping that can at this time be put in place. Work was begun on the division wall between the west high area and the subaqueous area. At the coal handling plant the berm crane erection consisted of erecting the four booms on the south side of each crane and miscellaneous riveting and connections were made. At the unloader wharf, the rock fill behind the piers of the wharf was put in place, and 2,253 cubic yards of fill placed. There were 1,737 cubic yards of concrete placed in the buttresses and 210 cubic yards of concrete were placed in the floor slab. At the reloader wharf, 263 lineal feet of trestle was built and a large number of supporting piles were driven around caissons. There were sixteen 6-foot cylinders and eight 8-foot cylinders started in March, making a total of 42 caissons started to date. During the month six caissons were sunk to rock. In all 622 lineal feet of caissons were sunk by orange peel excavation, which made a total for both orange peel and hand work of 792 lineal feet of penetration for the month.

Quay wall and pier—The placing of steel and concrete in the floor of section e-f was completed, and the brick pavement likewise put in place. Fender piles were driven nearly the whole length of the section. On section d-e there was a total penetration of 155 lineal feet made in excavating caissons and seven caissons were started during the month, two of which were sunk to rock. The anchorages behind section e-f were put in place as far along the wharf as there was material in which to place them. On pier No. 1 excavation was continued along the north side of the pier, and six anchors were put in place and connected.

Sosa Hill Quarry—The total excavation for the month amounted to 9,430 cubic yards, 4,456 cubic yards of which was rock.

The rock so excavated was used in and around the yards and docks at Balboa.

Fuel oil plant—Work continued on oil crib No. 1, and is progressing satisfactorily. The batter caissons behind the crib were put in place.

Quarantine boat landing—Contract was let to Mr. A. P. Crary to perform the work of putting in this landing, and work was started thereon on March 26.

ATLANTIC TERMINALS.

East Breakwater—Repairs were made on the old double-track trestle between bents 83 and 100 and new single track trestle begun at bent 100 and driven to bent 133, a total distance of 364 lineal feet. A crossover 194 feet long was made on the old double-track trestle at bents 88 to 100. On the old trestle 272 feet of track was laid. Nine thousand two hundred and twenty lineal feet of piling was driven in the trestle. The dredge *Caribbean* and scows dumped dredged material along the axis of the trestle ahead of the driving and the fill has been brought up to approximately -25 feet for a distance of 500 feet.

Coaling plant—The filling of caissons under the north section of the reloader wharf was continued and about 70 per cent completed. The concreting of girders and the floor slab on the unloader wharf was begun at bent 34 on March 17 and at the end of the month 190 lineal feet of wharf had been completely concreted. One thousand eight hundred and seventy-nine cubic yards of coral were excavated by orange peel bucket and used for back-filling transformer house and south end of reloader wharf. The dredge *Marmot* removed approximately 14,192 cubic yards of coral rock from the entrance basin and slip on the west side of the reloader wharf, and dredge No. 4 approximately 6,650 cubic yards from the same place. Work was started on the bolting of permanent track on the wharves, and progressed satisfactorily. The erection, riveting, and painting of two stock-in and reclaiming bridges was completed.

Marine Division.

One hundred and thirty-eight vessels, including launches, passed through the Canal in March, 82 northbound and 57 southbound. Of this number 57 vessels were of American registry and 54 of British registry.

Seventeen vessels were measured and 61 were inspected to see whether their certificates conform to the rules. Collections for tolls amounted to \$606,316.56.

Dredging Division.

The total excavation for the month, including earth, rock, gravel, and sand, was 1,329,361 cubic yards, as follows:

	Cu. Yds.
Miraflores Locks to the sea.....	13,139
Balboa inner harbor.....	187,984
Culebra Cut.....	670,891
Gatun Locks to the sea.....	199,521
Approach channel (Cristobal).....	15,045
Shelter cove, Toro Point.....	125,929
Breakwater, Limon Bay.....	500
Chagres River, gravel and sand.....	49,900
Approach to coal slip, Cristobal.....	20,990
Cristobal coaling station.....	20,842
Colon inner harbor.....	24,620
Total.....	1,329,361

The hydraulic grader was engaged from March 1 to 15, inclusive, sluicing slide north of Gold Hill and in furnishing steam for rock drills. The work of exterminating the water hyacinths continued during the month, as did the work on the system of ditches for draining for the Obispo Diversion, and progressed satisfactorily.

Mechanical Division.

Shop orders authorized during the month number 935, an increase of nearly 200 over last month, those left over from the previous month being 454, those completed during the month numbering 857, and those carried forward into April numbering 532. The output of the foundry was 114,402 pounds of iron, 77,568 pounds of steel, and 17,825 pounds of brass. Hostling was done on 4,260 pieces of equipment, and shop and field repairs were made on 6,823 cars. In addition to this 1,120 light repair jobs were done on equipment, and 13 cases of extended repairs.

The oil handling plant at Balboa handled 137,275.69 barrels of oil. The 6-inch line for handling Diesel oil was completed, and will be used for all future deliveries of this oil. Forty-three thousand two hundred sixteen and sixty-five hundredths barrels of Diesel oil were handled for individuals and companies during the month.

The final acceptance tests of the floating crane *Hercules* were completed on March 29, and the crane was turned over to this division on March 30.

Building Division.

The following buildings were completed during the month: Locks office building, at Gatun; Balboa dispensary; Balboa commissary; Balboa oil house, and all of the officers' houses at Fort Amador, with the exception of that of the field officer, the completion of which is delayed awaiting the receipt of material. At the Corozal Insane Asylum, with the exception of two of the 19 buildings, the work was practically completed. Work on the conversion of six more of the old Ancon asylum buildings, and on the new railroad station at Corozal, was commenced and is proceeding satisfactorily. At Fort Amador work was started on two field officers' houses, three 2-family houses, two 4-family houses, and three 4-family noncommissioned officers' houses. The headquarters building at Fort Amador is progressing.

The Corozal block plant resumed operation and 32,049 blocks were manufactured during the month, at a lower cost than any heretofore attained.

Supply Department.

The force report for the half-month ending Wednesday, March 24, showed a total of 23,414 employes of The Panama Canal and Panama Railroad Company, of whom 3,393 were white Americans and 20,021 were laborers. Of the latter approximately 265 were Europeans and the remainder West Indian negroes. The labor force was increased 398, and there was a reduction of 69 made in the number of American employes, leaving a net increase of 329.

The occupants of Government quarters numbered 6,819 white Americans, of whom 3,647 were men, 1,546 women and 1,626 children; 7,415 West Indians, of whom 4,460 were men, 1,259 women and 1,696 children.

The value of material received during the month was \$751,834.29. It came forward in 36 steamers. The total weight of the cargo, exclusive of lumber and piles, was 12,306 tons. Some of the principal items were: Two hundred and ninety-eight thousand and fifty-three feet, board measure, of lumber for stock, Mechanical Division, and fortifications; 1,008 pieces of piling; 191,730 bags of Portland cement; 1,963 bundles corrugated iron; 11,250 pieces sewer pipe, etc.

Health Department.

General—No case of yellow fever, smallpox,

or plague originated on or was brought to the Isthmus during the month. Twenty-five deaths occurred in the Canal Zone. The death rate for disease for the Canal Zone, based upon a population of 33,519, was 8.23 per thousand, as compared with 5.63 per thousand for the preceding month and 15.01 per thousand for the corresponding month of last year.

Employees—The health of employes continued good. The number of names on the pay rolls for the preceding month was 34,218. On this basis the admission to hospitals and quarters, 892, gave a rate of 312.82 per thousand, as compared with 294.17 for the preceding month and 653.92 for the corresponding month of last year. The admission rates to hospitals for all diseases were: White, 411.96; blacks, 69.22; Europeans, 1,463.28; and Americans, 327.72. The admission rates for malaria to hospitals and quarters were: Whites, 133.05; blacks, 32.98; Europeans, 474.58; and Americans, 106.44. The total number of deaths from all causes was 18. Of these 14 died from disease, or 4.91 per thousand as compared with 3.15 for the preceding month and 6.19 for the corresponding month of last year. No American died from disease during the month.

Accounting Department.

The cash balance in Canal construction appropriations on March 31, 1915, was \$9,414,606.41, and in the fortifications appropriations, \$3,429,570.05. The payrolls for March, exclusive of Army quarters, storehouses, fortifications, etc., amounted to \$926,903.05 and the fortification roll amounted to \$82,294.03. Payments by the Disbursing Clerk in Washington amounted to \$857,928.18, and by the Paymaster on the Isthmus, \$1,516,008.63. Collections on the Isthmus amounted to \$1,384,469.53, of which \$507,441.30 were repaid to appropriations, \$214,330.28 were commissary collections and other trust funds, and \$636,697.95 were covered into the Treasury as miscellaneous receipts. Of the miscellaneous receipts \$606,316.56 were collected on account of tolls, as compared with \$403,219.16 for February. Deposits in the amount of \$263,267.68 were made with the Assistant Treasurer, to be applied in payment of tolls and other charges against vessels using the Canal. Canal Zone revenue collections and miscellaneous funds received, amounted to \$198,636.19, and the disbursements under the same heading amounted to \$290,994.18.

Executive Department.**DIVISION OF CIVIL AFFAIRS.**

One hundred and eighty-six licenses of all kinds were issued during the month. Thirty-six estates were settled, having a total value of \$1,081.51. At the port of Balboa 116 vessels entered and 116 cleared, and at the port of Cristobal 138 vessels entered and 136 cleared. On account of the continued increase in the number of vessels calling at these ports, and the extra work incident thereto, the appointment of one additional customs inspector has been authorized.

Postal service—Postmasters remitted on account of stamp sales, second class mail collections, postage due collections, and box rent receipts, \$8,484.90. The money orders issued aggregated \$343,076.15. The fees collected thereon amounted to \$1,132.45. Of the total value of money orders issued, \$121,535 represents the value of deposit money orders issued without fee. Deposit orders to the value of

\$118,220 and postal savings certificates to the value of \$75,222 were paid. Balance of postal savings deposits on hand at the end of the month, represented by the unpaid certificates and deposit money orders, aggregated \$624,694, as compared with \$696,601 at the close of the previous month.

POLICE AND FIRE DIVISION.

Four hundred and ten arrests were made during the month. Of these 387 were males and 23 females. Sixty convicts were confined in the penitentiary at the close of the month. Ten persons were deported, seven of whom were convicts who had completed their sentences in the penitentiary, and three of whom were prisoners who had served terms in jail.

Twenty-four fires occurred during the month. The damage to The Panama Canal and Panama railroad property amounted to \$397.55, and the damage to United States Army property amounted to \$27,500. This last mentioned damage was caused by a fire of unknown origin, which occurred on March 8, 1915, in the mining dock at Fort Grant.

COURTS.

In the District Court, six civil, 40 probate and 24 criminal cases were settled; five civil, 39 probate, and 23 criminal cases were filed and 97 cases of all kinds were pending at the close of the month. In the magistrates' courts, 30 civil and 411 criminal cases were tried.

DIVISION OF SCHOOLS.

The total enrollment in the Canal Zone schools for the month was 1,605 for the white schools and 1,495 for the colored schools. In the white schools the net enrollment was 1,114, the average number belonging 959.9, and the average daily attendance 925.7. In the colored schools the net enrollment was 1,353, the average number belonging 863.6, and the average daily attendance 751.1.

Panama Railroad.

Cargo handled at the Colon and Balboa agencies aggregated 131,501 tons, of which 17,252 tons were handled through the Canal in steamers of the Panama Railroad Steamship Line, as follows: From New York to Balboa, 2,408 tons; from Colon to Balboa, 1,516 tons; total, 3,924 tons. From Balboa to New York, 10,680 tons; from Balboa to Colon, 2,648 tons; total, 13,328 tons; grand total, 17,252 tons.

One thousand nine hundred and seventy lineal feet of steel cylinders were driven for pier No. 7 at Cristobal, making this item 63 per cent complete; excavation in cylinders 50 per cent complete, and 35.5 per cent of the total amount of concrete required was placed in cylinders. Thirty caissons were completed during the month, making a total of 38.2 per cent of the total number required. The driving of fender piles at pier No. 10 and the fitting up of stringer pieces was completed on March 10, and this pier has since been available for the berthing of ships.

Respectfully,

GEO. W. GOETHALS,
Governor.

Obituary.

Joseph Wood, of 7436 Monroe Avenue, Chicago, Ill., an employe of C. J. Alberts, Canal contractor, and formerly living at Cristobal, died at Ancon Hospital on April 5.

C. J. Snapp, an employe of the Panama Railroad Company, living at Ancon, died at Ancon on April 6.

EXECUTIVE ORDER.

Designating Officials in Certain Localities to Issue Provisional Certificates of Registry to Certain Vessels.

In pursuance of the authority conferred upon the President of the United States by the Act of March 4, 1915, entitled, "An Act to provide for provisional certificates of registry of vessels abroad, and for other purposes," the Collector of Customs of the Philippine Islands, the Captains of the Ports of Cristobal and Balboa, Canal Zone, and the Governor of Guam, are designated for the purpose of issuing provisional certificates of registry to vessels abroad which have been purchased by citizens of the United States, including corporations, as defined in section forty-one hundred and thirty-two, Revised Statutes, as amended by the Panaman Canal Act and the Act of August eighteenth, nineteen hundred and fourteen.

WOODROW WILSON.

THE WHITE HOUSE,
April 7, 1915.

[No. 2164.]

Order No. 2164 is being published locally as Panama Canal circular No. 601-43.

The Act of Congress in pursuance of which the Order was issued was published in THE CANAL RECORD of March 24, 1915.

Residents of Balboa District Sending Baggage over Panama Railroad.

Residents of the Balboa district who ship baggage over the Panama railroad should give explicit instructions to the quartermaster, or anyone else handling the baggage, whether it shall be delivered at the station in Panama or that at Balboa Heights. If baggage is sent to the Balboa Heights station for shipment to a steamer, it should be checked from that station in the afternoon of the day before sailing. This will insure the proper delivery of the baggage at the dock. Baggage sent to the station in Panama for a vessel sailing Saturday may be checked at night, as the baggage room of the Panama station is kept open until 11 p. m., on Friday nights.

Completion of Filling in Balboa District.

The filling in the vicinity of Balboa and Ancon by Contractor H. A. Pearce was practically completed in the morning of Wednesday, April 28. The areas in which spoil has been dumped include the old Panama railroad yards "A" and "B" at Balboa, the part of the Balboa towasite lying between the Prado and yard "A," a fill in low ground between the old main line of the Panama railroad and the Corundú River, west of Panama City; and a fill in low ground between the present main line of the railroad and the municipal yard near the model house. In all, about

125,000 cubic yards of earth have been placed, all of which was excavated by the contractor at Diablo.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., April 26, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressees:

Belcher, Mr. & Mrs. Wm.	Hull, Miss Corina
Benner, Fred T.	Keene, Mrs. M. S.
Bowles, Mrs. W. E.	Knapp, James Z.
Clarke, W. E.	Kopald, Charles
Cleek, Earl T. (2)	Lishman, Louis
Coke, Frank	Loring, Capt. Nichols
Collins, Miss Rosalie	Loose, Calvin
Connor, Neil	Maxwell, J. D.
Cooke, Miss Cecelia	Mitchell, Mrs. E. D.
Laughery, James D.*	Nash, Walter
DeLeon, H. G.	Neals, Fred E.
Denman, E. E.	Nelson, Capt. John
Durham, Ambrose	Parker, Elizabeth Kettredge
Dustheimer, C.	Payne, Mrs. Joanna M.
Engle, Arndle	Pfabe, E. E.
Estes, Dr. Weston Burgess	Rhodes, Olin H.
Frazier, Frank	Sherman, William
Friedman, S. W.	Smith, Mrs. Ennis
Gart, John Gary	Smith, M. W.
Graboski, John	Spinks, James
Hall, Miss Nellie	Stoke, James
Henderson, Mrs., c/o Capt. Alexander*	Universal Company
Hidecker, Mrs. Mary C.	Watkins, Charles R.
Holbrook, Fred	West, Fred W.
Hoffman, Charles	Willoughby, W. C.
* Paper.	Yard, William H.

Examination by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, May 5, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the captain of the port of Cristobal on Friday, May 7, 1915, beginning at 9 a. m. Applicants should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.

F. M. NIXON,
Recorder, Board of Local Inspectors.

OFFICIAL CIRCULARS

Harbor Charges.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 19, 1915.

CIRCULAR No. 698:

1. A minimum charge of \$25 will hereafter be made against vessels using the mooring buoys, Balboa Harbor. The charge for the first day of 24 hours will be \$25, and \$10 for each subsequent day or portion thereof.

2. No vessel will be permitted to handle cargo at one of these berths when a regular wharf berth is available.

3. When a vessel is placed at the mooring buoys solely for the convenience of the Canal authorities, for measurement or other purposes, no charge will be imposed.

GEO. W. GOETHALS,
Governor.

Accounting for Cement Bags and Other Containers.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 19, 1915.

CIRCULAR No. 656-8:

Paragraph 9 of Circular No. 656-7 is hereby amended to read as follows:

9. When the contractor charges for containers, for which credit will be allowed when returned, the Balboa storekeeper will invoice against various divisions financially for such containers as may be issued or transferred. Separate invoices will be issued to cover such containers. When divisions return containers, they will be invoiced in the same manner as other material returned to store. Division returning such containers will invoice and ship same to the Storekeeper, Balboa.

GEO. W. GOETHALS,
Governor.

Acting Magistrate for Balboa.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 13, 1915.

To all concerned—Effective April 10, 1915, and during the absence on leave of Judge Samuel E. Blackburn, Mr. F. G. Swanson will perform the duties of magistrate for the subdivision of Balboa.

GEO. W. GOETHALS,
Governor.

Acting Executive Secretary.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 23, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective April 24, during the absence on leave of Mr. C. A. McIlvaine, Mr. W. P. Copeland will be acting Executive Secretary. Mr. John O. Collins will be acting chief clerk.

GEO. W. GOETHALS,
Governor.

Acting Office Engineer.

DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., April 23, 1915.

To all concerned—Effective Saturday, April 24, and until the return from leave of absence of Mr. C. J. Embree, office engineer, Mr. T. C. Morris will assume charge of the drafting room and perform the duties attached to the position of office engineer.

CHESTER HARDING,
Engineer of Maintenance.
Approved: GEO. W. GOETHALS,
Governor.

Accountable Official.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,

BALBOA HEIGHTS, C. Z., April 23, 1915.

CIRCULAR No. 88:

Effective May 1, 1915, Lieut. C. Garlington is designated an accountable official of The Panama Canal, vice Lieut. A. H. Acher.

H. A. A. SMITH,
Auditor, The Panama Canal.
Approved: GEO. W. GOETHALS,
Governor.

Accommodations on Panama Railroad Vessels.

THE PANAMA CANAL,
OFFICE OF EXECUTIVE SECRETARY,

BALBOA HEIGHTS, C. Z., April 23, 1915.

To all concerned—All available accommodations having been assigned on the steamship *Advance*, scheduled to sail on May 1, and on the steamship

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Snapp, C. J.	308	United States...	Ancon.	Panama R. R.	April 6, 1915.

The estate of the abovenamed deceased employe of The Panama Canal or the Panama Railroad Company is now in process of settlement, and any claims against the estate or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. This name will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

Colon, scheduled to sail on May 22, no further requests for passage on these vessels should be submitted.

A limited number of berths are still available on the steamship *Allionco*, scheduled to sail on May 15.

By direction of the Governor.

C. A. McILVAINE,
Executive Secretary.

In Charge of Gatun Locks.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., April 21, 1915.

To all concerned—Effective Saturday, April 24, Mr. T. W. McFarlane, mechanical supervisor, Gatun Locks, will assume temporary charge of the operation and maintenance of Gatun Locks.

CHESTER HARDING,
Engineer of Maintenance.

Approved:
GEO. W. GOETHALS,
Governor.

Acting Superintendent of Northern District of Division of Municipal Engineering.

THE PANAMA CANAL,
DIVISION OF MUNICIPAL ENGINEERING,
BALBOA HEIGHTS, C. Z., April 24, 1915.

To all concerned—Mr. W. F. Ashton will act as superintendent of the northern district, Division of Municipal Engineering, during the absence of Mr. E. H. Chandler on leave, effective April 24, 1915.

GEO. M. WELLS,
Resident Engineer.

Nonexpendable Property for Commissary Branch.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,

BALBOA HEIGHTS, C. Z., April 23, 1915.

CIRCULAR No. 89:

To all concerned—Effective May 1, 1915, all nonexpendable property required for use by the commissary

branch of the Supply Department will be drawn on foreman's order only (form A-152). Retail commissary storekeepers, and such other employees of the commissary branch as may be designated by the Depot Commissary, are authorized to draw nonexpendable property either from their own stock or from regular Supply Department storehouses. In no case shall any nonexpendable property be put into use unless it shall have been covered by foreman's order.

When at item of property is drawn from commissary stock, the issuing storekeeper will cover same by regular invoice (form Com. 5), showing charge to "Accounting." The usual copies of invoice, together with original, duplicate, and quadruplicate copies of foreman's order, will be forwarded to the commissary accountant in support of regular daily credit sheet. The chief accountant will forward the proper copy of foreman's order to the accountable official.

When property is drawn from regular Supply Department storehouses, the original, duplicate, triplicate, and quadruplicate copies of foreman's order will be delivered to the issuing storekeeper, who will handle in the same manner as foreman's orders signed by Panama Canal employees are handled.

The handling of property records will thereafter be in strict accordance with Circular No. 656-2. Copies of circular No. 656-1, and 656-2, together with list of nonexpendable property and supplements thereto, are attached for information of all concerned.

H. A. A. SMITH,
Auditor, The Panama Canal.

In Charge of Lighthouse Work.

THE PANAMA CANAL,
MARINE DIVISION,
BALBOA HEIGHTS, C. Z., April 10, 1915.

All concerned—Pilots John G. Fels and Frederick Kariger have exchanged duties, and Capt. Kariger is now in charge of the lighthouse subdivision.

HUGH RODMAN,
Marine Superintendent.

Legal Notice.

United States of America } In the District Court
Canal Zone. } Division of Balboa.

Estate of José Alvarez, deceased; Petition for Escheat.

Notice is hereby given that at 9 o'clock a. m., of the 15th day of May, 1915, in the court house at Ancon, there will be an inquisition into the estate of José Alvarez, who died intestate about the 24th day of October, 1910, possessed of improvements on lands located near Tabernilla, C. Z., for which improvements the Joint Land Commission, in 1913, made an award of \$175 and ordered that the same be paid in the Court of the Canal Zone, pursuant to a petition filed by John K. Baxter, Administrator of Estates, praying that the said sum be escheated in accordance with Sections 779, 780, and 781 of the Code of Civil Procedure of the Canal Zone, at which time and place all persons claiming the said estate, or any interest therein, may appear and be heard before the Court.

E. M. GOOLSBY,
Clerk.

JOINT LAND COMMISSION.

Notice of Award.

In the matter of sundry claims, award No. 79, docket numbers as noted, April 21, 1915—An award is hereby made against the United States, in favor of the persons hereinafter named, in the sum of \$150, United States currency.

This award shall be paid to the claimants hereinafter named, in the amounts hereinafter specified, on or before the 21st day of May, 1915, and if payment or tender of payment of any of the items of this award is not made on or before that date, such items shall thereafter bear interest at the rate of six per centum per annum until paid.

Juan Barboza (Balboza) and Antonio Fontelo, dockets Nos. 627 and 628—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which the said Barboza (Balboza) and Fontelo may possess or may have possessed near Matachio and near Gorgona, the sum of \$80, United States currency.

Cenon Cortes, docket No. 345—For all rights, claims, and other interests in growing crops, fruit trees, and other improvements which the said Cortes may possess or may have possessed on Tabernilla lands near Frijoles, the sum of \$70, United States currency.

Total, \$150, United States currency.
JORGE BOYO, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Launch Service to Taboga.

Week days—Leave Balboa dredge landing at 5.50 p. m., and Taboga at 6 a. m. *Sundays and holidays*—Leave Taboga at 6 a. m., Balboa dredge landing at 9.40 a. m. and 5.30 p. m.; leave Taboga at 7.15 p. m. *Fares*—Employees, 25 cents gold each way; nonemployees, 50 cents gold each way, children under 12 years, 15 cents gold each way.

Supplement to Coach Tariff—Fort Amador, Ancon, Panama, and Balboa.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 21, 1915.

Pursuant to the authority in me vested by law, the tariff of rates for the transportation of passengers for hire by means of cabs, coaches, or other horse-driven vehicles, established by order of the Head of the Department of Civil Administration, under date of April 20, 1911, is hereby supplemented by the addition thereto of the following rates:

Between	Any point in		Rates (Panaman Silver.)			
			Number of persons			
			One	Two	Three	Four
Balboa Heights*.....	City of Panama.....	One way... Round trip	.50 .90	.90 1.60	1.36 2.30	1.70 3.00
Balboa Heights*.....	Ancon.....	One way... Round trip	.40 .70	.70 1.20	1.00 1.80	1.30 2.40
Balboa Heights.....	Balboa.....	One way... Round trip	.20 .40	.40 .75	.60 1.00	.80 1.20
Balboa Heights.....	Fort Amador.....	One way... Round trip	.50 .80	.80 1.50	1.10 1.80	1.40 2.00
City of Panama.....	Fort Amador.....	One way... Round trip	1.00 1.60	1.60 2.00	2.00 2.50	2.50 3.20
Ancon.....	Fort Amador.....	One way... Round trip	1.00 1.60	1.60 2.00	2.00 2.50	2.50 3.20
Zone line at Chorrillo.....	Fort Amador.....	One way... Round trip	.80 1.40	1.20 1.80	1.60 2.20	2.40 3.00
Balboa.....	Fort Amador.....	One way... Round trip	.40 .80	.80 1.20	1.00 1.40	1.20 1.60
Balboa.....	Ancon via lower Balboa Heights road.....	One way... Round trip	.60 1.00	1.00 1.40	1.50 2.00	1.80 2.40

*Between Balboa Heights and Panama, and Balboa Heights and Ancon, via Ancon Hospital road, or to points on the two high levels of Balboa Heights, add 20 cents silver for one passenger and 30 cents silver for two or more passengers.

GEO. W. GOETHALS,
Governor.

Supplementary Rent Schedule No. 2.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER,
BALBOA HEIGHTS, C. Z., April 5, 1915.

To all concerned—The following changes and additions have been made to the rent schedule published March 1, 1915, and will become effective March 1, 1915, except for buildings occupied by the Coast Artillery Corps, for which the changes will become effective on date of occupancy:

GOLD QUARTERS. Decreases.

District.	Kind.	Building No.	Apartment or room No.	From	To
Gatun.....	Family.....	208, type 17....		\$10.00	\$8.00

Increase.

Cristobal.....	Bachelor.....	83*		4.00	4.25
Do.....	do.....	84*		4.00	4.25

Additions.

Balboa.....	Family.....	1, quarantine sta			\$10.00
Do.....	do.....	2, quarantine sta			20.00
Do.....	Bachelor.....	Room over quarantine station.			2.13
Do.....	do.....	Quarters occupied by silver attendant at quarantine sta			1.00
Cristobal.....	Buildings occupied by Coast Artillery Corps	1**			42.00
Do.....	do.....	2**			48.00
Do.....	do.....	54**, type 3			32.00

*Per room.

*Per man.

**This corrects an error made in publishing the original schedule of rentals, as the rate of all type-18 houses was fixed at \$4.25 per room.

**As the Coast Artillery Corps will make repairs to these buildings, no surcharge will be added to the rates. The supplementary rent schedule published under date of March 26 will be given No. 1 and all other lists of changes and additions will be numbered serially as published.

Approved:
GEO. W. GOETHALS,
Governor.

WM. R. GROVE,
Chief Quartermaster.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores at Las Cascadas, Empire, and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 p. m., to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

The following list of retail prices of cold storage provisions embraces most of the changes which will be effective April 29, 1915:

FRESH MEATS.	Price.
Ox tails, per pound.....	†9
MISCELLANEOUS.	
Kidneys, beef, per pound.....	*11
Livers—Beef, per pound.....	†9
Calf, each.....	70
half, each.....	35
Oysters, fresh, per pkt.....	28
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	*11
Frankfurter, per pound.....	†11
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	10
Pork, per pound.....	†13
Sweetbread, beef, per pound.....	20
Eggs, fresh, per dozen.....	*29
per ½ dozen.....	*15
Bluefish, per pound.....	16
Halibut, fresh, per pound.....	†6
Salmon, per pound.....	6
Yeast, per pound.....	31

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	*44
Sheffield Farms, extra fancy, per lb.....	58
Milk, Sheffield, per quart.....	*15
Fermeilac, bottle.....	*25
Ice cream, quart.....	†25
½-gallon.....	†50
Cream, 30 per cent, quart.....	†45
pint.....	†23
½ pint.....	†12

VEGETABLES.

Beets, per pound.....	2
Celery, per head.....	7
Cabbage, per pound.....	4
Carrots, per pound.....	*2½
Lettuce, per pound.....	†7
Onions, per pound.....	*3
Parsley, per pound.....	*12
Parsnips, per pound.....	*4
Peppers, per pound.....	18
Plantains, per dozen.....	12
Potatoes, white, per pound.....	2
Rhubarb, per pound.....	15
Spinach, per pound.....	†8
Turnips, per pound.....	2
Tomatoes, per pound.....	11
Yams, tropical, per pound.....	2

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective April 27, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Gum, Sen Sen, pkg.....	.03	.01
Honey, tin.....	.41	.47
Sheets, 54" x 90", ea.....	.55	.50
Corsets, ea.....	1.20	1.25
Ties, four-in-hand, ea.....	.44	.38
Belts, men's, ea.....	.26	.20
Suits, bathing, suit.....	2.10	2.15
Suits, bathing, suit.....	2.20	2.15
Polish, Albo, tin.....	.05	.06
Irons, waffle, ea.....	.98	.70
Filters, Gate City, ea.....	4.55	3.15
Percolators, ea.....	5.30	5.45
Bowls, berry, ea.....	.24	.16
Trunks, ea.....	6.40	7.80

Additions to Stock.

Vinegar, P. C. malt, Heinz Co., bot.....	.15
Soap, castile, cake.....	.16
Cloth, lace, yd.....	.14
Linen, sheer, fancy, yd.....	.14
Linen, sheer, fancy, yd.....	.16
Dress shields, cameo, No. 2, pr.....	.20
Dress shields, cameo, No. 3, pr.....	.22
Dress shields, cameo, No. 4, pr.....	.24
Ice cutters, ea.....	2.65
Measuring glasses, ea.....	.07

SHIPPING INFORMATION.

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in the following table:

APRIL.				
DATE.	Time and height of high and low water.			
Wed., April 28.....	13.3	1.7	14.7	0.6
	2:22	8:29	14:38	20:58
	14.4	0.7	15.8	-0.5
Thurs., April 29....	3:09	9:14	15:31	21:43
	15.4	-0.1	16.7	-1.4
Fri., April 30.....	3:54	10:02	16:08	22:30
	16.1	-0.6	17.1	-1.8

MAY.				
DATE.	Time and height of high and low water.			
Sat., May 1.....	4:40	10:48	16:54	23:17
	16.5	-0.7	17.2	-1.8
Sun., May 2.....	5:26	11:36	17:40	.....
	16.3	-0.4	16.8	.....
Mon., May 3.....	0:05	6:14	12:26	18:29
	-1.3	15.9	0.2	15.9
Tues., May 4.....	0:54	7:05	13:19	19:22
	-6.5	15.1	1.2	14.8
Wed., May 5.....	1:49	8:02	14:17	20:21
	0.6	14.1	2.2	13.5
Thurs., May 6.....	2:47	9:05	15:23	21:30
	1.7	13.2	3.1	12.5
Fri., May 7.....	3:51	10:18	16:32	22:45
	2.6	12.7	3.5	11.9
Sat., May 8.....	4:59	11:34	17:42	.....
	3.2	12.5	3.5	.....
Sun., May 9.....	0:07	6:05	12:40	18:45
	11.8	3.4	12.7	3.2
Mon., May 10.....	1:13	7:03	13:35	19:39
	12.1	3.2	13.1	2.6
Tues., May 11.....	2:06	7:54	14:20	20:24
	12.6	2.9	13.4	2.1
Wed., May 12.....	2:49	8:38	14:58	21:05
	13.0	2.6	13.8	1.6
Thurs., May 13....	3:28	9:19	15:34	21:43
	13.4	2.3	14.0	1.2
Fri., May 14.....	4:03	9:58	16:07	22:20
	13.7	2.2	14.2	1.0
Sat., May 15.....	4:37	10:35	16:41	22:58
	13.8	2.1	14.2	1.0
Sun., May 16.....	5:10	11:14	17:15	23:35
	13.8	2.3	14.0	1.2
Mon., May 17.....	5:45	11:52	17:49	.....
	13.5	2.5	13.7	.....
Tues., May 18.....	0:13	6:22	12:32	18:24
	1.5	13.3	2.9	13.3
Wed., May 19.....	0:54	6:59	13:14	19:03
	1.9	12.9	3.3	12.9
Thurs., May 20.....	1:36	7:40	14:01	19:46
	2.4	12.6	3.6	12.4
Fri., May 21.....	2:22	8:26	14:52	20:38
	2.8	12.4	3.8	12.0
Sat., May 22.....	3:13	9:18	15:50	21:38
	3.1	12.4	3.8	11.8
Sun., May 23.....	4:10	10:17	16:50	22:46
	3.2	12.6	3.3	11.9
Mon., May 24.....	5:08	11:19	17:49	23:52
	3.1	13.2	2.6	12.4
Tues., May 25.....	6:07	12:18	18:46	.....
	2.6	13.9	1.6	.....
Wed., May 26.....	0:55	7:03	13:14	19:39
	13.2	1.9	14.8	0.6
Thurs., May 27....	1:51	7:57	14:07	20:31
	14.1	1.2	15.6	-0.4
Fri., May 28.....	2:44	8:50	14:59	21:22
	15.0	0.5	16.3	-1.1
Sat., May 29.....	3:35	9:40	15:50	22:12
	15.7	0.0	16.7	-1.5
Sun., May 30.....	4:24	10:32	16:39	23:00
	16.0	-0.2	16.7	-1.5
Mon., May 31.....	5:15	11:23	17:29	23:50
	16.1	-0.1	16.4	-1.2

JUNE.

DATE.	Time and height of high and low water.			
Tues., June 1.....	6:05	12:15	18:20	.....
	15.8	0.4	15.6	.....
Wed., June 2.....	0:41	6:57	13:08	19:13
	-0.5	15.2	1.1	14.7

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3.47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday*.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE.—The sailings on Monday, May 3 and 31, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4 leaving Panama at 7.10 a. m. connects with the despatches for the sailings on May 3 and May 31.

Rainfall from April 1 to 24, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>			
Balboa	<i>Ins.</i> 1.39	4	<i>Ins.</i> 3 39
Balboa Heights	1.38	4	3.45
Miraflores	1.29	4	2.06
Pedro Miguel	1.02	4	1.61
Rio Grande	1.24	4	2.90
<i>Central Section—</i>			
Culebra	1.78	4	3.15
*Camacho	1.68	4	3.66
Empire	2.14	4	4.11
Gamboa	2.04	4	6.87
*Juan Mina	2.05	4	6.55
Alhajuela	1.98	2	8.23
*El Vigia	1.98	23	6.50
Frijoles	5.13	3	11.69
*Trinidad			
*Monte Lirio	5.40	3	11.79
<i>Atlantic Section—</i>			
Gatun	7.64	3	14.22
*Brazos Brook	5.27	3	11.52
Colon	4.98	3	9.11

*Standard rain gage—readings at 5 p. m.

Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, April 24, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., April 18.....	1.5 75	91.99	86.51	86.42	53 90
Mon., April 19.....	125.65	91.92	86.56	86.42	53 92
Tues., April 20.....	126.30	92.68	86.57	86.46	53 88
Wed., April 21.....	129.15	94.70	86.54	86.43	53 85
Thurs., April 22.....	126.15	92.66	86.48	86.43	53 88
Fri., April 23.....	131.25	96.20	86.65	86.51	53 85
Sat., April 24.....	126.50	94.92	86.36	86.50	53 90

Heights of low water to nearest foot.....

125.0	91.0			
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Sailings of Vessels in Regular Service with the Isthmus.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal; and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailing via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

	Sails.	Arrives.
NEW YORK TO CRISTOBAL-COLON.		
Almirante.....	U. F. C. April 21....	April 28
Panama.....	P. R. C. April 22....	April 28
Pastores.....	U. F. C. April 24....	May 2
Santa Marta.....	U. F. C. April 28....	May 5
Allianca.....	P. R. C. April 29....	May 5

(Continued on page 326.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., April 25, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
April 19.	Colon.	American.	Panama Railroad S. S. Line.	New York.	Balboa.	General cargo.	2,680	5,866	4,222
April 19.	Egremont Castle.	British.	Lancashire Shipping Co.	New York.	Vladivostok.	General cargo.	7,600	6,019	4,389
April 19.	H. C. Henry.	British.	H. C. Henry, Ltd.	London.	Seattle.	Creosote.	5,000	4,646	2,932
April 20.	San Miguel.	Honduran.	Wood and Reynolds.	Truxillo.	Balboa.	Ballast.		87	22
April 20.	Nordstjernan.	Swedish.	Akties Nordstjernan.	San Miguel.	Talcahuano.	General cargo.	1,000	1,305	682
April 20.	Santa Cruz.	American.	W. R. Grace & Co.	New York.	Seattle.	General cargo.	6,000	5,427	3,751
April 21.	Virginian.	American.	American-Hawaiian S. S. Line.	New York.	Los Angeles.	General cargo.	10,713	10,100	7,472
April 21.	Guernsey.	Norwegian.	Dampsk Acties Guernsey.	Philadelphia.	Taltal.	Ballast.		4,418	3,273
April 21.	Llandudno.	British.	Evan Thomas Radcliffe.	Cardiff.	Pacific Ocean.	Coal.	5,300	4,656	3,312
April 22.	Ferrona.	British.	William Lowden.	Brixham.	Mejillones.	Ballast.		5,492	4,016
April 23.	Crown of Navarre.	British.	Crown S. S. Co., Ltd.	La Pallace.	Los Angeles.	General cargo.	3,600	3,148	2,339
April 24.	Saint Ronald.	British.	Britana Foreign Co.	New York.	Yokohama.	General cargo.	6,400	4,962	3,583
April 25.	Minnesotan.	American.	American-Hawaiian S. S. Line.	New York.	Los Angeles.	General mdse.	9,100	6,875	4,610
April 25.	Advance.	American.	Panama Railroad S. S. Line.	New York.	Balboa.	General cargo.	1,235	2,965	2,161

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

April 19.	Montanan.	American.	American-Hawaiian S. S. Line.	Los Angeles.	Charleston.	General cargo.	6,700	6,857	4,706
April 19.	Mexican.	American.	American-Hawaiian S. S. Line.	Hilo.	Philadelphia.	Sugar, pineapples.	11,645	8,993	6,715
April 20.	Bessie Dollar.	British.	Dollar Line.	Vancouver.	New London.	Lumber.	5,775	4,955	3,600
April 20.	Acajulla.	British.	Salvador Railway Co.	Salina Cruz.	Cristobal.	Coffee and sugar.	1,064	1,219	627
April 20.	Peter H. Crowell.	American.	Crowell and Thurlow.	San Francisco.	New York.	General and lum.	4,500	3,345	2,360
April 20.	Hartington.	British.	J. & C. Harrison.	Mejillones.	Colon (orders).	Nitrates.	7,000	4,987	3,933
April 21.	Santa Rita.	American.	Union Oil Co.	Port Harford.	Sabine Pass.	Ballast.		5,421	3,775
April 21.	Cristobal.	American.	Panama Railroad S. S. Line.	Balboa.	Cristobal.	General cargo.		9,698	7,272
April 21.	Limari.	Chilean.	South American S. S. Co.	Talcahuano.	Cristobal.	General cargo.	1,328	3,631	2,421
April 21.	Metcor.	American.	Pacific Coast Line.	Astoria.	New York.	Lumber.	3,000	2,404	1,639
April 21.	Ardgarry.	British.	Ardgarry S. S. Co.	Callao.	Falmouth.	Nitrates.	7,500	5,081	3,704
April 21.	Braunton.	British.	Tatem S. S. Co.	Callao.	Colon (orders).	Ballast.		5,149	3,622
April 22.	Guatemala.	British.	Pacific Steam Nav. Co.	Cruz Grande.	Cristobal.	General cargo.	962	4,249	2,772
April 22.	American Transport.	British.	Empire Transport Line.	San Francisco.	Philadelphia.	Iron ore.	7,800	5,280	3,918
April 22.	S. V. Luckenbach.	American.	Luckenbach S. S. Co.	San Francisco.	New York.	General cargo.	2,500	3,858	2,632
April 23.	Thor.	Norwegian.	W. Wilhelmsen Co.	Astoria.	Quebec.	Lumber.	5,000	4,879	3,368
April 23.	Colon.	American.	Panama Railroad S. S. Line.	Balboa.	New York.	General cargo.		5,866	4,222
April 23.	Pilarica.	Panamanian.	Manuel Alonzo.	Seattle.	Cristobal.	Passengers.		15	15
April 23.	Asiyanax.	British.	Holt Line.	Seattle.	London.	General cargo.	5,800	5,125	3,237
April 23.	Santa Clara.	American.	W. R. Grace & Co.	Acajutla.	New York.	General and lum.	8,500	6,748	4,492
April 23.	Dakota.	American.	American-Hawaiian S. S. Line.	Hilo.	Del. Breakwater.	Sugar and general.	9,000	6,891	4,751
April 24.	California.	British.	Pacific Steam Nav. Co.	Talcahuano.	Liverpool.	General cargo.	3,720	6,493	4,142
April 25.	Indraghiri.	British.	Indra Line.	Hong Kong.	New York.	General cargo.	11,500	6,707	4,606
April 26.	Biritha.	Norwegian.	E. F. Kloveness.	Portland.	Falmouth.	Wheat.	2,246	1,965	1,319

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
April 23.	Calchas.	Ocean S. S. Co.	London.
April 24.	Port Curtis.	Com. and Dom. Line.	New York.
April 25.	Pleiades.	Luckenbach S. S. Co.	New York.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
April 24.	Urubamba.	Peruvian S. S. Co.	Callao.
April 24.	Netherpark.	Netherthorn Shipping Co.	South Pacific ports
April 24.	Strathearn.	Strathearn S. S. Co.	San Francisco ports
April 24.	Hornelen.	Kjaer and Isdahl.	South Pacific ports
April 24.	Pangan.	East Asiatic Co.	San Francisco.

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
April 19.	Leonidas.	U. S. Navy.	Gran Cayman.
April 20.	Skulda.	Munson Line.	Santiago de Cuba.
April 20.	Wegadesk.	Earn Line.	Norfolk.
April 21.	Musican.	Harrison Line.	Liverpool.
April 23.	Palomac (tug).	U. S. Navy.	Bocas del Toro.
April 23.	U. S. S. Seven.	U. S. Navy.	Bocas del Toro.
April 23.	5 submarines.	U. S. Navy.	Bocas del Toro.
April 24.	Puerto Rico.	Cie Gen. Transatlantique.	Bordeaux.

*DEPARTURES.

Date	Vessel	Line	To
April 20.	Skulda.	Munson Line.	Santiago de Cuba.
April 20.	Vulcanus.	R. D. W. I. M. Co.	Caracor.
April 22.	Tabor.	Earn Line.	Nima Nima.
April 24.	Wegadesk.	Earn Line.	Dalquiri, Cuba.
April 24.	Musican.	Harrison Line.	Belize.

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
April 26.	Danube.	Royal Mail S. P. Co.	United Kingdom.
April 27.	Ulysses.	The Panama Canal.	Norfolk.

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
April 27.	Danube.	Royal Mail S. P. Co.	United Kingdom.
April 30.	Puerto Rico.	Cie. Gen. Transatlantique.	Bordeaux.
	Owera.	P. C. Gerry.	Unknown.
	Leonidas.	U. S. Navy.	Unknown.

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Date	Vessel	Line	From
April 20.	San Juan.	Pacific Mail S. S. Co.	San Francisco.
April 22.	Ucayali.	Peruvian S. S. Co.	Mollendo.
April 22.	Kiyo Maru.	Toya Kisen Kaisha.	Coronel.
April 23.	J. A. Moffett.	Standard Oil Co.	San Francisco.
April 24.	W. Chatham.	W. R. Grace & Co.	Tacoma.

*DEPARTURES.

Date	Vessel	Line	To
April 19.	Jamaica.	Pacific Steam Nav. Co.	Callao.
April 22.	Newport.	Pacific Mail S. S. Co.	San Francisco.
April 24.	Kiyo Maru.	Toya Kisen Kaisha.	Yokohama.
April 25.	J. A. Moffett.	Standard Oil Co.	San Francisco.

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
April 24.	W. Chatham.	W. R. Grace & Co.	Tacoma.

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
April 24.	Kiyo Maru.	Toya Kisen Kaisha.	Yokohama.

*Other than vessels passing through the Canal.

(Continued from page 325.)							
Calmares.	U. F. C.	May 1.	May 9	Santa Marta.	U. F. C.	May 6.	May 13
Zacapa.	U. F. C.	May 5.	May 12	Panama.	P. R. R.	May 8.	May 14
Colon.	P. R. R.	May 6.	May 12	Pastores.	U. F. C.	May 10.	May 17
CRISTOBAL-COLON TO NEW YORK.				NEW ORLEANS TO CRISTOBAL-COLON.			
Almirante.	U. F. C.	April 29.	May 6	Parismina.	U. F. C.	April 24.	April 29
Advance.	P. R. R.	May 1.	May 8	Atenas.	U. F. C.	April 27.	May 4
Metapan.	U. F. C.	May 3.	May 11	Cartago.	U. F. C.	May 1.	May 6
				Turrialba.	U. F. C.	May 4.	May 11
				CRISTOBAL-COLON TO NEW ORLEANS.			
				Heredia.	U. F. C.	April 29.	May 4
				Abangarez.	U. F. C.	April 29.	May 6
				Parismina.	U. F. C.	May 6.	May 11
				Atenas.	U. F. C.	May 6.	May 13
				Cartago.	U. F. C.	May 13.	May 18
				Turrialba.	U. F. C.	May 13.	May 20



The Canal Record

Official publication of The Panama Canal.

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Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Cargo by Canal and Rail.

The cargo handled through the Canal during the month of March, 635,057 tons, is 98.7 per cent of the through freight hauled over the Panama railroad during the 12 months ending June 30, 1914, and is about 40,000 tons more than the through freight handled by the railroad during the fiscal year before that. It will be recalled that the Panama railroad was supposed to have the heaviest traffic per mile of all of the railroads in the world, prior to the opening of the Canal.

The through freight trains of the Panama railroad are made up of 18 or 20 cars and haul about 350 tons of freight per trip. To have handled the March cargo by rail would have necessitated 1,814 trains, or 58.5 trains on each of the 31 days. This would have meant despatching a through train each way about every 48 minutes; or at any given point, a train would have been passing every 25 minutes.

With the trains averaging 800 feet in length, 1,814 of them would have been 275 miles long, more than enough to form five parallel trains extending from Panama to Colon.

A comparison in terms of maximum railway traffic is afforded by the test trip made last year, from Baltimore to Philadelphia by a locomotive declared at the time of building to be the largest and most powerful in existence, and generally termed "three locomotives in one." Over relatively easy grades this locomotive hauled 55 carloads of coal, a total of 4,012 tons, said to have been the heaviest train ever pulled over the track by one locomotive. It would have required 158 of such 4,000-ton trains to handle the Canal cargo for March. In comparison with the loading of the maximum train, the average loading of cargo-carrying vessels through the Canal in March was 5,040 tons.

New Collier Discharging Cargo.

The new Canal collier *Ulysses*, which arrived from Norfolk on April 27, moved from the bay to the coal wharf near the entrance to the Mount Hope dry dock on Saturday, May 1. The Brown steam hoist has since been engaged in discharging the cargo.

The removal of a sunken "hand clapet" from the slip at the coaling wharf to make room for the *Ulysses*, was accomplished on Friday, April 30, by forces of the Dredging Division, without the use of the floating crane *Hercules*, previously contemplated. Barge No. 27 was lowered by pumping water into the hold and cables were made fast to slings around the clapet. The barge was then pumped out, and in rising, lifted the wreck so that it could be towed to sea by the tugs *Porto Bello* and *Tavernilla* and clapet No. 4.

Recovering Piledrivers.

The floating crane *Hercules* was towed out to the site of the East Breakwater in Limon Bay, in the forenoon of Wednesday, May 5, to begin the lifting of the two piledrivers lost off the breakwater trestle on February 9, during a norther. Slings had previously been placed around the piledrivers by forces of the Dredging Division.

Highway Bridge Removed.

The iron girder and concrete bridge crossing a former estuary of the Pacific Ocean about midway between the commissary building and the Canal hotel at Balboa has been removed and the space beneath it filled in for the completion of a continuous macadam and asphalt concrete highway over the place formerly bridged. The estuary had been filled in above and below the bridge, so that the latter had survived its usefulness. The girders in the bridge were relics of the Barbacoas bridge on the old Panama railroad.

Decreasing Operating Accidents.

By increasing the thoroughness of investigation and of discipline in cases of operating accidents on the Panama railroad, the transportation department has been able to reduce considerably the number of accidents. There were 57 train accidents in December, 1914, 47 in January, 1915, 25 in February, and 17 in March. The damage done in the respective months was \$636.33 in December, \$1,803.17 in January, \$338.41 in February, and \$373.69 in March. It was necessary to use the wrecker once each in December, January, and February, and not at all in March. Discipline, consisting of suspension, reprimand, or warning, and discharge in one instance, was administered in 12 cases in December, six in January, three in February, and one in March. Of the 146 accidents in the four months, two occurred on passenger trains; they were scraping an improperly placed baggage truck on a station platform, and the breaking of a "go ahead" eccentric strap on one of the locomotives.

During the period the daily movement of trains included three main line passenger trains each way, six passenger trains each way in the Panama-Las Cascadas shuttle service, a fast freight in each direction over the main line, and about 25 extra trains, in each

direction, including motor cars and Panama Canal work trains; in all, about 70 trains daily, traveling an aggregate of approximately 1,500 miles. For the movement of these trains, it requires daily about 70 telegraphic train orders, though none are required between Panama and Pedro Miguel between 6.30 a. m. and 6 p. m. If the average number of cars per train be taken at 10, the 17 accidents in the month of March occurred at the rate of about one to every 24,700 miles of car movement.

Starting a "City Beautiful" Movement.

In connection with the landscape work being done in the permanent towns of the Canal Zone the horticulturist supervising the work is endeavoring to secure the cooperation of all residents in beautifying the towns by means of plants, shrubs, and trees. He points out that no place in the world offers better opportunities for this purpose, as the climate of perennial summer allows plants a continuous development to more and more attractive forms. Tasteful planting, he states, and proper community care, will relieve the glistering newness of the new concrete town of Balboa, gradually conceal its angularity, and eventually transform it into a beautiful dwelling place, delightful to live in.

As the first step in this movement, the Supply Department has recently begun the propagation and distribution of a large variety of ornamental plants. These will be furnished free, in reasonable limits, to householders for outdoor planting, while those for indoor use will be furnished at a nominal price.

The Supply Department is preparing to put out a greater variety of decorative material than is now in evidence, and to use plants of finer quality than heretofore. The extent of this tendency will be limited, however, by the response of the people and the care taken of the plants. It is not anticipated that the householders will have any work to do in caring for the outdoor plants; their cooperation will be of most service in protecting the plants from destruction or abuse, at the hands of children.

Payment of Rent and Electric Current Charges.

To all concerned—Attention is invited to paragraph 6 of circular No. 627-3 which provides that payments for rent and electric current are to be made monthly by all employees without further notice than that originally sent to such employees by the district quartermasters. Monthly bills will be rendered but owing to frequent changes of quarters it will be impossible to place them in the hands of every person who should receive a bill. The failure to receive a bill will therefore not excuse an employee from payment of rent and electric light charges within the period required for the payment of such bills. In all cases where bills are received such bills must be presented to the Collector for receipt when payment is made.

If bills are not paid before the close of business on the 25th of each month, a penalty of \$1 will be added to the rent, and 25 per cent penalty added to electric light bill.

Where occupants of Panama Canal quarters are transferred from one house to another having a different rental value, refunds will not be made unless necessary by reason of the employe leaving the service, but credit will be given on the succeeding month's bill.

It is requested that bills be paid as rendered and that any claim for adjustment of overcharge be made in a letter addressed to the Auditor. If overcharge has been made adjustment will be made on the succeeding month's bill.

Payment of both gold and silver rental may be made on the pay car from Corozal to Gatun, inclusive, except that payment of gold rental will not be received on the pay car unless accompanied by the bill rendered. A deputy collector will be at the Mechanical Division shops at Balboa at 4 p. m. on May 10 and at 11 a. m. on the 11th to receive payment of rent.

H. A. A. SMITH,
Auditor, The Panama Canal.

BALBOA HEIGHTS, C. Z., April 28, 1915.

New Taboga Launch Schedule.

The Hotel Aspinwall launch service has been revised according to the following schedule:

Leave Balboa dredge landing—Daily, except Thursday at 5.30 p. m.;

Monday, Thursday, Saturday, and Sunday, 9.40 a. m.

Leave Taboga—Daily, except Friday at 7 a. m. (On Mondays, and days following holidays, one hour earlier);

Monday, Thursday, and Saturday at 1.30 p. m.;

Sunday at 7.15 p. m.

The 9.40 a. m. trips from Balboa await the arrival of Panama railroad trains. Trunks delivered to dredge landing will be carried on these trips.

Attention is called especially to the omission of the evening trip to Taboga on Thursday, and to the fact that on many days there are two trips each way.

Handling of Baggage for Taboga.

Persons going to Taboga who desire to have their baggage delivered at the Hotel Aspinwall on the day of their arrival by the evening boat should see that it is delivered at the dredge landing at Balboa by two o'clock. Residents of Panama and the Ancon-Balboa district should have their baggage delivered at the Panama railroad station at Panama or Balboa Heights by 1 o'clock in the afternoon, for delivery at the dock by the Balboa shuttle train leaving Panama at 1.40 p. m. Persons living along the line of the Panama railroad should check baggage in time for connection with this train. Baggage may be forwarded from main line stations on trains leaving Colon at either 7.10 or 11.05 a. m. From the Las Cascadas branch line, baggage should be forwarded not later than on the train leaving Las Cascadas at 10.40 a. m.

Patrons of the Hotel Aspinwall may have their baggage checked to "Taboga" from station of origin. It will then be handled through to the hotel without the necessity of further attention on the part of the passenger.

LABOR FORCE AND QUARTERS IN MARCH.

The force report of March 24, 1915, shows the actual working force of The Panama Canal on that date to have been 20,144; of the Panama railroad, 3,270; and of contractors, 360, a total effective working force of 23,774. This is an increase of 329 from the force on February 24, which was 23,445, but is 1,079 less than the force employed on January 20, which was 24,853.

The gold force on the Isthmus, composed almost exclusively of white Americans, was 3,425, a decrease of 69, as compared with the preceding month. The gold force for February was divided as follows: The Panama Canal, 3,034; the Panama railroad, 359; contractors, 32, a total of 3,425. Detailed figures of the total force employed on the Isthmus, by departments and divisions, follow:

DEPARTMENT OR DIVISION	SILVER EMPLOYEES*												Total silver.	Total gold	Grand total
	Artisans.						Laborers.								
	Monthly.	Special.	22 cents.	18 cents.	15 cents.	12 cents.	Special.	Euro- pean 16 cents.	13 cents.	10 cents.	7 cents.	5 cents.			
Operation and Main- tenance; office & locks	396	5	4	30	81	11	...	2	9	219	...	2	759	144	903
Terminal Construct'n	419	...	59	222	501	186	84	22	463	563	3	17	2,539	264	2,803
Building Division	43	14	203	448	540	45	...	...	232	296	1	11	1,833	121	1,954
Electrical	59	...	24	37	92	58	7	...	37	5	...	3	319	120	439
Municipal Eng.	326	15	90	232	309	193	...	29	135	808	3	38	2,178	99	2,277
Dredging	1,711	1	9	22	60	17	...	16	120	55	1	2	2,014	284	2,298
Mechanical	148	9	78	117	542	524	...	11	47	138	10	3	1,627	838	2,465
Marine Division	89	...	...	...	...	...	...	...	...	...	...	...	89	47	136
Fortifications	90	...	51	90	212	29	29	2	77	379	...	6	965	85	1,050
General Construct'n	25	...	...	1	5	6	...	148	41	78	1	3	308	8	316
Total	3,303	44	518	1,199	2,342	1,069	120	230	1,161	2,541	19	85	12,631	2,010	14,641
Supply: main office	...	...	...	...	...	...	...	...	...	...	...	...	...	14	14
Commissary	655	...	4	7	12	15	251	8	...	115	35	...	1,102	142	1,244
Subsistence	911	...	3	1	1	2	...	...	...	...	...	...	618	30	648
Quartermaster	748	27	79	104	117	...	99	11	40	662	...	1	1,888	72	1,960
Accounting	19	...	...	...	...	...	...	...	...	...	...	...	19	172	191
Health	389	...	3	4	6	...	49	...	8	224	...	...	683	170	853
Executive	164	2	1	2	...	...	...	...	...	...	...	...	169	424	593
Panama railroad	370	79	74	197	258	347	652	16	445	459	2	12	2,911	359	3,270
Contractors	14	...	...	...	19	...	226	7	3	57	...	2	328	32	360
Grand total	6,273	152	682	1,514	2,755	1,433	1,397	272	1,657	4,058	56	100	20,349	3,425	23,774
Month previous	6,242	131	735	1,504	2,806	1,270	1,165	266	1,574	4,053	68	137	19,951	3,494	23,445
Changes	+31	+21	-53	+10	-51	+163	+232	+6	+83	+5	-12	-37	+398	-69	+329

*The wages are stated in United States currency.

QUARTERS.

A summary of the occupation of Canal and Panama railroad quarters on March 31, 1915, is given below:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Children	Men	Women	Children	Men	Women	Children
Balboa	784	220	235	167	7	24	1,407	483	614
Ancon	875	411	329	...	...	...	477	34	1
Corozal	372	186	193	43	1	2	385	58	66
Pedro Miguel	181	110	131	16	...	...	183	18	26
Paraiso	294	77	90	87	6	23	384	109	113
Culebra	23	12	10	1	1	6	412	246	345
Gatun	26	6	8	...	...	...	110	23	29
Gatun	215	168	180	141	3	6	253	105	110
Cristobal	876	356	450	22	...	...	841	183	392
Toro Point	1	...	...	...	...	...	8	...	...
Total	3,647	1,546	1,626	477	18	61	4,460	1,259	1,696

(1) Includes 75 Colombians and Panamanians. (2) Includes 11 American negroes, 20 Asiatics, and two Panamanians on the gold roll. (3) Includes Sabanas police station, Taboga Island, Naos Island, Culebra Island, and Palo Seco. (4) Includes Miraflores. (5) Includes one Asiatic. (6) Includes 18 Panamanians. (7) Includes Empire, Las Cascadas, and Bas Obispo. (8) Includes Colon Beach and Colon Hospital. (9) Includes 36 East Indians, 12 American citizens, and 62 Panamanians. Gold force of contractors (included above), occupying Government quarters, 111 bachelors, eight families.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Brown, James	88479	Jamaica	Colon	P. R. R. docks	April 25, 1915
Daniel, Ernest	89411	Nevis, B. W. I.	Colon	P. R. R. docks	April 25, 1915
Landers, William A.	31913	Canada	Panama	Municipal Eng.	April 17, 1915
Taylor, James	50991	Barbados	Colon	Term. Cons.	May 1, 1915

The estates of the abovenamed deceased employes of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

THE HOOKWORM CAMPAIGN.

Seven Months of Field Work in Panama Show Prevalence of Disease.

The International Health Commission, invited last year by the Republic of Panama to undertake a campaign against uncinariasis or hookworm disease (familiarily known as tropical anemia), completed seven months of active work on April 1, 1915. Analysis of the results of the work in this period shows a great amount of the disease existing in the interior of the Republic, and the damage it is doing to the people in general.

Dr. L. W. Hackett, director of the Department of Uncinariasis of the health department of the Republic of Panama, has prepared for THE CANAL RECORD the following summary of the work:

"Of 9,810 people examined, 5,875 or 60 per cent were infected. The incidence of the disease in the several districts varies indirectly with the efficiency of the sanitation, although in the interior the sanitation is at best of the most elementary character. Thus Panama is lowest, with 34 per cent infected of those examined, most of the cases being imported from the interior or residing in Juan Diaz and other extramunicipal localities. Bocas del Toro is next with 35 per cent infected, the island being of coral formation unfavorable to the spread of the hookworm and having at hand the ocean, into which the law requires sewage to be dumped. Taboga and Bastimentos are also islands with a rudimentary system of sewage disposal by individuals into the ocean, and not more than 60 per cent of the inhabitants are infected. Percents in the other districts run much higher, culminating in Arraiján with 85 per cent of the entire population badly infected with hookworms. Children always suffer more than adults and in three districts over 90 per cent of the children under 16 years of age are victims of uncinariasis.

"Of the 5,875 people found harboring the hookworm, 5,215 were treated. The remainder could not be found after examination, or refused the medicine, or were refused treatment for medical reasons. But 2,370 people received two, three, or four treatments each.

"An examination of the blood of persons taken at random in the various localities shows an average for the country of 59 per cent of the normal amount of hemoglobin per individual. In other words, the average person is so anemic as to be 41 per cent below standard. Naturally he can do but 59 per cent as much work as a well person of his age,

although he may walk or sit about and not consider himself sick.

"Eleven thousand people were visited in their homes; lectures were given to 2,268 school children, and public lectures illustrated with stereopticon reached 1,237 people. About 5,000 educative pamphlets were distributed to those who could read.

"The fact that 75 per cent of all children of school age in the interior (and in many towns, over 90 per cent) are infected, means that the growing generation of Panamanians is being stunted to an alarming degree both physically and mentally. If a man can do only 60 per cent of a man's work on 60 per cent blood, so an anemic child will do only 60 per cent as well in school as a normal pupil. The expensive school system of which the people are so proud is being half wasted because of a complete disregard of natural, fundamental hygiene and entire absence of the most elementary sanitary equipment. Every school should have toilet facilities of an efficient and durable kind both to safeguard the lives and health of the children, and to serve as an instructive example to the community, particularly that growing and educable portion of the community upon which the future prosperity and reputation of the country depends."

A summary of the conditions disclosed and the work conducted in the first seven months is given in the accompanying table*.

ORDER.

The Panama Railroad Company has advised the War Department that special steamship rates between New York and the Isthmus will be granted by that company (the rates depending upon the circumstances under which the travel is made) to the following classes of persons:

1. Civilians going to the Canal Zone on orders or returning at their own expense when on leave.
2. Enlisted men stationed in the Canal Zone traveling on orders or on leave.
3. Commissioned officers stationed in the Canal Zone traveling on orders or on leave.
4. Commissioned officers *not* stationed in the Canal Zone desiring to visit the Isthmus on leave for their own pleasure.
5. Families of each of the above four classes.

In order to secure a special rate the following procedure should be adhered to:

The first two classes should make written

application for a special rate, forwarding the same to their official superior or commanding officer for approval, after which the application should be sent direct to the Panama Railroad Company, 24 State Street, New York City; or in lieu thereof present to the Panama Railroad Company such authority covering their return transportation as they may have secured on the Isthmus.

The third class should apply direct to the Panama Railroad Company in New York, sending with the request a copy of their orders directing them to proceed to the Isthmus, or any other official paper covering the same which they may have.

The fourth class should write direct to the Panama Railroad Company, in New York, giving their full name, military rank, branch of service to which assigned, and inclosing a copy of their leave order, if practicable.

The fifth class should follow the same respective procedures as given above for classes one, two, three, and four, the request for transportation coming from the head of the family desiring same, through the channels as above given; such request to be accompanied by a certificate stating that the party or parties for whom transportation is desired is a *permanent* member or members of the family of the four classes above referred to, habitually residing with him and having no other home. In cases where transportation is desired for the families of noncommissioned officers and enlisted men, the certificate should be approved by the immediate commanding officer of the organization to which the noncommissioned officer or enlisted man is attached.

Each request for transportation should contain the following data: Date of sailing from New York; date of sailing from Cristobal where return passage is desired; full names and family relationship of all persons involved; ages of minors; object of the journey; and address where mail and sailing instructions should be sent so as to insure prompt delivery. Requests for reservations should be made as far in advance of the sailing date selected as possible. Full sailing instructions will be sent in reply by the Panama Railroad Company, New York.

When transportation is official at the expense of the War Department, the passage should be prepaid and the passenger will be reimbursed in his expense account.

LINDLEY M. GARRISON,
Secretary of War.

Washington, D. C., February 12, 1915.

*SUMMARY OF SEVEN MONTHS' WORK IN UNCINARIASIS IN PANAMA.

DISTRICT	Province.	EXAMINATIONS					TREATMENTS		BLOOD EXAM.			EDUCATION			
		Total	Infected with hookworm	Per cent infected (all ages)	Per cent infected (children under 16)	No. of cases with other intestinal parasites	First	Second and subsequent	Total	No. of persons examined	Average condition of blood = per cent of normal hemoglobin	People reached by			
												House visits	School lectures	Public lectures	Pieces of literature distributed
Panama.....	Panama.....	1,337	458	34	30	624	440	116	556	76	79	658	1,300	.....	507
Taboga.....	Panama.....	992	538	54	64	1,350	516	281	797	187	58	1,575	.....	.....	575
Arraiján.....	Panama.....	630	535	85	90	595	513	412	925	.....	.....	690	100	100	153
La Chorrera.....	Panama.....	812	639	79	82	872	562	94	656	185	48	1,000	206	145	705
Capira.....	Panama.....	1,017	854	84	93	593	702	319	1,021	123	55	1,000	100	200	202
Chame.....	Panama.....	1,227	955	78	84	323	828	183	1,011	297	59	2,097	.....	300	450
Penonomé.....	Coclé.....	600	402	67	83	419	317	36	353	302	64	983	.....	281	644
Bocas del Toro.....	Bocas del Toro.....	2,065	726	35	42	2,109	635	378	1,013	443	64	2,500	500	.....	814
Bastimentos.....	Bocas del Toro.....	518	298	58	79	541	278	180	458	278	60	270	62	172	267
Chiriquí Grande.....	Bocas del Toro.....	612	470	77	91	579	424	371	795	330	55	283	.....	39	85
Totals.....		9,810	5,875	60	63	8,005	5,215	2,370	7,585	2,221	59	11,056	2,268	1,237	4,402
Excluding Panama City.....		8,752	5,622	64	73										

*Only infected persons examined.

LARGE FIRE IN COLON.

One Third of City Wiped Out in Blaze Covering Twenty-two Blocks.

Four hundred and thirty buildings in an area covering 22 blocks, about $19\frac{1}{2}$ acres of buildings, or a third of the city of Colon, were completely destroyed on Friday, April 30, in the most destructive fire which has occurred on the Isthmus since the American occupation. The value of the property destroyed is estimated at approximately \$3,000,000, United States currency. Of this, about \$2,150,000 represents the loss in buildings and \$850,000 the loss in contents of buildings.

Five people were killed, eight injured so seriously as to be confined to Colon Hospital, and about 20 injured to the extent of requiring dispensary treatment. About 7,500 people were rendered homeless, losing at the same time nearly all of their personal property, though the buildings themselves belong in most cases to absentee landlords. As compared with the Colon fire of March 23, 1911, the latter caused the destruction of 10 blocks of buildings and the death of two people.

The fire broke out at about 2.50 p. m. in a fruit store in what was known as the "Wagner building," at the northwest corner of Eighth and Bolivar Streets, two blocks directly east, along Eighth Street, from the main entrance to the Panama railroad passenger station. An alarm was turned in at 3.10 p. m., apparently about 20 minutes after the fire started, and although the Colon and Cristobal fire departments responded promptly the entire building was in flames at the time the engines reached the scene. The fire made rapid progress through the inflammable construction all around and forced its way to the south and west under a stiff breeze. It extended west to Front street and east to "D" Street, on the one axis, and south to Seventh Street and North to Fourteenth Street on the other.

The fire departments from Panama City, Balboa, and Gatun went to the assistance of the Colon and Cristobal departments on special trains, and the Canal tugs *Porto Bello* and *Tavernilla*, which are equipped for service

as fire boats, pumped water through lines of hose led across the piers and into the fire area. Members of the police departments of Panama and the Canal Zone, soldiers of the Coast Artillery Corps stationed near the Atlantic entrance to the Canal, and numerous civilians joined with the firemen in fighting the fire and moving goods from threatened buildings. Canal employes organized a gang to dynamite buildings. Twelve buildings were destroyed by dynamite, and their reduction was of considerable help in checking the course of the fire. The fire was brought under control at about 9 p. m.

Of the 215 city lots included in the burned area, 132 belonged to the Panama Railroad Company, being leased to individuals for the erection of buildings. Other loss to the United States was in damage to the Panama railroad passenger station, to the concrete apartment house at the corner of Front and Eleventh Streets, and to the Masonic building on the south side of Eleventh Street, in rear of the Cristobal commissary; aggregating about \$10,000; and damage and loss of goods moved from the Cristobal commissary, about \$12,000. The concrete apartment house served as a fire wall in preventing the passage of the fire to Cristobal. As it was, the commissary was scorched at the northeast corner and vigilant work was necessary to keep it from burning. Sparks falling in Cristobal caused numerous small fires, quickly extinguished by watchful householders.

A patrol of the city was established during the course of the fire by companies of the Coast Artillery Corps, cooperating with the local police, for the prevention of looting and the general establishment of order. The Canal Zone chapter of the American National Red Cross began relief work on Saturday. The sum of \$3,000 from the local treasury was placed at the immediate disposal of a local committee, operating from Cristobal, and subscription lists are circulating in the Canal Zone. With the assistance of The Panama Canal and the Army, most of the homeless have been housed in some 400 tents, and 400 railroad cars, and distribution of rations has been established.

Wind Movements at Colon During Fire.

The fire at Colon on April 30 afforded interesting records of the way a large fire generates a local wind, tending to strengthen the force of the flames. The hydrographic station at Colon is situated on the old Panama railroad office building, several hundred yards from the fire, and the Section of Hydrography and Meteorology states that the peculiar variation of the wind in the afternoon of April 30, during the progress of the fire, was due in large part to the fire. The heated air, rising, set up local currents recorded as wind. The rates and directions of movement in the period from noon to midnight were as follows:

Hour.	Miles per hour.
12 to 1.....	7 NW.
1 to 2.....	7 NW.
2 to 3.....	9 NW.
3 to 4.....	10 N.
4 to 5.....	15 N.
5 to 6.....	15 N.
6 to 7.....	13 N.
7 to 8.....	12 N.
8 to 9.....	12 N.
9 to 10.....	9 NE.
10 to 11.....	5 NE.
11 to 12.....	3 NE.

The maximum rate was 17 miles, from the north, at 4.40 p. m. The fire was in progress from about 3 to 9 p. m., and burning strongest between 4 and 6 p. m. The change of direction of the wind is also regarded as showing the influence of the fire.

Benefit Entertainments.

A benefit ball for the relief of the fire sufferers in Colon will be held at the Casino, in Panama City, on Sunday, May 9, under the auspices of the Century, Tivoli, Union, and University Clubs.

Benefit performances have been arranged by the managers of several theatres in Colon and Panama.

The gate receipts at the four ball games to be played on Sunday, May 9, by the teams of the Canal league will be turned over to the Red Cross.

The Cristobal Council, Knights of Columbus, has donated \$100 to the relief fund.

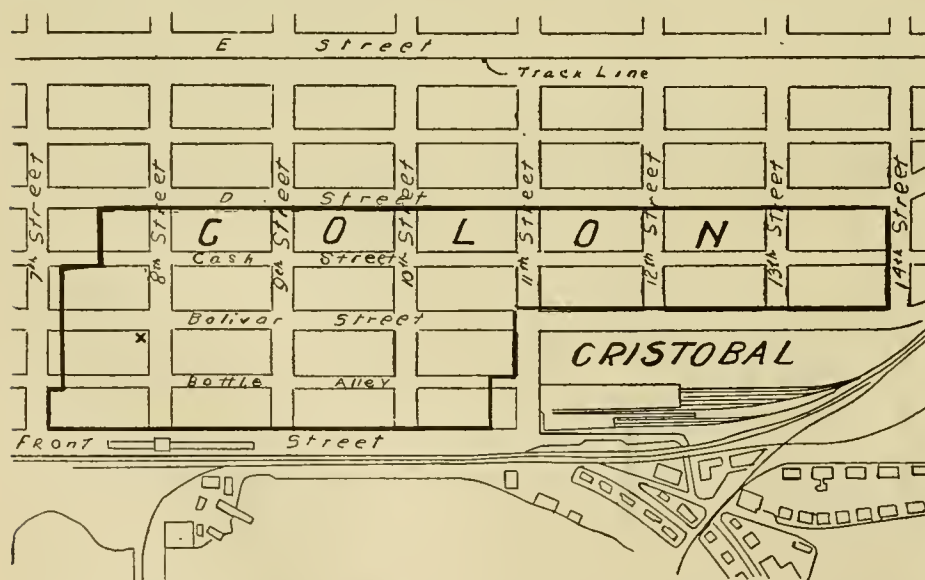
Red Cross Finances.

The financial statement of the Canal Zone Chapter, American National Red Cross, from January 1 to March 31, 1915, is as follows:

RECEIPTS.	
Jan. 1 Balance on hand January 1, 1915..	\$3,459.86
Sale Red Cross Seals.....	220.81
Proceeds of ball (additional).....	180.00
Donations.....	10.00
Refund of printing bill.....	16.94
Membership dues.....	5.00
Interest on deposit: Jan., 5.79.....	
Feb., 5.66.....	
Mar., 6.48.....	17.93
Total receipts.....	\$3,910.54
DISBURSEMENTS.	
Jan. 4 Relief of Spanish woman and children.....	\$20.00
Jan. 19 Printing bill.....	3.14
Jan. 20 Stamps.....	2.00
Feb. 6 Relief of Spanish woman and children.....	15.00
Feb. 25 Relief stranded American.....	20.00
Feb. 25 Relief stranded American.....	5.00
Mar. 4 Relief stranded American.....	50.00
Mar. 4 Relief stranded American.....	50.00
Mar. 9 Relief stranded Spanish woman and children.....	15.00
Mar. 16 Relief Spanish woman.....	10.00
Mar. 19 Money advanced.....	100.00
Mar. 17 Treasurer, National Red Cross (32 memberships).....	16.50
Mar. 18 Amount due National Red Cross, sale Red Cross seals.....	22.56
Mar. 22 Relief stranded American.....	10.00
Mar. 22 Relief stranded American.....	25.00
Total disbursements.....	\$364.20
Mar. 31 Balance on hand.....	3,546.34
	\$3,910.54

T. L. CLEAR,
Treasurer.

Approved:
C. A. McILVAINE,
Chairman.



MAP OF PORTION OF COLON, SHOWING SECTION BURNED ON APRIL 30.

Burned area is enclosed in heavy lines. Cross mark shows point of origin of fire. The Panama railroad passenger station is at the foot of Eighth Street, and shown on the map between the words "Front" and "Street."

RETAIL GROCERY PRICE LIST No. 1

Commissary Branch of Supply Department.

(Published as a Supplement to THE CANAL RECORD of May 5, 1915.)

The following prices will be increased by 10 per cent in cases of sales to foreign naval vessels and commercial ships; and by 20 per cent in cases of sales to yachts.

Article.	Size.	Unit.	Price.	Article.	Size.	Unit.	Price.
Alcohol, denatured, P. C.		Bot.	25	Butter, peanut	Med.	Jar	.13
Ammonia, household	Pt.	Bot.	.13	Butter, peanut	Large	Jar	.22
Ammonia, P. C.		Bot.	.14	Candies.			
Anchovies in oil	$\frac{1}{2}$	Bot.	.23	Almonds, shelled		Lb.	.40
Anchovies in oil	$\frac{1}{2}$	Bot.	.40	Almonds, sugared		Lb.	.23
Anchovies in oil, Cresca	$\frac{1}{2}$	Bot.	.39	Chocolate almonds, P. & T.	1s	Box	.12
Apples	3s	Tin	.08	Chocolate, American Beauty	$\frac{1}{2}$ s	Tin	.21
Apples	Gal.	Tin	.24	Chocolate, assorted, Cadbury	$\frac{1}{2}$ s	Tin	.21
Apricots in brandy		Bot.	.47	Chocolate, assorted, Lowney's	$\frac{1}{2}$ s	Tin	.25
Apricots	2 $\frac{1}{2}$ s	Tin	.13	Chocolate, assorted, Lowney's	1s	Tin	.45
Asparagus	2 $\frac{1}{2}$ s	Tin	.18	Chocolate, bon bon, P. & T.	$\frac{1}{2}$ s	Box	.34
Asparagus tips	1	Tin	.19	Chocolate, bon bon, P. & T.	1s	Box	.67
Artichokes	$\frac{1}{2}$ s	Tin	.35	Chocolate caramels	$\frac{1}{2}$ s	Tin	.19
Barley, Pearl	2s	Tin	.13	Chocolate, Fry's caracas	$\frac{1}{2}$ s	Cake	.08
Barley, Robinson	1s	Tin	.29	Chocolate marshmallows, Lowney's	$\frac{1}{2}$ s	Pkg.	.06
Beans and tomato sauce	Indv.	Tin	.05	Chocolate marshmallows, Cadbury		Box	.10
Beans and tomato sauce	Small	Tin	.09	Chocolate, nut milk, Cadbury		Cake	.19
Beans and tomato sauce	Med.	Tin	.13	Chocolate, nut milk, Lowney's		Bar	.03
Beans and tomato sauce	Large	Tin	.18	Chocolate, milk, P. & T.		Cake	.04
Beans, lima	2s	Tin	.08	Chocolate, nut milk, Cadbury		Stick	.10
Beans, lima, dried		Lb.	.07	Chocolate, milk, Lowney's		Bar	.03
Beans, P. navy, or white		Lb.	.06	Chocolate, P. & T., assorted	$\frac{1}{2}$ s	Box	.34
Beans, red kidney, Heinz	Small	Tin	.09	Chocolate, P. & T., assorted	1s	Box	.67
Beans, red kidney, Heinz		Lb.	.05	Chocolate, vanilla, Cadbury	$\frac{1}{2}$ s	Cake	.07
Beans, string	2s	Tin	.08	Dates, plain	1s	Jar	.19
Beans, string	Gal.	Tin	.45	Dates, stuffed	1s	Jar	.23
Beans, lima, Cresca	2s	Tin	.14	Figs and dates, stuffed	1s	Jar	.31
Beef, chipped	$\frac{1}{2}$	Tin	.20	Figs in maraschino	$\frac{1}{2}$ s	Bot.	.51
Beef, corned	1s	Tin	.21	Figs, plain	1s	Jar	.23
Beef, corned	2s	Tin	.41	Figs, stuffed	1s	Jar	.28
Beef, roast	1s	Tin	.23	Chu chu		Pkg.	.04
Beef, roast	6s	Tin	1.25	Gum, Spearmint		Pkg.	.03
Beets	2s	Tin	.11	Mints, cream, P. & T.		Tin	.08
Beets	3s	Tin	.14	Mints, lime, P. & T.		Tin	.08
Biscuits.				Nuts, filberts, Cresca	8 oz.	Bot.	.36
Beat wafers	1s	Tin	.27	Nuts, mixed		Lb.	.17
Butter Puffs, J. & Co		Tin	.34	Nuts, walnuts		Lb.	.18
Cream cracker, J. & Co.		Tin	.29	Nuts, walnuts	Small	Jar	.22
Cream wafers	3s	Tin	.50	Peanuts, toasted	$\frac{1}{2}$ s	Jar	.10
Cream wafers		Lb.	.17	Peppermint sticks		Lb.	.24
Gentilla	3 $\frac{1}{4}$	Tin	.82	Stick candy	$\frac{1}{2}$ s	Jar	.10
Gentilla		Lb.	.24	Sweets, Pascall's	1s	Jar	.21
Pretzelets		Tin	.09	Tid Bits	$\frac{1}{2}$ s	Jar	.10
Royal lunch	2s	Tin	.32	Toffee, McIntosh	4 oz.	Tin	.12
Saltines	1s	Tin	.22	Candles		Set	.09
Soda	Lb.	Ctn.	.10	Carrots	2s	Tin	.09
Soda	5s	Tin	.54	Caviar	1 $\frac{1}{2}$ oz.	Tin	.19
Sunshine	Large	Ctn.	.07	Caviar	3 oz.	Tin	.39
Sunshine	Small	Ctn.	.04	Caviar	$\frac{1}{2}$ s	Tin	.76
Blackberries	2s	Tin	.12	Capers, Cresca	36 oz.	Bot.	.75
Bloaters, Yarmouth	1s	Tin	.11	Capers, Cresca	6 oz.	Bot.	.10
Blueberries	2s	Tin	.15	Charcoal		Lb.	.00 $\frac{1}{2}$
Blue, laundry	1s	Pkg.	.14	Cherries, maraschino	Small	Bot.	.18
Borax, lump		Lb.	.08	Cherries, maraschino	Med.	Bot.	.29
Borax, powdered	$\frac{1}{2}$	Pkg.	.06	Cherries, maraschino	Large	Bot.	.46
Borax, powdered	4-oz.	Pkg.	.03	Cherries	2 $\frac{1}{2}$ s	Tin	.20
Bread, brown	Indv.	Tin	.08	Chicken, deviled	$\frac{1}{4}$ s	Tin	.19
Bread, brown	3s	Tin	.12	Chicken, roast	2s	Tin	.38
Bread, pilot		Lb.	.08	Chili con carne	1s	Tin	.08
Bread, pumpernickel		Loaf	.10	Chocolate, unsweetened, Baker's	$\frac{1}{4}$ s	Cake	.08
Bricks, bath		Cake	.04	Chow chow, American	Pint	Bot.	.09
Butter, apple	2s	Tin	.22	Chow chow, Heinz	18 oz.	Bot.	.26
Butter, Heyman	1s	Tin	.45	Chow chow	5 gal.	Keg	2.15
Butter, peach	1s	Tin	.11	Chowder, clam	1s	Tin	.08
Butter, peach	2s	Tin	.21	Chowder, clam	3s	Tin	.16
Butter, peanut	Small	Jar	.00	Cinnamon ground	2 oz.	Tin	.04

Article.	Size.	Unit.	Price.	Article.	Size.	Unit.	Price.
Cinnamon, stick.....		Lb.	.50	Food, roach.....		Tin	.07
Clams.....	1s	Tin	14	Formaldehyde.....		Bot.	.44
Clams.....	2s	Tin	24	Gasoline.....	Gal.	Gal.	.22
Clam juice.....	1s	Tin	.12	Gasoline.....	10-gal.	Tin	2.65
Cleanser, Old Dutch.....		Pkg.	.07	Gasoline in steel drum.....		Gal.	.22
Cloves, whole.....	2 oz.	Tin	.05	Garlic.....		Lb.	.10
Cloves, ground.....	2 oz.	Tin	.05	Gelatine, C. & B.....	2-oz.	Pkg.	.12
Cocoa (all other brands).....	$\frac{1}{2}$ s	Tin	.12	Gherkins, sweet, Heinz.....	18-oz.	Bot.	.31
Cocoa, Lowney's.....	$\frac{1}{2}$ s	Tin	.16	Gherkins, sour, Heinz.....	18-oz.	Bot.	.26
Cocoa, Omphale.....	$\frac{1}{2}$ s	Tin	.21	Gherkins, spiced.....	5-gal.	Keg.	2.35
Cocoa, Van Houten.....	$\frac{1}{2}$ s	Tin	.35	Gherkins, sour.....	18-oz.	Bot.	.20
Cocoa, Van Houten.....	1s	Tin	.74	Ginger, ground.....	2-oz.	Tin	.04
Cocoa (all other brands).....	1s	Tin	.23	Gold Dust.....	1s	Pkg.	.04
Cocoa (all other brands).....	5s	Tin	.86	Gold Dust.....	4s	Pkg.	.17
Cocoa (all other brands).....	Bulk	Lb.	.16	Gooseberries.....	2s	Tin	.11
Cocoanuts, shredded.....	1s	Pkg.	.25	Grapes.....	2 $\frac{1}{2}$ s	Tin	.13
Codfish.....		Lb.	.09	Grape Nuts.....	2s	Tin	.16
Codfish, shredded.....	1s	Tin	.19	Haddock.....	1s	Tin	.21
Coffee, Commissary No. 1.....	1s	Ctn.	.20	Ham, deviled, Underwood's.....	$\frac{1}{4}$ s	Tin	.13
Coffee, Commissary, Tivoli Special.....	1s	Ctn.	.25	Ham, deviled, Underwood's.....	$\frac{1}{2}$ s	Tin	.17
Coffee, Commissary, Mocha and Java.....	1s	Ctn.	.35	Hash, corned beef.....	1s	Tin	.19
Coffee and Chicofy.....	1s	Ctn.	.13	Hash, corned beef.....	2s	Tin	.34
Corn, sugar.....	Gallon	Tin	.46	Herring, boneless.....		Jar	.08
Corn, sugar.....	2s	Tin	.11	Herring, fresh.....	1s	Tin	.07
Corn on cob.....		Tin	.25	Herring, kippered.....	1s	Tin	.12
Corn on cob.....		Tin	.53	Herring in tomato sauce.....		Tin	.13
Pop corn.....		Lb.	.06	Hominy.....	2s	Tin	.11
Crabs, deviled.....	1s	Tin	.22	Hominy, hulled corn.....	3s	Tin	.07
Crabs, deviled.....	2s	Tin	.32	Honey.....	Qt.	Tin	.40
Cubes, Vegex.....	10s	Pkg.	.10	Horseradish.....	8-oz.	Bot.	.22
Dressing, salad.....	Large	Bot.	.37	Hors d'œuvres, Cresca.....	$\frac{1}{2}$ s	Bot.	.39
Dressing, salad.....	Small	Bot.	.22	Insecticide.....	$\frac{1}{2}$ pt.	Tin	.17
Exterminator, ant, P. C.....		Bot.	.10	Jams, American.....	1s	Tin	.10
Exterminator, bedbug.....	Small	Tin	.09	Jams, Morton's.....	1s	Tin	.12
Exterminator, Peterman's.....	Large	Tin	.16	Jam, American.....	1s	Jar	.13
Extract, beef, Rex.....	2-oz.	Jar	.34	Jams, Morton's.....	2s	Jar	.29
Extract, beef, Rex.....	4-oz.	Jar	.63	Jams, Morton's.....	7s	Tin	.55
Extract, beef, Rex.....	16-oz.	Jar	3.15	Jam, blackberry.....	2s	Tin	.17
Extract, beef, Armour's.....	26-oz.	Jar	3.15	Jam, strawberry.....	1s	Tin	.10
Extract, almond.....	4-oz.	Bot.	.21	Jelly, Heinz.....	9-oz.	Jar	.18
Extract, almond.....	8-oz.	Bot.	.40	Jelly.....	10-oz.	Jar	.12
Extract, almond.....	2-oz.	Bot.	.14	Jelly.....	18-oz.	Jar	.22
Extract, lemon.....	2-oz.	Bot.	.14	Jellycon.....		Pkg.	.07
Extract, lemon.....	4-oz.	Bot.	.19	Juice, grape, Topnotch.....		Bot.	.11
Extract, lemon.....	8-oz.	Bot.	.27	Juice, grape, Welch's.....		Bot.	.19
Extract, orange.....	2-oz.	Bot.	.14	Juice, grape, R. S.....		Bot.	.17
Extract, orange.....	4-oz.	Bot.	.21	Juice, lime, Cordial.....		Bot.	.26
Extract, orange.....	8-oz.	Bot.	.40	Juice, lime.....	Pt.	Bot.	.17
Extract, peach.....	2-oz.	Bot.	.14	Ketchup, Cresca.....	$\frac{1}{2}$ pint	Bot.	.12
Extract, peach.....	4-oz.	Bot.	.22	Ketchup.....	Pint	Bot.	.18
Extract, pineapple.....	2-oz.	Bot.	.14	Ketchup.....	Qt.	Bot.	.28
Extract, pineapple.....	4-oz.	Bot.	.22	Ketchup, Heinz.....		Bot.	.21
Extract, pineapple.....	8-oz.	Bot.	.43	Ketchup, Snider's.....		Bot.	.18
Extract, raspberry.....	2-oz.	Bot.	.14	Ketchup and pork, Heinz.....		Tin	.13
Extract, raspberry.....	4-oz.	Bot.	.22	Lard.....	1s	Tin	.16
Extract, rose.....	2-oz.	Bot.	.14	Lard.....	2s	Tin	.33
Extract, rose.....	4-oz.	Bot.	.23	Lard.....	3s	Tin	.42
Extract, rose.....	8-oz.	Bot.	.40	Lard.....	5s	Tin	.68
Extract, strawberry.....	2-oz.	Bot.	.14	Lard.....		Lb.	.10
Extract, strawberry.....	4-oz.	Bot.	.23	Lard, Crisco.....	2 $\frac{1}{2}$ s	Tin	.21
Extract, strawberry.....	8-oz.	Bot.	.40	Leaves, bay.....	$\frac{1}{2}$ s	Tin	.10
Extract, vanilla.....	4-oz.	Bot.	.20	Liver and bacon.....	1s	Tin	.20
Extract, vanilla.....	8-oz.	Bot.	.33	Loaf, chicken.....	$\frac{1}{2}$ s	Tin	.20
Fish, tuna.....	$\frac{1}{2}$	Tin	.08	Loaf, ham.....	$\frac{1}{2}$ s	Tin	.12
Fish, tuna.....	$\frac{1}{2}$	Tin	.12	Loaf, veal.....	$\frac{1}{2}$ s	Tin	.10
Flakes, corn.....		Ctn.	.08	Lobsters.....	$\frac{1}{2}$ s	Tin	.32
Flour.....		Lb.	.04	Lobsters.....	1s	Tin	.62
Flour.....	25s	Tin	1.25	Loaf, veal.....	1s	Tin	.17
Flour.....	7s	Sack	.35	Macaroni.....	1s	Pkg.	.07
Flour, buckwheat.....		Ctn.	.09	Mace, ground.....	2-oz.	Tin	.10
Flour, buckwheat.....	2s	Tin	.18	Mace, whole.....	2-oz.	Tin	.12
Flour, graham.....		Lb.	.04	Macadoine of vegetables.....	1s	Tin	.14
Flour, rye.....		Lb.	.04 $\frac{1}{2}$	Mackerel, soused.....	1s	Tin	.13
Food, ant.....	Small	Pkg.	.08	Mackerel, soused, English.....	1s	Tin	.10
Food, Mellin's.....		Jar	.47	Mackerel, fancy.....		Lb.	.10

Article.	Size.	Unit.	Price.	Article.	Size.	Unit.	Price.
Mackerel, No. 2.....		Lb.	.08	Pepper, black.....	2-oz.	Tin	.04
Malto Brau.....		Bot.	.09	Pepper, black.....	1s	Tin	.25
Marmalade, Dundee, Keiller's.....		Jar	.14	Pepper, whole, black.....	$\frac{1}{2}$ s	Tin	.07
Matches.....		Pkg.	.04	Pepper, white.....	2-oz.	Tin	.06
Meal, corn, white.....	4s	Tin	.19	Pepper, white.....	1s	Tin	.36
Meal, corn, yellow.....	4s	Tin	.19	Pepper, cayenne.....		Bot.	.07
Meal, corn, yellow.....	Bulk	Lb.	.03	Pettijohn.....		Ctn.	.13
Meat, deviled, ham flavor.....	$\frac{1}{2}$ s	Tin	.05	Pickle, dill, Heinz.....	Med.	Tin	.13
Meat, deviled, tongue flavor.....	$\frac{1}{2}$ s	Tin	.12	Pickle, dill, Heinz.....		Bot.	.31
Milk, malted, Borden's.....	Small	Bot.	.29	Pickle, dill, sliced.....	5-gal.	Keg.	3.45
Milk, malted, Borden's.....	Large	Bot.	.49	Pickle, euchred.....	14-oz.	Bot.	.20
Milk, malted, Borden's.....	Hosp.	Bot.	2.15	Pickles, mixed, spiced.....	5-gal.	Keg.	2.15
Milk, malted, Horlick's.....	Small	Bot.	.38	Pickles, mixed, Morton's.....	Pint	Bot.	.15
Milk, malted, Horlick's.....	Large	Bot.	.75	Pickles, Pin Money.....		Jar	.19
Milk, malted, Horlick's.....	Hosp.	Bot.	3.00	Pickles, sour, Heinz.....	18-oz.	Bot.	.26
Milk, Nestle's, condensed.....		Tin	.10	Pickles, sweet, Heinz.....	18-oz.	Bot.	.31
Milk, St. Charles, evaporated.....		Tin	.08	Pimentos, Morrones.....	$\frac{1}{2}$ s	Tin	.06
Mint, powdered.....	2-oz.	Tin	.05	Pimentos, Morrones, Cresca.....	1s	Tin	.12
Mincemeat.....	2s	Tin	.19	Pimentons, Superior.....	5s	Tin	1.05
Molasses, Duffy's.....	Qt.	Tin	.16	Pineapple.....	2s	Tin	.11
Mushrooms.....	1s	Tin	.19	Plums in brandy.....		Bot.	.47
Mustard, Coleman's.....	2-oz.	Tin	.11	Plums, egg.....	2 $\frac{1}{2}$ s	Tin	.14
Mustard, Heinz.....		Bot.	.09	Plums, greengage.....	2 $\frac{1}{2}$ s	Tin	.16
Mutton roast.....	1s	Tin	.21	Plum pudding, Heinz.....	Indv.	Tin	.13
Nutmeg, whole.....		Lb.	.21	Plum pudding, Heinz.....	Med.	Tin	.26
Oats, Quaker.....	2s	Tin	.13	Plum pudding, Heinz.....	Large	Tin	.48
Oats, rolled.....	2s	Tin	.13	Plum pudding.....	1s	Tin	.71
Oatmeal, coarse.....	2s	Tin	.14	Plum pudding.....	2s	Tin	.39
Oil, cotton seed.....	5s	Tin	3.90	Polish, stove.....		Cake	.06
Oil, kerosene.....	5s	Tin	.77	Pork and beans.....	1s	Tin	.08
Oil, olive, Alfonso.....	26-oz.	Bot.	.76	Pork and beans.....	2s	Tin	.12
Oil, olive, Alfonso.....	13-oz.	Bot.	.43	Pork and beans.....	3s	Tin	.15
Oil, olive, Cresca.....	Qt.	Bot.	.92	Postum cereal.....	$\frac{1}{2}$ s	Tin	.12
Oil, olive, Francescain.....	$\frac{1}{2}$ gal.	Tin	1.60	Postum cereal.....	1s	Tin	.19
Oil, olive, Francescain.....	1 gal.	Tin	3.10	Postum, instant.....	4-oz.	Tin	.24
Oil, olive, Italian.....	5s	Tin	6.65	Postum, instant.....	8-oz.	Tin	.39
Oil, peanut.....	Qt.	Bot.	.37	Potash or lye.....	1s	Tin	.04
Oil, pure salad.....	$\frac{1}{2}$ s	Tin	.51	Powder, baking, Rel.....	$\frac{1}{2}$ s	Tin	.05
Oil, pure salad.....	1 gal.	Tin	.80	Powder, baking, Rel.....	1s	Tin	.08
Oil, olive, superfine.....	Pint	Bot.	.40	Powder, baking, Royal.....	$\frac{1}{2}$ s	Tin	.22
Oil, salad, P. C.....	24 oz.	Bot.	.20	Powder, baking, Royal.....	1s	Tin	.43
Okra.....	3s	Tin	.11	Powder, chili.....		Tin	1.10
Oleomargarine.....	5s	Tin	.47	Powder, curry.....	4-oz.	Bot.	.05
Olives, Queen, R. S.....	6-oz.	Bot.	.09	Powder, egg (dessicated).....	$\frac{1}{2}$ s	Bot.	.44
Olives, stuffed.....	10-oz.	Bot.	.19	Powder, ice cream, Jello.....		Pkg.	.08
Olives, Queen, R. S.....	10-oz.	Bot.	.14	Powder, insect.....		Tin	.83
Olives, Queen, R. S.....	18-oz.	Bot.	.30	Preserves, cherry and peach.....	1s	Jar.	.19
Olives, Queen, R. S.....	28-oz.	Bot.	.46	Prunes in brandy.....		Bot.	.47
Olives, ripe.....	15-oz.	Bot.	.30	Puffed wheat.....		Ctn.	.11
Olives, Spanish Queen.....	Gal.		1.00	Puffed rice.....		Ctn.	.13
Olives, Spanish Queen.....	2-gal.	Keg.	2.30	Pumpkin.....	3s	Tin	.08
Onions, Pearl.....	18-oz.	Bot.	.32	Relish, India.....		Bot.	.22
Onions, Pearl, Cresca.....	$\frac{1}{4}$ s	Bot.	.20	Rice (second).....		Lb.	.05
Onions, pickled.....	5-gal.	Keg.	5.60	Rice (first).....		Lb.	.07
Oysters.....	1s	Tin	.07	Roes, ccd.....	1s	Tin	.19
Paper, ant, Majic Hoodoo.....		Sheet	.12	Sage, powdered.....	2-oz.	Tin	.05
Paper, fly, Tanglefoot.....		Sheet	.01 $\frac{1}{2}$	Sago.....	2s	Tin	.15
Paper, paraffine, sandwich.....		Roll	.02	Sal Ilepatica.....		Bot.	.35
Paper, toilet.....		Pkg.	.04	Salmon, steak, flats.....	1s	Tin	.13
Paprika.....	2-oz.	Bot.	.10	Salmon, steak, R. S.....	1s	Tin	.24
Paste, Anchovy.....	$\frac{1}{4}$	Jar	.11	Salmon, talls, fresh.....	1s	Tin	.14
Paste, rat and roach.....		Tin	.16	Salt, celery.....		Jar	.07
Peaches in brandy.....	2 $\frac{1}{2}$ s	Tin	.13	Salt, Cerebos.....	1 $\frac{1}{2}$	Tin	.11
Peaches in brandy.....	Gal.	Tin	.45	Salt, Enos fruit.....		Bot.	.51
Pears.....	2 $\frac{1}{2}$ s	Tin	.18	Salt, freezing.....		Lb.	.01
Pears.....	Gal.	Tin	.52	Salt, table.....	1s	Sack	.01 $\frac{1}{2}$
Pearline.....	1s	Pkg.	.08	Salt, table.....	4s	Jar	.09
Peas, sifted.....	2s	Tin	.07	Sapolio, scrub.....		Cake	.07
Peas, ex. sifted.....	2s	Tin	.10	Sardines, boneless.....	$\frac{1}{4}$ s	Tin	.13
Peas.....	Gal.	Tin	.39	Sardines in tomato, Cresca.....	$\frac{1}{4}$ s	Tin	.11
Peas, dried green.....		Lb.	.06	Sardines in oil.....	$\frac{1}{4}$ s	Tin	.08
Pas, split.....		Lb.	.07	Sauce, chili.....	18 $\frac{1}{2}$	Bot.	.26
Peel, citron.....		Lb.	.17	Sauce, cranberry.....	2s	Tin	.13
Peel, lemon.....		Lb.	.13	Sauce, oyster cocktail.....	16-oz.	Bot.	.24
Peel, orange.....		Lb.	.15	Sauce, Tabasco.....		Bot.	.22

Article.	Size.	Unit.	Price.	Article.	Size.	Unit.	Price.
Sauce, Worcestershire...	$\frac{1}{2}$ pt.	Bot.	24	Tea, Ceylon, English...	1s	Pkg.	.32
Sauce, Worcestershire...	Pt.	Bot.	.40	Tea, Ceylon, U. S.	1s	Tin	.32
Sauerkraut.....	3s	Tin	.07	Tea, E. B.	$\frac{1}{2}$ s	Tin	.16
Sauerkraut.....	5-gal.	Keg.	1.40	Tea, E. B.	2s	Tin	.71
Sausage, Vienna.....	$\frac{1}{2}$ s	Tin	.07	Tea, I. C. T.	$\frac{1}{2}$ s	Tin	.21
Sausage, Vienna.....	1s	Tin	.14	Tea, Omphale.....	$\frac{1}{2}$ s	Pkg.	.08
Seed, bird.....		Pkg.	.12	Tea, Omphale.....	$\frac{1}{2}$ s	Pkg.	.17
Shrimp.....	1s	Tin	.11	Tea, Omphale.....	1s	Tin	.34
Shrimp.....	2s	Tin	.20	Tea, Orange Pekoe.....	3-oz.	Tin	.19
Soap, Bon Ami.....		Cake	.08	Tea, Orange Pekoe.....	$\frac{1}{2}$ s	Tin	.37
Soap, Fairy.....		Cake	.04	Tea, Temple Garden.....	$\frac{1}{2}$ s	Pkg.	.08
Soap, Fels Naptha.....		Cake	.04	Tea, Temple Garden.....	$\frac{1}{2}$ s	Pkg.	.15
Soap, Grandpa's.....		Cake	.05	Tea, Temple Garden.....	1s	Pkg.	.30
Soap, Ivory.....		Cake	.04	Tea, Y. H.	$\frac{1}{2}$ s	Tin	.09
Soap, Lava.....		Cake	.04	Tea, Y. H.	$\frac{1}{2}$ s	Tin	.20
Soap, laundry.....		Cake	.05	Tea, Y. H.	2s	Tin	.73
Soap, Lenox.....		Cake	.03	Thyme, powdered.....	2-oz.	Tin	.04
Soap, Life Buoy.....		Cake	.07	Tomatoes.....	2s	Tin	.06
Soap, salt water.....		Cake	.05	Tomatoes.....	3s	Tin	.08
Soap, Sapolio.....		Cake	.06	Tomatoes.....	Gal.	Tin	.24
Soap, Skat.....		Tin	.06	Tongue, lamb.....	1s	Tin	.33
Soda, bicarbonate.....	4-oz.	Pkg.	.02	Tongue, lunch.....	1s	Tin	.29
Soda, washing.....		Lb.	.01	Triscuits.....	1s	Tin	.22
Soup, Campbell's, assorted	1s	Tin	.09	Truffles.....	$\frac{1}{2}$ s	Tin	.20
Soup, cream of celery.....		Tin	.16	Turnips.....	2s	Tin	.09
Soup, tomato, Heinz.....	Small	Tin	.09	Vermicelli.....		Lb.	.08
Soup, tomato, Heinz.....	Med.	Tin	.13	Vinegar, cider.....		Gal.	.15
Soup, tomato, Heinz.....	Large	Tin	.22	Vinegar, French wine.....		Bot.	.42
Soup, Van Camp's, assorted	1s	Tin	.08	Vinegar, French wine, P. C.		Bot.	.25
Spaghetti.....	Med.	Tin	.13	Vinegar, French wine, Cresca.....		Bot.	.30
Spaghetti, Heinz.....	1 lb.	Pkg.	.07	Vinegar, malt, Heinz.....	Qt.	Bot.	.22
Spice, pudding.....	2-oz.	Tin	.04	Vinegar, malt, C. & B.		Bot.	.13
Spinach.....	3s	Tin	.09	Vinegar, spiced salad, Heinz.....		Bot.	.22
Squash.....	3s	Tin	.10	Vinegar, Tarragon.....		Bot.	.21
Starch, corn.....	1s	Tin	.07	Vinegar, P. C. malt.....		Bot.	.13
Starch, laundry.....		Lb.	.03	Waters.....			
Starch, Tiger.....	1s	Pkg.	.05	Apenta.....	Qt.	Bot.	.21
Steak, hamburger.....	$\frac{1}{2}$ s	Tin	.10	Apollinaries.....	Split	Bot.	.09
Steak, hamburger.....	1s	Tin	.19	Apollinaries.....	Pint	Bot.	.11
Steak and onions.....	$\frac{1}{2}$ s	Tin	.10	Coco Cola.....	Split	Bot.	.06
Steak and onions.....	1s	Tin	.18	Cliquot Club ginger ale.....	Pint	Bot.	.09
Stew, kidney.....	1s	Tin	.16	Cochran's ginger ale.....	Pint	Bot.	.07
Strawberries in brandy.....		Bot.	.44	Paraiso ginger ale.....	Pint	Bot.	.08
Strawberries in brandy.....		Bot.	.47	Hunyadi.....		Bot.	.24
Strawberries.....	2s	Tin	.25	Kola, Cochran's.....	Pint	Bot.	.07
Strawberries, Heinz.....	Large	Jar	.44	Perrier.....	Qt.	Bot.	.10
Strawberries, Heinz.....	Med.	Jar	.32	Poland.....	2-qt.	Bot.	.30
Succotash.....	2s	Tin	.09	Red Raven.....	Split	Bot.	.09
Sugar, granulated.....	5s	Sack	.28	Sasaparilla.....	Pint	Bot.	.08
Sugar, loaf.....	2s	Ctn.	.16	Cream soda.....	Pint	Bot.	.08
Sugar, powdered.....	2s	Tin	.19	Lemon soda.....	Pint	Bot.	.08
Sugar, No. 13.....		Lb.	.05	Soda, plain.....	Pint	Bot.	.08
Syrup, Karo.....	Gal.	Tin	.45	Vichy.....	Qt.	Bot.	.18
Syrup, Karo.....	Quart	Tin	.10	White Rock.....	Pint	Bot.	.10
Syrup, maple.....		Tin	.25	Root beer.....		Bot.	.06
Syrup, mapleine, P. C.	24-oz.	Bot.	.20	Schweppe's.....	Pint	Bot.	.09
Syrup, corn, P. C.		Bot.	.15	Schweppe's.....	Split	Bot.	.06
Syrup, corn, P. C.	$\frac{1}{2}$ -gal.	Jar	.50	Wheat, Cream of.....	2s	Tin	.19
Tamales, chicken.....	$\frac{1}{2}$ s	Tin	.08	Wheat, shredded whole.....		Pkg.	.14
Tamales.....	1s	Tin	.15	Water, rose, C. P. R.	$\frac{1}{2}$ -pt.	Bot.	.13
Tapioca.....	2s	Tin	.15				

OFFICIAL CIRCULARS.

Acting Governor.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 30, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective May 1 and during my absence from the Isthmus, Lieut.-Col. Chester Harding will act as Governor of The Panama Canal.

GEO. W. GOETHALS,

Governor.

Witnesses before the Joint Land Commission.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 21, 1915.

CIRCULAR No. 699:

1. Persons who are not employes of The Panama Canal or Panama Railroad Company, or who are not otherwise paid by the United States, when called as witnesses to testify for the United States before the Joint Land Commission will be allowed a witness fee of \$1.50 for each day's attendance, and in addition will be reimbursed for actual necessary expenses incurred in going to, attendance upon, and return from the sessions of the Commission.

2. Payment will be made by voucher, upon which the expenses for which reimbursement is claimed must be itemized in detail.

3. The attorney for the United States will certify as to the place from which the witness was called and as to his attendance upon the sessions of the Commission.

GEO. W. GOETHALS,

Governor.

Division of Municipal Engineering—Building Division.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 24, 1915.

CIRCULAR No. 600-26:

The following changes in organization will take effect May 10, 1915:

1. The construction of all buildings and like structures now being performed by the Division of Municipal Engineering, will be transferred to the Building Division.

2. Mr. Geo. M. Wells will be relieved from duty as head of the Division of Municipal Engineering and assigned to duty as Resident Engineer in charge of the Building Division, vice Capt. R. E. Wood, U. S. A., resigned.

3. Mr. D. E. Wright will assume charge of the Division of Municipal Engineering as Municipal Engineer, reporting to the Engineer of Maintenance, vice Mr. Geo. M. Wells, relieved.

GEO. W. GOETHALS,

Governor.

Silver Roll Employments and Changes.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 27, 1915.

CIRCULAR No. 666-3:

1. Effective May 1, 1915, all employments, changes in ratings, transfers, and terminations of American citizens, or aliens who receive more than \$75 a month or 40 cents an hour, on the silver roll, should be reported in the same manner and on the same forms as is being done in all cases of persons employed on the gold roll, excepting that no medical certificate is required in connection with a person employed on the silver roll.

2. As the above classes of employes are entitled to leave privileges, it is necessary that this information be furnished in all cases as promptly as possible in order that the proper entries may be made on the records.

GEO. W. GOETHALS,

Governor.

Salaries Determined.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 28, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

The salaries of all positions will be determined by the book of estimates for 1916, and no increases in pay will be authorized beyond the salaries indicated therein. Where increases in salary have been authorized subsequent to the submission and approval of the 1916 estimates, such increases will cease on June 30, 1915.

GEO. W. GOETHALS,

Governor.

Temporary Employment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 23, 1915.

CIRCULAR No. 603-9:

Temporary employment may be made to fill positions

of employes on leave without pay for 15 days or more.

GEO. W. GOETHALS,

Governor.

Acting Marine Superintendent.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., May 1, 1915.

To all concerned—Effective this date, during the temporary absence of Capt. Hugh Rodman in the United States, Com. H. V. Butler will act as Marine Superintendent.

CHESTER HAROING,

Acting Governor.

Legal Notice.

United States of America } In the District Court
Canal Zone. } Division of Balboa.

Estate of José Alvarez, deceased; Petition for Escheat.

Notice is hereby given that at 9 o'clock a. m., of the 15th day of May, 1915, in the court house at Ancon, there will be an inquisition into the estate of José Alvarez, who died intestate about the 24th day of October, 1910, possessed of improvements on lands located near Tabernilla, C. Z., for which improvements the Joint Land Commission, in 1913, made an award of \$175 and ordered that the same be paid in the Court of the Canal Zone, pursuant to a petition filed by John K. Baxter, Administrator of Estates, praying that the said sum be escheated in accordance with Sections 779, 780, and 781 of the Code of Civil Procedure of the Canal Zone, at which time and place all persons claiming the said estate, or any interest therein, may appear and be heard before the Court.

E. M. GOOLSBY,

Clerk.

Act of Congress.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., March 22, 1915.

CIRCULAR No. 600-17:

RECOGNITION OF SERVICES OF CERTAIN CANAL OFFICIALS.

The Act of Congress quoted below is published for the information of all concerned

GEO. W. GOETHALS,

Governor.

AN ACT to provide for recognizing the services of certain officers of the Army, Navy, and Public Health Service for their services in connection with construction of the Panama Canal, to extend to certain of such officers the thanks of Congress, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the thanks of Congress are hereby extended to the following officers of the Army and Navy of the United States, who, as members of the late Isthmian Canal Commission, have rendered distinguished service in constructing the Panama Canal, to wit: Col. George W. Goethals, chairman and chief engineer; Brig. Gen. William C. Gorgas, sanitary expert; Col. H. F. Hodges,

Lieut. Col. William L. Sibert, and Com. H. H. Rousseau.

Sec. 2. That the President is hereby authorized, by and with the advice and consent of the Senate, to advance in rank Col. George W. Goethals to the grade of major general of the line, United States Army; Brig. Gen. William C. Gorgas to the rank of major general in the Medical Department, United States Army; Col. H. F. Hodges and Lieut. Col. William L. Sibert to the grade of brigadier general of the line, United States Army; and Com. H. H. Rousseau to the grade of rear admiral of the lower Nine, United States Navy.

Sec. 3. That such officers of the Army and Navy as were detailed for duty with the Isthmian Canal Commission on the Isthmus of Panama for more than three years, and who shall not have been advanced in rank by any other provisions of this bill, shall be advanced one grade in rank upon retirement: *Provided*, That any officer of the Army or Navy now on the retired list with similar service shall be immediately advanced one grade in rank on the retired list of the Army or Navy.

Sec. 4. That the President is further authorized, by and with the advice and consent of the Senate, to appoint such officers of the Public Health Service as were detailed for duty with the Isthmian Canal Commission on the Isthmus of Panama for more than three years to the grade next above that at present held by such officers.

Sec. 5. That the numbers in such grades provided for in sections two and four of this Act, except where vacancies occurring in any grade by the provisions of this Act can be filled by such officers in a lower grade as are entitled to the benefits of this Act, shall be temporarily increased during the time such offices may be held: *Provided*, That the officer who may be advanced and appointed major general in the Medical Department, United States Army, shall thereupon become the head of such department, and the operation of so much of section 26 of the Act of February 2, 1901, as limits the term of office of the head of the Medical Department, United States Army, shall be suspended during the incumbency of the head of the department who may be appointed under this Act: *Provided*, That whenever the head of the Medical Department appointed under the provisions of this Act shall become separated from the active list of the Army, by retirement or otherwise, the extra office or grade to which he shall have been so advanced or appointed shall cease and determine, and thereafter the rank of the head of the Medical Department, United States Army, shall be that of a brigadier general: *Provided further*, That nothing in this Act shall operate to interfere with or retard the promotion to which any officer would be entitled under existing law: *And provided further*, That the officers advanced to higher grades under this Act shall be junior to the officers who now rank them under existing law when these officers have reached the same grade.

Sec. 6. That at any time after the passage of this Act any officer of the Army or Navy to be benefited by the provisions of this Act may, on his own application, be retired by the President at 75 per centum of the pay of the rank upon which he is retired.

Approved, March 4, 1915.

Supplement to Coach Tariff—Fort Amador, Ancon, Panama, and Balboa.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., April 21, 1915.

Pursuant to the authority in me vested by law, the tariff of rates for the transportation of passengers for hire by means of cabs, coaches, or other horse-driven vehicles, established by order of the Head of the Department of Civil Administration, under date of April 20, 1911, is hereby supplemented by the addition thereto of the following rates:

Between	Any point in	Rates (Panaman Silver.)			
		Number of persons			
		One	Two	Three	Four
Balboa Heights*.....	City of Panama.....	One way... .50	.90	1.30	1.70
		Round trip... .90	1.60	2.30	3.00
Balboa Heights*.....	Ancon.....	One way... .40	.70	1.00	1.30
		Round trip... .70	1.20	1.80	2.40
Balboa Heights.....	Balboa.....	One way... .20	.40	.60	.80
		Round trip... .40	.75	1.00	1.20
Balboa Heights.....	Fort Amador.....	One way... .50	.80	1.10	1.40
		Round trip... .80	1.50	1.80	2.00
City of Panama.....	Fort Amador.....	One way... 1.00	1.60	2.00	2.50
		Round trip... 1.60	2.00	2.50	3.20
Ancon.....	Fort Amador.....	One way... 1.00	1.60	2.00	2.50
		Round trip... 1.60	2.00	2.50	3.20
Zone line at Chorrillo.....	Fort Amador.....	One way... .80	1.20	1.60	2.40
		Round trip... 1.40	1.80	2.20	3.00
Balboa.....	Fort Amador.....	One way... .40	.80	1.00	1.20
		Round trip... .80	1.20	1.40	1.60
Balboa.....	Ancon via lower Balboa	One way... .60	1.00	1.50	1.80
	Heights road.....	Round trip... 1.00	1.40	2.00	2.40

*Between Balboa Heights and Panama, and Balboa Heights and Ancon, via Ancon Hospital road, or to points on the two high levels of Balboa Heights, add 20 cents silver for one passenger and 30 cents silver for two or more passengers.

GEO. W. GOETHALS,

Governor.

JOINT LAND COMMISSION.

Notice of Award.

In the matter of the claim of Gumerinda Villareal, award No. 78, docket No. 454, April 19, 1915—An award is hereby made against the United States, in favor of the person hereinafter named, in the sum of \$300, United States currency.

This award shall be paid to the claimant hereinafter named, in the amount specified, on or before the 19th day of May, 1915, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

Gumerinda Villareal, docket No. 454—For all rights, claims, and other interests which the said Villareal may possess or may have possessed in growing crops, fruit trees, and other improvements at nor near La Ceiba, the sum of \$300, United States currency.

JORGE BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

In the matter of the claim of Joaquin Garcia Soto, for the property known as Tortola Island, award No. 80, docket No. 104, April 26, 1915—An award is hereby made against the United States, in favor of the heirs of Joaquin Garcia Soto, in the sum of \$1,500, United States currency.

This award shall be paid to the heirs of Joaquin Garcia Soto, in the amount specified, on or before the 26th day of May, 1915, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

For all rights, claims, and other interests which the said Joaquin Garcia Soto and his heirs may possess or may have possessed in and to the island of Tortola, located at the Pacific entrance of the Panama Canal, between the islands of Naos and Taboga and within the limits of the Canal Zone, together with all rights, claims, and other interests which the said Joaquin Garcia Soto and his heirs may possess or may have possessed in and to any growing crops, fruit trees, and other improvements located on said island of Tortola, the sum of \$1,500.

JORGE BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

In the matter of the claim of Francisco Martinez Herrera and Luis Alcina Quisal for property located near Corozal, award No. 81, docket No. 499, April 19, 1915—

An award is hereby made against the United States, in favor of the persons hereinafter named, in the sum of \$600, United States currency.

This award shall be paid to the persons hereinafter named, in the amount specified, on or before the 19th day of May, 1915, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

Francisco Martinez Herrera and Luis Alcina y Quisal, docket No. 399—For all rights, claims, and other interests which the said Francisco Herrera Martinez and Luis Alcina y Quisal may possess or may have possessed in and to house tax No. 3151, and crops, fruit trees, and any other improvements near Corozal, Canal Zone, the sum of \$600.

JORGE BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rule of Dismissal.

In the matter of sundry claims, rule of dismissal No. 178, docket numbers as shown, April 19, 1915—With reference to the following claims, the evidence before the Commission is that settlement therefor has been made by the United States:

Claimant.	Dkt. No.	Tox No.	Payment.
Martin Barsallo.....	477 & 478	.....	9-30-14
Francisco Cañizales...	527	C-154	3-39-15
Peter Modis (Moore)...	.....	.....	10-09

In view of the above settlements, no further action is necessary by the Commission, and the foregoing claims are therefore dismissed.

JORGE E. BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

In the matter of the claim of Emanuel Affection, rule of dismissal No. 180, docket No. 624, April 23, 1915—The claim of Emanuel Affection, docket number above shown, came on for hearing before the Commission on April 20, 1915. There was no appearance on the part of the claimant, but the evidence submitted to the Commission at this hearing showed that the claimant Emanuel Affection is not the true and lawful owner of the property in question and has no interest therein; and his claim for damages said to have been caused thereto is hereby dismissed.

JORGE BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

COMMISSARY DEPARTMENT.

Reduced Prices of Groceries

A general reduction of prices of general groceries becomes effective on Thursday, May 6. The new prices are set forth in the list published as a supplement to this issue of THE CANAL RECORD.

Balboa Store Moving on Monday.

The Balboa commissary will be closed all day on Monday, May 10, and will be reopened for business in the new concrete building on Tuesday morning, May 11.

Commissary Hours.

The commissary stores at Las Cascadas, Empire, and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

The following is a list of retail prices of cold storage provisions which will be effective May 6, 1915:

FRESH MEATS.	Price.
Mutton—Stewing, per pound.....	9
Shoulder, trimmed, per pound.....	12
Leg (8 to 10 pounds), per pound.....	19
Short cut, chops, per pound.....	23
Shoulder, chops, per pound.....	14
Lamb—Stewing, per pound.....	12
Shoulder, trimmed, per pound.....	15
Leg (5 to 8 pounds), per pound.....	24
Chops, per pound.....	29
Chops, shoulder, per pound.....	18
Veal—Stewing, per pound.....	12
Shoulder, for roasting (not under 4 lbs.), per pound.....	15
Chops, shoulder, per pound.....	20
Chops, per pound.....	30
Loin for roasting, per pound.....	30
Cutlets, per pound.....	36
Beef—Suet, special, per pound.....	3½
Soup, special, per pound.....	7
Soup, bones, special, per pound.....	2½
Stew, special, per pound.....	11
native, per pound.....	8
Plate, special, per pound.....	12
native, per pound.....	8
Chuck roast, special, (3 lbs. and over), per pound.....	12
Chuck roast, native (3 lbs. and over), per pound.....	8
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
Rib roast, second cut, native (3½ pounds and over), per pound.....	9
Rib roast, first cut (not under 3 pounds), special, per pound.....	19
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27
Rib roast, first cut, native (3 pounds and over), per pound.....	11
Pot roast, special, per pound.....	20
choice, per pound.....	28
native.....	12
Rump roast, special, per pound.....	20
choice, per pound.....	28
native.....	12
Porterhouse roast, special per pound.....	22
choice, per pound.....	31
native, per pound.....	16
Steak, chuck, special, per pound.....	13
native, per pound.....	9
Round, bottom, special, per pound.....	13
choice, per pound.....	19
native, per pound.....	9
Round, top, special, per pound.....	15
choice, per pound.....	22
native, per pound.....	10
Sirloin, special, per pound.....	20
Sirloin, choice, per pound.....	28
Sirloin, native, per pound.....	12
Sirloin, choice cut, special, per pound.....	23
Sirloin, choice cut, choice, per pound.....	32
Sirloin, choice cut, native, per lb.....	16
Rump, special, per pound.....	20
choice, per pound.....	28
native, per pound.....	12
Porterhouse (not less than 1½ pounds), special, per pound.....	23
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse (1½ pounds and over), native, per pound.....	17
Porterhouse, short, Delmonico special, per pound.....	20
Porterhouse, short, Delmonico choice, per pound.....	28

Price.

Porterhouse, short, native, per lb.	12
Tenderloin, Western, special, per pound.....	35
Tenderloin, Western, choice, per pound.....	46
Tenderloin, Western, native, per lb	25

NOTE:—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders placed with commissary storekeepers before 11 a. m. will be shipped for delivery on the following morning.

Pork—Hams, fresh, per pound.....	\$23
Shoulders, fresh, per pound.....	\$19
Loin, chop, or roast, per pound.....	18
Pigs' feet, fresh, each.....	8
Pigs' head, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23
Ox tails, per pound.....	19

MISCELLANEOUS.

Brains, calves', per pound.....	10
Calves' head, each.....	80
Kidneys, beef, per pound.....	11
Livers—Beef, per pound.....	9
Calves', each.....	70
half, each.....	35
Oysters, fresh, per pkt.....	28
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	11
Frankfurter, per pound.....	11
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	10
Pork, per pound.....	13
Sweetbread, beef, per pound.....	20
Eggs, fresh, per dozen.....	29
per ½ dozen.....	15
Bluefish, per pound.....	*8
Halibut, fresh, per pound.....	6
Salmon, per pound.....	*7
Yeast, per pound.....	31
per cake.....	2
Pate de foies gras, per jar.....	50

CURED AND PICKLED MEATS.

Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Mince, "Bologna style," per pound.....	*13
Sugar cured, boneless, whole, per pound.....	20
Sugar cured, whole, per pound.....	18
Half, per pound.....	20
Sliced, per pound.....	24
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	25
Half, boiled, per pound.....	27
Sliced, boiled, per pound.....	33
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	26
Whole piece, per pound.....	25
Strips, whole, per lb.....	19
Sliced, jar.....	24
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	6
Tongues, per pound.....	22

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound.....	†27
Chickens—Fancy, roasting, corn fed, per pound.....	26
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	22
Capons, per pound.....	32
Broilers, milk fed, per pound.....	34
Broilers, corn fed, per pound.....	28
Turkeys, per pound.....	28
Squabs, each.....	40
Geese, per pound.....	23
Grouse, each.....	1.00
Mallard ducks, 2 to 2½ pounds, each.....	2.35
Pheasants, each.....	1.35

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	44
Sheffield Farms, extra fancy, per lb.....	58
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	22
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield, per quart.....	**15
Fermillac, bottle.....	**25
Ice cream, quart.....	125
½-gallon.....	**50
Cream, 30 per cent, quart.....	**45
pint.....	**23
½ pint.....	**12

VEGETABLES.

Beets, per pound.....	2
Celery, per head.....	7
Cabbage, per pound.....	4
Carrots, per pound.....	2½
Lettuce, per pound.....	7
Onions, per pound.....	3
Parsley, per pound.....	12
Parsnips, per pound.....	4
Peppers, per pound.....	18
Plantains, per dozen.....	12
Potatoes, white, per pound.....	2

SHIPPING INFORMATION.

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in the following table:

MAY.				
DATE.	Time and height of high and low water.			
Wed., May 5.....	1:49	8:02	14:17	20:21
	0.6	14.1	2.2	13.5
Thurs., May 6.....	2:47	9:05	15:23	21:30
	1.7	13.2	3.1	12.5
Fri., May 7.....	3:51	10:18	16:32	22:45
	2.6	12.7	3.5	11.9
Sat., May 8.....	4:59	11:34	17:42	.....
	3.2	12.5	3.5	.....
Sun., May 9.....	0:07	6:05	12:40	18:45
	11.8	3.4	12.7	3.2
Mon., May 10.....	1:13	7:03	13:35	19:39
	12.1	3.2	13.1	2.6
Tues., May 11.....	2:06	7:54	14:20	20:24
	12.6	2.9	13.4	2.1
Wed., May 12.....	2:49	8:38	14:58	21:05
	13.0	2.6	13.8	1.6
Thurs., May 13....	3:28	9:19	15:34	21:43
	13.4	2.3	14.0	1.2
Fri., May 14.....	4:03	9:58	16:07	22:20
	13.7	2.2	14.2	1.0
Sat., May 15.....	4:37	10:35	16:41	22:58
	13.8	2.1	14.2	1.0
Sun., May 16.....	5:10	11:14	17:15	23:35
	13.8	2.3	14.0	1.2
Mon., May 17.....	5:45	11:52	17:49	.....
	13.5	2.5	13.7	.....
Tues., May 18.....	0:13	6:22	12:32	18:24
	1.5	13.3	2.9	13.3
Wed., May 19.....	0:54	6:59	13:14	19:03
	1.9	12.9	3.3	12.9
Thurs., May 20.....	1:36	7:40	14:01	19:46
	2.4	12.6	3.6	12.4
Fri., May 21.....	2:22	8:26	14:52	20:38
	2.8	12.4	3.8	12.0
Sat., May 22.....	3:13	9:18	15:50	21:38
	3.1	12.4	3.8	11.8
Sun., May 23.....	4:10	10:17	16:50	22:46
	3.2	12.6	3.3	11.9
Mon., May 24.....	5:08	11:19	17:49	23:52
	3.1	13.2	2.6	12.4
Tues., May 25.....	6:07	12:18	18:46	.....
	2.6	13.9	1.6	.....
Wed., May 26.....	0:55	7:03	13:14	19:39
	13.2	1.9	14.8	0.6
Thurs., May 27.....	1:51	7:57	14:07	20:31
	14.1	1.2	15.0	-0.4
Fri., May 28.....	2:44	8:50	14:59	21:22
	15.0	0.5	16.3	-1.1
Sat., May 29.....	3:35	9:40	15:50	22:12
	15.7	0.6	16.7	-1.5
Sun., May 30.....	4:24	10:32	16:39	23:00
	16.0	-0.2	16.7	-1.5
Mon., May 31.....	5:15	11:23	17:29	23:50
	16.1	-0.1	16.4	-1.2

JUNE.

DATE.	Time and height of high and low water.			
Tues., June 1.....	6:05	12:15	18:20	.....
	15.8	0.4	15.6	.....
Wed., June 2.....	0:41	6:57	13:08	19:13
	-0.5	15.2	1.1	14.7
Thurs., June 3.....	1:34	7:50	14:03	20:09
	.04	14.5	1.9	13.6
Fri., June 4.....	2:27	8:44	15:03	21:10
	1.5	13.8	2.6	12.6
Sat., June 5.....	3:23	9:48	16:04	22:17
	2.4	13.1	3.2	11.9
Sun., June 6.....	4:23	10:52	17:06	23:28
	3.2	12.6	3.4	11.5
Mon., June 7.....	5:24	11:55	18:06	.....
	3.7	12.4	3.4	.....
Tues., June 8.....	0:33	6:22	12:51	19:01
	11.5	3.9	12.4	3.1
Wed., June 9.....	1:31	7:15	13:41	19:49
	11.8	3.8	12.6	2.7

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3.47 p. m.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Balboa Heights;" in the United States, "Panacanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa

Heights, Canal Zone," for delivery on the Isthmus and "The Panama Canal, Washington, D. C." for delivery in the United States.

Misdirected Letters.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressees:

Anthony, H. E.	McConnell, Jas.
Bennett, Miss Maud	McLeod, Jimmie
Biemeret, John	Marquand, Philip
Case, Harry	Munda, Joseph F.
Clement, James R.	Murphy, Frank
Dolan, Mrs. Geo.	Reed, William
Druel, Frank L.	Riehl, Orrie
Druel, Miss Adeline	Robinson, S. H.
Garcia, L.	Rohring, Albert
Garth, Mrs. Lula	Smith, John Alexander
Green, Mrs. Emma M. (3)	Sneed, J. W.
Houghkirk, William	Taylor, Wade
Howard, R. C.	Thomason, Miss C. W.
Katz, Bennie	Turpin, Coleman
Klein, Robert	Van Kesteren, H.
Libowitz, William	Whitcomb, Carl M.

Wiley, Harvey

Rainfall from April 1 to ,30 1915, inclusive.

STATIONS.	Maximum one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa.....	1.39	4	4.37
Balboa Heights.....	1.79	26	5.37
Miraflores.....	1.29	4	2.88
Pedro Miguel.....	1.02	4	2.39
Rio Grande.....	1.24	4	3.41
<i>Central Section—</i>			
Culbra.....	1.78	4	3.81
*Camacho.....	1.68	4	4.52
Empire.....	2.14	4	4.96
Gamboa.....	2.04	4	7.09
*Juan Mina.....	2.05	4	7.74
Alhajuela.....	1.98	2	8.94
*El Vigia.....	1.98	23	6.77
Frijoles.....	5.13	3	11.56
*Trinidad.....	2.29	3	9.27
*Monte Lirio.....	5.40	3	12.19
<i>Atlantic Section—</i>			
Gatun.....	7.64	3	15.90
*Brazos Brook.....	5.27	3	12.17
Colon.....	4.98	3	10.42

*Standard rain gage—readings at 5 p. m.

Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, May 1, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., April 25.....	126.80	93.13	86.31	86.47	53.80
Mon., April 26.....	126.70	92.92	86.45	86.51	54.00
Tues., April 27.....	127.75	93.65	86.38	86.47	54.00
Wed., April 28.....	126.80	92.91	86.42	86.48	54.00
Thurs., April 29.....	127.30	93.44	86.46	86.45	53.93
Fri., April 30.....	125.95	92.40	86.52	86.46	53.91
Sat., May 1.....	125.60	92.11	86.54	86.44	53.86
Heights of low water to nearest foot....	125.0	91.0			

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States Due at New Orleans on the following Tuesday.

Every Saturday to New York for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday*.

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE.—The sailings on Monday, May 31, will not land mail in New York until Tuesday or the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Colum-

(Continued on page 334.)

Price.

Rhubarb, per pound.....	†8
Spinach, per pound.....	†10
Turnips, per pound.....	2
Tomatoes, per pound.....	11
Yams, tropical, per pound.....	2
FRUITS.	
Apples, per pound.....	5
Grape fruit—Select, each.....	5
Tropical, each.....	3½
Lemons, per dozen.....	10
Oranges—Select, each.....	2
Tropical, per dozen.....	12
Coconuts, each.....	10
Bananas, per bunch.....	38
Bananas, each.....	½
Apples, evaporated, per pound.....	12
Apricots, evaporated, per pound.....	13
Pears, evaporated, per pound.....	23
Pineapples, each.....	†10
Figs, dried, 12-oz. package.....	14
Figs, dried, 5-oz. package.....	5
Raisins, seedless, package.....	*11
table, cluster, per pound.....	19
Currants, cleaned, package.....	12
Prunes, stewing, per pound.....	12
Alligator pears, select, each.....	8

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective May 4, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Macedoines, tin.....	.10	.14
Brushes, hair, ea.....	.27	.19
Nets, fringe, ea.....	.09	.14
Sheets, 90" x 90", ea.....	.85	.72
Pins, book.....	.07	.05
Shirts, soft, ea.....	.78	.70
Shirts, negligee, ea.....	1.40	1.70
Pants, khaki, pr.....	1.80	1.50
Shoes, men's, pr.....	4.05	4.30
Shoes, men's, pr.....	4.95	5.25
Shoes, men's, pr.....	4.00	4.20
Shoes, men's, pr.....	5.85	6.16
Shoes, men's, pr.....	5.25	5.55
Hand bags, ea.....	6.95	6.50
Bags, women's unfitted, ea.....	5.75	6.85
Suit cases, ea.....	4.65	4.30
Pillows, feather, ea.....	1.30	1.20
Coolers, water, 4-gal., ea.....	1.50	1.40

Proposals for Tearing Down Two-Story Building at Balboa.

Sealed bids for taking down house No. 752, Balboa, in sections and in good condition, and loading on cars ready for shipment, cars to be spotted on nearest track to building, will be received by the Secretary, Balboa Yacht Club, until 8 p. m., Monday, May 10, and then opened at the Balboa Y. M. C. A. The building committee reserves the right to reject any or all bids. Further information may be obtained at the office of the Balboa Y. M. C. A. Bids should be marked "Proposal for tearing down house No. 752" and addressed to J. R. Bingaman, Secretary, Balboa Yacht Club, Balboa, C. Z.

Joint Land Commission Notice.

Following is a calendar of claims set for hearing for the week ending May 15—Monday, May 10—Docket 808, Thos. A. Campbell; docket 809, Nicanor Chavez; docket 810, John A. Giscombe; docket 811, Eusebio Muñoz. Tuesday, May 11—Docket 812, Dudley Cummings; docket 813, Jos. Chandler; docket 814, Simeon Larence; docket 815, Chas. Hobbins. Wednesday, May 12—Docket 816, J. Taylor Rose; docket 817, Solomon Mason; docket 818, Nagina Single; docket 819, Adolphus Minzie. Thursday, May 13—Docket 820, Chas. Hinds; docket 821, Frederick Lewis; docket 822, Henry Gigwood; docket 823, Wm. Lewis. Friday, May 14—Docket 824, Henry Brooks; docket 825, Mrs. Margaret Cook; docket 826, Maria Bargo; docket 827, Ebenezer White.

WILLIAM TAYLOR,
Secretary.

Office of District Quartermaster Moved.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., April 26, 1915.

To all concerned—The offices of the district quartermaster, Ancon and Balboa, have been moved to building No. 612, near Balboa passenger station.

In future, please address all mail for that office to Balboa Heights post-office.

WM. R. GROVE,
Chief Quartermaster.

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., May 2, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
April 26....	Port Curtis.....	British.....	Com. and Dom. Line.....	New York.....	Auckland.....	General cargo.....	7,000	6,031	4,204
April 26....	Calchas.....	British.....	Ocean S. S. Co.....	London.....	Los Angeles.....	General cargo.....	1,400	6,669	4,672
April 26....	Strathfillan.....	British.....	Strathfillan S. S. Co.....	Newport News.....	Pisagua.....	Ballast.....	.....	4,639	3,382
April 27....	Limari.....	Chilean.....	South American S. S. Co.....	Cristobal.....	Guayaquil.....	General cargo.....	.....	3,631	2,421
April 27....	Pleiades.....	American.....	Luckenbach S. S. Co.....	New York.....	San Francisco.....	General mdse.....	4,500	4,147	3,255
April 27....	Strathairly.....	British.....	Strathairly S. S. Co.....	Newport News.....	Balboa.....	Ballast.....	.....	4,680	3,363
April 28....	Berwick Low.....	British.....	T. Law and Company.....	New York.....	Littletown.....	General cargo.....	10,270	6,195	4,630
April 28....	Oliver J. Olson.....	American.....	Olson and Mahoney.....	New York.....	Chile.....	Ballast.....	.....	2,207	1,483
April 29....	Guatemala.....	British.....	Pacific Steam Navigation Co.....	Cristobal.....	Balboa.....	General cargo.....	532	4,249	2,772
April 29....	Santa Catalina.....	American.....	W. R. Grace and Co.....	New York.....	Iquique.....	General cargo.....	2,000	6,657	4,409
April 30....	Peru.....	British.....	Pacific Steam Navigation Co.....	Cristobal.....	Balboa.....	General mdse.....	644	4,038	2,626
April 30....	Alaska.....	American.....	American-Hawaiian S. S. Co.....	New York.....	Los Angeles.....	General cargo.....	10,058	8,868	6,509
April 30....	Acajulla.....	British.....	Salvador R. R. Co.....	Cristobal.....	Balboa.....	General mdse.....	700	1,219	627
May 1....	Jamaica.....	British.....	Royal Mail S. P. Co.....	Cristobal.....	Balboa.....	Ballast.....	.....	1,170	620
May 1....	Olson & Mahoney.....	American.....	Olson and Mahoney.....	New York.....	Vancouver.....	Sugar.....	1,745	1,564	782
May 1....	River Forth.....	British.....	River Forth Co., Ltd.....	London.....	Mejillones.....	Ballast.....	.....	4,852	3,647
May 2....	Kentuckian.....	American.....	American-Hawaiian S. S. Co.....	New York.....	Los Angeles.....	General cargo.....	7,635	6,913	4,756

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

April 27....	Jersey City.....	British.....	W. R. Smith.....	Antofagasta.....	Charleston.....	Nitrates.....	7,800	5,271	3,836
April 27....	Titonio.....	Norwegian.....	W. Wilhelmsen.....	Antofagasta.....	Alexandria.....	Nitrates.....	5,560	3,659	3,670
April 28....	Advance.....	American.....	Panama R. R. S. S. Line.....	Balboa.....	New York.....	General cargo.....	1,675	2,965	2,161
April 28....	Jamaica.....	British.....	Pacific Steam Nav. Co.....	Tumaco.....	Cristobal.....	General cargo.....	384	1,170	620
April 28....	Leather Castle.....	British.....	Jos. Chambers.....	Tacoma.....	Falmouth.....	Flour.....	6,820	5,768	4,367
April 29....	Noma.....	American.....	Vincent Astor.....	San Francisco.....	New York.....	Ballast.....	.....	811	336
April 29....	Colusa.....	American.....	W. R. Grace & Co.....	Brisbane.....	New York.....	Wool.....	3,000	6,639	6,572
April 30....	Urubamba.....	Peruvian.....	Peruvian S. S. Co.....	Callao.....	Liverpool.....	General cargo.....	2,877	4,957	3,118
April 30....	Netherpark.....	British.....	Netherton S. S. Co.....	Taitai.....	Tayal.....	Nitrate.....	2,804	4,789	3,503
May 1....	St. Helens.....	American.....	E. J. Dodge Co.....	Astoria.....	New York.....	Lumber.....	2,150	1,642	775
May 1....	Proteus.....	American.....	U. S. Navy.....	Cavite.....	Hampton Roads.....	Naval stores.....	1,500	11,143	6,749
May 1....	Alvarado.....	American.....	Swayne & Hoyt.....	Astoria.....	New York.....	Lumber.....	2,780	1,040	703
May 1....	Howick Hall.....	American.....	U. S. Steel Products Co.....	Calita Buena.....	Colon (orders).....	Nitrates.....	7,522	6,048	4,348
May 2....	Ardenmohr.....	British.....	Clark & Service.....	Port Pirie.....	Mobile.....	Concentrates.....	5,800	4,959	3,698

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
April 29....	Panama.....	Panama Railroad S. S. Line.....	New York.
April 30....	Terrier.....	Wilhelmsens Dmptsk. Akties.....	New York.
April 30....	Kiev.....	Russian Vol. Fleet Assn.....	New York.
May 2....	Falls City.....	Bradford S. S. Co.....	Marselles.
May 2....	Frederick Luckenb'h.....	Luckenbach S. S. Co.....	New York.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
.....	Suecia.....	A. A. Johnson.....	San Francisco.
.....	Strathearn.....	Strathearn S. S. Co.....	.....
.....	Sinaloa.....	Superior S. S. Co.....	.....
.....	Pangan.....	East Asiatic S. S. Co.....	San Francisco.

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
April 26....	Danube.....	Royal Mail S. P. Co.....	United Kingdom.
April 27....	Gorgona (tug).....	Panama Canal.....	New York.
May 1....	Ocland.....	Earn Line.....	Norfolk.
May 1....	Potomac (tug).....	U. S. Navy.....	Bocas del Toro.

*DEPARTURES.

Date	Vessel	Line	To
April 27....	Danube.....	Royal Mail S. P. Co.....	United Kingdom.
April 27....	Owera (yacht).....	P. G. Gerry.....	Kingston, Ja.
April 30....	Puerto Rico.....	Cie. Generale Transatlantique.....	Bordeaux.
April 29....	Potomac (tug).....	U. S. Navy.....	Bocas del Toro.
April 29....	Severn.....	U. S. Navy.....	Bocas del Toro.
April 29....	5 submarines.....	U. S. Navy.....	Bocas del Toro.

*EXPECTED ARRIVALS.

May 3....	La Champagne.....	Cie. Generale Transatlantique.....	St. Nazaire.
May 5....	Siena.....	La Veloce.....	Genoa.

*EXPECTED DEPARTURES.

May 8....	Siena.....	La Veloce.....	Genoa.
May 7....	La Champagne.....	Cie. Generale Transatlantique.....	Bordeaux.
May 7....	Ocland.....	Earn Line.....	.....
May 7....	Leonidas.....	U. S. Navy.....	Unknown.

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

April 27....	Ucayali.....	Peruvian S. S. Co.....	Cerro Azul.
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*DEPARTURES.

April 26....	Ucayali.....	Peruvian S. S. Co.....	Mollendo.
April 27....	Manavi.....	Pacific Steam Nav. Co.....	Guayaquil.
May 28....	San Juan.....	Pacific Mail S. S. Co.....	San Francisco.
May 28....	Il'm. Chatham.....	W. R. Grace & Co.....	Tacoma.
May 2....	Pachitea.....	Peruvian S. S. Co.....	Cerro Azul.

*EXPECTED ARRIVALS.

.....	Anyo Maru.....	Toya Kisen Kaisha.....
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*EXPECTED DEPARTURES.

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*Other than vessels passing through the Canal.

(Continued from page 333.)

bia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4 leaving Panama at 7.10 a. m. connects with the despatches for the sailings on May 31.

Sailings of Vessels in Regular Service with the Isthmus.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal; and every Thursday, direct from New York; between

Colon and New York by the United Fruit Company, sailing via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails. Arrives.

NEW YORK TO CRISTOBAL-COLON.

Santa Marta.....	U. F. C.	April 28....	May 5
Allianca.....	P. R. R.	April 29....	May 5
Calmares.....	U. F. C.	May 1....	May 9
Zacapa.....	U. F. C.	May 5....	May 12
Colon.....	P. R. R.	May 6....	May 12

CRISTOBAL-COLON TO NEW YORK.

Santa Marta.....	U. F. C.	May 6....	May 13
Panama.....	P. R. R.	May 8....	May 14
Pastores.....	U. F. C.	May 10....	May 17

Zacapa.....	U. F. C.	May 13....	May 20
Allianca.....	P. R. R.	May 15....	May 21

NEW ORLEANS TO CRISTOBAL-COLON.

Cartago.....	U. F. C.	May 1....	May 6
Turrialba.....	U. F. C.	May 4....	May 11
Heredia.....	U. F. C.	May 8....	May 13
Abangarez.....	U. F. C.	May 11....	May 18
Parismina.....	U. F. C.	May 15....	May 20

CRISTOBAL-COLON TO NEW ORLEANS.

Parismina.....	U. F. C.	May 6....	May 11
Atenas.....	U. F. C.	May 6....	May 13
Cartago.....	U. F. C.	May 13....	May 18
Turrialba.....	U. F. C.	May 13....	May 20
Heredia.....	U. F. C.	May 20....	May 25
Abangarez.....	U. F. C.	May 20....	May 27



The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly free of charge, one copy each, to all employees of The Panama Canal and Panama Railroad Company whose names are on the gold roll. To others, the subscription rate will be \$1, United States currency, per annum, in the United States and its possessions; Canada, Cuba, Mexico, and the Republic of Panama, and \$1.50 United States currency, per annum, in all other countries.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

The "Cristobal" to Return to Passenger Service.

The steamship *Cristobal* of the Panama Railroad Steamship Line, which has been making tramp runs between New York and the Isthmus in freight service since retirement from passenger service in August, 1914, is to be returned to passenger service, as set forth in the circular notice from the Acting Governor of The Panama Canal, published on page 339. The congestion in passenger traffic which necessitates the use of the *Cristobal* for its relief is regarded as temporary and due to the fact that numbers of employees are taking their leaves, prior to the expiration of the leave period.

Both Piledrivers Recovered from Limon Bay.

Piledriver No. 103, one of the two lost off of the trestle of the East Breakwater during the norther of February 9, was recovered on Wednesday, May 5, by forces of the Dredging Division and is now undergoing repairs, preparatory to its return to service in the construction of the breakwater trestle. The men started work at five o'clock in the morning and by 5 p. m. had landed the piledriver at Dock 14. It was lifted by means of the floating crane *Hercules* and, on account of the choppy sea running at the time, towed to the dock under water, which prevented the possibility of its damaging the hull of the *Hercules*, as might have happened if it had been attempted to raise the piledriver out of water and swing it aboard the crane or on a barge. The piledriver was found to have been damaged only slightly and it was hauled on its own trucks from Dock 14 to Coco Solo, where it is being repaired. The steam hammer had fallen away from the leads and was not recovered but it will be located by the diver and raised.

The other driver, No. 104, was raised two feet on Friday, May 7, but the slings gave way and a second effort was necessary. This was made on Tuesday, May 11, when the piledriver was recovered and brought to Dock 14. Since falling from the trestle it had been three-fourths buried in the coral sand fill through which the trestle was being driven, and submerged 40 feet below the surface of

the water. Its recovery was at first not thought practicable, but was effected by the skillful and persistent work of the men in charge of the superintendent of dredging. No. 104 was damaged worse than No. 103, but may be fitted for service at considerably less expense than the purchase of a new piledriver would involve.

Distances to Seattle by the Canal.

Inquiry has been received as to why the port of Seattle was omitted from the ports listed in an article showing some of the reductions in distances effected by The Panama Canal, published in THE CANAL RECORD of April 7, 1915.

In the preparation of the tables of distances, the distances saved at sea were the primary consideration, and accordingly the several important ports on Puget Sound were represented, as a group, by Port Townsend because it is nearest the sea. Vessels bound for Seattle or Tacoma pass Port Townsend; reductions of distances to Port Townsend are equivalent to reductions of distances to the ports farther inland on Puget Sound.

Seattle is 38 miles inland from Port Townsend. By the Canal, Seattle is 6,070 nautical miles from New York, which is 7,873 miles less than by the Straits of Magellan, 13,943 miles. The new course is slightly over two-fifths of the former. From Seattle to New Orleans is now 5,491 miles, three-eighths of the old route. From Seattle to Liverpool by way of Magellan is a distance of 14,310 nautical miles; this is reduced by the use of the Canal to 8,644 miles. The foregoing are representative distances and of the greatest importance in the relation of the Canal to Seattle, as practically all of the ships from that port which have passed through the Canal have been bound for Atlantic ports of the United States, in the coastwise trade, or for Europe. It is stated by the Seattle Chamber of Commerce that three-fourths of the salmon pack for 1914, one of the important items of export from Seattle, has been despatched to Atlantic ports through the Canal.

New Records in Mixing and Placing Concrete.

Further records for the mixing and placing of concrete with half-yard mixers were made by the forces of the Division of Terminal Construction on the south wall of dry dock No. 1 at Balboa on April 19.

The regular mixer battery on the south wall consists of four half-yard mixers, working in units of two. One of the mixers in one of the units was closed down and the two crews of the unit fed the other mixer. During the 8-hour day, the double-crew mixer mixed approximately 321.94 cubic yards of concrete, as calculated on this basis: The total place measurement of the output of the three mixers was 655 cubic yards, mixed in 1,005 batches. Each batch averaged, accordingly, .6517 cubic yards. Of the 1,005 batches, the

double-crew mixer mixed 494, which, on the basis of the average for all batches, may be taken to mean 321.94 cubic yards.

The time charged to this mixer was as follows:

	Hours.	Cost.
1 foreman.....	4	\$2.71
1 subforeman.....	8	2.00
1 mixer runner.....	8	1.04
1 mixer helper.....	8	1.04
1 lever man.....	8	1.04
1 man cleaning runway.....	8	1.04
2 men carrying cement to hoppers.....	*8	2.08
2 men wheeling cement.....	*8	2.08
2 men in cement car.....	*8	2.08
18 men handling wheelbarrows.....	*8	18.72
1 helper on wheelbarrows.....	8	1.04
Total labor cost.....		\$34.87

*8 hours for each man.

During the 8-hour period 30 minutes were lost while the chutes for the mixed concrete were being washed, and one hour and 15 minutes were lost in waiting for forms. The actual working time was, accordingly, six hours and 15 minutes. The half-yard mixer, therefore, made a record of mixing 321.94 cubic yards of concrete in six hours and 15 minutes, at a cost of \$34.87, or \$.108 per cubic yard.

The yardage of gravel used is about the same as the yardage of concrete mixed. The 18 men trundling the wheelbarrows handled, therefore, in the six hours and 15 minutes about 321 cubic yards of gravel, an average of 17.8 yards per man. This is equivalent to 2.85 cubic yards, or about 76.9 cubic feet per hour. As the gravel as handled at the dry dock weighs about 115 pounds to the cubic foot, each man was handling about 8,840 pounds, or 4.44 tons, per hour of working time, which is an average of over 147 pounds per minute.

Starting New Coastwise Passenger Service.

The steamship *Finland* of the Panama Pacific Line arrived at Cristobal on Friday, May 7, and made the transit of the Canal the same day, on her way from New York to San Francisco on the first voyage of a proposed regular coastwise passenger and freight service in which the *Finland* is to be engaged with her sister ship, the *Kroonland*, with sailings each way about every three weeks. The eastbound service will be started with the return of the *Finland*, scheduled to sail from San Francisco on May 26.

On this voyage the *Finland* carried a total of 431 passengers, consisting of four local and 427 through passengers, the latter made up of 342 cabin, and 85 intermediate passengers. Her crew numbers 284. The cargo amounted to about 5,000 tons and included a great variety, among the larger items of which were table sauce, beans, milk, beer, nuts, grape juice, animal food, machinery, horse shoes, wire goods, wired glass, petroleum tar oil, tin plates, soap, tobacco, whiskey, dry goods, drugs, floor tiles, and barbed wire, and a shipment of United States mail, discharged at Cristobal for the Canal Zone.

Quarantine Activities in April.

Emigration from the Isthmus to foreign ports during the month of April exceeded immigration by 1,770 persons. This brings the net emigration since July 1, 1913, to 25,889; during the 22 months, there has been only one month, March, 1915, in which immigration exceeded emigration.

A summary of the movements of people through the ports and of the activities of the quarantine officers at the ports of Balboa-Panama and Cristobal-Colon during the month of April, is given in this consolidated report:

Number of vessels inspected and passed	172	
Number of vessels held in quarantine..	13	
Total.....	185	
Number of vessels fumigated on arrival	9	
Number of vessels fumigated on departure.....	2	
Total.....	11	
Number of crew examined.....	11,032	
Number of passengers examined (including 133 U. S. troops).....	3,605	
Total.....	14,637	
Number of persons vaccinated at ports of arrival because of compulsory vaccination law.....	481	
Number of persons vaccinated at ports of departure or enroute because of compulsory vaccination law.....	657	
Total.....	1,138	
Number of persons held in quarantine at the detention houses to complete period of incubation of yellow fever and plague.....	360	
Number of persons held in quarantine on board vessels to complete period of incubation of yellow fever and plague.....	1,448	
Total.....	1,808	
Number of persons landed from foreign ports:		
Cabin.....	1,575	
Steorage.....	981	
Total.....	2,556	
Number of persons embarked for foreign ports:		
Cabin.....	2,886	
Steorage.....	1,440	
Total.....	4,326	
Number of persons arrived from coast towns on small launches and sailing craft.....	2,799	
Number of persons sailing for coast towns on small launches and sailing craft.....	1,726	
Apparent increase for month from coast towns.....	1,073	
Apparent decrease for month from foreign ports:		
Cabin (decrease).....	1,311	
Steorage (decrease).....	459	
Total.....	1,770	
Number of immigrants recommended for deportation.....	11	
Number of bills of health issued or viséed.....	193	
Total number of persons landed.....	5,355	
Less number for Pacific ports.....	214	5,141
Total number of persons sailing.....	6,052	
Total apparent decrease for month.....	911	

Cargo of Creosote.

The steamship *H. C. Henry*, passing through the Canal on April 20, carried a cargo of 5,000 tons of creosote, shipped at London and Middlesboro for discharge at lumber yards at Seattle and along the Columbia River. This is the first whole cargo of this preservative to have passed through the Canal.

The "Ulysses" Sails for Norfolk.

The new Canal collier *Ulysses* completed on Sunday, May 9, the discharge of the cargo of coal brought to the Isthmus on her maiden voyage, and sailed the same day for Norfolk. The *Ulysses* is being operated by the Panama Railroad Steamship Line.

RECEIPTS AND EXPENSES.

Toll Earnings in March Exceed Cost of Operation and Maintenance, Reducing Deficit.

Earnings of tolls during the month of March were greater than the cost of operation and maintenance of the Canal by \$137,509.65.

This gain reduced the deficit in the account, running from the beginning of the fiscal year, on July 1, 1914, to \$123,588.45. The total cost of operation and maintenance during the 9-month period of the fiscal year which has elapsed has been \$3,018,888.65. The loss of \$123,588.45 represents a loss of 4.09 per cent on the total outlay, not counting anything for interest on the investment or depreciation of the plant.

The basis of the distribution of costs in determining what should be charged to operation and maintenance was explained in THE CANAL RECORD of April 14, 1915, prefacing a

report on the account to March 1. It was stated there that the charges for operation and maintenance include all the diversified expenditures necessary for keeping the Canal open and in order, and the work of handling vessels through; with the addition to such expenditures of a prorated part (approximately 35 per cent) of the overhead expenses of The Panama Canal organization.

The deficit, amounting to \$123,588.45 on April 1, was further reduced during the month of April. The exact figures on the cost of operation and maintenance during the month of April are not available yet, but it is known that the collections of tolls were in excess of the expenses.

Detailed summary of the various items of expenditure included under operation and maintenance for March and February, and the aggregate for the nine months ending April 1, is given in the following table:

ITEMS.	Month of March, 1915	Month of February, 1915	Total since July 1, 1914
Civil Government, proportion.....	\$19,944.39	\$20,164.53	\$172,309.69
Health Department, proportion.....	20,243.87	19,128.60	183,481.36
Administration, proportion.....	83,397.24	81,146.00	657,968.06
Operation and maintenance:			
Admeasurement of vessels.....	1,008.16	957.16	7,616.07
Local inspection.....	373.49	380.66	2,840.85
Aids to navigation.....	4,777.69	4,856.27	35,915.38
Pilotage.....	6,752.18	7,075.80	42,000.28
Damages to vessels.....	720.63	1,055.19	2,169.09
Maintenance of transportation tracks.....	5,969.73	4,824.90	29,859.31
Gatun Locks:			
Superintendence.....	1,338.22	1,731.09	13,731.28
Operation.....	8,183.68	7,865.30	76,298.31
Maintenance of operating machinery and equipment.....	2,926.54	3,681.15	24,188.21
Maintenance and care of emergency dams.....	934.28	1,280.89	10,126.57
Maintenance of gates.....	11.36	48.18	733.25
Maintenance of valves.....		242.78	785.28
Maintenance of towing track system.....	714.21	745.25	5,071.71
Maintenance of towing locomotives, lines, and hawsers.....	1,184.07	823.27	9,764.25
Maintenance of lighting and telephone system.....	202.59	228.17	2,223.67
Maintenance of power control and lighting cables.....	2.85	26.81	257.86
Maintenance of structures.....	1,959.68	2,327.02	18,764.92
Maintenance of backfill.....	190.41	2,370.77	6,372.44
Miscellaneous supplies and expenses.....	148.25	149.81	2,190.54
Gatun Spillway:			
Operation.....	83.67	66.49	821.09
Maintenance of operating machinery and equipment.....			1,030.51
Maintenance of gates and caissons.....	668.84		2,975.84
Maintenance of structures.....	329.57	755.28	5,086.59
Gatun Dam, maintenance.....	10,539.14	4,073.89	26,867.02
Pedro Miguel Lock:			
Superintendence.....	1,516.75	1,863.70	11,580.97
Operation.....	5,132.10	5,329.25	60,571.53
Maintenance of operation machinery and equipment.....	2,046.94	2,251.64	17,001.63
Maintenance and care of emergency dams.....	433.39	640.32	5,861.96
Maintenance of gates.....			1,090.77
Maintenance of valves.....		21.19	117.17
Maintenance of towing track system.....	19.63	1.96	114.82
Maintenance of towing locomotives, lines, and hawsers.....	940.10	797.30	6,446.82
Maintenance of lighting and telephone system.....	184.36	129.60	1,323.92
Maintenance of power control and lighting cables.....		9.36	876.13
Maintenance of structures.....	1,123.14	1,114.23	6,114.30
Maintenance of backfill.....	4,438.80	3,243.27	15,800.96
Miscellaneous supplies and expenses.....	197.35	117.64	1,273.28
Pedro Miguel Dam, maintenance.....			42.00
Miraflores Locks:			
Superintendence.....	1,656.24	1,848.58	13,675.07
Operation.....	7,721.72	7,025.83	77,781.65
Maintenance of operating machinery and equipment.....	1,230.79	895.53	13,356.53
Maintenance and care of emergency dams.....	1,682.70	362.41	6,395.20
Maintenance of gates.....	1,588.89	2,503.20	22,478.38
Maintenance of valves.....	1,357.30	4,602.05	9,420.42
Maintenance of towing track system.....		79.92	1,045.17
Maintenance of towing locomotives, lines, and hawsers.....	525.13	837.04	5,446.79
Maintenance of lighting and telephone system.....	138.74	109.19	1,472.41
Maintenance of power control and lighting cables.....		4.00	135.48
Maintenance of structures.....	775.87	830.58	6,999.86
Maintenance of backfill.....	3,488.64	2,582.78	12,659.01
Miscellaneous supplies and expenses.....	230.82	287.70	2,452.53
Miraflores East Dam and Spillway:			
Operation.....			651.50
Maintenance of operating machinery and equipment.....	116.61	63.39	4,956.86
Maintenance of gates and caissons.....	117.44	100.87	3,118.43
Maintenance of structures.....	51.38	276.89	648.74
Miraflores West Dam, maintenance.....			377.17
Dredging:			
Atlantic entrance.....	16,930.57	20,376.08	117,649.33
Culebra Cut.....	195,262.52	181,873.83	1,207,957.91
Pacific entrance.....			4,978.80
Maintenance of Gatun Lake.....	1,762.66	1,439.21	10,538.83
Gatun-Mindi Levee, maintenance.....		323.46	22,564.96
Naos Island Breakwater, maintenance.....			461.93
Total, operation and maintenance.....	\$423,275.32	\$408,001.26	\$3,018,888.65
Tolls earned.....	560,784.96	383,904.96	2,895,300.20
Excess of tolls earned over expenses.....	\$137,509.64		
Expenses in excess of tolls earned.....		\$24,096.30	\$123,588.45

FIRE ON "PENNSYLVANIAN."

Blaze Started from Broken Oil Pipe—Extinguished After 50 Hours' Fighting.

Within less than two hours of clearing the Canal, enroute from New York to San Francisco, in the evening of Tuesday, May 4, the *Pennsylvanian* of the American-Hawaiian Line caught fire and was compelled to return to Balboa. The fire burned for about 70 hours but was finally extinguished with only superficial damage to the ship.

The fire broke out at 8.20 p. m., starting from a broken union in a fuel oil pipe leading to the boilers. The oil fell to the floor from the break and was ignited from the burners under the boilers. Efforts were made by the crew to extinguish the blaze by means of patent extinguishers and sand but it was necessary to start the fire pump before the blaze could be put out. In the meantime the excessive heat against the forward fire room bulkhead had ignited cargo resting against the bulkhead on the 'tween deck of the No. 3 hold. It was from this point that the fire spread.

After the fire in the fire room had been put out the smoke of burning wood gave notice of the cargo afire in the No. 3 hold. The hatches were taken off but in the dense smoke it was impossible to locate the extent of the blaze and it was decided to try to smother the fire with steam. The hatches were sealed and steam was turned into the hold from the vents. This required more steam, however, than was immediately available and as the heating of the deck plates continued, the *Pennsylvanian* started back to Balboa at 10.25 p. m. The steam pressure had been

Panama Canal, the fire was put out in the afternoon of Friday, May 7. Over 40 men had been overcome from time to time, and physicians of The Panama Canal were at hand continuously to care for them. There were no fatalities.

At one time it seemed advisable to scuttle the vessel, principally on account of danger of interior explosions. She would have been taken to Culebra Island and sunk, to be pumped out and raised, after the fire was extinguished. While this procedure was under advisement by the master of the vessel and the local representative of the American-Hawaiian Steamship Company and the agent of Lloyd's, the fire department succeeded in extinguishing the fire. The water pumped in had caused the ship to list nine degrees to the port side, but when this was pumped out the vessel righted herself.

The damage to the ship is regarded as superficial, principally in paint scaled off by the heat, some buckling of plates, and in the holes cut in the plates, which can be repaired very easily. The damage to the cargo has yet to be determined by average adjusters.

As will be seen from the accompanying cargo sketch of the *Pennsylvanian*, the damage to the cargo was principally forward of the engine room, in No. 3 and No. 2 holds. However, the steam used in the smothering attempts in the forward holds passed aft through inside alleyways as far as the No. 4 bulkhead, and did considerable damage to the cargo in the No. 4 hold on the shelter deck. Cargo below the shelter deck of No. 4 hold was not damaged, and the No. 4 bulkhead protected the cargo in No. 5 and No. 6 holds, which was not damaged. The practically

The master of the *Pennsylvanian* expressed himself as feeling that he had come out luckily from a situation which at first seemed most serious. He had only words of praise for the way in which he had been assisted by the Canal force, and said that in no way could his vessel have received better treatment. At the same time he stated that the officers and crew of the ship acted admirably throughout. The original blaze in the fire room was very strong, and the proximity of the deep fuel oil tank made coping with it a matter of considerable danger.

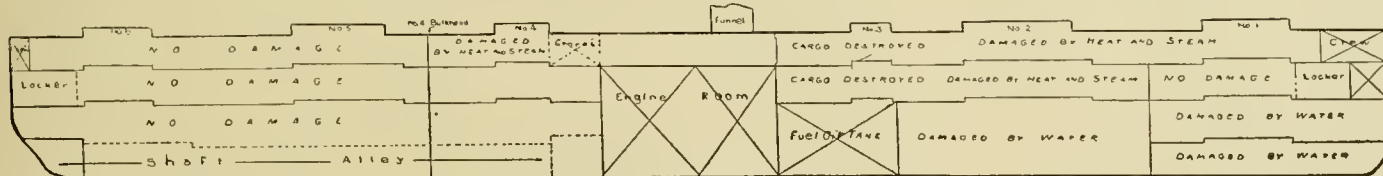
Cargo on the "Pennsylvanian."

The total cargo on the *Pennsylvanian* was 6,800 tons of general merchandise, of remarkable variety. Among the debris unloaded on the wharf were glassware, plumbing material, chairs, rope, disinfectant, sewing machines, soap, rubber shoes, toys, kitchen utensils, fruit jar rings, tools, underwear, beans, rifles, patent medicines, salad dressing, paint, stationery, flour, electrical material, and many other things.

Records of the "Pennsylvanian."

The *Pennsylvanian* of the American-Hawaiian Line is a fast ocean freight vessel, 408 feet long by 54 feet in the beam, of 6,649 gross and 4,054 net tons, United States registry, built at Sparrows Point, Maryland, in 1913, and equipped with refrigerating apparatus. She was among the first vessels to make the transit of the Canal, having entered on August 15, 1914, the day of the opening to commercial traffic, and has been through the Canal seven times.

Up to the time of the trip of the *Great*



CARGO SKETCH OF *Pennsylvanian* SHOWING DISTRIBUTION OF DAMAGE.

so lowered by the use of steam against the fire that movement was slow and it was not until 2.25 a. m., Wednesday, that the vessel cast anchor in the outer harbor.

Word of the fire had been sent to the Canal authorities by radio, requesting extra men to break out the cargo. These were sent but investigation showed they could not extinguish the fire, and the *Pennsylvanian* was brought into the inner harbor and moored alongside the quay wall, about opposite the Port Captain's office, at 5.30 p. m. Forces of the Canal Zone Fire Department were waiting on the wharf and immediately took charge.

The firemen fought the fire with hose and water until about midnight, when it was decided to try smothering again. At 7 a. m., Thursday, the hatches were removed and it was found that the steam had not extinguished the fire, so the use of hose was resumed. On account of the heat, smoke, and fumes it was difficult to locate the fire and to approach close to it, and various efforts were made to reach it from above, by cutting holes in the deck plates, in which the oxy-acetylene process was employed. After nearly two days of continuous work by the Canal Zone firemen, forces of the Coast Artillery Corps stationed at Fort Grant, and various employees of The

complete damaging of cargo was confined to the No. 4 hold shelter deck, where heat and steam were very severe, and to the No. 3 hold shelter and 'tween decks. The cargo in the No. 2 hold, shelter and 'tween decks, was damaged by heat and steam. The hold below was flooded by water which overflowed the hatch copings of the 'tween deck. In the No. 1 hold, heat and steam did some damage on the shelter deck, but the 'tween deck was protected by a bulkhead, separating this from the No. 2 hold, and its cargo escaped damage. The cargo below was damaged by water which came down the scuppers. In all, about half the cargo escaped damage, and of the damaged half about one-fifth appeared to have been badly damaged.

Much of the damaged cargo was unloaded on the wharf, along with a considerable quantity which was not badly damaged. On Tuesday the discharge of cargo was discontinued, it having been decided to carry all except that badly damaged to San Francisco, and to leave the other here for appraisal by a Lloyd's surveyor, to come from New York. Work of reloading in the forward holds was begun on Tuesday, and it is expected that the *Pennsylvanian* will sail for San Francisco on Thursday or Friday of this week.

Northern, a new passenger steamship, the *Pennsylvanian* held the record for the quickest voyage from Philadelphia to San Francisco, done in 14 days, 17 hours and 25 minutes, through the Canal. The distance of 5,130 miles was covered at an average speed of 14.51 knots. On the voyage the *Pennsylvanian* burned 3,977 barrels of fuel oil, or .77 of a barrel to the mile. As the oil costs the company about 80 cents per barrel, the fuel cost of the vessel was approximately 60 cents a mile.

Swimming Proficiency of Zone Children.

That the American children reared on the Isthmus have attained a proficiency in swimming considerably above the average for children in the United States is an opinion recently expressed by the Superintendent of Clubs and Playgrounds. It is said that there is not an American child in Cristobal over six years of age that can not swim; and it is believed that the proportion of swimmers among the children is almost as great in the other Canal villages, excepting Ancon and Balboa, from which access to swimming places is relatively difficult. The proficiency among the girls is almost as great as among the boys. The development of swimming on the Isthmus is attributed principally to the continuous warm weather, the accessibility of the water, and the lack of other outdoor sports.

DIRECTORY FOR PANAMA.

List of Principal Officials of Republic, and of Representatives of Foreign Countries in Panama.

The following is a directory of the principal officials of the Republic of Panama, and of the diplomatic and consular representatives of foreign countries accredited in Panama on May 3, 1915. The headquarters of the national government are in the city of Panama, which is the address of all the officials of the government listed here except those specifically designated as officials of other provinces or municipalities, and those connected with the embassy at Washington. The addresses of the consular and diplomatic officers are indicated separately.

President—Dr. Belisario Porras.
First Vice-president—Rodolfo Cbiari.
Second Vice-president—Ramon M. Valdés.
Third Vice-president—Aristides Arjona.

Departments of National Government.

Secretary of Government and Justice—Juan B. Sosa.
Under Secretary of Government and Justice—Enrique Hurtado.
Secretary of Foreign Affairs—Ernesto T. Lefevre.
Under Secretary of Foreign Affairs—José B. Calvo.
Secretary of Finance and Treasury—Aristides Arjona.
Under Secretary of Finance and Treasury—Leovigildo Gonzalez.
Secretary of Public Works—
Under Secretary of Public Works—Ladislao Sosa.
Secretary of Public Instruction—Guillermo Andrey.
Under Secretary of Public Instruction—Jephtha B. Duncan.
Director General of Posts and Telegraphs—Emilio Clare, Jr.
Director General of Statistics—Aizpuru Aizpuru.
Administrator General of Public Lands—J. J. Garcia.
Treasurer General—J. M. Alzamora.
Consulting Engineer of the Republic—A. S. Zinn.
Chief of the National Police—Rodolfo Estripeaut.
Director of the Office of Uncinariasis—Dr. L. W. Hackett.

Minister at Washington—Eusebio A. Morales.
Secretary of Legation—José E. Lefevre.

Judiciary.

Superior Judge of the Republic—Juan D. Arosemena.
Attorney-General—Antonio Papi Aizpuru.

Governors of Provinces.

Panama—José Maria Fernandez.
Colon—Ruben S. Arcia.
Bocas del Toro—Fabio Bravo.
Coclé—Alfredo Patiño.
Los Santos—Ezequiel Urrutia Diaz.
Veraguas—Federico Barrera.
Chiriqui—Santiago Anguizola.
Herrera—Moisés Espino.

Municipalities of Panama and Colon.

Alcalde of Panama—Julio Arjona Q.
Alcalde of Colon—M. de J. Grimaldo P.

List of the Diplomatic and Consular Corps Accredited to the Republic of Panama.

ARGENTINA.
Panama—Horacio Bossi Cáceres, Consul-General.
AUSTRIA-HUNGARY.
Colon—Francisco Ullrich, Consul.
BELGIUM.
Guatemala—H. Henin, Minister Resident.
Panama—B. D. Fidanque, Consul (absent). Mauro B. Fidanque, Consul (acting, absent). Alfred L. Maduro, Consul (acting).
Colon—J. J. Henriquez, Vice-Consul.
BOLIVIA.
Panama—Samuel Boyd, Consul-General.
Colon—Isidoro Hazera, Consul (acting).
BRAZIL.
Havana, Cuba—Luis Guinaraes, Chargé d'Affaires.
Panama—Ranón Arias F., Consul. Jorge D. Arias F., Vice-Consul.
CHILE.
San José, Costa Rica—C. Vergara Clark, Envoy Extraordinary and Minister Plenipotentiary.
Panama—C. Risopatron Barros, Chargé d'Affaires and Consul-General. Juan Ehrman, Consul.
Colon—Ernesto Jaramillo Avilés, Consul.
CHINA.
Panama—Fong Tsiang Kwong, Consul-General.
C. N. Chan, Vice-Consul.
COSTA RICA.
Panama—Humberto M. Vaglio, Consul.

Colon—Daniel Rojas P., Consul.
Bocas del Toro—Luis Esquivel, Consul.

CUBA.

Panama—R. Gutiérrez Alcaide, Chargé d'Affaires and Consul-General. Julio Dominguez Romay, Vice-Consul.

Colon—José Manuel García Cuervo, Consul.

DENMARK.

Panama—I. L. Maduro, Consul.
Colon—Joseph Fidanque, Vice-Consul.

ECUADOR.

Panama—J. Cueva García, Minister Resident. Victoriano Endara, Consul.

FRANCE.

Panama—Paul Bizel, Chargé d'Affaires. Louis Thublier, Vice-Consul.
Colon—M. H. de Jussien de Senevier, Vice-Consul.
Bocas del Toro—Raoul Cochéz, Consular Agent.
David—Eugene Loeffler, Vice-Consul.

GERMANY.

Panama—Arturo Köhpcke, Consul.
Colon—Alfred Sange, Consul.

GREAT BRITAIN.

Panama—C. C. Mallet, Envoy Extraordinary and Minister Plenipotentiary. Percivale Helyar, Vice-Consul. E. S. Hamber, Pro-Consul.
Colon—H. O. Chalkley, Consul. Albert E. Renault Browne, Vice-Consul. William McAdam, Pro-Consul.
Bocas del Toro—William H. Ponton, Vice-Consul.

GREECE.

Panama—Florealdo Arosemena, Consul.

GUATEMALA.

Panama—J. F. Arango, Consul.
Colon—Vicente Delgado, Consul.

HAYTI.

Colon—Jules Faine, Consul-General.

HONDURAS.

Panama—Marcos E. Velázquez, Consul-General.
Colon—L. Delplano, Consular Agent.

ITALY.

Panama—Carlos Raguzzi, Chargé d'Affaires.
Colon—L. Delplano, Consular Agent.

MEXICO.

Panama—Francisco Mallén, Consul-General. Baldo-mero Méndez, Vice-Consul.

Colon—Inocencio Galindo, Vice-Consul.

THE NETHERLANDS.

Panama—D. M. Sasso, Consul.
Colon—J. J. Ecker, Sr., Vice-Consul.

NICARAGUA.

Panama—Marcos E. Velázquez, Chargé d'Affaires.
Julio Arjona Q., Consul.
Bocas del Toro—Solomon H. Conoan, Consul.

NORWAY.

Mexico City—Michael Strom Lie, Consul-General.
Panama—George Myers Guerin, Vice-Consul. P. G. Eastwick, Acting Vice-Consul.
Colon—David S. Webster, Consul. Nicolas Bergh, Acting Vice-Consul.

Bocas del Toro—Hans F. W. Candler, Vice-Consul.

PERU.

Panama—O. Barranchey Raygado, Chargé d'Affaires and Consul-General. Alberto de Obarrio, Consular Agent.

Colon—H. R. Wilford, Consul.

PORTUGAL.

Panama—Fernaó Botto Machado, Envoy Extraordinary and Minister Plenipotentiary. Ramón Arias F., Consul. Esteban Duran, Vice-Consul.
Guatemala—José da Costa Carneiro, Consul-General.
Colon—Ruben Arcia, Consul. Ofilio Hlazerá, Vice-Consul.

Bocas del Toro—E. C. McFarland, Vice-Consul.

SALVADOR.

Panama—Ernesto Boyd, Consul-General.

SANTO DOMINGO.

Panama—Arturo de Lemos, Consul.
Colon—José M. Fidanque, Vice-Consul.

SPAIN.

Panama—Emilio de Motta, Chargé d'Affaires and Consul. Luis San Simón y Ortega, Vice-Consul.
Colon—Antonio Andrade Polanco, Consul.
David—Pedro del Rio, Consular Agent.
Santiago de Veraguas—Julio García Sierra, Vice-Consul.

SWEDEN.

Panama—B. Malo, Consul.
Colon—J. J. Ecker, Sr., Vice-Consul.

SWITZERLAND.

Panama—José Misteli, Consul.

UNITED STATES.

Panama—Wm. Jennings Price, Envoy Extraordinary and Minister Plenipotentiary. Willing Spencer, Secretary of Legation. Alban G. Snyder, Consul-General. Louis A. Clausel, Vice and Deputy Consul-General.
Colon—William H. Gale, Consul. Frederick L. Herron, Vice-Consul.
Bocas del Toro—Paul Osterhout, Consular Agent.
David—William D. Gillespie, Consular Agent.
Santiago de Veraguas—Nathaniel J. Hill, Consular Agent.

VENEZUELA.

Colon—Aristides Calcaño, Consul-General.

EXECUTIVE ORDER.

Changing the Name of Culebra Cut.

It is hereby ordered that the portion of the Panama Canal through the continental divide heretofore known as "Culebra Cut" shall hereafter be named "Gaillard Cut" in honor of the late Lieut.-Col. D. D. Gaillard, Corps of Engineers, United States Army.

As a member of the Isthmian Canal Commission from March 16, 1907, to December 5, 1913, Lieutenant Colonel Gaillard was in charge of the work in Culebra Cut until its virtual completion, being compelled to abandon his duties in July, 1913, through an illness which culminated in his death on December 5, 1913. His period of Panama Canal service included the years of most active construction work. He brought to the service trained ability of the highest class, untiring zeal, and unswerving devotion to duty.

I deem it a fitting recognition of Lieutenant Colonel Gaillard's service to the country to re-name in his honor the scene of his life's triumph.

WOODROW WILSON

THE WHITE HOUSE,

April 17, 1915.

[No. 2185.]

Executive Order No. 2185 is being published locally as Canal circular No. 601-44.

Relief Work in Colon.

The Canal and Red Cross forces have continued the work of relieving the victims of the fire which burned 22 blocks in the city of Colon on April 30. Rations are supplied to women and children but the men who are able to work have been made to support themselves, since the third day. The Panama Canal and the Panama Railroad Company have made employment available to all, at the docks or in the work of clearing away the wreckage. About 1,000 rations have been issued daily, from the Red Cross relief station in the Cristobal commissary. The total number issued during the first week, ending May 8, was 8,161. A card index system is used in keeping tab on the issues.

Tracks have been laid up Bottle Alley and Cash Street and forces of the railroad are engaged in hauling away the remains of the burned houses, consisting principally of corrugated iron roofing.

The Acting Governor has appointed a committee consisting of the Special Attorney, the Engineer of Termina' Construction, and the Superintendent of the Panama railroad, to confer with the Panamanian authorities as to procedure governing reconstruction in the burned area.

Penalty for Non-Payment of Rent and Electric Current Charges by the 15th of Each Month.

In last week's issue of THE CANAL RECORD it was stated that penalties would be added to rent and electric bills if they were not paid before the close of business on "the 25th of each month." The date should have been printed as the 15th, and not the 25th. Occupants of Government quarters will please be guided accordingly.

Announcement has been made of a race from New York to San Francisco, through the Canal, by sea-going motor boats, to start from Sandy Hook early in October.

OFFICIAL CIRCULARS.

Report of Absences.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., May 6, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Your attention is directed to Circular No. 602-9, "Report of Absences," issued under date of July 13, 1914. The failure of foremen and others in supervisory capacities to see that report of absence on PC form No. 484 is forwarded to the timekeeping bureau immediately upon the return of an employee to work, has in numerous instances resulted in payment for time absent being delayed one month. This is particularly the case where an employee returns from a leave of absence at or near the close of a month and the report of absence is received after the rolls for the month are closed.

Foremen and others whose duty it is to see that reports of absences are forwarded to the timekeeping bureau must see that this is done and they will be held personally responsible for unnecessary delays.

CHESTER HARDING,
Acting Governor.

All Accommodations on "Advance" Taken.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., May 7, 1915.

To all concerned—No further accommodations on the steamship *Advance*, scheduled to sail from Cristobal on May 29, 1915, are available.

W. P. COPELAND,
Acting Executive Secretary.

Freight Arrangements for Balboa Heights.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., May 4, 1915.

CIRCULAR No. 62:

To all concerned—Balboa Heights station is now open as a freight station for the handling of less than car-load shipments.

In the absence of way-freight train service at this point, a triweekly service from outlying points will be inaugurated by operating an exclusive car for Balboa Heights on the way freight south, out of Colon every Monday, Wednesday, and Friday; likewise on the Las Cascadas branch.

The local agent at Colon will load all freight for Balboa Heights and Balboa Heights only, in a car by itself every Tuesday, Thursday, and Saturday for forwarding on the way-freight the following morning.

In the absence of freight and no car made up for Balboa Heights, he will so notify the yardmaster, who in turn, will see that the way-freight is given an empty box car for the picking up of Balboa Heights freight along the line.

Conductors will be particular to see that only freight for Balboa Heights is loaded into this car.

The chief dispatcher will see that the branch local has an empty box car each Monday, Wednesday, and Friday.

Upon arrival at Balboa yard, the yardmaster will see that cars are promptly placed on the house track, south end of station, for unloading.

On outbound shipments from Balboa Heights, agent will load in a car for the Panama freight station as often as is necessary, where shipments will be transferred to proper cars, made up and forwarded from that station.

C. H. MOTSETT,
Superintendent.

Acting Receiving and Forwarding Agent, Colon-Cristobal.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., May 3, 1915.

CIRCULAR No. 61:

To all concerned—Effective May 6, and during the absence of Mr. R. W. Bergin on leave, Mr. R. B. Walker will act as receiving and forwarding agent, Colon-Cristobal.

C. H. MOTSETT,
Superintendent.

Approved:
CHESTER HARDING,
Second Vice-president.

Acting Receiving and Forwarding Agent, Balboa.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., May 4, 1915.

CIRCULAR No. 65:

To all concerned—Effective May 3, Mr. C. T. Lindsay will act as receiving and forwarding agent at Balboa, vice Mr. Walker, temporarily transferred to Colon.

This cancels my Circular No. 60 of May 3.

C. H. MOTSETT,
Superintendent.
Approved:
CHESTER HARDING,
Second Vice-president.

Acting Superintendent of Stables at Colon.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., May 3, 1915.

CIRCULAR No. 59:

To all concerned—Effective May 8, and during the absence of Mr. X. W. Culbertson, on leave, Mr. W. E. Tragsdorf will be acting superintendent of the Panama railroad stables at Colon.

C. H. MOTSETT,
Superintendent.

Approved:
CHESTER HARDING,
Second Vice-president.

Weights of Cars of Gravel.

PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., May 1, 1915.

CIRCULAR No. 59:

To all concerned—In weighing cars loaded with run-of-bank gravel from Gamboa, it has been ascertained that the large Western dumps average 58½ tons and the small Western dumps average 41 tons.

Hereafter, when securing cars at Gamboa for single and double trains, figure your tonnage according to the above mentioned weights.

All previous instructions in regard to the weights of these cars are hereby cancelled.

C. H. MOTSETT,
Superintendent.

Accountable Official.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,

BALBOA HEIGHTS, C. Z., May 6, 1915.

CIRCULAR No. 91:

Effective May 10, 1915, Mr. D. E. Wright is designated an accountable official of The Panama Canal, and as such will account for all nonexpendable property in the service of the Division of Municipal Engineering.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING,
Acting Governor.

Accountable Official.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,

BALBOA HEIGHTS, C. Z., May 8, 1915.

CIRCULAR No. 92:

Effective May 10, 1915, Mr. Geo. M. Wells is relieved of his accountability for nonexpendable property of the Division of Municipal Engineering, and will assume the accountability for all nonexpendable property of the Building Division, relieving Mr. C. A. McIlvaine, the present accountable official for that division.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING,
Acting Governor.

Half-Rate Tickets for the Military.

THE PANAMA RAILROAD COMPANY,
OFFICE OF THE ACCOUNTANT,

BALBOA HEIGHTS, C. Z., May 5, 1915.

To all station agents—On May 6, 1915, we will put on sale special round trip card tickets marked across face, in large red letters, "U. S."

These tickets are to be sold to United States officers, soldiers, and sailors in uniform, at half regular tariff, without any further authority other than the uniform. These tickets will be honored for passage only when presented by passenger in uniform.

Officers, soldiers, and sailors and their wives, in civilian's clothes, will have to present the usual half-rate request to get the benefit of the reduced rate.

Agents, when honoring a half-rate request, will issue a full-rate ticket, form AI 576 or 576-F, reporting same accordingly, attaching to their monthly report the rate authorities covering.

Agents at points where no U. S. card tickets are on sale will use half-rate simplex tickets, form AI 576-D (the same as used for children) for soldiers and sailors in uniform.

Agents will use form AI 576-A when request is made by soldiers and sailors in uniform for one-way ticket.

Conductors and collectors will honor tickets form AI 576-A and AI 576-D, when presented by passengers in uniform, or by children.

J. H. GERRING,
Acting Railroad Accountant.

Listing of Nonexpendable Accessories of Equipment.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,

BALBOA HEIGHTS, C. Z., April 24, 1915.

CIRCULAR No. 90:

To all concerned—Effective at once, inspectors signing inspection calls for equipment, the price of which includes nonexpendable tools or other accessories, will list these on both the original and duplicate calls, or attach a list thereof to the calls. Full description of such items and estimated value for each item, where actual values are not obtainable, must be furnished. The price at which equipment of this character will be taken into account will be that shown on the call, less the value of such tools or accessories included in the purchase price.

H. A. A. SMITH,
Auditor, The Panama Canal.

Acting Superintendent in Building Division.

THE PANAMA CANAL,

OFFICE OF CONSTRUCTING QUARTERMASTER,
BALBOA HEIGHTS, C. Z., May 5, 1915.

To all concerned—Effective this date, Mr. A. M. Bradford is appointed acting superintendent of the northern district of the Building Division, with headquarters at Cristobal, Canal Zone.

R. E. WOOD,
Constructing Quartermaster

Superintendent of Gatun Locks.

THE PANAMA CANAL,

EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 29, 1915.

CIRCULAR No. 661-15:

Effective May 1, 1915, Capt. Theodore H. Dillon, U. S. A., is appointed superintendent of Gatun Locks, vice Capt. Wm. F. Endress, U. S. A., relieved from duty with The Panama Canal.

GEO. W. GOETHALS,
Governor.

Assistant Engineer, Fortification Division.

THE PANAMA CANAL,

EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 30, 1915.

CIRCULAR No. 661-16:

Effective May 6, 1915, First Lieut. Creswell Garlington, U. S. A., assistant engineer, will be placed in charge of fortification work on the Isthmus, vice First Lieut. Albert H. Acher, U. S. A., relieved from duty.

GEO. W. GOETHALS,
Governor.

The "Cristobal" to Return to Passenger Service.

THE PANAMA CANAL,

EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 7, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

In order to relieve the congestion on Panama railroad vessels, it has been decided to fit out the steamship *Cristobal* for passenger service, beginning with the sailing from New York on May 14.

If it is decided not to send the *Cristobal* through to Balboa on this trip, she will sail from Cristobal on or about May 30. In any event, applications for leave may be submitted effective on the sailing date of the steamship *Cristobal*, and if it is found impracticable to despatch the vessel prior to June 1, such leaves will be extended accordingly.

CHESTER HARDING,
Acting Governor.

Acting Collector.

THE PANAMA CANAL,

EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 1, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective May 1, 1915, and during the absence on leave of Mr. T. L. Clear, Collector, Mr. Elwood P. Sine is designated as Acting Collector of The Panama Canal.

CHESTER HARDING,
Acting Governor.

Proposal for Painting Shavings Exhaust System at Buildings Nos. 8 and 14, Balboa Shops.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., May 19, 1915, and then opened, for furnishing the necessary labor to paint the shavings exhaust system at buildings Nos. 8 and 14, Balboa shops. Specifications and all necessary information may be obtained at this office. Plans of the system may be seen at the office of the assistant engineer, Pacific terminals, Balboa. Bids must be on the basis of a lump sum price. Bids must be accompanied by a deposit of 15 per cent of the total bid. The Panama Canal reserves the right to reject any or all bids.

JOINT LAND COMMISSION.

Rules of Dismissal.

In the matter of the claims of Camille Lepel, rule of dismissal No. 181, docket Nos. 10 and 11, April 28, 1915—The claims of Camille Lepel, dockets Nos. 10 and 11, covering two houses said to be located in the Empire district on lot No. 25, Empire village, and lot No. 16, Camacho village, are hereby dismissed, as the evidence before the Commission is that said Camille Lepel is not the true and lawful owner of the property in question.

FEDERICO BOYD, NICHOLAS CORNET, LEVI M. KAGY, S. Lewis, Commissioners.

In the matter of sundry claims, rule of dismissal No. 179, docket numbers as shown, April 23, 1915—With reference to the following claims, the evidence before the Commission is that settlement therefor has been made by the United States:

Claimant.	Docket No.	Tax No.	Date of Pym't.
Adolphus Delvalle (Del-valley).....	750 & 273	634	3-6-15
		345	
		637	
José Mercedes Olmedo....	753	629	1-30-15
Rev. P. José Valk.....	752 & 3500.....		

In view of the above settlements, no further action is necessary by the Commission, and the foregoing claims are therefore dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI M. KAGY, S. LEWIS, Commissioners.

In the matter of sundry claims, rule of dismissal No. 182, docket numbers as shown, April 29, 1915—With reference to the following claims, the records of the Commission show that in each case written advice received by the Commission from the claimant or claimants or the authorized attorney therefor states that settlement has been made by the United States or by the Panama Railroad Company and asks that said claim be withdrawn:

Claimant.	Dkt. No.	Date of Advice.
Alice Louise Harmon.....	2642	2-8-15
Agustín Rodríguez and Manuel de Jesús Rodríguez, co-owners with Hilario Rodríguez or his successors.	258	2-4-15
José Solís.....	1769	3-4-15
José Solís & Company.....	1770	3-4-15

The requests of the claimants have been granted, and this formal rule dismissing the claims is entered in order that they may be properly stricken from the trial docket.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

In the matter of the claim of Nicholas Yazas, rule of dismissal No. 183, docket No. 774, April 29, 1915—With reference to the claim of Nicholas Yazas (Ayarza), docket No. 774, the evidence before the Commission is that all of the property mentioned in this claim was covered by the Commission's award No. 37 of September 20, 1913, in favor of Nicholas Ayarza, and that Nicholas Ayarza named in award No. 37 is the same person as Nicholas Yazas named in claim docket No. 774.

In view of the above facts, the claim of Nicholas Yazas, docket No. 774, is hereby dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Joint Land Commission Calendar.

Following is a calendar of claims set for hearing for the week ending May 22: *Monday, May 17*—Docket 539 (remainder), Zoraida Cabeza; docket 769, Elena Arguelles. *Tuesday, May 18*—Docket 340, Wm. Keyes; docket 1913, Manuel Leones (argument on motions). *Wednesday, May 19*—Docket 740, Gabriel Jolly. *Thursday, May 20*—Docket 760, Ezequiel Ortega; docket 828, Isee Sing; docket 829, S. L. Abbot. *Friday, May 21*—Docket 830, Francisco Alarcon; docket 831, Uriah Smith; docket 833, Estwick King; docket 834, Edw. Mattise; docket 832, A. D. Primus.

WILLIAM TAYLOR,
Secretary.

Examination by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, May 19, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding

the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the captain of the port of Cristobal on Friday, May 21, 1915, beginning at 9 a. m. Applicants should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.

F. M. NIXON,

Recorder, Board of Local Inspectors.

Legal Notice.

United States of America } In the District Court
Canal Zone. } Division of Balboa.

Estate of José Alvarez, deceased, Petition for Escheat.

Notice is hereby given that at 9 o'clock a. m., of the 15th day of May, 1915, in the court house at Ancon, there will be an inquisition into the estate of José Alvarez, who died intestate about the 24th day of October, 1910, possessed of improvements on land located near Tabernilla, C. Z., for which improvements the Joint Land Commission, in 1913, made an award of \$175 and ordered that the same be paid in the Court of the Canal Zone, pursuant to a petition filed by John K. Baxter, Administrator of Estates, praying that the said sum be escheated in accordance with Sections 779, 780, and 781 of the Code of Civil Procedure of the Canal Zone, at which time and place all persons claiming the said estate, or any interest therein, may appear and be heard before the Court.

E. M. GOOLSBY,
Clerk.

Rainfall from May 1 to 8, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa.....	1.09	5	1.90
Balboa Heights.....	.82	5	1.59
Miraflores.....	.90	5	2.73
Pedro Miguel.....	1.69	7	1.90
Rio Grande.....	1.33	6	2.37
<i>Central Section—</i>			
Culebra.....	1.32	6	1.95
Camacho.....	1.76	6	1.76
Empire.....	1.80	6	2.24
Gamboa.....	.93	7	1.32
*Juan Mina.....	.76	8	1.30
Alhajuela.....	.78	7	.85
*El Vigia.....	.99	7	1.09
Fríjoles.....	2.26	8	3.99
*Trinidad.....			
*Monte Lirio.....	1.75	8	3.40
<i>Atlantic Section—</i>			
Gatun.....	1.02	7	1.68
*Brazos Brook.....	.66	7	1.38
Colon.....	2.10	7	2.59

*Standard rain gage—readings at 5 p. m.

Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, May 8, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., May 2.....	125.60	92.11	80.53	86.44	53.86
Mon., May 3.....	125.55	92.09	86.51	86.44	54.10
Tues., May 4.....	126.45	93.07	86.50	86.45	54.20
Wed., May 5.....	126.15	93.75	86.56	86.47	54.15
Thurs., May 6.....	125.65	92.17	86.56	86.48	54.15
Fri., May 7.....	136.45	99.80	86.55	86.56	54.14
Sat., May 8.....	129.50	94.73	86.12	86.16	54.14
Heights of low water to nearest foot.....	125.0	91.0			

COMMISSARY DEPARTMENT.

New Commissary Store Opened at Balboa.

The opening of the new concrete commissary store at Balboa on Tuesday, May 11, was made something of an event in the community. A considerable number of patrons came to inspect the building and were shown about by the manager. The landscape gardener had provided floral decorations for the occasion. The Depot Commissary delivered a short talk to the employees of the store.

The Balboa commissary is now the largest and best equipped on the Isthmus. It will use regularly over 100 employees.

Commissary Hours.

The commissary stores at Las Cascadas, Empire, and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

The following is a list of retail prices of cold storage provisions which will be effective May 13, 1915:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....		9
Shoulder, trimmed, per pound.....		12
Leg (8 to 10 pounds), per pound.....		19
Short cut, chops, per pound.....		23
Shoulder, chops, per pound.....		14
Lamb—Stewing, per pound.....		12
Shoulder, trimmed, per pound.....		15
Leg (5 to 8 pounds), per pound.....		24
Chops, per pound.....		29
Chops, shoulder, per pound.....		18
Veal—Stewing, per pound.....		12
Shoulder, for roasting (not under 4 lbs.), per pound.....		15
Chops, shoulder, per pound.....		20
Chops, per pound.....		30
Loin for roasting, per pound.....		30
Cutlets, per pound.....		36
Beef—Suet, special, per pound.....		3½
Soup, special, per pound.....		7
Soup, bones, special, per pound.....		2½
Stew, special, per pound.....		11
native, per pound.....		8
Plate, special, per pound.....		12
native, per pound.....		8
Chuck roast, special, (3 lbs. and over), per pound.....		12
Chuck roast, native (3 lbs. and over), per pound.....		8
Rib roast, second cut (not under 3½ pounds), special, per pound.....		16
Rib roast, second cut (not under 3½ pounds), choice, per pound.....		24
Rib roast, second cut, native (3½ pounds and over), per pound.....		9
Rib roast, first cut (not under 3 pounds), special, per pound.....		19
Rib roast, first cut (not under 3 pounds), choice, per pound.....		27
Rib roast, first cut, native (3 pounds and over), per pound.....		11
Pot roast, special, per pound.....		20
choice, per pound.....		28
native.....		12
Rump roast, special, per pound.....		20
choice, per pound.....		28
native.....		12
Porterhouse roast, special per pound.....		22
choice, per pound.....		31
native, per pound.....		16
Steak, chuck, special, per pound.....		13
native, per pound.....		9
Round, bottom, special, per pound.....		13
choice, per pound.....		19
native, per pound.....		9
Round, top, special, per pound.....		15
choice, per pound.....		22
native, per pound.....		10
Sirloin, special, per pound.....		20
Sirloin, choice, per pound.....		28
Sirloin, native, per pound.....		12
Sirloin, choice cut, special, per pound.....		23
Sirloin, choice cut, choice, per pound.....		32
Sirloin, choice cut, native, per lb.....		16
Rump, special, per pound.....		20
choice, per pound.....		28
native, per pound.....		12
Porterhouse (not less than 1½ pounds), special, per pound.....		23
Porterhouse (not less than 1½ pounds), choice, per pound.....		34

Price.

Porterhouse (1½ pounds and over) native, per pound.....	17
Porterhouse, short, Delmonico special, per pound.....	20
Porterhouse, short, Delmonico choice, per pound.....	28
Porterhouse, short, native, per lb.	12
Tenderloin, Western, special, per pound.....	35
Tenderloin, Western, choice, per pound.....	46
Tenderloin, Western, native, per lb	25

NOTE:—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders placed with commissary storekeepers before 11 a. m. will be shipped for delivery on the following morning.

Pork—Hams, fresh, per pound.....	\$23
Shoulders, fresh, per pound.....	\$19
Loin, chop, or roast, per pound.....	\$20
Pigs' feet, fresh, each.....	8
Pigs' head, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23
Ox tails, per pound.....	19

MISCELLANEOUS.

Brains, calves', per pound.....	10
Calves' head, each.....	80
Kidneys, beef, per pound.....	11
Livers—Beef, per pound.....	\$10
Calf, each.....	70
half, each.....	35
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	11
Frankfurter, per pound.....	11
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	10
Pork, per pound.....	13
Sweetbread, beef, per pound.....	20
Eggs, fresh, per dozen.....	29
per ½ dozen.....	15
Bluefish, per pound.....	\$19
Halibut, fresh, per pound.....	15
Salmon, per pound.....	15
Yeast, per pound.....	31
per cake.....	2
Pate de foies gras, per jar.....	50

CURED AND PICKLED MEATS.

Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Minced, "Bologna style," per pound.....	13
Sugar cured, boneless, whole, per pound	20
Sugar cured, whole, per pound.....	18
Half, per pound.....	20
Sliced, per pound.....	24
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	25
Half, boiled, per pound.....	27
Sliced, boiled, per pound.....	33
Hocks, boiled, per pound.....	10
Bacon—Breakfast, sliced, per pound.....	26
Whole piece, per pound.....	25
Strips, whole, per lb.....	19
Sliced, jar.....	24
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	6
Tongues, per pound.....	22

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound	27
Chickens—Fancy, roasting, corn fed, per pound	25
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	22
Capons, per pound.....	32
Broilers, milk fed, per pound.....	32
Broilers, corn fed, per pound.....	28
Turkeys, per pound.....	28
Squabs, each.....	40
Geese, per pound.....	23
Grouse, each.....	1.00
Mallard ducks, 2 to 2½ pounds, each.....	2.35
Pheasants, each.....	1.35

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	†39
Sheffield Farms, extra fancy, per lb.....	58
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	22
Swiss, per pound.....	30
Edam, each.....	90
Parmesan, per pound.....	29
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	**15
Fermeilac, bottle.....	**25
Ice cream, quart.....	†25
½ gallon.....	†50
Cream, 30 per cent, quart.....	**45
pint.....	**23
½ pint.....	**12

VEGETABLES.

Beets, per pound.....	2
Cabbage, per pound.....	4
Carrots, per pound.....	2½
Celery, per head.....	†6
Lettuce, per pound.....	**11
Onions, per pound.....	*4

Price.

Parsley, per pound.....	12
Parsnips, per pound.....	4
Peppers, green, per pound.....	12
Plantains, per dozen.....	*15
Potatoes, white, per pound.....	2
Rhubarb, per pound.....	†6
Spinach, per pound.....	10
Turnips, per pound.....	2
Tomatoes, per pound.....	11
Yams, tropical, per pound.....	2

FRUITS:

Apples, per pound.....	5
Grape fruit—Select, each.....	5
Tropical, each.....	3½
Lemons, per dozen.....	10
Oranges—Select, each.....	2
Tropical, per dozen.....	12
Coconuts, each.....	†4
Bananas, per bunch.....	38
Bananas, each.....	½
Apples, evaporated, per pound.....	12
Apricots, evaporated, per pound.....	13
Pears, evaporated, per pound.....	23
Pineapples, each.....	10
Figs, dried, 12-oz. package.....	14
Figs, dried, 5-oz. package.....	5
Raisins, seedless, package.....	11
table, cluster, per pound.....	*20
Currants cleaned, package.....	12
Prunes, stewing, per pound.....	12
Alligator pears, tropical, each.....	5

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective May 8, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Pears' soap, transparent, cake.....	.13	.16
Brushes, shaving, ea.....	.62	.70
Ribbon, black velvet, yd.....	.15	.17
Ribbon, black velvet, yd.....	.19	.22
Umbrellas, ladies', ea.....	1.90	1.40
Robes, bath, ea.....	5.90	5.30
Hand bags, ea.....	8.50	7.25
Mattresses, single, ea.....	3.75	3.30
Brushes, varnish, 1", ea.....	.32	.36
Cutters, biscuit, ea.....	.01	.02
Kettles, Berlin, 8-qt., ea.....	.53	.57
Oil, 3 in 1, bot.....	.07	.09
Spoons, gravy, ea.....	.85	.71
Cups and saucers, plain, ea.....	.08	.05
Bowls, finger, ea.....	.74	1.05
Glasses, cocktail, ea.....	.45	.70
Glasses, sherry, ea.....	.44	.60
Glasses, claret, ea.....	.49	.70
Glasses, punch, ea.....	.45	.70
Glasses, water, ea.....	.32	.66
Tumblers, whiskey, ea.....	.23	.45

Additions to Stock.

Checks, linen finish, yd.....	.11
Novelty wash goods, yd.....	.09
Voile, splashed, yd.....	.18
Belting, black, No. 152, yd.....	.15
Belting, white, No. 152, yd.....	.15
Belting, black, No. 153, yd.....	.18
Belting, white, No. 153, yd.....	.18
Plates, round, No. 4807, ea.....	1.65
Pots, tea, No. 4807, ea.....	1.55
Jugs, water, decorated crystal, ea.....	4.80
Glasses, lemonade, decorated crystal, ea.....	1.00
Nappies, 5", decorated crystal, ea.....	1.30
Olives, green, keg.....	5.65
Chocolate, "Caracas," cake.....	.12
Chocolate, "Caracas," cake.....	.12
Cocoa, "Caracas," tin.....	.42

Misdirected Letters.

BALBOA HEIGHTS, C. Z., May 10, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressees:

Bartlett, Herbert E.	Hubby, Ralph H.
Bowen, Fitz H.	Jermanos, Debe
Clarke, Joshua D.	Lindle, Willie B.
Clarke, Waldo E.	Markland, G. H.
Coleman, A. W.	Matter, E. P.
Cox, E. M.	Melbourne, Victor
Cullen, James	Persons, Mrs. E. E.
Curtis, Capt. Lawrence A.	Sanders, Walter*
Delson, A. N.	Senhouse, Joseph
Delleser, Louie	Singh, Inder
Dorsey, James	Storm, H.
Duncombe, Wilfred	Suarez, Mrs. Garque
Gaudin, W. F.	Tardo, Steve
Gorman, J. C.	Vick, Sarg
Hertman, A. J.	*Paper.

SHIPPING INFORMATION.

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in the following table:

MAY.				
DATE.	Time and height of high and low water.			
Wed., May 12.....	2:49	8:38	14:58	21:05
	13.0	2.6	13.8	1.6
Thurs., May 13.....	3:28	9:19	15:34	21:43
	13.4	2.3	14.0	1.2
Fri., May 14.....	4:03	9:58	16:07	22:20
	13.7	2.2	14.2	1.0
Sat., May 15.....	4:37	10:35	16:41	22:58
	13.8	2.1	14.2	1.0
Sun., May 16.....	5:10	11:14	17:15	23:35
	13.8	2.3	14.0	1.2
Mon., May 17.....	5:45	11:52	17:49	.....
	13.5	2.5	13.7	.....
Tues., May 18.....	6:13	12:22	18:24	23:12
	1.5	13.3	2.9	13.3
Wed., May 19.....	6:54	12:59	19:03	23:50
	1.9	12.9	3.3	12.9
Thurs., May 20.....	1:36	7:40	14:01	19:46
	2.4	12.6	3.6	12.4
Fri., May 21.....	2:22	8:26	14:52	20:38
	2.8	12.4	3.8	12.0
Sat., May 22.....	3:13	9:18	15:50	21:38
	3.1	12.4	3.8	11.8
Sun., May 23.....	4:10	10:17	16:50	22:46
	3.2	12.6	3.3	11.9
Mon., May 24.....	5:08	11:19	17:49	23:52
	3.1	13.2	2.6	12.4
Tues., May 25.....	6:07	12:18	18:46	.....
	2.6	13.9	1.6	.....
Wed., May 26.....	6:55	7:03	13:14	19:39
	13.2	1.9	14.8	0.6
Thurs., May 27.....	1:51	7:57	14:07	20:31
	14.1	1.2	15.6	-0.4
Fri., May 28.....	2:44	8:50	14:59	21:22
	15.0	0.5	16.3	-1.1
Sat., May 29.....	3:35	9:40	15:50	22:12
	15.7	6.0	16.7	-1.5
Sun., May 30.....	4:24	10:32	16:39	23:00
	16.0	-0.2	16.7	-1.5
Mon., May 31.....	5:15	11:23	17:29	23:50
	16.1	-0.1	16.4	-1.2

JUNE.

DATE.	Time and height of high and low water.			
Tues., June 1.....	6:05	12:15	18:20	.....
	15.8	0.4	15.6	.....
Wed., June 2.....	6:41	6:57	13:08	19:13
	-0.5	15.2	1.1	14.7
Thurs., June 3.....	1:34	7:50	14:03	20:09
	.04	14.5	1.9	13.6
Fri., June 4.....	2:27	8:44	15:03	21:10
	1.5	13.8	2.6	12.6
Sat., June 5.....	3:23	9:48	16:04	22:17
	2.4	13.1	3.2	11.9
Sun., June 6.....	4:23	10:52	17:06	23:28
	3.2	12.6	3.4	11.5
Mon., June 7.....	5:24	11:55	18:06	.....
	3.7	12.4	3.4	.....
Tues., June 8.....	6:33	6:22	12:51	19:01
	11.5	3.9	12.4	3.1
Wed., June 9.....	1:31	7:15	13:41	19:49
	11.8	3.8	12.6	2.7
Thurs., June 10.....	2:18	8:04	14:24	20:33
	12.2	3.6	12.9	2.3
Fri., June 11.....	3:00	8:49	15:04	21:16
	12.6	3.2	13.3	1.8
Sat., June 12.....	3:39	9:31	15:41	21:56
	13.0	2.9	13.6	1.5
Sun., June 13.....	4:15	10:12	16:17	22:35
	13.3	2.6	13.8	1.2
Mon., June 14.....	4:51	10:52	16:54	23:14
	13.5	2.5	13.9	1.1
Tues., June 15.....	5:26	11:32	17:30	23:53
	13.7	2.4	13.9	1.1
Wed., June 16.....	6:02	12:12	18:06	.....
	13.7	2.4	13.7	.....

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from Oh (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Balboa Heights;" in the United States, "Panacanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C." for delivery in the United States.

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., May 9, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
May 3	Panama	American	Panama Railroad S. S. Line.	New York	Balboa	General mdse.	1,802	5,866	4,222
May 3	Fred'k Luckenbach	American	Luckenbach Line.	New York	Los Angeles	General cargo	3,400	3,001	2,042
May 3	Terrier	Norwegian	Wilhelmsens Dmpsk. Akties	New York	Chile	Ballast		5,495	4,032
May 4	Falls City	British	Bradford S. S. Co., Ltd.	Marseilles	Mejillones	Ballast		5,302	3,802
May 4	Pennsylvanian	American	American-Hawaiian Line.	New York	Los Angeles	General cargo	6,800	6,819	4,663
May 4	Inverkip	British	Inverkip S. S. Co., Ltd.	Newport News	Chile	Ballast		4,803	3,620
May 4	John A. Hooper	American	Sudden & Christensen	Matanzas	Port Angeles	Sugar	2,288	2,462	1,536
May 5	Ancon	American	Panama Railroad S. S. Line.	New York	Balboa	Ballast		9,698	7,272
May 6	Panama	Danish	East Asiatic Co.	Port Arthur	Amoy	Oil and wax	8,494	7,021	5,267
May 7	Ohioan	American	American-Hawaiian Line.	New York	San Diego	General cargo	7,319	6,844	4,699
May 7	Finland	American	Panama-Pacific Line.	New York	San Francisco	General cargo	5,000	13,122	8,485
May 9	Natica	British	Anglo Saxon Petroleum Co.	Port Arthur	Balboa	Illuminating oil	6,758	5,957	4,284
May 9	Cassia	British	Anglo Saxon Petroleum Co.	New Orleans	Balboa	Petroleum	6,602	5,162	3,622
May 9	City of Rungoon	British	Ellerman Lines, Ltd.	New York	Vladivostok	General cargo	9,390	7,905	6,054
May 9	Lewis Luckenbach	American	Luckenbach Line.	New York	San Francisco	General mdse.	5,239	4,599	3,492

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

May 3	Auchencrag	British	Auchen S. S. Co.	Cruz Grande	Philadelphia	Iron ore	6,250	4,554	3,505
May 4	Oregonian	American	American-Hawaiian Line.	Los Angeles	N. Y. and Boston	General lumber	6,960	5,909	4,145
May 4	Nereus	American	U. S. Navy	Honolulu	Hampton Roads	Hemp	300	11,143	6,749
May 4	Damara	American	Luckenbach Line.	San Francisco	New York	General	4,153	5,835	4,506
May 5	Pangan	Danish	East Asiatic Co.	Seattle	St. Thomas	Barley, fruit, cop.	4,800	3,794	2,726
May 5	Huasco	British	South American Steamship Co.	Talcahuano	Cristobal	General	1,250	4,563	3,121
May 5	Hurst	British	Clyde Shipping Co.	Calita Buena	Colon (orders)	Nitrates	7,400	5,316	3,890
May 6	Dunsyre	Swedish	Eschen, Minor Co.	San Francisco	Stockholm	Barley, beans, etc.	3,480	2,199	2,027
May 6	Samui	Danish	East Asiatic Co.	Callao	Copenhagen	Nitrates	300	2,912	2,091
May 6	Boyne	British	Mercantile S. S. Co.	Vancouver	Jamaica	Lumber and Gen.	2,400	4,965	3,776
May 6	Royal Prince	British	Prince Line	China and Japan	Boston	General	8,000	7,105	5,300
May 7	Panama	American	Panama Railroad S. S. Line	Balboa	New York	General	2,657	5,866	4,222
May 7	Spectator	British	G. & J. Harrison	Tacoma	Liverpool	General lumber	5,000	4,296	2,961
May 7	Hackness	British	London & Northern S. S. Co.	Australia	Galv's tn, Boston	Conc'n't, wool	7,000	6,423	4,580
May 8	Orissa	British	Pacific Steam Navigation Co.	Valparaiso	Liverpool	General	3,435	5,597	3,508

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
May 5	Allianca	Panama Railroad S. S. Line	New York

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
	Succia	A. A. Johnson	San Francisco.
	Strathearn	Strathearn S. S. Co.	
	Hornelen	Kjaer & Isdahl	Sou. Pacific.

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
May 3	La Champagne	Cie. Generale Transat'tique	St. Nazaire.
May 4	Buford	U. S. Navy	Galveston.
May 5	Siena	La Veloce	Genoa.
May 6	Tyne	Royal Mail S. P. Co.	Puerto Colombia.
May 6	Chiswick	Earn Line	Norfolk.
May 7	Frances Hyde	Copely Cement Mfg. Co.	New Orleans.
May 8	Finn	Earn Line	Norfolk.

*DEPARTURES.

Date	Vessel	Line	To
May 5	Leonidas	U. S. Navy	Bocas del Toro.
May 7	Oland	Earn Line	Daiquiri, Cuba.
May 9	Siena	La Veloce	Genoa.
May 9	Ulysses	Panama Railroad S. S. Line	Norfolk, Va.
May 9	La Champagne	Cie. Generale Transat'tique	St. Nazaire.

*EXPECTED ARRIVALS.

May 10	Montevideo	Spanish Line	Barcelona.
May 12	Oranian	Leyland Line	Liverpool.

*EXPECTED DEPARTURES.

	Buford	U. S. Navy	Unknown.
	Chiswick	Earn Line	Unknown.
	Finn	Earn Line	Unknown.
	Frances Hyde	Copely Cement Mfg. Co.	Unknown.
	Tyne	Royal Mail S. P. Co.	Jamaica.
	Oranian	Leyland Line	Unknown.
May 12	Montevideo	Spanish Line	Barcelona.

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

May 3	Anya Maru	Toya Kisen Kaisha	Hong Kong.
May 4	Hercules (tug)	Ship Owners Mcr. T. B. Co	Port Harford.
May 5	Hualaga	Peruvian Steamship Co.	Mollendo.
May 8	City of Para	Pacific Mail Steamship Co.	San Francisco.
May 9	Quilpie	Pacific Steam Nav. Co.	Talcahuano.

*DEPARTURES.

May 6	Hercules (tug)	Ship Owners Mer. T. B. Co.	Port Harford.
May 7	Anya Maru	Toya Kisen Kaisha	Coronel.

*EXPECTED ARRIVALS.

May 9	Cuzco	A. Cuzco, Wilhelmsen	San Francisco.
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*EXPECTED DEPARTURES.

*Other than vessels passing through the Canal.

Sailings of Vessels in Regular Service with the Isthmus.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal; and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailings via Kingston weekly and via Havana weekly between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

NEW YORK TO CRISTOBAL-COLON.		Sails.		Arrives.	
Zacapa	U. F. C.	May 5	May 12		
Colon	P. R. R.	May 6	May 12		

Tenadores	U. F. C.	May 8	May 16		
Carrillo	U. F. C.	May 12	May 19		
Advance	P. R. R.	May 13	May 20		
Metapan	U. F. C.	May 15	May 23		
Almirante	U. F. C.	May 19	May 26		
Panama	P. R. R.	May 20	May 26		

CRISTOBAL-COLON TO NEW YORK.

Zacapa	U. F. C.	May 13	May 20		
Allianca	P. R. R.	May 15	May 21		
Calamares	U. F. C.	May 17	May 24		
Carrillo	U. F. C.	May 20	May 27		
Colon	P. R. R.	May 22	May 26		
Tenadores	U. F. C.	May 24	May 31		
Almirante	U. F. C.	May 27	June 3		
Advance	P. R. R.	May 29	June 5		

NEW ORLEANS TO CRISTOBAL-COLON.

Heredia	U. F. C.	May 8	May 13		
Abangarez	U. F. C.	May 11	May 18		
Parismina	U. F. C.	May 15	May 20		
Atenas	U. F. C.	May 18	May 25		
Cartago	U. F. C.	May 22	May 27		
Turrialba	U. F. C.	May 25	June 1		
Heredia	U. F. C.	May 29	June 3		

CRISTOBAL-COLON TO NEW ORLEANS.

Parismina	U. F. C.	May 6	May 11		
Atenas	U. F. C.	May 6	May 13		
Parismina	U. F. C.	May 27	June 1		
Atenas	U. F. C.	May 27	June 3		
Cartago	U. F. C.	June 3	June 8		
Turrialba	U. F. C.	June 3	June 10		

CANAL



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All subscriptions expire on December 31. Domestic subscriptions are accordingly charged as beginning from the first of the quarter of the year in which received. Remittances should be made to pay only to December 31, on this basis: Sent between April 1 and July 1, 75 cents; July 1 to October 1, 50 cents; October 1 to January 1, 25 cents. For foreign subscriptions the year is divided into thirds: Between January 1 and May 1, \$1.50; May 1 to September 1, \$1; September 1 to January 1, 50 cents.

Remittances for subscriptions may be forwarded to The Panama Canal, Washington, D. C., or to The Canal Record at the address given below.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Three Battleships to Pass through the Canal.

The United States battleships *Missouri*, *Ohio*, and *Wisconsin* are to arrive at Cristobal on June 16, to pass through the Canal on their way to San Francisco. They will have on board about 680 midshipmen from the United States Naval Academy at Annapolis, comprising the first, second, and third classes at the Academy, who will be on the regular summer practice cruise.

Rear Admiral William F. Fullam, U. S. Navy, Superintendent of the Naval Academy, is in command of this squadron and flies his flag on the *Missouri*.

The following is the itinerary of the cruise: Leave Annapolis June 6; leave Guantanamo June 13; arrive Cristobal June 16, leave Balboa June 20; arrive Magdalena Bay June 30, leave July 1; arrive San Diego July 3, leave July 6; arrive San Francisco July 8, leave July 22; arrive Los Angeles July 24, leave July 26; arrive Balboa August 7, leave Cristobal August 10; arrive Hampton Roads August 17, and Annapolis August 30.

Damaged Cargo Off the "Pennsylvanian."

Twenty carloads of salable goods selected from the damaged cargo of the American-Hawaiian Line steamship *Pennsylvanian*, which was on fire at Balboa from May 5 to May 7, inclusive, have been moved from the quay wall alongside which the vessel moored, to the old American wharf in Panama harbor, and will be offered at auction in an average adjusters' sale. Ten other cars were loaded with remains of ruined goods, to be dumped. The sale is in charge of Mr. Kemp, of the firm of Koehler and Kemp, average adjusters, who conducted the sale of cargo off the steamship *Newport* of the Pacific Mail Steamship

Company, which sank alongside a wharf at Balboa on August 17, 1912. Mr. Kemp arrived on the Isthmus on Sunday, May 9, and is staying at the Hotel Tivoli; he states that the sale is to begin within a short time, as soon as the goods can be disposed properly for exhibition.

Fined for Violation of Quarantine Regulations.

The District Court, sitting at Cristobal on May 15, imposed a fine of \$25 on the master of one of the vessels of the Pacific Steam Navigation Company plying between Cristobal and the west coast of South America, for violation of the quarantine regulations. An additional sentence of 30 days in jail was suspended on condition of strict compliance with the regulations hereafter.

The specific violation consisted of not having the vessel breasted off at least six feet from the wharf at which the vessel was moored. This requirement is insisted on for the purpose of preventing the passage to land, or to other ships, of rats and is very important in the case of vessels coming from plague ports. This vessel had come from Guayaquil and other Ecuadorian ports, and had been allowed to make the transit of the Canal in quarantine, after completing the six-day period of incubation in the outer harbor at Balboa. From November 1 to January 31, there were 310 new cases of plague, and 119 deaths from it, reported from Guayaquil, and its prevalence is reason for strict insistence on sanitary precautions.

Copies of the quarantine regulations have been furnished to the local agents of this and other companies making use of the Canal and its terminal ports, and the specific precautions to be observed by the vessels are set forth in writing for each one. A summary of the recent additions to the quarantine regulations is published in this issue of THE CANAL RECORD, page 345.

Passage of a Walrus Hunter.

The Norwegian whaling vessel *Kit*, bound from Yokohama to Sandefjord and passing through the Canal on May 11, was the second sea hunting outfit to make the homeward voyage through the Canal, laden with the spoils of the season. The first was the whaling fleet consisting of the *Capella I* and tenders *Hidalgo*, *Juarez*, and *Morelos*, which cleared for the same port on September 28, bound from Magdalena Bay. The *Kit* has aboard 140 tons of walrus skins and hides and 70 tons of walrus oil, taken in the Arctic Ocean, to the north of the Aleutian Islands, and 75 tons of fish oil, 28 tons of rice, and about \$1,750 worth of curios loaded at Yokohama. By using the Panama Canal, the *Kit* saves about 1,800 miles at sea over the next shortest route between Yokohama and Norway, which is through the Suez Canal. The *Kit* is 162 feet long by 28 feet in the beam and was drawing 11½ feet at the time of passing through the

Canal. She took 90 tons of coal at Colon and cleared for Norfolk.

Passage of the Motorship "Panama."

The motorship *Panama*, which passed through the Canal on May 7, is the most recent addition to the fleet of the East Asiatic Company and was named in honor of the Canal, of which the East Asiatic Company is one of the important users. The *Panama* is a handsome vessel and the largest of the motorships which have used the Canal. Her length of 427 feet, beam of 55 feet, and draft, at time of passage, of 27 feet four inches, are above the average for the steam vessels which have been through the Canal. The gross Canal tonnage of the vessel is 7,021 and the net Canal tonnage 5,267. The total number in the crew is 37.

The *Panama* is on her maiden voyage to the Far East, the center of the East Asiatic Company's work. She is enroute from Port Arthur, Texas, to Amoy, China, with 214 barrels of wax and 228,291 cases of refined petroleum, a total cargo of 8,494 tons.

Cuban Sugar for British Columbia.

The steamship *John A. Hooper*, passing through the Canal on May 4, carried a cargo of 19,500 bags of sugar from the province of Matanzas, Cuba, consigned to Vancouver, British Columbia, via Port Angeles. Matanzas is the principal sugar-producing province of the island, and the port of Matanzas, formerly a pirates' refuge, is second to Havana in commercial importance.

Special Reservations in the Canal Zone.

Construction work on the new Naval radio stations at Darien, Balboa, and Colon, is practically completed. At Darien the aerial mat was hoisted in April, and tests of the radio equipment furnished by the Federal Telegraph Company are now in progress. The station is in regular communication with Arlington, Va., and has received messages from other distant points. At Colon and Balboa, which are secondary stations, the antennae were swung from the new 300-foot towers and the radio equipment is practically completed. The last wooden mast of the old Colon station will be taken down in the near future. These stations will be operated by the Navy Department, the operating force consisting of enlisted men of the Navy under the command of a commissioned officer.

The land on which the Darien and Balboa stations are located has been set aside by Executive Order for radio and other naval purposes under the control of the Secretary of the Navy, but these areas as well as all other areas and reservations for naval and military purposes in the Canal Zone are, in conformity with the Panama Canal Act, subject to the civil jurisdiction of the Governor of the Canal Zone. All sanitary and building regulations and all other laws of the Canal

Zone apply with equal force to all portions of the Canal Zone, including all military or naval reservations embraced therein.

The Colon radio station is located on land of the Panama railroad. The Panama railroad holds this land in Colon under a qualified title of ownership which gives the company a leasehold estate therein to the end of the company's concession in 1966, at which time ownership will revert to the United States by virtue of the Canal treaty.

Dutch Royal Mail Sends Vessel through the Canal.

The steamship *Agamemnon* of the Dutch Royal Mail entered the Canal on Monday, April 17, enroute from Amsterdam to Guayaquil, in ballast. This is the first vessel of this line to have gone through the Canal, though the company has an active service between Holland and the Caribbean, with frequent calls at Colon. Like other vessels of this line which have been plying through the war zone, the *Agamemnon* bears the ship's name and port of registry in large letters, legible at several miles distance, on both sides, amidships, thus, AGAMEMNON—AMSTERDAM.

Corrected Statement of Tolls Levied and Collected.

The deposits made with the Collector for payment of tolls on vessels using the Canal have been carried in a special account, and payments are made therefrom as the vessels use the Canal. While the money was available at the time of transit, in some cases actual transfer of funds was not made in the month in which the vessels passed through the Canal. Up to the end of March this resulted in an apparent discrepancy between the levy of tolls and the actual collections, month for month. In addition, several vessels belonging to the United States Government were assessed for tolls but allowed to proceed without actually paying them, the transfer of funds being a matter for inter-departmental adjustment.

In publishing the figures for tolls, those showing actual collections have been used for some months, and for others the figures have been for tolls levied during the month. In addition, refunds have been made, to the extent of \$11,551.20, after final decision was reached in regard to what constitutes a vessel "in ballast," or on account of errors in the first bills. A total of \$56,238 is still due The Panama Canal from other departments of the United States Government. With all these adjustments taken into consideration, the net collections of tolls up to April 1, 1915, were \$2,853,680.88, and the net earnings \$2,909,918.88, the difference, \$56,238, being the amount still charged against other departments of the United States Government, as shown in this summary:

Month.	Originally Levied.	Corrected Amount.	Amount Collected.	Refunded.	Balance due from U. S.
May, 1914.....	\$7,146.12				
June.....	7,472.56		\$4.00		
Prior to July 1, 1914.....	\$14,618.68	\$14,618.68	\$4.00		
July, 1914.....	7,598.40	7,598.40	11,606.69		
August.....	88,401.80	88,401.80	98,066.19		
September.....	269,839.20	269,839.20	263,220.00		4,238.40
October.....	382,503.12	374,156.88	349,986.48		7,370.40
November.....	382,886.40	381,533.28	349,382.15		12,372.00
December.....	411,895.44	410,043.60	404,868.93	9,699.36	2,128.80
January, 1915.....	419,057.12	419,037.12	378,662.72	1,851.84	20,436.00
February.....	383,904.96	383,904.96	403,118.36		
March.....	560,784.96	560,784.96	606,316.56		9,692.40
Total.....	\$2,921,470.08	\$2,909,918.88	\$2,865,232.08	11,551.20	\$56,238.00
Less non-payments and refunds.....		56,238.00	11,551.20		
Net collections.....		\$2,853,680.88	\$2,853,680.88		

LABOR FORCE AND QUARTERS IN APRIL.

The force report of April 21, 1915, shows the actual working force of The Panama Canal on that date to have been 21,505; of the Panama railroad, 2,936; and of contractors, 374, a total effective working force of 24,815. This is an increase of 1,041 from the force on March 24, which was 23,774, and is 1,370 more than the force employed on February 24 (numbering 23,345), but is 38 less than the force employed on January 20, which was 24,853.

The gold force on the Isthmus, composed almost exclusively of white Americans, was 3,361, a decrease of 64 from the previous month, and a decrease of 133 as compared with the report for February 24, and a decrease of 352 since January 20. The gold force for April, 3,361, was divided as follows: The Panama Canal, 3,173; the Panama Railroad Company, 151; contractors, 37. The heavy decrease in the gold force of the railroad, from 359 on March 24, is due principally to the transfer of the Department of Telephones, Telegraphs, and Signals to the Electrical Division of The Panama Canal. Detailed figures of the Canal force employed on the Isthmus, by departments and divisions, follow:

DEPARTMENT OR DIVISION	SILVER EMPLOYEES*												Total silver.	Total gold.	Grand total.
	Artisans,						Laborers.								
	Monthly.	Special.	22 cents.	18 cents.	15 cents.	12 cents.	Special.	European 16 cents.	13 cents.	10 cents.	7 cents.	5 cents.			
Operation and Maintenance; office & locks.....	424	...	4	31	92	106	275	21	7	352	...	2	1,314	156	1,470
Terminal Construction.....	423	...	55	217	611	197	68	54	463	616	3	23	2,730	271	3,000
Building Division ..	50	20	259	396	479	45	...	...	303	285	1	8	1,846	145	1,991
Electrical ..	98	7	47	70	171	124	...	1	159	62	...	7	746	185	931
Municipal Eng.	245	...	83	219	319	188	20	29	122	963	4	42	2,234	91	2,325
Dredging ..	1,657	1	6	21	70	16	...	9	113	98	1	2	1,994	295	2,289
Mechanical.....	151	9	68	115	554	530	...	8	41	169	11	2	1,658	847	2,505
Marine Division ..	161	...	...	...	...	...	24	...	...	...	...	...	125	49	174
Fortifications ..	92	...	52	85	204	39	22	1	105	329	...	8	937	92	1,029
General Construction	24	...	...	1	5	6	...	149	42	76	1	3	307	7	314
Total.....	3,265	37	574	1,155	2,505	1,251	409	272	1,355	2,950	21	97	13,891	2,138	16,029
Supply: main office ..	...	...	...	...	...	...	...	...	...	...	...	...	15	15	...
Commissary.....	672	...	4	7	10	16	231	8	...	109	7	...	1,064	154	1,218
Subsistence.....	554	...	3	1	1	2	...	...	...	...	...	...	561	30	591
Quartermaster.....	783	28	85	121	128	...	51	9	44	677	...	3	1,929	77	2,006
Accounting.....	21	...	...	...	...	...	...	...	...	...	...	...	21	194	215
Health.....	372	...	3	9	6	...	17	...	9	264	9	17	700	160	860
Executive.....	161	2	1	2	...	...	...	...	...	...	...	...	166	405	571
Panama railroad.....	219	72	56	108	178	612	772	26	294	440	2	6	2,785	151	2,936
Contractors.....	64	...	3	...	11	13	145	4	24	66	...	7	337	37	374
Grand total	6,111	139	729	1,397	2,839	1,894	1,625	319	1,726	4,506	39	130	21,454	3,361	24,815
Month previous.....	6,273	152	682	1,514	2,755	1,433	1,397	272	1,657	4,058	56	100	20,349	3,425	23,774
Changes.....	-162	-13	+47	-117	+84	+461	+228	+47	+69	+448	-17	+30	+1,105	-64	+1,041

*The wages are stated in United States currency.

QUARTERS.

A summary of the occupation of Canal and Panama railroad quarters on April 30, 1915, is given below:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Children	Men	Women	Children	Men	Women	Children
Balboa.....	850	228	235	63	6	20	1,273	498	620
Ancon.....	868	411	327	...	...	...	239	8	1
Corozal.....	286	188	200	75	1	2	502	56	65
Pedro Miguel.....	190	110	135	25	...	...	190	21	26
Paraiso.....	272	77	93	99	6	23	325	109	113
Culebra.....	19	14	11	1	1	6	437	272	342
Gamboa.....	22	5	8	...	...	...	100	23	26
Catun.....	211	165	178	125	3	6	257	105	109
Cristobal.....	885	352	448	...	...	...	833	174	377
Toro Point.....	...	...	...	...	...	...	...	...	...
Total.....	3,603	1,550	1,635	388	17	57	4,156	1,265	1,679

(1) Includes Taboga Island, Naos Island, and Palo Seco. (2) Includes 19 Asiatics. (3) Includes 12 American negroes, 67 Colombians and Panamanians, and two Panamanians on the gold roll. (4) Includes Miraflores. (5) Includes one Asiatic. (6) Includes Empire, Las Cascadas, and Bas Obispo. (7) Includes Colon Beach and Colon Hospital. (8) Includes 33 East Indians, 13 American citizens, and 62 Panamanians. Gold force of contractors, included above, occupying quarters, 48 bachelors.

Over \$3,000,000 in Tolls.

Tolls collected during April for the use of the Canal by vessels amounted to \$448,764.74. This makes the total net collection of tolls from the beginning of tolls collection, in May, 1914, up to May 1, 1915, amount to \$3,302,445.62.

The Italian steamship *Igea*, which carried 900 tons of material for the exhibit of the Italian Government at San Francisco through the Canal on March 19, returned on May 7 from San Francisco and passed through the Canal in ballast, on her way to Galveston.

QUARANTINE REGULATIONS.

Recently Issued Circular Contains Changes and Additions.

The quarantine rules and regulations governing the entry of vessels at the ports of Cristobal and Balboa, and Colon and Panama, at the ends of the Canal, set forth in circular No. 626, dated May 1, 1914, have been reissued, with changes and additions, in the form of circular No. 626-1.

With the exception of the changes herein-after noted, the provisions remain the same. It is accordingly deemed more satisfactory to publish here the changes rather than the new circular in full. Those wishing complete copies of the new circular may obtain same by addressing The Panama Canal, Balboa Heights, Canal Zone, with request for circular No. 626-1, "Quarantine Rules and Regulations."

Sections 29 to 32 of the original circular have been struck out and the following sections, numbered from 29 to 33, inclusive, substituted for them:

29. Vessels entering the port for the purpose of passing through the Canal without discharge of cargo or disembarking passengers at the ports of Balboa or Cristobal, or the ports of Panama or Colon in the Republic of Panama, will be given pratique to proceed without detention provided special regulations prescribed for observation in foreign ports have been carried out and no disease of a quarantinable nature has occurred during the voyage.

Such vessels from ports infected with quarantinable disease, arriving within the period of incubation of such disease or diseases, shall be passed through the Canal "in quarantine."

30. Vessels entering the port for the purpose of passing through the Canal without discharge of cargo or disembarking passengers at the ports of Balboa or Cristobal or the ports of Panama or Colon in the Republic of Panama, arriving from ports infected with quarantinable disease and in which the special regulations prescribed for observation in foreign ports have not been carried out, may be passed through the Canal "in quarantine" after necessary measures of disinfection, etc., have been taken. Such vessels, however, as have not completed the quarantine period since leaving the last infected port, in addition to disinfection, may be detained in quarantine a sufficient length of time to cover the period of incubation of the disease in question before being allowed passage through the Canal.

31. Passengers or crews on vessels falling under the heading (29 and 30) who disembark at the ports of Balboa or Cristobal, or the ports of Panama or Colon in the Republic of Panama, will be held under observation in quarantine a sufficient number of days to complete the period of incubation of the disease against which quarantine is directed.

32. Vessels entering the port for passage through the Canal that have on board cases of quarantinable disease, or that have had such during the voyage, may be allowed to proceed to the port of destination after the measures provided by the quarantine regulations have been

carried out. In such cases the vessel should proceed through the Canal "in quarantine."

33. In case of vessels coming under Section 32, a statement of the nature of the disease removed at quarantine and the measures of disinfection carried out, shall be communicated to the Health Officer of the next port to which the vessel is going; a sealed letter attached to the bill of health and forming a part of the ship's papers, should be addressed to the Health Officer of the port of destination, and the pratique granted the vessel shall have a notation of the facts entered thereon.

The following are new sections in the revised regulations, not included in the original circular, containing special regulations for passage through the Panama Canal "in quarantine:"

34. Permission for passage through the Canal in quarantine shall only be granted with the approval of the Chief Health Officer.

35. A quarantine officer and one or more sanitary guards, or one or more sanitary guards when in the judgment of the Chief Quarantine Officer such will be sufficient, shall board the vessel for passage in quarantine and accompany her through the Canal. Their duty shall be to prevent unauthorized communication and see to the proper execution of the prescribed sanitary and quarantine regulations, during the passage through the Canal.

36. All embarkations, landings, and transshipments of passengers or cargo are forbidden during the passage through the Canal between the terminal ports.

37. Vessels passing through "in quarantine" shall make the trip from port to port without putting into dock. In case of being compelled to put into dock, the necessary operations shall be performed by the personnel on board, all communication with the employees of The Panama Canal being avoided.

38. When ships are conveyed through the Canal "in quarantine," the trip shall be made in the daytime only, when practicable.

39. If it is necessary to stop in the Canal, the vessel should anchor in Gatun Lake, not less than 200 meters from the

shore. If it is absolutely necessary to tie up at a wharf or at the lock walls, special precautions as prescribed by the Chief Quarantine Officer shall be taken to prevent the passage of persons or things to or from the vessel.

40. Vessels passing through "in quarantine" are forbidden to approach the wharves or piers in the terminal ports.

41. When it is absolutely necessary for vessels passing through "in quarantine" to take on coal in the terminal ports, the coaling shall be done under the supervision of the quarantine authorities. If the coaling is done at night the place where the coaling is done should be brilliantly illuminated by electric lights.

42. The pilots, quarantine officers, sanitary guards, or other agents of The Panama Canal, will be subject to provisions under the heading "General Requirements at Quarantine."

43. War vessels passing through "in quarantine" may not be required to take on board quarantine officer and sanitary guards provided certificate is issued by the senior medical officer on board and countersigned by the commanding officer, that the quarantine regulations have been and will be complied with.

Nevertheless the quarantine authorities shall have the right to place their agents on board whenever they deem it necessary.

The insertion of the foregoing additional sections increases the number of sections in the circular from 124 to 135. Up to Section 29 there is no change; from 29 to 43, changes are as given above; the remainder of the circular is unchanged, other than advancing the section numbers 11 points.

Lacking Required Bill of Health.

The British steamship *Durley Chine*, belonging to the Canadian Government, and arriving at Cristobal on Monday, May 17, on her way from Halifax to Vancouver, was found not to have the required bill of health. After examination, the vessel was allowed to proceed through the canal in quarantine, and her master was summoned to appear before the District Court for violation of the quarantine regulations. The case is to come before the court on Wednesday, May 19.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Martin, Edward.....	65209	Barbados.....	Gamboa.....	Dredging Div. ..	May 2, 1915
Brooker, George.....	67267	British Guiana..	Panama.....	Oper. & Main...	May 12, 1915
Griffith, St. Clair.....	36293	Barbados.....	Colon.....	Term. Const....	May 2, 1915
White, Wesley.....	60802	Barbados.....	Panama.....	Supply Dept....	May 3, 1915

Insane Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of commitment
Roberto, Eliet.....	21105	Martinique.....	Panama.....	Timekeeping Div	May 3, 1915

The estates of the abovenamed deceased and insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

DRY SEASON RAINFALL.

Above Normal at Nearly All Stations—New Records for 24-Hour Precipitation.

The rainfall during the dry season, now drawn to a close, has been such that the season was at several periods like the wet season; and a daily rainfall exceeding usual wet season precipitation for equal time was twice recorded. The precipitation was generally above normal over the area of the Canal Zone.

On the Pacific coast the rainfall was almost double the average amount, while on the Atlantic side it was approximately 50 per cent above the normal dry season amount. Conditions were nearer the normal over the central section, the rainfall at Culebra being slightly below the average, but above at both Gamboa and Alhajuela.

Two storms or so-called "northers," during the periods from February 9 to 11, inclusive, and from April 3 to 5, inclusive, influenced the total amount of rainfall to a great extent, the fall during these periods being general over the Isthmus, though greater on the Atlantic coast than over the other sections. These were the northers of which the accompanying high seas on the Atlantic side did damage to the breakwaters in Limon Bay, protecting Colon harbor and the Atlantic entrance to the Canal.

On April 3 the precipitation at Gatun was 7.64 inches, and a fall of 7.94 inches of rain in 24 hours occurred at Colon on February 10th. This exceeded the maximum 24-hour precipitation during the wet season of 1914, which was 6.85 inches, at Gatun, on August 12-13.

This record for heavy fall within 24 hours has never been exceeded, even during the wet season, at Balboa, Balboa Heights, Culebra, or Gamboa during the years of recorded measurement. The fall at Balboa and Balboa Heights has been recorded for 17 years; at Culebra, 25 years, and at Gamboa, 30 years. The highest precipitation during 24 consecutive hours on record on the Isthmus is 10.86 inches, at Porto Bello.

The subjoined table presents the accumulated rainfall at selected stations and for the whole Canal Zone during the dry season of 1915 (December, 1914, to April, 1915, inclusive) compared with the normal rainfall during the same period, and the fall during the dry seasons of 1910 and 1912. The dry seasons of 1910 and 1912 represent extreme conditions, 1910 for relative wetness and 1912 for unusual dryness, and the data for these extreme seasons are given for the sake of comparison.

It may be noted that the totals include the five months from December to April, inclusive. The dry season frequently begins in December, and for this reason the rainfall for this month is included in all totals.

	Normal dry season rainfall, Dec. to Apr. inclusive.	Years of record.	Dry season 1915-Dec. 1914 to April 1915 inclusive.	Per cent of normal.	Dry season 1910-Dec. 1909 to April 1910 inclusive.	Per cent of normal.	Dry season 1912-Dec. 1911 to April 1912 inclusive.	Per cent of normal.
Balboa Heights..	9.66	16	18.73	194	19.58	203	4.76	49
Culebra.....	13.90	24	13.11	94	19.53	141	3.85	28
Gamboa.....	14.08	29	17.75	126	22.34	159	3.01	31
Alhajuela.....	12.54	15	14.62	117	34.20	273	1.02	8
Gatun.....	26.53	10	36.39	137	53.85	203	10.27	39
Colon.....	23.97	43	36.79	153	49.66	207	6.13	26
Average for the Zone	16.78	.....	20-52	122	36.57	218	5.18	31

Passenger Steamship Connections from Balboa to San Francisco.

Passenger steamship connections from Balboa to San Francisco, thence to other ports on the north Pacific coast, are afforded at present by the Pacific Mail Steamship Company, the Johnson Line, the Panama Pacific Line, and the coastal service of W. R. Grace and Company.

The Pacific Mail has sailings about every 10 days for San Francisco, with calls enroute at Puntarenas, San Juan del Sur, Corinto, Amalpa, La Union, La Libertad, Acapulco, San José de Guatemala, Champerico, Ocos, Salina Cruz, Acapulco, Manzanillo, San Blas, and Mazatlan. This trip requires about 26 days.

The Johnson Line of Swedish vessels, operating through the Canal between Europe and the north Pacific coast of the United States, sends a vessel through the Canal to San Francisco about every two months. The trip from Balboa is made in approximately 12 days. The next sailing in this service will be that of the *Margaret*, leaving Balboa about May 26.

The Panama Pacific Line operates the *Finland* and the *Kroonland* on trips from New York to San Francisco, and return, with a vessel each way about every three weeks. The voyage from Balboa to San Francisco is made in about nine days. The next sailing from Balboa will be that of the *Kroonland*, about May 28.

Grace and Company maintain an irregular service with a vessel plying between San Francisco and Valparaiso, with calls at Balboa and other way ports. The vessel makes a round voyage about every 10 weeks. The next date of sailing can not be given at this time, and those interested should inquire of the agent.

The northward sailings of the South American service of the Toyo Kisen Kaisha, calling at Balboa, go only as far as Manzanillo, before veering off across the Pacific to Honolulu and the Far East. The southward sailings call at Los Angeles and proceed down the coast as far as Coronel, calling at Balboa.

The Pacific Mail Steamship Company makes a minimum rate of \$85 for carrying Canal employees to San Francisco as first class passengers. The local office of W. R. Grace and Company states that the Grace Line, the Johnson Line, and the Toyo Kisen Kaisha, for all of which W. R. Grace and Company are agents, will make approximately the same prices as the Pacific Mail for equal voyages, but that specific rates for sailings may be had on application. The Panama Pacific Line offers to carry first class passengers from Balboa to San Francisco for four-fifths of the charge for similar accommodations from New York to San Francisco. The minimum first-class rate from New York to San Francisco on this line is \$125, which would make the minimum from Balboa to San Francisco \$100. The Isthmian agents for

the Panama Pacific Line are W. Andrews and Company, Colon. The executive office has taken up with the several lines the matter of special rates for Canal employees.

Revised Rates on United Fruit Company's New York Division.

As stated in THE CANAL RECORD of February 17, all of the steamers of the United Fruit Company's line plying between Colon and New York are to be operated exclusively on the *a la carte* system of meal service after May 1. This went into effect with the sailing of the *Carillo* from New York on Wednesday, May 5.

Under this plan, fares cover transportation and stateroom accommodations only, meals being charged for extra. The company has accordingly discontinued its flat rate of \$56.25 between Colon and New York, including meals, for employees of The Panama Canal and Panama Railroad Company. For the former reduced rate it has substituted a reduction of 25 per cent from the minimum tariff for Canal employees and their families, for rooms without bath. If accommodations are desired in rooms with bath or in a suite, the difference between the minimum tariff fare and fare for rooms desired will be charged.

The minimum tariff fare on the *Almirante*, *Carillo*, *Santa Marta*, and *Zacapa*, is \$57.50, which makes the fare for Canal employees \$43.15 in minimum priced accommodations. The tariff minimum on the *Calamares*, *Pastores*, *Tenadores*, and *Metapan* is \$65, which makes the fare for Canal employees \$48.75 in minimum priced accommodations.

Passengers Coming on the "Cristobal".

The steamship *Cristobal* of the Panama Railroad Steamship Line reentered passenger service with her sailing from New York on Friday, May 14, at 6 p. m. She is carrying 129 passengers, including 75 enlisted men, and 3,020 tons of cargo and is due to arrive at Cristobal on May 21.

New Coach Rates in Effect.

The new and additional coach rates between points in Ancon, Balboa, Fort Amador, and the city of Panama, approved by the Governor and published in THE CANAL RECORD of April 28 and May 5, have been adopted by the municipality of Panama and promulgated by the alcalde of the city as decree No. 32, dated April 29, 1915.

Rent Collections in March and April.

Collections of rent on quarters occupied by employees of The Panama Canal and Panama Railroad Company on the Isthmus during the month of March amounted to \$23,088.22.

During April the collections amounted to \$21,610.41.

Family Quarters.

Applications for married quarters on file on April 30, 1915, were as follows:

STATIONS.	Number of applications.
Ancon	269 (108)
Corozal	48 (2)
Paraiso	121
Gatun	11 (3)
Cristobal	77 (32)
Total	526 (145)

NOTE—The figures in parentheses show the number of applicants already occupying regular or non-house-keeping family quarters at stations other than those at which applications are filed.

OFFICIAL CIRCULARS.

Assignment of Gold Family Quarters.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 12, 1915.

CIRCULAR No. 627-8:

Circular No. 627-5, dated March 12, 1915, is amended as follows:

1. An applicant on the waiting list for family quarters, when he becomes eligible for assignment, will be given an opportunity to refuse three separate and distinct tenders. If he does not accept the third tender, his application will be cancelled and he will not be allowed to file a new application for similar quarters for a period of 10 days.
2. When an employe forfeits family quarters through failure to occupy them within the time limit, he will not be allowed to file a new application for a period of 10 days.

CHESTER HARDING,
Acting Governor.

Acting Auditor.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 15, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective May 17, Mr. Ad. Faure will act as Auditor of The Panama Canal during the absence of Mr. H. A. A. Smith from the Isthmus.

CHESTER HARDING,
Acting Governor.

Designing of Buildings.

THE PANAMA CANAL,
BUILDING DIVISION,
BALBOA HEIGHTS, C. Z., May 10, 1915.

To all concerned—Effective at once the design of all buildings and like structures now being handled under the direction of the architect will be divided into two sections.

Architect Hitt will continue in charge of the direction of all studies, architectural designs and plans, and all details exclusive of reinforced concrete work.

Mr. T. C. Morris, acting office engineer, will have charge of all engineering designs, including the detail of same, covering reinforced concrete footings, columns, slabs, and all members requiring analysis. This work shall be carried along in collaboration with Architect Hitt.

GEO. M. WELLS,
Resident Engineer.

Approved:

CHESTER HARDING,
Acting Governor.

Accountable Official.

THE PANAMA CANAL,
OFFICE OF THE AUDITOR,
BALBOA HEIGHTS, C. Z., May 1, 1915.

CIRCULAR No. 93:

Effective May 1, 1915, Capt. Theodore H. Dillon is designated an accountable official of The Panama Canal, vice Mr. T. W. McFarlane.

H. A. A. SMITH,
Auditor, The Panama Canal.
Approved: CHESTER HARDING,
Acting Governor.

Standee Bunks on the "Colon."

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 12, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Arrangements have been made to place 75 standee bunks on the steamship *Colon*, sailing Saturday, May 22, for the accommodation of male first-class passengers. Employes wishing to take advantage of such accommodations should submit their applications promptly.

W. P. COPELAND,
Acting Executive Secretary.

Superintendent of Municipal Work.

THE PANAMA CANAL,
DIVISION OF MUNICIPAL ENGINEERING,
BALBOA HEIGHTS, C. Z., May 10, 1915.

To all concerned—Mr. W. J. Spalding is appointed superintendent of the southern district of the Municipal Division, effective May 10, 1915, and will have local charge under the Municipal Engineer of the work of the Municipal Division in the city of Panama and in the Canal Zone south of Darien. The operation of the purification plant at Miraflores continues under the supervision of Mr. Geo. C. Bunker, physiologist.

DAN E. WRIGHT,
Municipal Engineer.
Approved: CHESTER HARDING,
Acting Governor.

Act of Congress.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 22, 1915.
CIRCULAR No. 600-18:
HOSPITAL CARE FOR GARRISONS.

The extracts from an Act of Congress quoted below are published for the information of all concerned.

GEO. W. GOETHALS,
Governor.

AN ACT making appropriations to supply deficiencies in appropriations for the fiscal year 1915, and for prior years, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, to supply deficiencies in appropriations for the fiscal year 1915 and for prior years, and for other purposes, namely:

* * * * *
WAR DEPARTMENT.

MEDICAL DEPARTMENT.

Hospital care, Canal Zone garrisons: For paying The Panama Canal such reasonable charges, exclusive of subsistence, as may be approved by the Secretary of War for caring in its hospitals for officers, enlisted men, military prisoners, and civilian employes of the Army admitted thereto upon the request of proper military authority, \$4,000: *Provided*, That the subsistence of the said patients, except commissioned officers and acting dental surgeons, shall be paid to said hospitals out of the appropriations for subsistence of the Army at the rates provided therein for commutation of rations for enlisted patients in general hospitals. *Provided further*, That of this sum \$2,000 shall be available to pay The Canal for similar services rendered during the month of June, 1914.

* * * * *
Approved, March 4, 1915.

JOINT LAND COMMISSION.

Notices of Awards.

In the matter of the claim of Narciso Garay, attorney-in-fact for the Hurtado family, for property designated as "Cardenas y la Ramona," award No. 82, docket No. 295, May 3, 1915—The claim of the Hurtado family, represented by Narciso Garay as attorney-in-fact, docket No. 295, for the estate of Cardenas and La Ramona, came before the Commission for public hearing on February 17, 1915, the hearing being concluded on March 4.

At the time this claim was filed, the extent of the properties claimed was not given by the claimants. At the hearing, the attorneys for the United States introduced two maps, Nos. 3840 and 3841, showing the properties claimed by the Hurtado family as consisting of some 796 hectares, which was accepted by the claimants. During the hearing of this claim, it developed that there were adverse claims of other private parties as to the ownership of certain portions of the land claimed by the Hurtado family.

Plea to the jurisdiction of the Commission to pass upon such conflicting claims of private parties was filed by counsel for the Schubert family, one of the adverse claimants to the property under adjudication; and the Commission, after considerable discussion of this question, agreed that it should not pass upon the adverse claims of private parties to the same property, and that the rights of such adverse claimants should be determined before a court of competent jurisdiction or by private agreement between the parties before appearing before the Commission for the adjudication of their respective rights in the premises. Under this rule, which the Commission announced it would follow in its proceedings, an agreement was reached between Mr. Narciso Garay, the attorney-in-fact for the Hurtado family, and Dr. Daniel Ballen, attorney-in-fact for Mr. John J. Gibbons, one of the adverse claimants to a portion of the land claimed by the Hurtado family, that the area of this disputed tract enclosed in the following boundaries be ascertained by the Commission and divided in equal parts between the said two parties, the Hurtado family and John J. Gibbons:

"Starting from the point where the Cruces road crosses the Cardenas River and then following the Cruces road in a general northerly direction as far as the point where it crosses the Dominica Creek, and thence downstream as far as the point where it crosses a certain straight imaginary line drawn from the point of beginning to the top of Dominica Hill, and thence from the said point of intersection in a general southeasterly direction in a straight line to the starting point."

By consent of all the parties, the Commission designated Mr. B. B. Alexander, a civil engineer in the employ of The Panama Canal, to determine the area of the tract of land described above, who later reported to the Commission that it contains 108.5 hectares.

There was also an adverse claim made by the Schubert family to a tract of land bounded as follows, a portion of which land is also claimed by the United States and the Panama Railroad Company:

"Beginning at the summit of Corozal Hill and running in a straight line to the point at which the Asiento Viejo Creek crosses the Cruces road, thence in a general northerly direction along the Cruces road to the point at which the Cruces road crosses the Cardenas River, thence in a general westerly direction downstream of the Cardenas River on the left bank thereof to the point of juncture of the Cardenas River and the Rio Grande River, thence in a straight line from the point last mentioned to the summit of Corozal Hill, the point of beginning; excluding therefrom the tract of land comprised within the line running from the point of juncture of the Cardenas and Rio Grande Rivers to the summit of Corozal Hill and the Cardenas River at a point from said juncture of the two lines last mentioned to the point on said river and line where the old line of the Panama Railroad Company crosses both river and line, said to have been purchased by the old French canal company from the Hurtado family in 1883."

By consent of all the parties, the Commission designated Mr. B. B. Alexander to determine also the area of the tract of land above described, who reported that the area of this tract is 364 hectares, exclusive of the tract specially excepted above in the last part of the description, which contains three hectares. The Commission will make no award for damages in the matter of the 364 hectares of land above described until after the parties shall have settled the question as to what rights if any they or each of them may have therein, either before a court of competent jurisdiction or by agreement, as they may see fit.

An award is hereby made against the United States in favor of José Marcelino Hurtado, Manuel José Hurtado, Amalia Hurtado de Bidwell, Carmen Hurtado de Hurtado, and Manuela Hurtado de Santa Maria, in the sum of \$32,100, United States currency, for all their right, title, interest, and claims to that portion of the estate of Cardenas situated within the following boundaries and to which no adverse claim of title has been made either by the United States or by private parties:

"Starting at junction of Cameron and Dominica, going upstream to the Cruces trail, thence along the Cruces trail to the crossing of the Cardenas River, thence down the Cardenas to a point which is 5,675 feet from the old line of the Panama railroad in the direction N. 36° 10' E. from a point on the railroad 172 feet north of the north end of old bridge No. 62 (over Cardenas River), thence N. 54° 58' W. for 950 feet, thence S. 56° 50' W. for 1,275 feet, thence S. 86° 25' W. for 4,750 feet to a point 100 feet from the center line of the Panama railroad in a line at right angles to it, thence paralleling said railroad 100 feet to north, around a 1° 55' 55" curve for 550 feet, thence along a line N. 4° 53' W. to the junction of the Cameron and Dominica Rivers, the point of beginning."

It being understood that there is deducted from the above all claims to the 54.25 hectares ceded by the Hurtado family to Mr. John J. Gibbons in accordance with the agreement above referred to, and damages for said 54.25 hectares will be awarded to Mr. John J. Gibbons when his claim, docket No. 1365, for the lands of "Guayabal" comes on for hearing in regular order.

The payment of this award to the Hurtado family as above named, or tender of payment thereof, shall be made on or before the 3rd day of June, 1915, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Joint Land Commission Calendar.

Following is a calendar of claims set for hearing in the week ending May 29:

Monday, May 24—Argument on motion of J. H. Stilson, by C. P. Fairman, to set aside order of the Commission denying motion for reconsideration of his claim for lands of Barro Colorado Abajo, docket No. 447; same, for motion of Columbian Fruit Company, docket 448; docket 835, Wm. Douglas; docket 836, Geo. Lewis.

Tuesday, May 25—Docket 837, Mrs. R. Maitland; docket 838, Rebecca Jackson; docket 839, C. A. Bacquie; docket 840, Wm. Morris.

Wednesday, May 26—Docket 841, Ezequiel Carmichael; docket 842, Uriah Scott; docket 851, Antonio Baldeo; docket 852, Manuela Geo. de Iglesia.

Thursday, May 27—Docket 854, Clarence McMackin; docket 855, Antolino Garcia; docket 866, Gumerinda Iglesias; docket 867, Abraham Johnson.

Friday, May 28—Docket 873, Jas. Osborne; docket 877, Mrs. Ann Williams; docket 879, Loice Lochel; dockets 880 and 1595, Juan (Aparicio) Aparicio.

WILLIAM TAYLOR,
Secretary.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores at Las Cascadas, Empire, and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

The following is a list of retail prices of cold storage provisions which will be effective May 20, 1915:

FRESH MEATS.

	Price.
Mutton—Stewing, per pound.....	9
Shoulder, trimmed, per pound.....	12
Leg (8 to 10 pounds), per pound.....	19
Short cut, chops, per pound.....	23
Shoulder, chops, per pound.....	14
Lamb—Stewing, per pound.....	12
Shoulder, trimmed, per pound.....	15
Leg (5 to 8 pounds), per pound.....	24
Chops, per pound.....	29
Chops, shoulder, per pound.....	18
Veal—Stewing, per pound.....	12
Shoulder, for roasting (not under 4 lbs.), per pound.....	15
Chops, shoulder, per pound.....	20
Chops, per pound.....	30
Loin for roasting, per pound.....	30
Cutlets, per pound.....	36

The prices of fresh beef have not changed since their publication in THE CANAL RECORD of May 12.

MISCELLANEOUS.

Brains, calves', per pound.....	10
Calves' head, each.....	80
Kidneys, beef, per pound.....	11
Livers—Beef, per pound.....	*10
Calf, each.....	70
half, each.....	35
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	11
Frankfurter, per pound.....	11
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	10
Pork, per pound.....	*14
Sweetbread, beef, per pound.....	20
Eggs, fresh, per dozen.....	15
per 1/2 dozen.....	15
Bluefish, per pound.....	10
Halibut, fresh, per pound.....	15
Salmon, per pound.....	15
Yeast, per pound.....	31
per cake.....	2
Pate de foies gras, per jar.....	50

CURED AND PICKLED MEATS.

Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Minced, "Bologna style", per pound.....	13
Sugar cured, boneless, whole, per pound.....	*21
Sugar cured, whole, per pound.....	18
Half, per pound.....	20
Sliced, per pound.....	24
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	25
Half, boiled, per pound.....	27
Sliced, boiled, per pound.....	33
Hocks, boiled, per pound.....	10
Shoulders, sugar cured, whole shoulder, per pound.....	14
Bacon—Breakfast, sliced, per pound.....	26
Whole piece, per pound.....	25
Strips, whole, per lb.....	19
Sliced, jar.....	*30
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	*8
Tongues, per pound.....	22

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound.....	27
Chickens—Fancy, roasting, corn fed, per pound.....	25
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	22
Capons, per pound.....	32
Broilers, milk fed, per pound.....	32
Broilers, corn fed, per pound.....	28
Turkeys, per pound.....	28
Squabs, each.....	40
Geese, per pound.....	19
Grouse, each.....	1.00
Mallard ducks, 2 to 2 1/2 pounds, each.....	2.35
Pheasants, each.....	1.35

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	*43
Sheffield Farms, extra fancy, per lb.....	58
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	22

	Price.
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	**15
Fermeilac, bottle.....	**25
Ice cream, quart.....	125
1/2-gallon.....	150
Cream, 30 per cent, quart.....	**45
pint.....	**23
1/2 pint.....	**12

VEGETABLES.

Beets, per pound.....	2
Cabbage, per pound.....	13
Carrots, per pound.....	2 1/2
Celery, per head.....	6
Lettuce, per pound.....	*16
Onions, per pound.....	4
Parsley, per pound.....	12
Parsnips, per pound.....	4
Peppers, green, per pound.....	12
Plantains, per dozen.....	15
Potatoes, white, per pound.....	7
Rhubarb, per pound.....	1 1/2
Turnips, per pound.....	*3
Tomatoes, per pound.....	*12
Yams, tropical, per pound.....	2

FRUITS.

Apples, per pound.....	5
Grape fruit—Select, each.....	5
Tropical, each.....	3 1/2
Lemons, per dozen.....	*11
Limes, per 100.....	75
Oranges—Select, each.....	2
Tropical, per dozen.....	12
Coconuts, each.....	4
Bananas, per bunch.....	38
Bananas, each.....	1/2
Apples, evaporated, per pound.....	12
Apricots, evaporated, per pound.....	13
Pears, evaporated, per pound.....	23
Pineapples, each.....	10
Figs, dried, 12-oz. package.....	14
Figs, dried, 5-oz. package.....	5
Raisins, seedless, package.....	11
table, cluster, per pound.....	20
currants, cleaned, package.....	12
Prunes, stewing, per pound.....	12
Alligator pears, tropical, each.....	5

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than 1/2 ham or 1/2 shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective May 15, 1915:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Cigars, Brevas, No. 2, Havana, ea.....	.07	.09
Cigars, Regalia Sport, Havana, ea.....	.08	.11
Sheeting rubber, yd.....	.45	.39
Ribbon, yd.....	.03	.02
Belts, men's, ea.....	.41	.37
Leggins, motor, pr.....	4 10	3.65
Hooks, towel, doz.....	.09	.11
Metal polish, tin.....	.12	.10
Glasses, champagne, decorated crystal, ea.....	.34	.70
Biscuits, Sunshine, pkg.....	.07	.08
Chocolate, "Caracas", cake.....	.22	.32
Flour, tin.....	1.25	1.45
Gasoline in steel drums, gal.....	.22	.20
Shoes, men's, pr.....	3.75	4.25

Sale of Corrugated Floor-tyl.

THE PANAMA CANAL,

OFFICE OF CHIEF QUARTERMASTER,

BALBOA HEIGHTS, C. Z., May 17, 1915.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m. May 27, 1915, and then opened for the purchase of any or all of a lot of floor-tyl, approximately 11,680 lineal feet, now stored at Mount Hope depot. This material may be examined and full information obtained upon application to the Sales Agent, Mount Hope, C. Z.

Proposals must be accompanied by certified check, post-office money order, or cash, for five per cent of the amount bid.

The Panama Canal reserves the right to reject any or all bids.

Bids should be marked "Proposals for purchase of corrugated floor-tyl" and addressed to the Chief Quartermaster, Balboa Heights, C. Z.

WM. K. GROVE,
Chief Quartermaster.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., May 17, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressee:

Biemeret, John	Humphries, Byron
Bressette, Fred S.	Judson, Clay
Cade, Robert	Keane, John
Cain, Elmer	Michael, Dr. Wm. H.
Duffy, E.	Mosse, Milton J.
Duncan, Miss Jessie	Skillman, A. D. S. A. J.
Glaze, Hump., Jr.	Snipes, Elvie
Gomez, J. B. (paper)	Wilson, Mrs. Emma

Grandison, Berty

April Rainfall for Three Years.

STATIONS.	1913	1914	1915	Station Av.	Years of record	Rainy days '15
<i>Pacific Section—</i>	<i>Ins.</i>	<i>Ins.</i>	<i>Ins.</i>	<i>Ins.</i>		
Balboa.....	.06	4.94	4.37	3.92	17	9
Balboa Heights.....	.03	4.80	5.37	2.87	17	10
Miraflores.....	.79	2.69	2.88	3.07	7	11
Pedro Miguel.....	1.04	3.00	2.39	3.07	8	10
Rio Grande.....	1.12	.83	3.41	3.05	11	16
<i>Central Section—</i>						
Culebra.....	.71	.62	3.81	3.55	25	15
Camacho.....	2.52	.49	4.52	3.18	9	9
Empire.....	.90	.50	4.96	3.17	11	12
Gambao.....	1.07	1.38	7.09	3.51	34	16
Juan Mina.....	.54	1.01	7.74	2.54	5	14
Alhajuela.....	.72	1.68	8.94	3.32	16	15
El Vigia.....	.98	2.05	6.77	2.60	7	15
Frijoles.....	2.44	2.95	11.56	4.54	4	24
Trinidad.....	2.52	3.16	9.27	5.12	8	17
Monte Lirio.....	3.54	4.44	12.19	5.57	8	15
<i>Atlantic Section—</i>						
Gatun.....	5.38	3.26	15.90	5.18	11	21
Brazos Brook.....	5.23	7.33	12.17	4.86	9	22
Colon.....	2.69	4.12	10.42	4.19	45	18

Rainfall from May 1 to 15, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa.....	1.09	5	3.66
Balboa Heights.....	.88	15	3.26
Miraflores.....	2.37	15	7.68
Pedro Miguel.....	2.69	15	5.50
Rio Grande.....	1.33	15	4.04
<i>Central Section—</i>			
Culebra.....	1.32	6	2.77
*Camacho.....	1.76	6	2.62
Empire.....	1.80	6	3.54
Gambao.....	.93	7	2.16
*Juan Mina.....	.76	8	2.39
Alhajuela.....	.97	15	2.70
*El Vigia.....	1.21	15	2.84
Frijoles.....	2.26	8	5.20
*Trinidad.....			
*Monte Lirio.....	1.75	8	3.90
<i>Atlantic Section—</i>			
Gatun.....	1.13	10	3.16
*Brazos Brook.....	.70	10	2.38
Colon.....	2.10	7	3.37

*Standard rain gage—readings at 5 p. m.

Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, May 15, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gambao.	Gatun Lake.	Miraflores Lake.
Sun., May 9.....	128.55	94.65	85.58	85.65	54.17
Mon., May 10.....	131.50	96.32	85.48	85.46	53.91
Tues., May 11.....	129.95	95.73	85.49	85.47	54.00
Wed., May 12.....	128.80	94.95	85.49	85.47	53.92
Thurs., May 13.....	126.40	92.77	85.50	85.48	53.87
Fri., May 14.....	136.95	93.00	85.47	85.46	53.88
Sat., May 15.....	130.10	95.21	85.52	85.51	54.20
Heights of low water to nearest foot.....	125.0	91.0			

SHIPPING INFORMATION.

June Weather Probabilities.

The following weather conditions may be expected to prevail at the Canal entrances during the month of June, 1915. The probabilities are based on the records at Colon and Ancon for the past seven and eight years, respectively.

Winds—Light variable winds will prevail over the Atlantic coast, southeast predominating. The average hourly velocity will be about seven miles an hour, although during rain or thunder squalls a velocity of from 26 to 30 miles an hour may be expected.

On the Pacific coast and over the interior, light northwest winds will prevail with a considerable percentage of variable wind, and an average hourly velocity of about six miles an hour. Here too, during occasional rain squalls, the maximum wind velocity may be as high as 30 miles an hour, but these storms are invariably of short duration.

Rain—Rainy season conditions will continue during the month of June and heavy showers may be expected on both coasts, and over the interior. The average rainfall at the Atlantic entrance to the Canal for June is 13.38 inches and at the Pacific entrance, 8.10 inches, averages being for a period of 44 and 17 years, respectively. The average number of rainy days (a "rainy day" being one on which 0.01 inch or more of rain is measured), is 24 on the Atlantic coast and 20 on the Pacific side, while the average number of days on which the rainfall equals or exceeds one inch (1.00) is five and two, respectively.

Fogs—No fogs are likely to occur over the Pacific coast, and at the Atlantic entrance to the Canal only two fogs have been observed during the month of June during the past seven years. Night and early morning fogs will be numerous over the interior. The average number of nights with light or dense fog over the Gaillard Cut section of the Canal is 21. All fogs can be expected to lift or become dissipated by 8.30 a. m., and under the present operating conditions they will not constitute a hindrance to the navigation of the Canal.

Temperature—The average shade air temperature will be approximately 80° Fahrenheit at both the Atlantic and Pacific entrances to the Canal. The maximum temperature is not likely to be over 95°, or the minimum temperature lower than 70°. The mean daily range in temperature is greater on the Pacific coast than on the Atlantic coast, and will probably be about 10° F., and 9° F., for the respective sides.

Barometric pressure—Fluctuations in atmospheric pressure are so slight, except for the well-marked diurnal change, and local barometric readings so uniform from day to day, that they are of little value in forecasting weather conditions on the Isthmus. The average sealevel pressure for the month of June should be about 29.84 inches. The maximum reading for the month may not be expected to exceed 29.94 inches, or the minimum to be less than 29.71 inches, at either Canal entrance.

Storms—Local rain and thunder storms are very frequent during the month of June. The average number of days on which thunder storms have occurred is 18 on the Pacific coast and 17 on the Atlantic side. During these thunder squalls comparatively high wind velocities may be attained, but these storms are of too short duration to cause a

rough sea. Generally cloudy weather, with smooth to moderate seas, can be expected at both Canal entrances.

Tides—No consideration need be given to tidal fluctuations in navigating the Atlantic entrance to the Canal, as the average tidal range at Colon is less than one foot, and the maximum range approximately two feet.

An average tidal range of about 13 feet may be expected at the Pacific entrance and a maximum range of 20 feet sometimes occurs during spring tides.

Panama (Balboa) tide predictions are given below:

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in the following table:

MAY.				
DATE.	Time and height of high and low water.			
Wed., May 19.....	0:54	6:59	13:14	19:03
	1.9	12.9	3.3	12.9
Thurs., May 20.....	1:36	7:40	14:01	19:46
	2.4	12.6	3.6	12.4
Fri., May 21.....	2:22	8:26	14:52	20:38
	2.8	12.4	3.8	12.0
Sat., May 22.....	3:13	9:18	15:50	21:38
	3.1	12.4	3.8	11.8
Sun., May 23.....	4:10	10:17	16:50	22:46
	3.2	12.6	3.3	11.9
Mon., May 24.....	5:08	11:19	17:49	23:52
	3.1	13.2	2.6	12.4
Tues., May 25.....	6:07	12:18	18:46	.....
	2.6	13.9	1.6	.....
Wed., May 26.....	0:55	7:03	13:14	19:39
	13.2	1.9	14.8	0.6
Thurs., May 27.....	1:51	7:57	14:07	20:31
	14.1	1.2	15.6	-0.4
Fri., May 28.....	2:44	8:50	14:59	21:22
	15.0	0.5	16.3	-1.1
Sat., May 29.....	3:35	9:40	15:50	22:12
	15.7	6.0	16.7	-1.5
Sun., May 30.....	4:24	10:32	16:39	23:00
	16.0	-0.2	16.7	-1.5
Mon., May 31.....	5:15	11:23	17:29	23:50
	16.1	-0.1	16.4	-1.2

JUNE.				
DATE.	Time and height of high and low water.			
Tues., June 1.....	6:05	12:15	18:20	.....
	15.8	0.4	15.6	.....
Wed., June 2.....	0:41	6:57	13:08	19:13
	-0.5	15.2	1.1	14.7
Thurs., June 3.....	1:34	7:50	14:03	20:09
	.04	14.5	1.9	13.6
Fri., June 4.....	2:27	8:44	15:03	21:10
	1.5	13.8	2.6	12.6
Sat., June 5.....	3:23	9:48	16:04	22:17
	2.4	13.1	3.2	11.9
Sun., June 6.....	4:23	10:52	17:06	23:28
	3.2	12.6	3.4	11.5
Mon., June 7.....	5:24	11:55	18:06	.....
	3.7	12.4	3.4	.....
Tues., June 8.....	0:33	6:22	12:51	19:01
	11.5	3.9	12.4	3.1
Wed., June 9.....	1:31	7:15	13:41	19:49
	11.8	3.8	12.6	2.7
Thurs., June 10.....	2:18	8:04	14:24	20:33
	12.2	3.6	12.9	2.3
Fri., June 11.....	3:00	8:49	15:04	21:16
	12.6	3.2	13.3	1.8
Sat., June 12.....	3:39	9:31	15:41	21:56
	13.0	2.9	13.6	1.5
Sun., June 13.....	4:15	10:12	16:17	22:35
	13.3	2.6	13.8	1.2
Mon., June 14.....	4:51	10:52	16:54	23:14
	13.5	2.5	13.9	1.1
Tues., June 15.....	5:26	11:32	17:30	23:53
	13.7	2.4	13.9	1.1
Wed., June 16.....	6:02	12:12	18:06	.....
	13.7	2.4	13.7	.....
Thurs., June 17.....	0:31	6:40	12:53	18:45
	1.3	13.7	2.5	13.4
Fri., June 18.....	1:11	7:17	13:37	19:27
	1.6	13.7	2.7	13.1
Sat., June 19.....	1:53	7:58	14:24	20:12
	1.9	13.6	2.7	12.8
Sun., June 20.....	2:40	8:43	15:16	21:05
	2.3	13.6	2.7	12.5
Mon., June 21.....	3:31	9:36	16:11	22:06
	2.6	13.6	2.6	12.4
Tue., June 22.....	4:28	10:35	17:11	23:13
	2.7	13.7	2.2	12.5
Wed., June 23.....	5:28	11:38	18:12	.....
	2.6	14.0	1.7	.....

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region,

and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.*

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE.—The sailings on Monday, May 31, and June 27, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4 leaving Panama at 7:10 a. m., connects with the despatches for the two sailings mentioned above.

Fuel and Supplies.

Firms sending their vessels to the Canal do not need to employ agents on the Isthmus to take care of their interests in regard to the payment of tolls and minor charges.

Delays and expense may be avoided by doing business direct with The Panama Canal. The Canal organization has been developed to handle vessels with all possible despatch, and to attend to their wants fully in the matter of supplies, fuel, water, repairs, etc., to the extent of the available facilities.

Deposits to cover tolls or the purchase of supplies may be made with any of the Assistant Treasurers of the United States, who are to be found at the larger seaports, or with the Assistant Auditor of The Panama Canal at Washington, D. C. As soon as these deposits are made, cable information is sent to The Panama Canal.

It is advisable that deposits be made somewhat in excess of the anticipated charges, to cover minor charges which may not have been anticipated, such as pilotage and towage. Pilotage is at the rate of \$1 per foot of maximum draft, but is not charged on a vessel which makes the transit of the Canal without taking on or discharging freight or passengers in a terminal port. Tug service, which is at the rate of \$15 per hour, will not be charged on vessels of less than 15,000 gross tonnage.

It has been arranged that when a deposit has been made with The Panama Canal, either direct or through an Assistant Treasurer of the United States, to cover the tolls or other bills of a vessel making the transit of the Canal, the Collector shall forward to the depositor immediately after the vessel clears, a copy of its bill, a statement of the account, and a draft for the balance due to the depositor.

Should the depositor request, however, that any balance be left to his account, to be applied on future charges, the Collector will be governed accordingly. In such a case he will forward immediately a copy of the vessel's bill and a statement of the account, specifying, of course, the balance to the credit of the depositor.

This arrangement has been made to put the steamship operator's dealings with the Canal on the simplest basis. Except that the Government requires payment in advance, which not all commercial firms do, the transaction is exactly analogous to a purchase in a store; with the delivery of the goods, the patron receives his change, or, if he prefers, may have it credited to his account.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 400 and 650 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa or Cristobal from plants of The Panama Canal or from private corporations. The present price from the Canal is \$1.25 per barrel.

(Continued on page 350.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., May 16, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
May 10	Huasco	Chilean	South American S. S. Co.	Cristobal	Balboa	General mdse	1,350	4,563	3,121
May 12	Chincha	American	W. R. Grace & Co.	New York	Paipa	General cargo	6,821	6,429	4,642
May 13	Panama	British	Pacific Steam Navigation Co.	Liverpool	Balboa	General cargo	200	6,804	4,438
May 14	Arna	Norwegian	Akties Arna	New York	Townsville	General cargo	7,500	6,253	4,693
May 15	South Pacific	British	Pacific Shipping Co. Ltd.	New York	Australia	General cargo	6,700	4,465	3,255
May 15	Texan	American	American-Hawaiian Line	New York	Los Angeles	General cargo	9,942	8,984	6,683
May 16	Quilpue	British	Pacific Steam Navigation Co.	Cristobal	Balboa	General cargo	400	3,922	2,231
May 16	Colon	American	Panama Railroad S. S. Line	New York	Balboa	General mdse	1,890	5,866	4,222
May 16	Mills	American	Ogden Mills	Newport News	Seattle	Creosote	3,600	3,421	1,614
May 16	San Joaquin	Norwegian	Akties Tankfart	Tonsberg	Balboa	Ballast		7,020	5,042
May 16	Nevadan	American	American-Hawaiian Line	New York	Los Angeles	General cargo	5,200	4,513	3,103

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

May 9	Vega	Italian	Lovarella Bros.	San Francisco	Galveston	Ballast		3,110	2,079
May 10	Christians Bors	Norwegian	W. Torkildsen	Portland	Limerick	Wheat	6,680	4,724	3,425
May 11	Grangewood	British	E. W. Morgan & Co.	Iquique	Archangel	Nitrates	5,060	3,890	2,880
May 11	Quilpue	British	Pacific Steam Navigation Co.	Talcahuano	Cristobal	Cocoa—general	1,841	3,922	2,231
May 11	Kil	Norwegian	C. Christenson	Talcahuano	Sandefjord	Walrus hides, etc.	313	592	309
May 12	Inverberie	British	R. J. Rowat Co.	Talcahuano	London	Oats and nitrates	6,570	4,792	3,602
May 12	Port Phillip	British	Commonwealth-Dominion Line	Melbourne	Boston	Concentrates	1,240	5,103	3,798
May 12	Oceana	Swedish	South African Line	Taitai	St. Thomas (ord's)	Nitrates	4,925	3,655	2,526
May 12	Southport	British	Lewis Trading Co.	Callao	Marseilles	Sugar	6,101	4,372	3,186
May 12	Hattie Luckenbach	American	Luckenbach Line	San Francisco	New York	General	2,000	4,708	3,637
May 12	John Palmer	American	Sudden & Christenson	Aberdeen	Quebec	1,283,640 ft. lum.	2,335	1,088	1,080
May 13	Portland	American	Lotus S. S. Co.	San Francisco	New York	General cargo	2,950	2,330	1,725
May 13	Ancon	American	Panama Railroad S. S. Line	Balboa	New York	General cargo	7,225	9,698	7,256
May 13	Isthmian	American	American-Hawaiian Line	Junin	Savannah	General cargo	7,000	5,677	3,975
May 13	Mars	American	United States Navy	San Francisco	Philadelphia	Naval stores	2,000	5,804	3,197
May 13	Machoon	British	A. Holt & Co.	Seattle	London	Gen. & lumber	7,000	6,656	4,621
May 15	Tallac	American	Tallac Co.	Los Angeles	New York	Lumber	1,909	1,884	1,125
May 15	Copenhagen	British	Glasgow Shipowners Co.	Iquique	Colon (orders)	Nitrates, c'n'trates	7,071	5,029	3,735
May 16	Jamatca	British	Pacific Steam Navigation Co.	Buenaventura	Cristobal	General cargo	596	1,170	620
May 16	Harry Luckenbach	American	Luckenbach Line	San Francisco	New York	General cargo	2,860	3,001	2,047
May 16	Arizonan	American	American-Hawaiian Line	Hilo	Del. Breakwater	Sugar and general	11,804	8,989	6,864

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
May 21	Cristobal	Panama Railroad S. S. Line	New York
May 26	Margaret	Johnson Line	Stockholm

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
June 5	Finland	Panama Pacific Line	San Francisco

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
May 10	Monterideo	Spanish Line	Barcelona
May 15	Wegadesk	Earn Line	Norfolk

*DEPARTURES.

Date	Vessel	Line	To
May 12	Monterideo	Spanish Line	Barcelona
May 13	Chiswick	Earn Line	Daiquiri, Cuba
May 13	Tyne	Royal Mail S. P. Co.	Daiquiri, Cuba
May 14	Finn	Earn Line	Norfolk, Va.

*EXPECTED ARRIVALS.

May 18	Oranian	Leyland Line	Liverpool
May 22	Covina	Elders and Fyffes	Port Limon

*EXPECTED DEPARTURES.

May 22	Covina	Elders and Fyffes	Bristol, via Jam'ca.
	Buford	U. S. Navy	Unknown.
	Wegadesk	Earn Line	Cuban ports.
	Francis Hyde	Copely Cement Mfg. Co.	Unknown.
	Oranian	Leyland Line	Unknown.

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

May 14	Manavi	Pacific Steam Nav. Co.	Taboga
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*DEPARTURES.

May 10	Huallaga	Peruvian S. S. Line	Callao
May 12	Cuzco	A. Cuzco, Wilhelmsen	South ports.
May 14	City of Para	Pacific Mail S. S. Co.	San Francisco

*EXPECTED ARRIVALS.

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*EXPECTED DEPARTURES.

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*Other than vessels passing through the Canal.

(Continued from page 349.)

Diesel engine oil is for sale by several companies, at approximately 45 shillings per ton of seven barrels.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light, and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Panama;" in the United States, "Panacanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C." for delivery in the United States.

Sailings of Vessels in Regular Service with the Isthmus.

		<i>Sails.</i>	<i>Arrives.</i>
NEW YORK TO CRISTOBAL-COLON.			
Carrillo.....	U. F. C.	May 12.....	May 19.....
Advance.....	P. R. R.	May 13.....	May 20.....
Metapan.....	U. F. C.	May 15.....	May 23.....
Almirante.....	U. F. C.	May 19.....	May 26.....
Panama.....	P. R. R.	May 20.....	May 26.....
Pastores.....	U. F. C.	May 22.....	May 30.....
Santa Marta.....	U. F. C.	May 26.....	June 2.....
Allianca.....	P. R. R.	May 27.....	June 2.....
Calamares.....	U. F. C.	May 29.....	June 6.....
Zacapa.....	U. F. C.	June 2.....	June 9.....
Colon.....	P. R. R.	June 3.....	June 9.....
CRISTOBAL-COLON TO NEW YORK.			
Carrillo.....	U. F. C.	May 20.....	May 27.....
Colon.....	P. R. R.	May 22.....	May 26.....
Tenadores.....	U. F. C.	May 24.....	May 31.....
Almirante.....	U. F. C.	May 27.....	June 3.....

Advance	P. R. R. May 29	June 5
Metapan	U. F. C. May 31	June 7
Santa Marta	U. F. C. June 3	June 10
Panama	P. R. R. June 5	June 11

NEW ORLEANS TO CRISTOBAL-COLON.			
Parismina	U. F. C. May 15	May 20	
Atenas	U. F. C. May 18	May 25	
Cartago	U. F. C. May 22	May 27	
Turrialba	U. F. C. May 25	June 1	
Heredia	U. F. C. May 29	June 3	
Abangarez	U. F. C. June 1	June 8	
Parismina	U. F. C. June 5	June 10	
Atenas	U. F. C. June 8	June 15	

CRISTOBAL-COLON TO NEW ORLEANS.			
Heredia	U. F. C. May 20	May 25	
Abangarez	U. F. C. May 20	May 27	
Parismina	U. F. C. May 27	June 1	
Atenas	U. F. C. May 27	June 3	
Cartago	U. F. C. June 3	June 8	
Turrialba	U. F. C. June 3	June 10	

CANAL



RECORD

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Address all Communications,
THE CANAL RECORD,
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Isthmus of Panama.

NOTES OF PROGRESS.

Collier "Ulysses" Again in Port.

The Canal collier *Ulysses* arrived at Cristobal on Tuesday, May 25, with 12,000 tons of coal, having sailed from Norfolk on May 19. This is the second voyage of the *Ulysses*. On the first, the vessel cleared from Norfolk on April 21 and arrived at Cristobal on April 27; she cleared from Cristobal on May 9, and thus began the return trip within 10 days after departure, and was back at Cristobal again in slightly over two weeks.

The "Hesperos" Calls at Balboa for Coal.

The Norwegian steamship *Hesperos* arrived at Balboa in the afternoon of Monday, May 17, and sailed on May 19, on her way from Mejillones to San Francisco. The call at Balboa was for the purpose of taking on 450 tons of coal, and some commissary supplies. The *Hesperos*, which is operating under a 6-year charter to the E. I. Dupont de Nemours Company, powder makers, is carrying 8,028 tons of nitrates. The distance from Mejillones to Balboa is about 2,200 miles, and that from Balboa to San Francisco about 3,277 miles, the total route of the *Hesperos* being thus approximately 5,477 miles, or about 767 miles more than the direct sailing from Mejillones to San Francisco.

Piles Driven for New Quarantine Landing.

The driving of the pipe piles for the trestle of the new quarantine landing at Balboa was completed on Thursday, May 20, after 12 days of driving. The work of cutting off the tops of the piles to even elevation was immediately begun, using an oxy-acetylene torch, and finished on May 21. The torch was able to cut some of the pipes, 14 inches in diameter and $\frac{3}{8}$ -inch in thickness, in four minutes. The

placing of reinforcement for the concrete in the casings was begun on May 22.

In driving the pipe it was necessary to fill them with concrete for about two feet above the bottom of the cap, to weight the hollow piles to the sinking point. In order to give them the required batter, the piles were driven through a guide frame, built of timber and ballasted, which was sunk at the point of driving. After it was placed in approximate position movable guides were adjusted for exact regulation. This frame, 24 feet high by 20 feet long and 12 feet wide, was handled from place to place by derrick barge No. 156, which also operated a steam hammer to drive the piles.

"Cristobal" Will Sail Next Wednesday.

The steamship *Cristobal* of the Panama Railroad Steamship Line, recently returned to passenger service, will make her first sailing from the Canal Zone with passengers on Wednesday, June 2, sailing from Dock 9 at Cristobal at 3 p. m. She can accommodate 76 first-class passengers, and 52 in the steerage.

Shipment from British Guiana through the Canal.

The steamship *Student* of the Harrison Line, which arrived at Cristobal on Sunday, May 23, from Liverpool, via Trinidad, and entered the Canal the same day on the way to Los Angeles, is carrying, in a cargo of about 4,000 tons, 1,906 tons of refined Emerara sugar from British Guiana for discharge at Los Angeles, San Francisco, Seattle, and Vancouver. This is the largest single shipment of a product of northeast South America which has passed through the Canal.

Train Service on May 31.

To all concerned—Monday, May 31, being observed as a legal holiday, trains Nos. 11 and 12, scheduled to run on Sundays only, will run on that day. Otherwise the regular week-day schedule will be in effect.

C. H. MOTSETT,

Superintendent, Panama Railroad.

BALBOA HEIGHTS, C. Z., May 26, 1915

Special Launch Service for Decoration Day Holiday.

In connection with the Decoration Day holiday, to be observed on Monday, May 31, the regular schedule of launches to Balboa will be supplemented on Saturday, May 29, by a boat leaving the dredge landing at Balboa at 1.30 p. m., with which passengers coming on the noon train may connect, and a boat leaving the dredge landing at 7.30 p. m., to take persons from the evening train.

The following is the regular schedule, in addition to which the special launches will be operated:

Leave Balboa dredge landing—Daily, except Thursday, at 5.30 p. m.; Monday, Thursday, Saturday, and Sunday, at 9.40 a. m.

Leave Taboga—Daily, except Friday, at 7 a. m. (On Mondays and days following holidays, one hour earlier); Monday, Thursday, and Saturday at 1.30 p. m.; Sunday at 7.15 p. m. The 9.40 a. m. trips from Balboa await the arrival of Panama railroad trains.

CANAL TRAFFIC IN APRIL.

Exceeds Previous Months' Excepting March.—
Summary of Movements.

Traffic through the Canal during the month of April was not as great as during the preceding month. In April 119 oceangoing vessels passed through the Canal, carrying an aggregate of 522,841 tons of cargo. In March 136 vessels carried 635,057 tons. The average daily transit of cargo during April was 17,428 tons, as compared with 20,485.7 tons in March.

The traffic in April, however, exceeded that in all preceding months except March. Summaries of the traffic eastbound, or from Pacific to the Atlantic, and westbound, from Atlantic to Pacific, are given herewith, in comparison with the movements during previous months:

Month	Eastbound.		Westbound.		Total.	
	Ves-sels.	Cargo.	Ves-sels.	Cargo.	Ves-sels.	Cargo.
Aug...	12	57,182	12	49,106	24	106,288
Sept...	30	186,776	27	135,262	57	322,038
Oct...	40	252,288	44	168,069	84	420,357
Nov...	38	242,291	54	206,510	92	448,801
Dec...	57	261,680	42	177,235	99	438,915
Jan...	54	240,875	44	208,082	98	448,957
Feb...	53	274,619	39	149,987	92	424,606
Mar...	80	417,610	56	217,447	136	635,057
April.	60	285,457	59	237,384	119	522,841
Total	424	2,218,778	377	1,550,082	801	3,768,860

Thirteen of the vessels passing through the Canal in April were in ballast. The average loading for the 106 vessels carrying cargo was 4,932 $\frac{1}{2}$ tons.

To May 1st, 70 vessels, not including launches, which are not included in these summaries, had passed through the Canal without cargo, and 731 had carried cargo through the Canal.

The numbers of laden and ballast vessels using the Canal each month since its opening to commercial traffic on August 15, 1914, the average amount of cargo in each of the laden vessels each month, and the average daily transit of cargo are given in this table:

	Bal-last	Lad-en	Average loading	Daily movement
August	4	20	5,314.4	6,643.0
September	8	49	6,572.2	10,734.6
October	12	72	5,838.3	13,559.9
November	7	83	5,280.0	14,960.0
December	6	91	4,724.3	14,190.8
January	6	92	4,879.9	14,482.5
February	4	88	4,825.1	15,164.5
March	10	126	5,040.1	20,485.7
April	13	106	4,932.5	17,428.0

The average loading for all of the 731 laden vessels which have made use of the Canal, up to May 1, 1915, has been 5,155 $\frac{1}{2}$ tons.

The tolls earned during the month of April amounted to \$142,415.49. The levy by months has been:

Prior to July 1, 1914	\$14,618.68
July	7,598.40
August	88,401.80
September	268,208.64
October	375,787.44
November	381,533.28
December	410,043.60
January, 1915	419,037.12
February	385,904.96
March	560,784.96
April	442,415.49

Total 3,352,334.37

Tolls collected in April amounted to \$420,-884.69, making the total collections to May 1, less refunds, amount to \$3,274,565.57.

The cargo was carried over five principal routes, as follows:

Route.	Tons of Cargo.	
Coastwise, eastbound.....	80,660	
Coastwise, westbound.....	121,064	
Total.....		201,724
U. S. Pacific coast to Europe.....	40,556	
Europe to United States.....	14,038	
Total.....		54,594
South America to Europe.....	54,541	
Europe to South America.....	6,477	
Total.....		61,018
South America to United States.....	88,262	
United States to South America.....	28,993	
Total.....		117,255
United States to Far East.....	61,512	
Far East to United States.....	16,438	
Total.....		77,950
Miscellaneous westbound.....	5,300	
Miscellaneous eastbound.....	5,000	
Total.....		10,300
Grand total.....		522,841

The miscellaneous westbound routing was that of the *Llandudno*, carrying 5,300 tons of coal from Cardiff to unknown destination in the Pacific Ocean. The eastbound cargo not classified on the five principal routes consisted of 5,000 tons of lumber, shipped on the *Thor* from Astoria to Quebec.

Cargo declarations made by the masters of vessels passing through the Canal during April listed 111 commodities; of these, 20 were carried through the Canal in both directions. Distribution of the principal commodities was as follows:

Cacao amounted to 6,537 tons, of which 91 tons were shipped from the Atlantic to the Pacific coast of the United States, and 6,446 tons originated on the west coast of South America, for shipment to Europe and the United States.

Canned fish included 50 tons from Christiania to Chile, 50 tons from Guayaquil to Europe, and 5,544 tons from Vancouver, Seattle, Portland, Astoria, and San Francisco, shipped to London and New York, the latter port receiving 1,000 tons.

Coal shipments amounted to 14,716 tons: 1,000 tons from Norfolk to Peru and Chile, 1,821 from Baltimore to Seattle, 6,595 from Newport News to San Francisco, and 5,300 tons from Cardiff to the Pacific Ocean. No coke was shipped through the Canal during the month.

Copper amounting to 1,213 tons was shipped from Seattle, 13 tons to London and 1,200 tons to New York; 5,766 tons were shipped from various ports on the west coast of South America, for Europe and the United States.

One thousand tons of flour passed through the Canal from New York, 200 tons consigned to Cruz Grande, 200 to Sydney, and 600 to United States ports; and 14,407 tons were shipped from Seattle and Tacoma to Europe.

Gasoline shipments amounted to 6,462 tons; 600 tons were from New York for Dalney and Tien Tsin, and 177 tons from New York for the west coast of South America; while a single eastbound shipment of 5,685 tons, on the *Luz Blanca*, was in transit from Talara to London.

Goods classified as general cargo amounted to 167,385 tons, of which 118,556 tons were shipped from the Atlantic to the Pacific, and 48,829 tons eastward. In the westward traffic, 68,271 tons were in the United States coast-

wise trade; 22,515 tons were shipped from New York to South and Central America; 23,873 tons were from New York for the Far East, and 3,893 tons from Europe for the west coast of the United States. In the eastward movement, 27,438 tons were in the American coastwise trade; 402 tons from the Far East for New York; 5,963 tons from Portland for Avonmouth; 6,482 tons from South America for Europe; and 8,544 tons from South America for New York.

Iron shipments amounted to 6,987 tons; 4,262 tons from New York to the American west coast; 1,800 tons from New York to Tien Tsin and Shanghai; 800 tons from New York to New Zealand and Australia; 80 tons from Liverpool to Callao; and 35 tons from Christiania to San Francisco.

Lumber amounted to 27,160 tons, shipped from the west coast of the United States and Canada; 5,010 tons went to England, 5,000 tons to Quebec, and the remainder to Atlantic ports of the United States.

Manufactured goods of iron and steel amounted to 30,234 tons, of which all but 44 tons were shipped from the Atlantic to the Pacific; 147 tons were shipped from Liverpool to South America, and 30,043 tons were shipped from Atlantic ports of the United States; of this quantity, 10,600 tons went to the Far East, 6,788 tons to South America, and the remainder to ports of the United States.

Nitrates amounted to 68,277 tons, of which 250 tons were shipped from Christiania to San Francisco, and 68,027 tons from the west coast of South America, 21,576 tons to Europe and 46,451 tons to the United States.

Of refined petroleum, 4,502 tons were shipped from Portsmouth to Los Angeles, and 22,297 tons from the Atlantic seaboard of the United States to Honolulu and the Far East; and 307 tons were carried by the *Luz Blanca* from Talara to London.

Shipments of skins and hides amounted to 4,572 tons, of which 800 tons were shipped from Shanghai to New York, and the remainder from the west coast of South America to the United States and Europe, excepting 60 tons from San Francisco to New York.

Sugar amounted to 32,668 tons; 1,001 tons from South America and 31,687 tons from the Hawaiian Islands, all consigned to New York.

Tin to the amount of 3,655 tons was shipped from New York, 1,400 tons to Tien Tsin, 40 tons to South America, and 2,215 tons to Los Angeles and San Francisco; unworked tin amounting to 717 tons was shipped from Chile to Europe and 200 tons were shipped from San Francisco to New York.

Wool amounted to 4,665 tons; 882 tons were from Chile for Europe; and 33 from San Francisco, 850 from Shanghai, and 3,000 tons from Brisbane were consigned to New York.

Detailed summary of the traffic follows:

Commodity	Atlantic to Pacific.	Pacific to Atlantic	Total.	Remarks.
	Tons.	Tons.	Tons.	
Alcohol.....		4	4	San Francisco to London.
Algarovilla.....		100	100	Valparaiso to Liverpool.
Antimony.....		120	120	Chile to Liverpool.
Apples.....		246	246	Hilo to Philadelphia.
Asphalt.....	85		85	Calbo to north Pacific ports.
Balsam.....		1	1	Balboa to New York.
Bismuth.....		59	59	Antofagasta to Liverpool.
Bathtubs.....	125		125	New York to Portland and Seattle.
Beans.....		50	50	San Francisco to New York.
Beans, lima.....		30	30	San Francisco to New York.
Beans, vanilla.....		3	3	San Francisco to London.
Borax.....		654	654	Chile to Liverpool.
Brass.....		35	35	Tacoma to Liverpool.
Cacao.....	91	6,446	6,537	See introduction.
Cakes, cotton seed oil.....		450	450	Callao to Liverpool.
Canned goods:				
Fish.....	50	5,594	5,644	See introduction.
Fruit.....		3,520	3,520	Honolulu and San Francisco to New York and London.
Miscellaneous.....	182	20	202	Between north Pacific ports and New York and Europe.
Cassia.....		100	100	Hongkong to New York.
Cement.....	2,110		2,110	North Atlantic to Pacific ports.
Chemicals.....	1,090	25	1,115	Between New York and San Francisco and Los Angeles.
Clay, fire.....	30		30	Liverpool to Callao.
Coal.....	14,716		14,716	See introduction.
Coca leaves.....		5	5	Salaverry to Cristobal.
Coconuts.....		10	10	Tumaco to Colon.
Coffee.....	79	2,617	2,696	New York to north Pacific; south Pacific to New York.
Coin, silver.....	1		1	Liverpool to Panama.
Copper.....		9,136	9,136	See introduction.
Copper ore.....		836	836	Peru and Chile to New York and Liverpool.
Copra.....		900	900	Manila to New York.
Corn.....	100		100	New Orleans to Central American ports.
Corn meal.....	45		45	New York to San Francisco and Los Angeles.
Cotton.....	1,026	947	1,973	1,000 New York to Vladivostok; 879, south Pacific to Europe.
Creosote.....	5,000		5,000	London to Seattle.
Earthenware.....	78		78	New York to San Francisco and south Pacific ports.
Explosives.....	2,699	23	2,722	New York to north Pacific ports and Vladivostok.
Flour.....	1,000	14,407	15,407	See introduction.
Fruit, dried.....		200	200	San Francisco to Europe.
Garlic.....		35	35	Valparaiso to Cristobal.
Gasoline.....	777	5,685	6,462	See introduction.
General cargo.....	118,556	48,829	167,385	See introduction.
Glassware.....	54		54	New York to San Francisco.
Grease.....		15	15	San Francisco to London.
Hay.....		550	550	Valparaiso to Cristobal.
Hemp.....		784	784	Manila to New York.
Honey.....		56	56	San Francisco to London.
Hops.....		10	10	San Francisco to London.
Horns and hoofs.....		1	1	Callao to New York.
Indigo.....		1	1	Guayaquil to Cristobal.
Iodine.....		597	597	Valparaiso to Cristobal.
Iron.....	6,987		6,987	See introduction.
Iron ore.....		14,704	14,704	Cruz Grande to Philadelphia.
Ivory nuts.....		405	405	Tumaco to Cristobal.
Jute.....	5		5	Liverpool to Callao.

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.	Remarks.
Kitchen utensils.....	27		27	New York to north Pacific ports.
Lard.....	52		52	New Orleans to south Pacific ports.
Lead.....	2	329	331	San Francisco and Valparaiso to Cristobal and New York.
Leather.....		20	20	San Francisco to London.
Linoleum.....	122		122	New York to San Francisco and Los Angeles.
Liquors.....	483		483	New York to west coast ports.
Live stock (716 pigs).....				San Francisco to New York.
Lumber.....		27,160	27,160	See introduction.
Macaroni.....		15	15	San Francisco to London.
Manufactured goods:				
Iron and steel.....	30,190	44	30,234	See introduction.
Machinery.....	3,883		3,883	New York to west coast, Orient, and Australia.
Railroad material.....	577		577	New York to north Pacific ports and Shanghai.
Textiles.....	1,788		1,788	New York and Liverpool to west coast ports.
Miscellaneous.....	2,401	67	2,468	New York to north Pacific ports; Valparaiso to Cristobal.
Marble.....	23		23	New York to San Francisco.
Nails, wire.....	40		40	New York to Portland, Oreg.
Nitrates.....	250	68,027	68,277	See introduction.
Oil, crude.....	446	8,089	8,535	See introduction.
Oil, lubricating.....	335		335	New York to north Pacific ports.
Oils, vegetable.....	80	2,850	2,940	New York to west coast, and China to New York.
Panama hats.....	237		237	New York to north Pacific ports.
Paper.....		51	51	Guayaquil to Cristobal.
Paper ware.....	2,178		2,178	New York and Europe to west coast.
Petroleum, refined.....	146		146	New York to San Francisco.
Printing presses.....	26,799	307	27,106	See introduction.
Quillay.....	12		12	New York to north Pacific ports.
Resin.....	4	160	160	Valparaiso to Cristobal and Liverpool.
Rice.....			4	Liverpool to Panama.
Rubber.....		500	500	San Francisco to New York.
Rubber, old.....		224	224	South Pacific ports to Cristobal and New York.
Salt.....		160	160	Portland and San Francisco to New York.
Scrap metal.....	147		147	New York and Europe to west coast.
Seed.....		46	46	West coast to Liverpool and New York.
Shooks, box.....		80	80	Hongkong and Peru to New York and Liverpool.
Silver.....		150	150	Victoria to Liverpool.
Silver sulphides.....		51	51	South Pacific ports to New York and Liverpool.
Skins and hides.....		70	70	Valparaiso to Cristobal.
Soap.....	668	4,572	4,572	See introduction.
Sugar.....		32,688	32,688	Liverpool and New York to west coast.
Tallow.....		478	478	See introduction.
Tea.....	5		5	North Pacific ports and Shanghai to New York and London.
Textiles, miscellaneous.....	1,912		1,912	Liverpool to Callao and Valparaiso.
Ties, railroad.....		3,853	3,853	New York and Liverpool to west coast and Vladivostok.
Tin.....	3,655	917	4,572	Vancouver to Jamaica (orders).
Tin ore.....		1,173	1,173	See introduction.
Tin plates.....	3,552		3,552	Chile to Liverpool.
Tires, rubber.....	20		20	New York to north Pacific ports.
Tobacco.....	37		37	New York to north Pacific ports.
Vaults.....	7		7	Liverpool and New York to west coast.
Wax.....	11		11	New York to Portland, Oreg.
Wheat.....	3,746		3,746	Valparaiso to Liverpool.
Wines.....	50	230	280	Portland to New York and Falmouth.
Wire.....	2,370		2,370	New York, Europe, and west coast.
Wolfram.....		12	12	New York to North Pacific ports, Sydney, and Vladivostok.
Wool.....		4,665	4,665	Antofagasta to Liverpool.
Zinc concentrate.....		6,502	6,502	See introduction.
Total.....	237,384	285,457	522,841	Port Pirie to Galveston.

CANAL WORK IN APRIL.

Monthly Report of the Acting Governor to the Secretary of War.

BALBOA HEIGHTS, C. Z., May 15, 1915.

The Honorable the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of operations on the Isthmus for the month of April, 1915:

Department of Operation and Maintenance.

Lock operation and maintenance.—The installation of chain fender apparatus for all locks, except the hanging of two chains at Miraflores, was completed. The grading of dams and backfill and the planting of grass at the Pacific locks progressed satisfactorily, and at the close of the month this work was practically completed at Pedro Miguel. The new air compressor plant for Pedro Miguel Lock was put into service. The construction of buildings for permanent repair shops at both the Atlantic and Pacific locks was completed. The following lockages were made during the month: *Gatun*—115 lockages, 122 vessels; *Pedro Miguel*—120 lockages, 127 vessels; *Miraflores*—120 lockages, 127 vessels.

Electrical Division.—Construction work was in progress on the underground conduit systems and street lighting systems in the Ancon-Balboa, Gatun, and Cristobal districts; bar-

racks and quarters at Fort Grant; concrete quarters, dispensary, commissary, and oil house at Balboa; and the buildings of the new insane asylum at Corozal. The usual operation and maintenance work in connection with electric power and air compressor plants, substations, transmission lines, and the cargo-handling cranes was carried on.

On April 1 the construction, operation, and maintenance of the telephone system and the railway signal system, and the construction and maintenance of the telegraph systems were transferred from the Panama railroad to the Electrical Division of The Panama Canal. On the same date the construction, operation, and maintenance of the fire alarm system were transferred from the Division of Police and Fire to the Electrical Division.

Municipal Engineering Division.—In addition to work incident to maintenance, operation, and repairs, work was in progress on the following items of construction: The concrete reservoir at Gatun; repair shop and office building at Pedro Miguel Lock; parking in front of Ancon commissary; water and sewer systems, roads, walks, and grading for the Army post at Balboa dump; water and sewer connections and grading for the Army at Balboa Heights and Corozal; water and sewer systems and roads for quarters on Cemetery Ridge, Balboa; road paralleling the Canal

Zone boundary in Ancon; improvements in Balboa townsite; roads, walks, and grading at the Panama waterworks plant, Miraflores, and the extension of the Miraflores powerhouse for the Electrical Division.

Meteorology and hydrography.—The rainfall was above normal at all stations except Miraflores and Pedro Miguel. The monthly totals ranged from 2.39 inches at Pedro Miguel to 15.90 inches at Gatun. The maximum precipitation recorded in any one day was 7.64 inches, at Gatun on April 3. The estimated rainfall over the Chagres River basin was 115 per cent above the average, or 9.98 inches against a 14-year average of 4.65 inches. The discharge at Alhajuela was 104 per cent above the 26-year April normal. The elevation of Gatun Lake varied from 86.89 feet on the 3rd to 86.37 feet on the 24th of the month, averaging 86.46 feet.

Division of Terminal Construction.
PACIFIC TERMINALS.

Shops.—Building No. 30 was completed during the month, with the exception of placing the heating coil in the potash vat, and making the connection to the mixer for cutting compounds. Crane rails in buildings Nos. 1, 2, 3, 4, and 12 were levelled up, and in building No. 2 tie rods were placed between the girders of the runway extensions in order to correct the span, which was too great.

Dry dock.—The proposals for the pumping plant and the flooding and sluice valves were canvassed during the month and the award made on each. The receipt of proposal drawings permitted work to proceed on drawings for the masonry of the pump well proper. The structural framing for the combined compressor and pump house was proceeded with, together with the necessary substructure. Hand excavation in connection with the work of preparing the foundations continued during the month and amounted to 4,920 cubic yards; 13,552 cubic yards of mass concrete, and 4,161 cubic yards of reinforced concrete were placed during the month. There were embedded in concrete 119,910 pounds of reinforcing steel and 40,016 pounds of anchorage rails; 83,240 pounds of fixed steel were placed, consisting of bolts, nuts, gates, anchors, etc. Work was started on the bases for the big pumps back of the suction wall.

Entrance pier.—Excavation continued during the month for the foundation for the wharf along the south side of the entrance pier. The drilling of holes, grouting and placing anchor rails for the foundations was well under way, 59,200 pounds of rail having been placed. During the month a total of 614 cubic yards of concrete was placed, 576 cubic yards of which were mass and 38 cubic yards reinforced.

Coaling plant.—In the coal pocket 676 cubic yards of concrete were placed, 85 of which were classified as reinforced, and 39,035 pounds of reinforcing steel were placed. Ten tons of steel were erected in the construction of the berm cranes. At the unloader wharf an incline was completed and backfill placed for a loading track, in anticipation of cutting in a steamshovel to excavate a part of the earth and rock for the emplacement of concrete for the buttresses, and in making this incline 1,816 cubic yards of fill were placed. One thousand seven hundred and seven cubic yards of concrete were placed in the floor slab of the unloader wharf and curtain walls, practically all of which was reinforced; 324.03 tons of structural steel were placed for the decking and aligned and riveted. This completes the erec-

tion of the steel decking to station 2 plus 50. At the reloader wharf 12 caissons were started during the month, making a total to date of 54. Earth excavation in cylinders amounted to 581 cubic yards by orange peel bucket and 69 yards by task and day labor, and in addition there were 872 cubic yards of earth and 1,504 cubic yards of rock excavated from the reloader wharf by steamshovels. Two hundred forty-three lineal feet of construction trestle was built to be used in working the fourth or "D" row of caissons.

Quay wall and pier—Rock amounting to 8,104 cubic yards was placed in the backfill for quay wall d-e-f. Excavation was carried on in six caissons, 207 cubic yards of material being removed. Concrete placed in caissons amounted to 447 cubic yards. On quay wall i-j-m-n two anchors for holding the pontoon were placed. At pier No. 1, additional anchor rods were placed from girders 30 to 34, the weight of the material used being 31,218 pounds.

Sosa Hill Quarry—There were excavated from Sosa Hill quarry during the month by steamshovels 1,898 cubic yards of earth and 34,110 cubic yards of rock. Of this material 14,623 cubic yards were used as shops fill, 12,136 cubic yards were sent to the Cristobal mole, and the remainder was used in miscellaneous filling and by other divisions.

Fuel oil plant—Oil crib No. 1 was completed. Twenty-eight cubic yards of concrete were placed in caissons and 146 cubic yards in the floor slab. For the dolphins 48 piles were driven, the total length being 3,515 lineal feet.

Quarantine boat landing—The work of the contractor progressed rather slowly during the month, and at the close of the month it is estimated but five per cent of the landing was completed. The landing was assembled by this division, 12½ tons of steel being used in its erection.

ATLANTIC TERMINALS.

East Breakwater—On the night of April 3, a norther blew up along the Atlantic coast, and continued to April 5. The following damage was done to the breakwater trestle: The two lights on the shore section of the trestle were thrown overboard and lost. The old double-track trestle from bents 1 to 69 is in good condition, except that one pile was broken out of bent 60, sea track. From bent 70 to bent 82, 15 piles were broken out on the sea track, and four piles on the harbor track. In this section, the caps were displaced from the piles, but the decking remained intact on the caps. Bent No. 82 was the last one on which there was a cap. There were two piles standing in each of bents 83 and 84. There was one pile standing in each of bents 98, 99, 100, 110, and 111. There were five piles standing in the foundation of relay station No. 1. Before this norther, the old double-track trestle was intact to bent No. 100. New single-track trestle had been driven and decked to bent No. 125 and three piles had been driven in bent No. 126.

As to the outside section of the trestle, the decking remained on bents 359 to 368, approximately. This is at station 0 to 1 plus 50 "C." From bent 369 to 579 there were approximately 250 piles standing. In no place were the piles standing in more than six consecutive bents. Relay station No. 2 was partially wrecked. In all, 15,627 lineal feet of piling were driven during the month, and 32,885 cubic yards of dredged material were dumped by scows along the axis of the breakwater ahead of the pile driving. Dredge No. 4 pumped 8,628 cubic yards of material on the

center line of the trestle and 5,174 cubic yards into the pile yard fill.

Cooling plant—Caisson foundation work generally is progressing satisfactorily although considerable difficulty is experienced at the north end of the unloader wharf, but the more difficult work is now nearly finished. All but 11 cylinders under the unloader wharf have been entirely completed.

Fuel oil plants—During the month the erection of one of the three 55,000-barrel fuel oil tanks to be erected by the Huasteca Petroleum Company at Mount Hope was commenced.

Marine Division.

One hundred and twenty-three vessels, including four launches, passed through the Canal in April, 61 (with one launch) north-bound, and 62 (with three launches) south-bound. Of this number 54 vessels were of American register and 49 of British register. Collections of tolls amounted to \$420,884.69.

Twenty-one vessels were measured and 88 were inspected to see whether their certificates conform to the rules.

Dredging Division.

The total excavation for the month, including earth, rock, and gravel, was 1,092,637 cubic yards. Of this total, 28,357 cubic yards were removed between the Pacific entrance and Miraflores Locks, 154,809 cubic yards from Balboa inner harbor, 635,717 cubic yards from the Gaillard Cut, and 30,561 cubic yards from Gatun Locks to the Atlantic entrance. The hydraulic grader was engaged in sluicing at Balboa harbor and the north side of Gold Hill and in cutting one of the Obispo Diversion ditches. Extermination of water hyacinths was confined to the vicinity of old Gorgona. The entire waters of the Trinidad valley have been covered, but no trace of these plants has been found there.

Mechanical Division.

Shop orders authorized during the month numbered 887, a decrease of 48 from the previous month, those left over from March being 532, those completed during the month numbering 927, and those carried forward into May numbering 492. The output of the foundry was 107,467 pounds of iron, 59,995 pounds of steel, and 8,731 pounds of brass. Hostling was done on 4,199 pieces of equipment, and shop and field repairs were made on 7,855 cars. In addition, 1,123 light repair jobs were done on equipment, and six cases of extended repairs.

The fuel oil handling plant at Balboa handled 174,566.08 barrels and the fuel oil plant at Mount Hope handled 10,455.77 barrels of oil during the month.

Building Division.

Construction work was in progress on the following buildings: Bath house at Hotel Washington in Colon; Panama railroad station, farm superintendent's house, insane asylum ward buildings, and superintendent's house, and three mess halls and temporary stables for the Army, at Corozal; combined office, storehouse, and mattress factory at Ancón; 4-family and 2-family concrete houses and 2-family frame houses at Balboa; and headquarters building at Fort Amador. The field officer's house and the last of the first four barracks at Fort Amador were completed. In addition, the construction of two 4-family concrete houses and four 4-family frame houses at Balboa was let out by contract. The Corozal block plant turned out 53,000 blocks.

Supply Department.

The force report for the half month ending

Wednesday, April 21, showed a total of 24,441 employes of The Panama Canal and Panama Railroad Company, of whom 3,324 were white Americans and 21,117 were laborers. Of the latter, approximately 388 were Europeans and the remainder West Indian negroes. There was an increase of 1,105 laborers, and a decrease of 64 Americans, making a net increase of 1,041.

The occupants of Government quarters numbered 6,788 white Americans, of whom 3,603 were men, 1,550 women, and 1,635 children; 7,300 West Indians, of whom 4,156 were men, 1,265 women, and 1,679 children.

The value of material received during the month was \$668,581.85. It came forward in 31 steamers; the total weight of the cargo, exclusive of lumber and piles, was 15,379 tons. Some of the principal items were 1,075,050 feet, board measure, of lumber for stock, and 179,715 bags of Portland cement.

Health Department.

General.—No case of yellow fever, smallpox, or plague originated on or was brought to the Isthmus during the month. Eighteen deaths occurred in the Canal Zone. The death rate for disease for the Canal Zone, based upon a population of 33,652, was 5.71 per thousand, as compared with 8.23 per thousand for the preceding month and 11.10 per thousand for the corresponding month of last year.

Employes.—The health of employes continued good. The number of names on the payrolls for the preceding month was 34,125. On this basis the admission to hospitals and quarters, 802, gave a rate of 282.02 per thousand, as compared with 312.82 for the preceding month and 350.59 for the corresponding month of last year. The admission rates to hospitals for all diseases were: White, 240.84; blacks, 96.44; Europeans, 439.49; and Americans, 211.52. The admission rates for malaria to hospitals and quarters were: Whites, 51.61; blacks, 24.62; Europeans, 171.97; and Americans, 33.84. The total number of deaths from all causes was eight. Of these five died from disease, or 1.76 per thousand, as compared with 4.91 for the preceding month and 5.53 for the corresponding month of last year. Two Americans died from disease during the month.

Accounting Department.

The cash balance in Canal construction appropriations on April 30, 1915, was \$24,686,640.87, and in the fortifications appropriations \$5,831,621.29. The payrolls for April, exclusive of Army quarters, storehouses, fortifications, etc., amounted to \$947,924.16 and the fortification roll amounted to \$73,389.47. Payments by the Disbursing Clerk in Washington amounted to \$728,397.38, and by the Paymaster on the Isthmus, \$1,607,600.80. Collections on the Isthmus amounted to \$991,780.91, of which \$328,841.42 was repaid to the appropriations, \$200,668.74 was commissary collections and other trust funds, and \$462,270.75 was miscellaneous receipts to be covered into the Treasury. Of the miscellaneous receipts \$420,884.69 as collected on account of tolls, as compared with \$606,316.56 for March. Deposits in the amount of \$279,297.87 were made with the Assistant Treasurer, to be applied in payment of tolls and other charges against vessels using the Canal. Canal Zone revenue collections and miscellaneous funds received, amounted to \$177,874.40, and the disbursements under the same heading amounted to \$286,365.96.

Executive Department.

DIVISION OF CIVIL AFFAIRS.

One hundred and ninety-one licenses of all

kinds were issued during the month. Sixteen estates were settled, having a total value of \$961.87. At the port of Balboa 90 vessels entered and 93 cleared, and at the port of Cristobal 135 vessels entered and 130 cleared.

Postal service.—Postmasters remitted on account of stamp sales, second class mail collections, postage due collections, and box rent receipts, \$8,037.10. The money orders issued aggregated \$308,188.26. The fees collected thereon amounted to \$1,096.81. Of the total value of money orders issued, \$96,020 represents the value of deposit money orders issued without fee. Deposit orders to the value of \$102,325 and postal savings certificates to the value of \$59,098 were paid. The balance of postal savings deposits on hand at the end of the month, represented by the unpaid certificates and deposit money orders, aggregated \$559,291, as compared with \$624,694 at the close of the previous month.

POLICE AND FIRE DIVISION.

Four hundred and twenty-four arrests were made during the month. Of these 394 were males and 30 females. Fifty-eight convicts were confined in the penitentiary at the close of the month. Ten persons were deported, four of whom were convicts who had completed their sentences in the penitentiary, and six of whom were prisoners who had served terms in jail.

Twenty-three fires occurred during the month. The damage to The Panama Canal and Panama railroad property amounted to \$22,527.40, approximately \$22,000.00 of which was caused by the conflagration which occurred in Colon on April 30, 1915. No fire damage resulted during the month to United States Army property or private property on the Canal Zone.

COURTS.

In the District Court, five civil, 18 probate, and 29 criminal cases were settled; five civil, 20 probate, and 30 criminal cases were filed, and 100 cases of all kinds were pending at the close of the month. In the magistrates' courts, 10 civil and 425 criminal cases were tried.

DIVISION OF SCHOOLS.

The total enrollment in the Canal Zone schools for the month was 1,722 for the white schools and 1,575 for the colored schools. In the white schools the net enrollment was 1,128 and the average number belonging 921.7, and the average daily attendance 888.7. In the colored schools the net enrollment was 1,399, the average number belonging 833.4, and the average daily attendance, 692.8.

Panama Railroad.

The cargo handled at the Colon and Balboa agencies aggregated 162,539 tons, of which 21,917 tons were handled through the Canal in steamers of the Panama Railroad Steamship Line, as follows:

From New York to Balboa, 2,336 tons; from Colon to Balboa, 2,723, tons; total, 5,059 tons. From Balboa to New York, 11,871.5 tons; from Balboa to Colon, 4,986.5 tons; total 16,858 tons; grand total, 21,917 tons.

The work on the terminal docks at Cristobal continued satisfactorily during the month. One thousand four hundred fifty-five lineal feet of steel cylinders were driven for dock No. 7, making this item 69 per cent complete. Excavation in cylinders was 61 per cent complete, and concrete in cylinders 50 per cent

complete. Twenty-eight caissons were completed during the month, making this item 51.4 per cent complete. The sail loft, pier

No. 8, was completed during the month.

Respectfully,
CHESTER HARDING, *Acting Governor.*

Supplementary Rent Schedule No. 3.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER,
BALBOA HEIGHTS, C. Z. May 11, 1915.

To all concerned—The following changes and additions to the rent schedule are hereby promulgated, and will become effective as follows, unless otherwise specifically mentioned: Decreases and additional rates will become effective March 1, 1915, and increases will become effective June 1, 1915.

Decreases.

GOLD QUARTERS.

District.	Kind.	Building No.	Apartment or room No.	From	To
Balboa.	Family.	155.		\$30.00	\$26.00
Paraiso.	Bachelor.	32.	1 and 2.	6.50	5.00
Gatun (Frijoles).	do.	Box car.		2.00	1.50
Cristobal.	do.	17.	4.	5.00	3.00
Do.	do.	59.	C.	7.00	6.50

SILVER QUARTERS.

Gatun (Gamboa).	Bachelor.	25.		5.00	2.50
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Increases.

GOLD QUARTERS.

Balboa.	Family.	148.		30.00	31.50
Do.	do.	146.		30.00	31.50
Do.	do.	151.		25.00	26.00
Do.	do.	105.		25.00	26.00
Gatun (Gamboa).	Bachelor.	13.		1.00	2.00
Cristobal.	do.	59.	Upper floor.	4.25	4.30

SILVER QUARTERS.

Cristobal.	Family.	79.		2.00	3.00
Do.	do.	80.		2.00	3.00
Do.	do.	81.		2.00	3.00

Additions.

GOLD QUARTERS.

Cristobal.	Bachelor.	10.			\$10.00
Do.	do.	220 (rented to U. S. Army.)			36.00
Gatun (Gamboa).	Bachelor.	21.	Upper floor.		2.00
Gatun.	do.	Dispensary.			*3.50
Gatun (Gamboa).	do.	Box cars.			2.00
Paraiso (Las Cascadas).	do.	24.			†2.13
Corozal.	do.	35.			†10.00
Corozal.	Family.	61.			10.00
Do.	do.	†50.			10.00
Do.	do.	32.			†10.00
Palo Seco.	Building occupied by superintendent.				4.50

SILVER QUARTERS.

Balboa.	Bachelor.	6 outfit cars near roundhouse.			40.50
Do.	Married.	9 outfit cars near roundhouse.			41.00
Do.	Bachelor.	1 bunkhouse near roundhouse.			40.50
La Pinta.		Bldg. oc'ied by att'ant at signal station.			2.50
Corozal.	Bachelor.	Office Mun. Eng.			41.00
Cristobal.	Bachelor.	Police station.			40.50
Cristobal (Mount Hope).	Bachelor.	Tax No. 447.			41.50
Do.		Tax No. 831.			
		1 a.p't., 2 rooms.			4.00
		1 a.p't., 1 room.			2.00
		1 room.			1.00
Do.	Bachelor.	Two houses near French canal.			3.00
Do.	Married.	Tax No. 990.			
		2 a.p'ts., 2 rooms.			42.50
		5 r'ms or a.p'ts.			41.50
		1 room.			1.00
Do.	Married.	Near oil plant.	2 apa'tments		42.00
Do.	do.	Near water tank.			6.00
Do.	do.	Near water tank.	2 apa'tments		41.50

* Occupied by M. H. Willard. † Per man. ‡ Per room. § Per family. ¶ Per apartment.

*Effective March 1.

†This rate is per man while used as bachelor quarters; when used as married quarters the old rate of \$8.25 will apply.

‡Effective date of occupancy.

Miscellaneous.

Effective May 1, 1915, an amount equal to the rent of quarters occupied by officers of the Army and Navy assigned to duty with The Panama Canal, as well as the cost of fuel and oil furnished them, will, where such officers receive no extra compensation from The Panama Canal or not sufficient to cover the cost or same, be charged directly against the department or division in which they are employed.

Instead of fixing a monthly rental on buildings used by religious and fraternal organizations, Y. M. C. A.'s, etc., based on the factors applied to quarters, the cost of all repairs and alterations to these buildings, as well as the cost of repairs and renewals of furniture, will be charged against the organization or organizations using the same, prorated according to the assignment of the building. Collection of garbage, care of grounds, and janitor service, which are fixed factors, will be charged for at a flat monthly rate, divided on the same basis as repairs to the buildings, no surcharge to be added in either case.

Approved:
CHESTER HARDING,
Acting Governor.

WM. R. GROVE,
Chief Quartermaster.

OFFICIAL CIRCULARS.

Material and Shop Work for the Government of Panama.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., May 21, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

This office is in receipt of a letter from the Secretary of Foreign Relations of the Republic of Panama, dated May 16, 1915, requesting that no work of any kind should be performed for the Government of Panama in the shops of The Panama Canal, nor is any material to be furnished to that Government, without express authority in writing from the office of the Secretary of Foreign Relations. You will please be governed accordingly.

CHESTER HARDING,
Acting Governor.

Acting Engineer of Docks.

PANAMA RAILROAD COMPANY,
OFFICE OF PRESIDENT,

BALBOA HEIGHTS, C. Z., May 24, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective May 24, 1915, and during the absence on leave of Mr. T. B. Mönliche, Engineer of Docks, Mr. Starr Truscott is designated as Acting Engineer of Docks.

CHESTER HARDING,
Second Vice-president.

Sale of Second-hand Doors, Blinds, Sash, and Railing.

THE PANAMA CANAL,
OFFICE OF CHIEF QUARTERMASTER,
BALBOA HEIGHTS, C. Z., May 5, 1915.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 3 p. m., May 27, 1915, and then opened, for the purchase of any or all of a miscellaneous lot of second-hand doors, blinds, sash, and railing now stored at the dry dock store, Cristobal, C. Z. This material may be examined and full information obtained upon application to the storekeeper, dry dock store, Cristobal.

Proposals must be accompanied by certified check, post-office money order, or cash, for five per cent of the amount bid.

The Panama Canal reserves the right to reject any or all bids.

Bids should be marked "Proposals for purchase of doors, blinds, sash, and railing" and addressed to the Chief Quartermaster, Balboa Heights, C. Z.

WM. R. GROVE,
Chief Quartermaster.

Examination by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, June 2, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the captain of the port of Cristobal on Friday, June 4, 1915, beginning at 9 a. m. Applicants should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.

F. M. NIXON,
Recorder, Board of Local Inspectors.

COMMISSARY DEPARTMENT.

Inventory Only at Cristobal.

The usual monthly inventories will not be taken at the close of business this month at any of the retail commissaries except Cristobal. An audited inventory will be taken at that commissary on June 2 and June 3. The commissary will be closed all day on June 2. Grocery and cold storage departments will be open to the trade not later than 10 a. m., June 3, and other departments will be opened as soon as possible thereafter.

Sale of Articles in Case Lots.

To commissary storekeepers—In order to prevent abuse of commissary privileges by the purchase of any article or articles in unusual quantities, effective at once it is directed that no sales of goods in case lots or original containers be made to any individuals except where specific authority is given from the office of the Chief Quartermaster or from this office.

The above, of course, is not intended to cover the sale of supplies to hotels, Army organizations, etc.

Please call the attention of all salesmen to this bulletin and impress upon them the necessity for seeing that its provisions are lived up to.

BENJ. L. JACOBSON,
Depot Commissary.

CRISTOBAL, C. Z., May 19, 1915.

Commissary Hours.

The commissary stores at Las Cascadas, Empire, and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

The following is a list of retail prices of cold storage provisions which will be effective May 27, 1915.

The prices will be increased by 10 per cent in cases of sales to foreign naval vessels and to commercial ships, and by 20 per cent for sales to yachts.

FRESH MEATS.

	Price.
Mutton—Stewing, per pound	*14
Shoulder, trimmed, per pound	*18
Leg (8 to 10 pounds), per pound	*28
Short cut, chops, per pound	*35
Shoulder, chops, per pound	*21
Lamb—Stewing, per pound	12
Shoulder, trimmed, per pound	15
Leg (5 to 8 pounds), per pound	24
Chops, per pound	29
Chops, shoulder, per pound	18
Veal—Stewing, per pound	12
Shoulder, for roasting (not under 4 lbs.), per pound	15
Chops, shoulder, per pound	20
Chops, per pound	30
Loins for roasting, per pound	30
Cutlets, per pound	36
Beef—Suet, special, per pound	3½
Soup, special, per pound	7
Soup, native, per pound	5
Soup, bones special, per pound	2
Stew, special, per pound	11
native, per pound	8
Plate, special, per pound	12
native, per pound	8
Chuck roast, special, (3 lbs. and over), per pound	12
Chuck roast, native (3 lbs. and over), per pound	8
Rib roast, second cut (not under 3½ pounds), special, per pound	16
Rib roast, second cut (not under 3½ pounds), choice, per pound	24
Rib roast, second cut, native (3½ pounds and over), per pound	9
Rib roast, first cut (not under 3 pounds), special, per pound	19
Rib roast, first cut (not under 3 pounds), choice, per pound	27
Rib roast, first cut, native (3 pounds and over), per pound	11

	Price.
Pot roast, special, per pound	20
choice, per pound	28
native, per pound	12
Rump roast, special, per pound	20
choice, per pound	28
native, per pound	12
Porterhouse roast, special, per pound	22
choice, per pound	31
native, per pound	16
Steak, chuck, special, per pound	13
native, per pound	9
Round, bottom, special, per pound	13
choice, per pound	19
native, per pound	9
Round, top, special, per pound	15
choice, per pound	22
native, per pound	10
Sirloin, special, per pound	20
Sirloin, choice, per pound	28
Sirloin, native, per pound	12
Sirloin, choice cut, special, per pound	23
Sirloin, choice cut, choice, per pound	32
Sirloin, choice cut, native, per lb.	16
Rump, special, per pound	20
choice, per pound	28
native, per pound	12
Porterhouse (not less than 1½ pounds), special, per pound	23
Porterhouse (not less than 1½ pounds), choice, per pound	34
Porterhouse (1½ pounds and over) native, per pound	17
Porterhouse, short, Delmonico special, per pound	20
Porterhouse, short, Delmonico choice, per pound	28
Porterhouse, short, native, per lb.	12
Tenderloin, Western, special, per pound	35
Tenderloin, Western, choice, per pound	46
Tenderloin, Western, native, per lb.	25

NOTE:—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders placed with commissary storekeepers before 11 a. m. will be shipped for delivery on the following morning.

Pork—Hams, fresh, per pound	\$23
Shoulders, fresh, per pound	\$19
Loins, chop, or roast, per pound	*20
Pigs' feet, fresh, each	8
Pigs' head, fresh, whole	83
half	42
Sausage, home made, per pound	23
Ox tails, per pound	0
Spare ribs, pork, per pound	15

MISCELLANEOUS.

Brains, calves', per pound	10
Calves' head, each	80
Kidneys, beef, per pound	11
Livers—Beef, per pound	*12
Calf, each	70
half, each	35
Steak—Hamburger, package	17
Hamburger, 20-pound containers, per pound	14
Sausage—Bologna, per pound	11
Frankfurter, per pound	11
Frankfurter, imported, tin	14
Lieberwurst, per pound	10
Pork, per pound	*15
Sweetbread, beef, per pound	20
Eggs, fresh, per dozen	20
per ½ dozen	15
Bloaters, fancy, each	5
Bluenish, per pound	18
Halibut, fresh, per pound	5
Salmon, oer pound	5
Whitefish, smoked, per pound	21
Yeast, per pound	31
per cake	2
Pate de foies gras, per jar	50

VEGETABLES.

Beets, per pound	2
Cabbage, per pound	*3½
Carrots, per pound	2½
Celery, per head	6
Lettuce, per pound	16
Onions, per pound	4
Spring, per pound	4
Parsley, per pound	12
Parsnips, per pound	3
Peppers, green, per pound	12
Plantains, per dozen	15
Potatoes, white, per pound	2
New, per pound	5
Rhubarb, per pound	4
Turnips, per pound	3
Tomatoes, per pound	12
Vams, Lucca, per pound	*3

FRUITS.

Apples, per pound	*6
Grape fruit—Select, each	3
Tropical, each	3½
Lemons, per dozen	*13
Limes, per 100	75
Oranges—Select, each	2
Tropical, per dozen	12
Coconuts, each	4
Bananas, per bunch	38
Bananas, each	½
Apples, evaporated, per pound	12
Apricots, evaporated, per pound	13
Pears, evaporated, per pound	23

	Price.
Pineapples, each.....	18
Figs, dried, 12-oz. package.....	14
Figs, dried, 5-oz. package.....	5
Raisins, seedless, package.....	11
table, cluster, per pound.....	20
Currants cleaned, package.....	12
Prunes, stewing, per pound.....	12
Alligator pears, tropical, each.....	5

* Indicates advance from preceding list.

** Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, on orders taken for delivery.

§ Not less than 1/2 ham or 1/2 shoulder of fresh pork will be sold.

Price Changes.

The following list of shoes is of old stock, consisting of broken sizes, reduced to effect sale. Changes became effective May 25.

ARTICLE.	PRICE CHANGE.	
	Old.	New
Mens' patent Oxfords, pr.....	3.40	2.70
Mens' patent Oxfords, pr.....	5.25	4.20
Mens' patent Oxfords, pr.....	5.00	4.00
Mens' canvas Oxfords, pr.....	4.40	3.50
Mens' canvas Oxfords, pr.....	2.90	2.30
Mens' canvas Oxfords, pr.....	2.50	2.00
Mens' canvas pumps, pr.....	3.50	2.80
Mens' tan Oxfords, pr.....	3.95	3.15
Mens' tan bluchers, pr.....	4.20	3.35
Mens' tan bluchers, pr.....	3.75	3.00
Mens' tan bluchers, pr.....	4.10	3.30
Mens' G. M. Oxfords, pr.....	5.00	4.00
Mens' G. M. Oxfords, pr.....	5.20	4.15
Mens' G. M. Oxfords, pr.....	4.00	3.20
Mens' G. M. Oxfords, pr.....	3.75	3.00
Mens' slippers, pr.....	1.40	1.10
Womens' slippers, pr.....	1.25	1.00
Womens' G. M. pumps, pr.....	3.45	2.75
Womens' tan pumps, pr.....	3.45	2.75
Womens' patent pumps, pr.....	3.40	2.70
Womens' nubuck pumps, pr.....	3.10	2.50
Womens' canvas Oxfords, pr.....	2.35	1.90
Womens' tan Oxfords, pr.....	2.50	2.00
Childs' G. M. Oxfords, pr.....	2.20	1.75
Childs' kid button, pr.....	1.20	.95
Tooth wash, Glyco, bot.....	.21	.23
Ribbon, yd.....	.14	.11
Ribbon, yd.....	.04	.03
Handkerchiefs, ea.....	.08	.10
Pajamas, suit.....	.88	.95
Cribbs, baby, ea.....	5.05	5.30
Mattresses, crib, ea.....	4.70	4.05
Hooks, towel, ea.....	.11	.09
Dishes, bakers', ea.....	.79	1.05
Bowls, sugar, ea.....	.14	.09
Beans, red kidney, lb.....	.05	.08
Sugar, loaf, ctm.....	.16	.20
Water, Perrier, bot.....	.10	.14

Additions to Stock.

Cigarettes, Egyptian Luxury, pkg.....	.13
Poplin cloth, yd.....	.16
Poplin cloth, splashed, yd.....	.17
Voile, splashed, yd.....	.16
Ladies' hose, black, pr.....	.42
Ladies' hose, tan, pr.....	.42
Ladies' hose, white, pr.....	.42
Childrens' rompers, ea.....	.75
Ribbon, assorted, taffeta, yd.....	.10
Ribbon, assorted, taffeta, yd.....	.10
Ribbon, satin, taffeta, flowered, yd.....	.11
Ribbon, satin, taffeta, flowered, yd.....	.11
Ribbon, taffeta, yd.....	.10
Crex Rugs, Herringbone:	
Green, ea.....	4.75
Brown, ea.....	4.75
Red, ea.....	4.75
Green, ea.....	6.60
Brown, ea.....	6.60
Red, ea.....	6.60
Mustard, prepared, tub.....	.56
Oil, olive, tin.....	.70
Oil, olive, tin.....	.41
Olives, ripe, tin.....	.19
Potatoes, sweet, tin.....	.10
Hats, felt, ladies', ea.....	.50
Hats, straw, childrens', ea.....	.50
Ribbon, taffeta, "Dolly Varden," yd.....	.31
Ribbon, taffeta, "Dolly Varden," yd.....	.41
Polish, liquid shoe, black, bot.....	.07
Polish, liquid shoe, tan, bot.....	.07
Decorated crystal glassware:	
Bowls, salad, ea.....	4.00
Caraffes, ea.....	3.35
Decanters, ea.....	3.85
Sets, water, set.....	4.80
Plates, ice, ea.....	1.10
Matting, Japanese, green, yd.....	.19
Matting, Japanese, brown, yd.....	.19
Cream cereal, pkg.....	.17
Gelatine, pkg.....	.09
Jelly powder, assorted flavors, pkg.....	.08
Juice, grape, Welch's, bot.....	.12
Water, Poland, bot.....	.16
Pickles, whole dill, keg.....	2.05

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in the following table:

MAY.				
DATE.	Time and height of high and low water.			
Wed., May 26.....	0:55	7:03	13:14	19:39
Thurs., May 27.....	13:2	1:9	14:8	0:6
Fri., May 28.....	1:51	7:57	14:07	20:31
Sat., May 29.....	14:1	1:2	15:6	-0:4
Sun., May 30.....	2:44	8:50	14:59	21:22
Mon., May 31.....	15:0	0:5	16:3	-1:1
	3:35	9:40	15:50	22:12
	15:7	6:0	16:7	-1:5
	4:24	10:32	16:39	23:00
	16:0	-0:2	16:7	-1:5
	5:15	11:23	17:29	23:50
	16:1	-0:1	16:4	-1:2

JUNE.

DATE.	Time and height of high and low water.			
Tues., June 1.....	6:05	12:15	18:20	.....
Wed., June 2.....	15:8	0:4	15:6	.....
Thurs., June 3.....	0:41	6:57	13:08	19:13
Fri., June 4.....	-0:5	15:2	1:1	14:7
Sat., June 5.....	1:34	7:50	14:03	20:09
Sun., June 6.....	.04	14:5	1:9	13:6
Mon., June 7.....	2:27	8:44	15:03	21:10
Tues., June 8.....	1:5	13:8	2:6	12:6
Wed., June 9.....	3:23	9:48	16:04	22:17
Thurs., June 10.....	2:4	13:1	5:2	11:9
Fri., June 11.....	4:23	10:52	17:06	23:28
Sat., June 12.....	3:2	12:6	3:4	11:5
Sun., June 13.....	5:24	11:55	18:06	.....
Mon., June 14.....	3:7	12:4	3:4	.....
Tues., June 15.....	0:33	6:22	12:51	19:01
Wed., June 16.....	11:5	3:9	12:4	3:1
Thurs., June 17.....	1:31	7:15	13:41	19:49
Fri., June 18.....	11:8	3:8	12:6	2:7
Sat., June 19.....	2:18	8:04	14:24	20:33
Sun., June 20.....	12:2	3:6	12:9	2:3
Mon., June 21.....	3:00	8:49	15:04	21:16
Tues., June 22.....	12:6	3:2	13:3	1:8
Wed., June 23.....	3:39	9:31	15:41	21:56
Thurs., June 24.....	13:0	2:9	13:6	1:5
Fri., June 25.....	4:15	10:12	16:17	22:35
Sat., June 26.....	13:3	2:6	13:8	1:2
Sun., June 27.....	4:51	10:52	16:54	23:14
Mon., June 28.....	13:5	2:5	13:9	1:1
Tues., June 29.....	5:26	11:32	17:30	23:53
Wed., June 30.....	13:7	2:4	13:9	1:1
Thurs., June 1.....	6:02	12:12	18:06	.....
Fri., June 2.....	13:7	2:4	13:7	.....
Sat., June 3.....	0:31	6:40	12:53	18:45
Sun., June 4.....	1:3	13:7	2:5	13:4
Mon., June 5.....	1:11	7:17	13:37	19:27
Tues., June 6.....	1:6	13:7	2:6	13:1
Wed., June 7.....	1:53	7:58	14:24	20:12
Thurs., June 8.....	1:9	13:6	2:7	12:8
Fri., June 9.....	2:40	8:43	15:16	21:05
Sat., June 10.....	2:3	13:6	2:7	12:5
Sun., June 11.....	3:31	9:36	16:11	22:06
Mon., June 12.....	2:6	13:6	2:6	12:4
Tues., June 13.....	4:28	10:35	17:11	23:13
Wed., June 14.....	2:7	13:7	2:2	12:5
Thurs., June 15.....	5:28	11:38	18:12	.....
Fri., June 16.....	2:6	14:0	1:7	.....
Sat., June 17.....	0:21	6:31	12:42	19:12
Sun., June 18.....	13:0	2:3	14:5	1:0
Mon., June 19.....	1:25	7:33	13:43	20:10
Tues., June 20.....	13:6	1:8	15:0	0:2
Wed., June 21.....	2:25	8:31	14:41	21:04
Thurs., June 22.....	14:4	1:1	15:6	-0:5
Fri., June 23.....	3:22	9:25	15:36	21:57
Sat., June 24.....	15:1	0:6	16:0	-1:0
Sun., June 25.....	4:14	10:19	16:29	22:47
Mon., June 26.....	15:7	0:2	16:2	-1:2
Tues., June 27.....	5:05	11:11	17:19	23:37
Wed., June 28.....	16:0	0:1	16:0	-1:0
Thurs., June 29.....	5:54	12:01	18:08	.....
Fri., June 30.....	15:9	0:3	15:5	.....

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from Oh (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.*

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE.—The sailings on Monday, May 31, and June 27, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4 leaving Panama at 7:10 a. m., connects with the despatches for the two sailings mentioned above.

Rainfall from May 1 to 22, 1915, Inclusive.

STATIONS.	Maximum in one day.		Date.	Total for period.
	In.	Ins.		
Pacific Section—				
Balboa.....	1.09	5	5	22
Balboa Heights.....	.88	15	4	31
Miraflores.....	2.37	15	8	56
Pedro Miguel.....	2.09	15	6	28
Rio Grande.....	1.33	6	4	89
Central Section—				
Culebra.....	1.32	6	3	90
*Camacho.....	1.76	6	3	71
Empire.....	1.80	6	4	52
Gamboa.....	.93	7	2	75
*Juan Mina.....	1.27	20	5	17
Alhajuela.....	3.56	20	7	23
*El Vigia.....	4.21	20	10	10
Frijoles.....	2.26	8	8	22
*Trinidad.....	.....	.....	.....	.....
*Monte Lirio.....	1.75	8	6	20
Atlantic Section—				
Gatun.....	1.65	21	5	78
*Brazos Brook.....	1.92	21	4	90
Colon.....	2.10	7	6	29

*Standard rain gage—readings at 5 p. m.

Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, May 22, 1915.

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., May 16.....	128.90	95.00	85.55	85.44	54.11
Mon., May 17.....	127.75	93.69	85.57	85.51	54.03
Tues., May 18.....	127.20	93.54	85.47	85.45	53.96
Wed., May 19.....	126.80	93.02	85.48	85.44	54.00
Thurs., May 20.....	133.10	97.65	85.75	85.53	54.91
Fri., May 21.....	136.00	99.90	85.56	85.51	53.95
Sat., May 22.....	134.70	99.85	85.48	85.47	53.85

Heights of low water to nearest foot..... 125.00 91.00

Misdirected Letters.

BALBOA HEIGHTS, C. Z., May 24, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressee:

Bannister, Aubrey	Leonard, Maj. H. G.
Brownlow, Charley A.	Lochow, Geo. W.
Butcher, A. M.	McConnell, James
Clement, James R.	McFadden, Emmit
Conoly, W. L.	McNally, R. J.
De Buhr, Gerard (2)	Merck, George
Fowler, Harry	Meyer, Herman O.
Gordon, C. H.	Neville, Mrs. Edward
Gruber, Raymond	Noble, F. M.
Hayes, W.	Nugent, R. S.
Kipp, Harry M.	Phillips, James T.
Kitts, Mrs. J. A.	Roberts, George
Knopp, Miss Amelia	Robinson, Mrs. N. M.
Williams, Frank	

Fuel and Supplies.

Fuel oil may be obtained at Balboa or Cristobal from plants of The Panama Canal or from private corporations. The present price from the Canal is \$1.25 per barrel.

(Continued on page 358.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., May 23, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
May 17	Clumberhall	British	West Hartlepool Stm. Nav. Co.	Newport News	Calita Calosa	Ballast		3,989	2,911
May 17	Durley Chine	Canadian	Alum Chine S. S. Co.	Halifax	Vancouver, B. C.	Ballast		2,166	1,430
May 18	Agamemnon	Dutch	Royal Dutch West India Mail Co.	Amsterdam	Guayaquil	Ballast		2,927	2,044
May 18	Aboukir	British	Clydesdale Shipowners Co., Ltd.	New York	Valparaiso	General cargo	6,500	4,148	2,967
May 18	Jutlandia	Danish	East Asiatic Co.	Copenhagen	San Francisco	General cargo	2,000	5,371	3,932
May 19	Aspinet	British	Tank Storage and Carriage Co.	New York	Japan	General cargo	7,000	5,287	3,834
May 19	Jamaica	British	Royal Mail S. P. Co.	Cristobal	Balboa	General cargo	500	1,170	620
May 20	Falstria	Danish	East Asiatic Co.	New York	Dahly	Oil	5,438	4,787	3,458
May 21	S. V. Luckenbach	American	Luckenbach Line	New York	San Francisco	General cargo	2,808	5,859	2,632
May 23	Mexican	American	American-Hawaiian Line	New York	Los Angeles	General mdse	10,781	8,993	6,715
May 23	Advance	American	Panama Railroad S. S. Line	New York	Balboa	General cargo	1,291	2,965	2,161
May 23	Student	British	Harrison Line	Liverpool	Los Angeles	General mdse	4,000	4,056	2,873

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

May 17	Strathdale	British	Strath Line	Calita Buena	Colon (orders)	Nitrates	6,776	4,823	3,592
May 17	Horned	Norwegian	Kjaer and Isdahl	Iquique	Colon (orders)	Nitrates	5,900	4,183	3,022
May 19	Colon	American	Panama Railroad S. S. Line	Balboa	New York	Ballast		5,866	4,222
May 20	Polena	Chilean	South American S. S. Co.	Valparaiso	Cristobal	General cargo	1,315	3,639	2,537
May 20	Peru	British	Pacific Steam Nav. Co.	Guayaquil	Cristobal	General cargo	1,552	4,038	2,626
May 20	Cayo	British	N. Y. & Pacific S. S. Co.	Antofagasta	New York	Copper ore, nitrts.	4,200	3,222	2,216
May 21	O. J. Olson	American	Olson and Mahoney	Pisagua	Liverpool	Nitrates	2,207	2,207	1,483
May 21	Protesilaus	British	A. Holt & Co.	Los Angeles	Liverpool	General cargo	10,050	9,781	7,148
May 21	Salvador	British	Salvador Railway Co.	Salina Cruz	Colon	General cargo	1,087	1,190	692
May 21	Santa Catalina	American	W. R. Grace & Co.	Antofagasta	Charleston	Nitrates	8,536	6,657	4,409
May 21	Guernsey	Norwegian	W. Wilhelmsen Co.	Iquique	Colon (orders)	Nitrates	6,770	4,418	3,280
May 21	Mory Olson	American	Olson and Mahoney	San Diego	New York	Lumber	1,500	939	550
May 21	Strathfillan	British	Strath Line	Iquique	Colon (orders)	Nitrates	6,750	4,639	3,382
May 22	Columbian	American	American-Hawaiian Line	Hilo	Delaware Bkwr	Sugar, pineapples	11,537	8,062	6,409
May 23	Ferrona	British	British and Chilean S. S. Co.	Mejillones	Colon (orders)	Nitrates	7,000	5,492	4,016

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
May 22	Margaret	Johnson Line	Christiania.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
May 24	Honolulu	American-Hawaiian Line	San Francisco.
May 24	Strathern	Strath Line	Mejillones.
May 24	Capac	N. Y. & Pacific S. S. Co.	Calita Buena.
May 24	Hawaiian	American-Hawaiian Line	Seattle.
May 24	Guatemala	Pacific Steam Nav. Co.	Callao.
May 25	Suecia	Johnson Line	San Francisco.

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
May 19	Oranian	Harrison Line	Liverpool.
May 22	Corina	Elders and Fyffes	Port Limon.
May 22	Tordenskjold	Earn Line	Norfolk.
May 22	Zeta	Robert Wilcox & Co	Mobile.
May 22	Wilhelmina	McCreighton	Bluefields.

*DEPARTURES.

Date	Vessel	Line	To
May 20	Wegadesk	Earn Line	Felton, Cuba.
May 20	Frances Hyde	Copely Cement Mfg. Co.	Nicaragua.
May 22	Corina	Elders & Fyffes	Bristol, Jamaica.

*EXPECTED ARRIVALS.

May 25	Tagus	Royal Mail S. P. Co	United Kingdom.
May 30	Venezuela	Cie. Generale Trans'que	St. Nazaire.
May 30	Haiti	Cie. Generale Trans'que	Bordeaux.

*EXPECTED DEPARTURES.

May 25	Oranian	Harrison Line	Port Limon.
May 25	Tordenskjold	Earn Line	Unknown.
	Buford	U. S. Army	Galveston, Texas.
	Haiti	Cie. Generale Trans'que	Bordeaux.
	Venezuela	Cie. Generale Trans'que	St. Nazaire.
	Zeta	Robert Wilcox & Co	Unknown.
	Wilhelmina	McCreighton	Bluefields.
May 26	Tagus	Royal Mail S. P. Co	United Kingdom.

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

May 17	Hesperos	Brusgaard Kiosterud	Mejillones.
May 20	Ucayali	Peruvian S. S. Co.	Callao.
May 21	Peru	Pacific Mail S. S. Co.	San Francisco.

*DEPARTURES.

May 17	Monari	Pacific Steam Nav. Co	Guayaquil.
May 19	Hesperos	Brusgaard Kiosterud	San Francisco.
May 22	Jamaica	Pacific Steam Nav. Co	Buenaventura.

*EXPECTED ARRIVALS.

May 27	Peru	Pacific Mail S. S. Co.	San Francisco.
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*EXPECTED DEPARTURES.

May 27	Peru	Pacific Mail S. S. Co.	San Francisco.
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*Other than vessels passing through the Canal.

(Continued from page 357.)

Diesel engine oil is for sale by several companies, at approximately 45 shillings per ton of seven barrels.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light, and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Panama;" in the United States, "Panacanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C." for delivery in the United States.

Sailings of Vessels in Regular Service with the Isthmus.

Sails	Arrives
NEW YORK TO CRISTOBAL-COLON.	
Almirante	U. F. C. May 19
Panama	P. R. R. May 20
Pastores	U. F. C. May 22
Santa Marta	U. F. C. May 26
Alliance	P. R. R. May 27
Calamares	U. F. C. May 29
Zacapa	U. F. C. June 2
Colon	P. R. R. June 3

CRISTOBAL-COLON TO NEW YORK.

Almirante	U. F. C. May 27
Advance	P. R. R. May 29
Metapan	U. F. C. May 31
Santa Marta	U. F. C. June 3
Panama	P. R. R. June 5

NEW ORLEANS TO CRISTOBAL-COLON.

Cartago	U. F. C. May 22
Turrialba	U. F. C. May 25
Heredia	U. F. C. May 29
Abangarez	U. F. C. June 1
Parismina	U. F. C. June 5
Atenas	U. F. C. June 8

CRISTOBAL-COLON TO NEW ORLEANS.

Parismina	U. F. C. May 27
Atenas	U. F. C. May 27
Cartago	U. F. C. June 3
Turrialba	U. F. C. June 3

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, JUNE 2, 1915.

No. 41.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly. The subscription rate is \$1 per year in the United States and its possessions, and in Canada, Cuba, Mexico, and Panama (domestic postage), and \$1.50 in other countries (foreign postage). The paper is furnished free to United States Government departments, representatives of foreign governments, public libraries, and employees of The Panama Canal and the Panama Railroad Company whose names are on the gold roll.

All subscriptions expire on December 31. Domestic subscriptions are accordingly charged as beginning from the first of the quarter of the year in which received. Remittances should be made to pay only to December 31, on this basis: Sent between April 1 and July 1, 75 cents; July 1 to October 1, 50 cents; October 1 to January 1, 25 cents. For foreign subscriptions the year is divided into thirds: Between January 1 and May 1, \$1.50; May 1 to September 1, \$1; September 1 to January 1, 50 cents.

Remittances for subscriptions may be forwarded to The Panama Canal, Washington, D. C., or to The Canal Record at the address given below.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS

New Jib for the "Ajax" on its Way.

The greater part of the material for the new jib for the floating crane *Ajax*, to supplant the original jib which failed under test on December 7, will arrive from Germany by way of New York on board the steamship *Ancon* of the Panama Railroad Steamship Line, due at Cristobal in about 10 days. The new jib is practically identical in construction with the first, except that several of the members have been reinforced according to recommendations made after investigation of the failure of the original jib. It is about 143 feet long overall by 39 feet deep and 32 feet wide at the pivot end, contains approximately 307 members, and weighs about 170 tons.

Directly after the failure of the first jib the local superintendent for the contractor, the Deutsche Maschinenfabrik Actiengesellschaft of Duisburg, Germany, cabled a report of the failure and the construction of the new jib was begun. It was completed in about four months, approximately the middle of April, and the greater part was shipped on May 8 from Rotterdam to New York on the steamship *Cornelius* of the Holland America Line. By courtesy in response to the representations of the Department of State it was agreed by representatives of the several warring nations in Europe that there should be no interference with the completion and transportation of the jib, if it were shipped from a port of a neutral country in a vessel of neutral registry.

The forces of the contractor on the Isthmus are making ready to assemble the new jib quickly and hasten the completion of the *Ajax*. The *Hercules*, mate of the *Ajax*, has

been engaged in active service. After recovering the piledrivers sunk off the East Breakwater trestle, the crane was used to remove a broken concrete pier, weighing about 100 tons, at Pier 7 in Cristobal. On Friday, May 28, it lifted the Gatun Spillway caisson, weighing about 120 tons, from the waters of Gatun Lake to the upper west wing wall of Gatun Locks, to allow its overhauling and painting in the dry. The caisson is 49½ feet long by 22½ feet high by five feet 9½ inches through. The *Hercules* is now stationed at Paraiso.

Nautical Training Ships Visiting Canal.

The New York State nautical training ship *Newport* arrived at Cristobal on May 26 from the West Indies, and after taking on 75 tons of coal, and commissary supplies, passed through the Canal, clearing for Honolulu on May 30. The *Newport* is a gunboat of the United States Navy, loaned to and operated by the Public Marine School of New York for training young men to become officers in the merchant marine; on this cruise she is carrying a crew of 142. She is a vessel of 1,010 tons displacement, with a length of 168 feet on the load water line.

The Massachusetts nautical training ship *Ranger*, also a Navy gunboat, has left Boston for a cruise to San Juan in Porto Rico, St. Thomas, and Colon, and is due to arrive at Colon about June 30. It is not planned to take the *Ranger* through the Canal, but her crew will be given opportunity to inspect it.

Storm in the Bay of Panama.

A brisk wind and rain storm visited the Bay of Panama in the afternoon of May 26, raising a wind which blew at times as high as 47 miles an hour. The sea in the outer harbor at Balboa was unusually choppy, making it unsafe for the pilot launches, and reports from the lower bay tell of the capsizing of launches and other small boats belonging to citizens of Panama, with the loss of several lives. Fairly heavy rainfall accompanied the storm, all over the Isthmus, and wind velocity of around 20 miles an hour was recorded at all stations, excepting that at Balboa Heights, which showed a maximum of 47 miles. The highest previous wind recorded at this station in May during the seven years of record was 27 miles, in 1910. The highest wind which has been recorded on the Isthmus was one which reached a maximum of 59 miles an hour at Ancon on July 10, 1909.

Dredging Operations in the Cut.

Following recent improvements in the slide situation in the Cut, Sunday work on the slides was discontinued on May 9. Operations are now carried on daily. The 15-yard dipper dredges *Gamboa* and *Paraiso*, the ladder dredge *Corozal*, the pipeline suction dredge *No. 86*, and the seagoing suction dredge *Culebra* are working 24 hours a day, with three shifts; and

two of the three smaller dipper dredges, the *Cardenas*, *Chagres*, and *Mindi* are working 16 hours daily, the third of the dipper dredges being retired in rotation temporarily for repairs. The last delaying obstruction to the channel occurred early in March, prior to which Sunday work had been kept up for about four months. The channel has now a minimum depth of about 30 feet, and minimum width of about 150 feet. The limiting channel is now at the base of Cucaracha slide.

The *Gamboa*, *Paraiso*, and *No. 86* are now working at Cucaracha slide; the *Corozal* and one small dipper dredge are at the base of the new Culebra slide, and the other small dipper dredge is at the old Culebra slide, on the west bank of the Cut. The seagoing dredge *Culebra* is ranging between Paraiso and Empire, removing daily about 6,000 cubic yards of light material which has silted in the channel.

Work is suspended at 2 o'clock each afternoon to give the right of way to vessels passing through the Canal, and resumed immediately after the vessels have passed through the slide section. The vessels in transit are brought to the upper approach wall of Pedro Miguel Lock, on the south, or to the passing station opposite Empire, on the north, and moored, prior to 2 o'clock; and when the dredging fleet has made way, they are despatched past the slides quickly. Surveys of the channel opposite the slides are made each day, so that conditions are known to those in charge and vessels are handled with corresponding certainty.

The "Culebra" Beached for Minor Repairs.

The seagoing suction dredge *Culebra*, which has been working in the Cut, was taken to Naos Island last week and beached at high tide so that minor exterior repairs, principally to the sand-excluding device, could be made while the water was below mean tide. The work was completed between Thursday and Friday afternoons and the *Culebra* was returned to the Cut Friday evening, May 28, the fires having been kept up all the time. The beaching was resorted to as quicker and cheaper than dry docking.

Special Train for "Kroonland" Passengers.

During the passage of the passenger steamship *Kroonland* of the Panama Pacific Line through the Canal on Friday, May 28, on the way from New York to San Francisco, the vessel was tied up at the upper end of Pedro Miguel Lock long enough to allow her passengers to disembark and board a special train which took them into Panama City. The *Kroonland* continued through the Canal to Balboa, where she moored at the concrete wharf in the inner harbor, sailing the next morning at about 7 o'clock. The vessel carried 383 through and four local passengers, and 4,200 tons of general cargo,

FLOATING CRANE "AJAX."

Investigation of Cause of Failure of Jib During Acceptance Tests.

Investigation has been made of the failure of the jib of the floating crane *Ajax* on December 7, 1914. The history of the purchase of the *Ajax* and the *Hercules* and description of them have been published in THE CANAL RECORD. A diagram of the side elevation of one of the cranes, published in connection with a description in THE CANAL RECORD of

hook load is carried by a bearing at the top of the fixed tower, and the overturning moment of the weights and loads is resisted by a horizontal force at the top of the fixed tower, and an equal but opposite horizontal force at the foot of the tower. The construction of the pontoon is such as to make it an efficient box girder for carrying the stresses.

The testing of the *Ajax* began on December 3. By the terms of the contract, the contractor was responsible for the conduct of the tests. The proposed capacities for the main

The crane withstood successfully the 100-ton normal load test. The hoisting speed, luffing speed, and slowing speed were measured and the contract requirements were met.

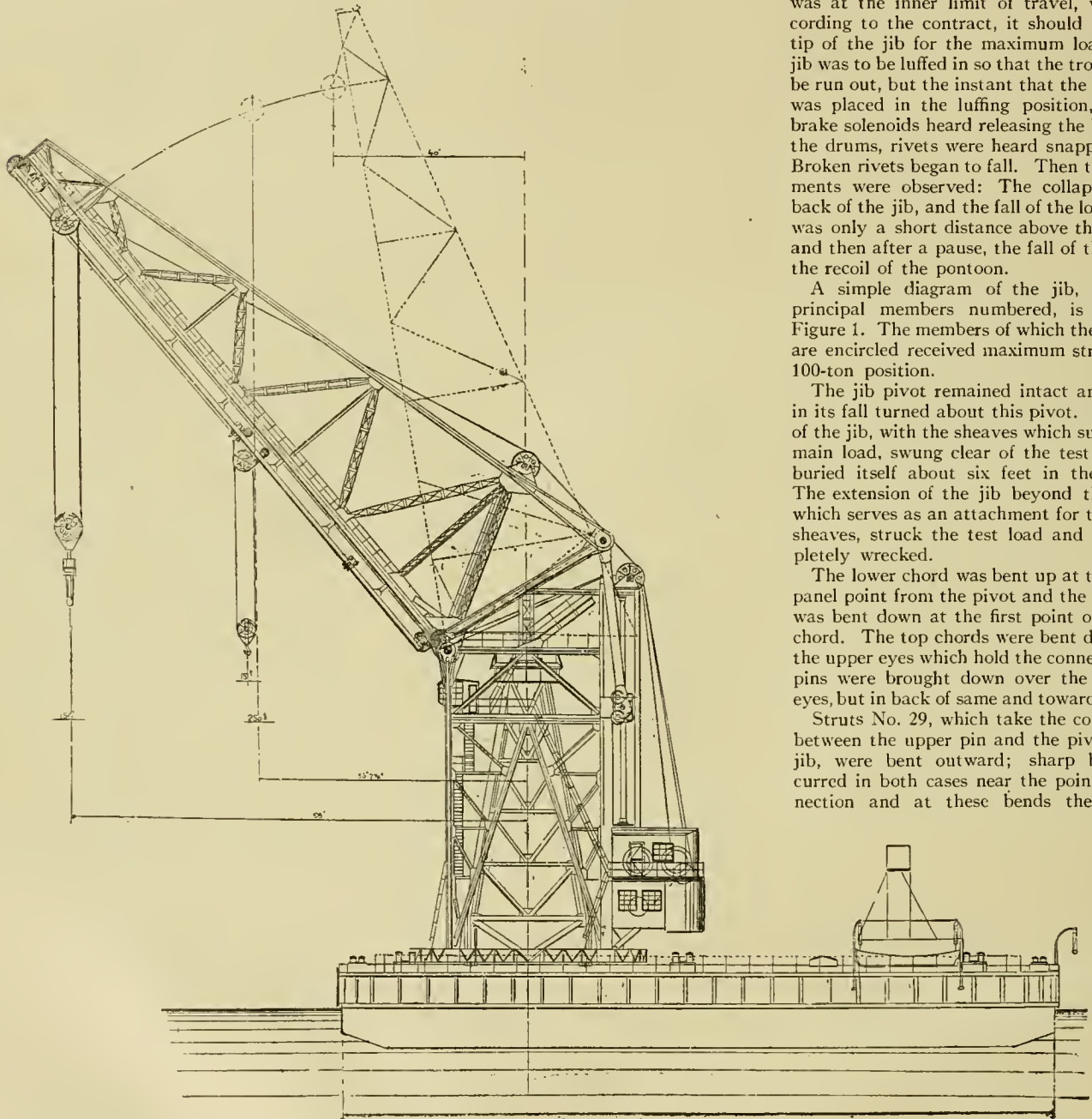
On December 7 the test load was increased by 20 per cent, as specified by the contract for the overload tests. The 120-ton load was hoisted clear of the wharf and luffed slowly out to the 100-ton reach, that is, to a reach of 81 feet from the face of the fender. No sign of distress was noted in any member. It was noted that the auxiliary hoist trolley was at the inner limit of travel, when, according to the contract, it should be at the tip of the jib for the maximum loads. The jib was to be luffed in so that the trolley could be run out, but the instant that the controller was placed in the luffing position, and the brake solenoids heard releasing the brakes on the drums, rivets were heard snapping aloft. Broken rivets began to fall. Then two movements were observed: The collapse of the back of the jib, and the fall of the load, which was only a short distance above the ground; and then after a pause, the fall of the jib and the recoil of the pontoon.

A simple diagram of the jib, with the principal members numbered, is shown in Figure 1. The members of which the numbers are encircled received maximum stress in the 100-ton position.

The jib pivot remained intact and the jib in its fall turned about this pivot. The head of the jib, with the sheaves which support the main load, swung clear of the test load and buried itself about six feet in the ground. The extension of the jib beyond this point, which serves as an attachment for the trolley sheaves, struck the test load and was completely wrecked.

The lower chord was bent up at the second panel point from the pivot and the top chord was bent down at the first point on the top chord. The top chords were bent down until the upper eyes which hold the connecting link pins were brought down over the jib pivot eyes, but in back of same and towards the left.

Struts No. 29, which take the compression between the upper pin and the pivot on the jib, were bent outward; sharp bends occurred in both cases near the points of connection and at these bends the built-up



SIDE ELEVATION OF FLOATING CRANES "AJAX" AND "HERCULES."

May 28, 1913, is reproduced herewith for convenient reference. As will be seen, the crane consists essentially of a pontoon carrying a fixed tower surrounded by a revolving frame structure which carries the jib. The pontoon is 150 feet long by 88 feet wide, the tower rises 66 feet from the deck to the jib pivot, and the jib is 143 feet long. When elevated to the highest angle, the jib outriggers reach 206 feet above the deck. The entire weight of the superstructure and the

hoist were, for long tons:

	100 Tons.	150 Tons.	250 Tons.
Loaded reach over end.....	81.0 feet.	59.3 feet.	21.4 feet.
Loaded reach over side.....	82.4 feet.	63.6 feet.	24.2 feet.

The time of hoisting main loads was to be as follows:

Tons.	Per minute.
250.....	3 feet 6 inches
125.....	7 feet
62½.....	14 feet

channels forming the cross-section of the strut were crushed together. The sharp bend at the upper connection consisted of a bend in both directions; at the lower connection the strut was doubled upon itself.

Strut No. 27 on the right side broke clear of the upper chord at the connection and was not crushed; on the left side the connection held at top and bottom but the strut was crushed.

Members Nos. 23 and 21 were bent inward.

The portal which ties the upper chord together at the first panel point and supports the guide sheaves for the main hoist remained in place. The connecting links from jib to cross-head were badly twisted.

The spindle carriage track was sprung outward, the spindles with it; but the spindles suffered no injury.

The main hoist blocks and the equalizer bar were injured, the latter especially, but the block sheaves were intact. Of the ten upper sheaves at the head of the jib, only two were broken. The ladders, walks, railing, etc., were bent and the trolley track was badly twisted and bent. The jaws of the revolving superstructure which form the jib pivot were twisted and the outer cover plate was ripped. The inner part of the trolley track penetrated the operator's cab and injured the controllers and instruments. The hoisting cable was kinked in places and rendered unfit for use.

INVESTIGATION OF THE CAUSE.

The jib is a framed structure consisting of two trusses, each as shown in Figure 1. The lower chords of the trusses are connected by cross bracing, but the plane of the upper chords is devoid of cross bracing, except for a portal at the first panel point from the inner end. There are cross frames in the planes of members 4, 11, 17, and 23. Cross bracing in the plane of the upper chords was purposely omitted to secure flexibility, the idea being that while the jib is symmetrically loaded,

The consensus of authoritative opinion from the viewpoint of The Panama Canal is that member No. 29 was the first member to fail, and that this failure was due, not to deficiency in sectional area, but to insufficient provision of latticing, batten plates, etc., to tie the two parts of the member together. Paragraph No. 116 of the specifications refers to compression members and reads as follows:

"In compression members the metal shall be disposed as far as practicable from the axis. No compression members shall have a length exceeding 40 diameters, nor a value of L/R exceeding 100 for main members, nor 120 for wind bracing. Lattice bars, stay plates, diaphragms, etc., together with rivets, shall be generously used to insure the mutual support of the various parts forming the cross section."

This member consists of two halves, each half being built up of a plate and two angles, two additional plates being added for a portion of the length of the member. Each individual half is relatively weak as regards transverse stiffness, the end batten plates are short, and the latticing consists of $2\frac{1}{2}$ " by $2\frac{1}{2}$ " by $\frac{3}{8}$ " angles at about 45° inclination, with one $\frac{3}{4}$ " rivet at each end. The latticing was in most cases not bent, but the rivets were in many cases sheared off. An inspection of the rivets showed that they were sheared almost as neatly as if by a shearing machine.

The steel was apparently of excellent quality, this being evidenced by the bending which it withstood without fracture. All of the rivet holes in the jib were either sub-

ma Canal with the results shown in the following table:

Samples Marked	Elastic limit per sq. inch in lbs.	Ultimate stress per sq. inch in lbs.	Elongation per cent in 8 inches.
1 Angle...	32,600	50,400	30.0
2 Angle...	33,000	50,600	28.8
3 Flat...	32,950	49,570	27.4
4 Flat...	31,830	49,100	29.2
5 Web...	35,020	54,600	31.4
6 Web...	35,570	54,180	30.2

The fractures were in every case "fine silky." The material was also subjected to cold bending and quench bending tests, which showed that the material conformed to the contract requirements in this respect.

It will be noted that the ultimate tensile strengths developed by tests on the Isthmus were less than those shown by the tests in Germany. The reason for this disagreement has not yet been ascertained.

Table No. 1, following, shows the computed stresses in member No. 29 in the "100-ton" position; first as estimated by the contractor for 100-ton suspended load, second as computed by The Panama Canal for 100-ton suspended load, and third as computed by The Panama Canal for 122.5-ton test suspended load. The reason for the differences between the first two estimates is that the contractor estimated on the basis of a pontoon inclination of 5° , while the estimate made by The Panama Canal is on the basis of the inclination existing at the time the crane was tested. Similarly, actual conditions have been used in estimating the stress at the time of failure, i. e., actual inclination and reach, actual wind, and dead load of trolley at inboard end of jib. The results are expressed in metric tons of 2,204.5 pounds.

TABLE NO. 1
Stresses in Member No. 29 in Metric Tons of 2,204.5 Pounds in the 100-ton Position.

	1.	2.	3.
	Condition A.	Condition A.	Condition B.
As estimated by contractor with 100 tons suspended load, 120 foot radius, 5° inclination 10-lb. wind.	As estimated by Panama Canal with 100 tons suspended load, and reach, inclination, and wind obtaining at the time of test.	As estimated by Panama Canal with 122.5 tons suspended load, and reach, inclination, and wind obtaining at the time of test.	
Dead load..	76.3	73.0	67.0
Live load..	174.0	171.6	196.0
Wind.....	4.1	0	.3
Total...	254.4	244.6	263.3

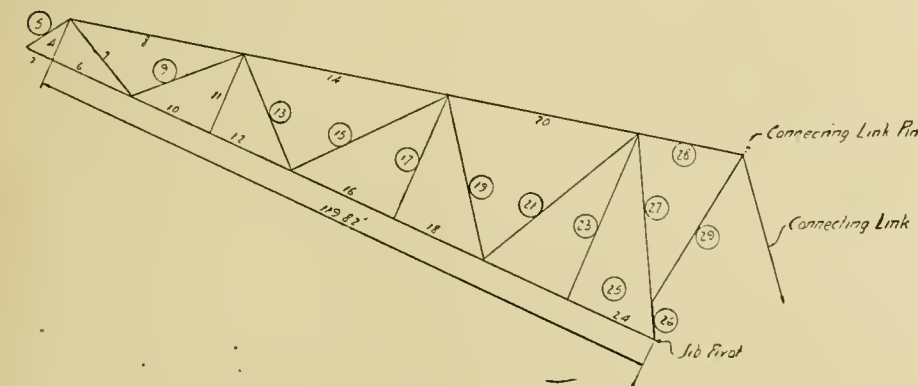


FIGURE 1.—SIMPLE DIAGRAM OF JIB OF THE "AJAX."

equal tension in the connecting links is assured. If the jib were a rigid structure and the alignment not perfect, a condition could be conceived in which one truss and one connecting link would be forced to carry an excessive percentage of the whole load. There is no cross bracing in the plane of member No. 29, due to the necessity of allowing that portion of the jib to pass on either side of the girder which supports the "bell," or revolving structure below the jib, which carries the winch house, operator's cab, etc.

The point at which the connecting links act, the intersection of members Nos. 28 and 29, is therefore not braced against lateral stresses, bracing, although desirable, not being thought necessary by the designer. The pivots of the jib are provided with spherical bearings to enable them to adjust themselves should both pins not be on the same axis. The designer of the crane frankly endeavored to keep down the weight of the jib without exceeding the specified unit stresses, since the weight of this portion of the crane affects the whole structure.

punched and reamed or drilled in the solid, and the question of workmanship evidently did not enter into the failure. The material was inspected in Germany and the mill tests on material later worked into member No. 29 gave the following results:

SECTION.	Ultimate strength per sq. in.	Elongation in 8 inches.	Elongation per cent.	Cold bending. Quench bending.
Plate.....	59,000	10.4	30	Good
Angle.....	55,000	10.3	29	Good
Flat.....	54,000	10.1	27	Good

The requirements for the structural steel were as follows:

Ultimate tensile strength in the direction of rolling, between 52,500 pounds per square inch and 62,500 pounds per square inch, with a minimum elongation of 20 per cent.

COLD AND QUENCH BENDING TEST.

To be bent in the direction of rolling 180° around a diameter equal to the thickness of the test piece, without sign of fracture on the outside of the bent portion.

Six specimens cut from the member No. 29 were tested at the Balboa shops of The Pana-

From the study of the elements of member No. 29 considered as a whole, and setting forth the permissible and actual unit stresses theoretically existing, it was seen that the area at the middle of the member is about 30 per cent in excess of that at the ends, and that the unit stresses at the middle are well within the specified limits, while at the ends the unit stresses in condition "A" exceed the permissible limits by about 1,800 pounds per square inch. It is to be noted here that the original specifications gave two sets of permissible unit stresses, one set known as condition "A," being for loads within the rated capacity with wind not exceeding 10 pounds per square foot, the other set, known as condition "B," being for the crane under conditions of test load with wind pressure assumed at five pounds per square foot, and for the unloaded crane with wind pressure at 40 pounds per square foot. Since the test loads were but

20 per cent in excess of the capacity loads, while the permissible unit stresses were nearly 30 per cent in excess of the working unit stresses, the contractor did not consider it necessary to make complete calculations for condition "B," confining these calculations to cases where wind pressure was the determining feature.

Each half of member No. 29 was further investigated as regards its strength, considered as a short column of length represented by the distance between ends of lattice bars, with the result that the maximum value of L/R is 58.7 for the end sections and 42.8 for the middle section; these values are in each case less than for the member considered as a whole, and therefore the member is theoretically safe.

It is conceivable that, due to the unstayed condition of the intersection of member No. 29 with member No. 28, a component of the dead weight could cause bending stresses at the foot of No. 29, due to the longitudinal inclination of the pontoon which existed at the time of failure. This inclination was, however, but slight, not exceeding about two per cent, and since the dead load at the point in question is but 8.2 tons the additional stress at the bottom of member No. 21 can not be large, especially when the action of the portal in member No. 28 and the bracing in the plane of member No. 23 are taken into account.

It appears, therefore, that the theoretical stress existing in member No. 29 at the time of failure implied a factor of safety of at least two, figured on the elastic limit of the material. No evidence was found pointing to local defects in material or workmanship. There was a crunching sound heard at the jib pins during the tests preceding the one in which failure occurred, but examination of these pins after the collapse showed that they were unscored and that the crunching probably arose from the movement of the jib on the spherical bearing surrounding the jib pin, which does not affect the force necessary to luff in the jib.

An excessive stress could have been caused if the main hoist drums had not been free to move, but immediately after the accident the magnetic brakes on the main drums were examined and found free.

Since member No. 29 failed just as the jib commenced to be luffed in, which luffing-in was necessary because the dead load of the trolley was not at the upper end of the jib, and the existing inclination would be exceeded with the trolley run out without luffing the jib in, it is very possible that vibrations were set up in member No. 29, which is one of the two members meeting at the point where the luffing-in pull is applied, with the result that the rivets connecting the two halves of member No. 29, already near their limit of resistance, were finally sheared, causing member No. 29 to consist of two weak halves, with the result that they bowed outward. This action once started would continue, member No. 28 would commence to bend, and the collapse of the entire inboard end of the jib is then inevitable.

The opinion that the collapse of the jib was due to initial failure of member No. 29 and that this initial failure was due to insufficient provision of latticing, battens, etc., is based on the foregoing facts, which may be summarized as follows:

First: There is no indication of faulty material or workmanship at any point of the jib.

Second: There are no indications that

either during manufacture, erection, or use the crane suffered damage or was subjected to loads beyond its capacity.

Third: The hoisting drums were free and no defect could be found in the luffing machinery by running the spindle carriage up and down after the wreck had been cleared away.

Fourth: Rivets snapped and fell just prior to the collapse of the jib. An examination of the wrecked jib showed that the rivets connecting the two halves of member No. 29 were sheared, while the maximum unit stress in member No. 29 was well within the elastic limit. Similar shearing of rivets was not observed in other members.

OPERATIONS SUBSEQUENT TO FAILURE OF THE "AJAX".

The contractor did not share the opinion of The Panama Canal that the failure was due to insufficient lattice bars, batten plates, etc., and he expressed such confidence in his design that on December 10, 1914, he offered to subject the *Hercules* to exactly the same conditions as those under which the jib of the *Ajax* collapsed, but in view of the circumstances The Panama Canal was unwilling to permit this to be done without reinforcing certain members of the jib. This point of view was also taken by the underwriters.

The reinforcement of the jib of the *Hercules* was completed January 27, 1915; this reinforcement was executed in accordance with drawings made by The Panama Canal and was confined to members 27, 28, and 29. Member No. 27 was given additional tie plates; in member No. 28 the internal system of latticing was replaced by an internal diaphragm plate; in member No. 29 the latticing on one side was replaced by a continuous cover plate, on the other side the $2\frac{1}{2}$ " angle latticing was replaced by 6" by $3\frac{1}{2}$ " angle latticing with four rivets at each end instead of one, and additional diaphragms and batten plates were provided. The contractor ordered a complete new jib for the *Ajax* to be fabricated in Germany, incorporating substantially the reinforcement above described for the *Hercules* plus minor additions to other members, to make the details conform more nearly to American practice.

After the completion of the reinforcement of the jib of the *Hercules*, the crane was in the service of The Panama Canal for about one month prior to acceptance tests. These acceptance tests were completed March 27, 1915, without mishap. The crane met the contract requirements fully as regards capacity, reach, and speed of all motions.

Notice to Mariners.

The master of the steamship *Orissa* reports, May 17, 1915, that the steamship *Craster Hall* sighted early in May, while in latitude $28^{\circ} 15'$ South, longitude $71^{\circ} 37'$ West, a derelict, which apparently was a large lighter, bottom up.

CHESTER HARDING,
Acting Governor.

BALBOA HEIGHTS, C. Z., May 24, 1915.

Reduced Rate to San Francisco.

The Panama Agencies Company has advised that a special rate of \$85 will be made to Canal employees for first-class passenger accommodations between Balboa and San Francisco on vessels of W. R. Grace and Company's lines. The regular fare on these vessels is \$120.

EXECUTIVE ORDER.

Sale of Surplus Material and Equipment.

The Sundry Civil Act approved March 3, 1915, contains the following clause:

" * * * expenses incurred in assembling, sorting, storing, repairing, and selling material, machinery and equipment heretofore or hereafter purchased or acquired for the construction of the Panama Canal, which are unserviceable or no longer needed, to be reimbursed from the proceeds of such sales."

There is no clause in this Act as there was in former similar acts specifying the manner in which the above mentioned items might be sold.

Under the general authority of the President to issue regulations for the government of the Panama Canal and by his direction, it is therefore ordered that the regulations relative to the sale of material enumerated above as heretofore laid down by the President for the fiscal year ending June 30, 1915, shall remain in force until further ordered.

LINDLEY M. GARRISON,
Secretary of War.

WAR DEPARTMENT,
Washington, D. C.,
May 12, 1915.

The foregoing Executive Order is being published locally as Canal circular No. 601-45.

Rent Order Suspended.

The President signed on May 25 an Executive Order directing that the Order of January 15, 1915, No. 2120, "Conditions of Employment," authorizing the collection of charges for rent, fuel, and electric current from employees occupying Government quarters on the Isthmus, be modified by suspending from operation so much as relates to rent, fuel, and lights during the period of actual construction of the Panama Canal, but not later than June 30, 1916.

Governing Assignments to Quarters in Ancon-Balboa District.

Following the decision to assign no more quarters at Corozal to employees and to turn the town over to the Army forces, as had been done at Las Cascadas, Empire, and Culebra, the Canal forces now stationed in Corozal are to be transferred to the Ancon-Balboa district as rapidly as quarters there are available. New quarters for 120 families are under construction or authorized for construction at Balboa; 187 families are quartered at Corozal. After June 1, quarters will not be assigned in the Ancon-Balboa district except to families transferred from Corozal. It is estimated that four or five months will be required for the transferring.

Inspection of Goods to be Shipped to the United States.

The attention of employees is called to the fact that goods intended for shipment to the United States can be inspected on the Isthmus only when they consist exclusively of household effects used for one year or longer, or articles of American manufacture, forwarded by freight. Personal belongings of foreign manufacture which can not properly be classified as household effects are not subject to inspection on the Isthmus, nor is anything carried as baggage subject to local inspection. All baggage must be inspected on the dock at

the port of arrival. Owing to general ignorance with regard to these restrictions, customs inspectors have frequently been required to make unnecessary trips to points on the line.

Inspections can not be made in the evening or on Sunday, and an employee applying for an inspection must either be present in person, taking time off for the purpose, or be represented by some member of his immediate family.

Until further notice inspections in the Ancon-Balboa district will be made only on Tuesdays, Thursdays, and Saturdays and at points on the line south of Gamboa only on Mondays, Wednesdays, and Fridays.

Holiday Patronage of Hotel Aspinwall.

One hundred and thirty-five people, mostly Canal employees and their families, were registered at the Hotel Aspinwall, Taboga, on Sunday, May 30.

Excepting the register on March 13, which was the same number, 135, this was the greatest number of house guests at the hotel during the present calendar year. During the Decoration Day period the quartering of patrons was so arranged that it was not necessary to use the music room and the billiard room as dormitories.

Motor Omnibus Service through Ancon-Balboa District.

It is expected to place four motor omnibuses, recently purchased in the United States, in service between Ancon and Balboa about the latter part of this week. The cars have been undergoing modifications at Balboa shops to fit them to local conditions, and are now almost ready for use. Detailed schedule of service has not been planned, as it is expected to develop a running plan according to the demands of the traffic. The present

idea is to keep the cars circulating on a route extending from the Ancon Hospital gate to the Hotel Tivoli, thence to Balboa station by way of Bishop's Hollow, thence to Balboa and the docks, and then back to Ancon by way of Balboa Heights and through the hospital grounds. In addition to maintaining a service over this route in which a car will pass a given point about every 20 minutes it is expected to provide special service for meeting passenger trains. The operation is in charge of the Panama Railroad Company. The fare will be 10 cents gold for any distance.

Special Train Service for Opera in Panama.

For the accommodation of persons residing on the Las Cascadas branch of the Panama railroad, and at main line points south of Pedro Miguel, who desire to attend the operas being sung at the National Theatre, Panama, every Sunday, Tuesday, Thursday, and Saturday for the next three weeks, it has been decided to furnish the following train service, beginning Saturday, May 29:

On the above days train No. 42 for Las Cascadas, now leaving Panama at 10.40 p. m., daily except Saturday, will be set back to leave at 12.40 a. m. each night, and operate on the schedule of Saturday night train No. 52, leaving Panama at 12.40 a. m.

For the benefit of those residing at Colon, Gatun, and other main line points desiring to attend the Saturday night performances, train No. 10, scheduled to leave Panama at 11.30 p. m. Saturday nights, will be set back to leave at 12 o'clock midnight, or running 30 minutes late.

Obsolete and Retired Equipment.

A complete revised catalogue of all obsolete and retired equipment which was formerly in the service of the Canal and now is available for sale has been issued and is ready for distribution. This catalogue gives brief but inclusive descriptions of the various items and shows the original value, estimated cost of repairs, crating, handling, etc., and price free alongside ship, Colon or Balboa. It is believed that this will greatly facilitate the disposal of this equipment by furnishing prospective purchasers full information as to what equipment is available and its condition, etc. Copies of the catalogue may be obtained by those having interest in such equipment on application to the Chief Quartermaster, Balboa Heights, Canal Zone.

Breaking a Boat Channel through the Dying Jungle.

A 400-cubic yard barge, heavily loaded with rock from the Cut, was used for breaking a channel through inundated brush and dead trees between the Canal and a landing for motor boats on the edge of Gatun Lake at Darien, on Friday, May 28. The barge was pushed through the greater part of the distance of several hundred feet by the tug *Reliance*, after which the place of the *Reliance* was taken by the tender *De Lesseps*, which has a draft of only six feet, for clearing away the shallow parts. The boats succeeded in breaking up a floating island which blocked the way and clearing a channel to a minimum depth of about nine feet in less than an hour, after which the barge was dumped in one of the deeper parts. A floating pile driver was sent through the channel on Tuesday, June 1, to drive piles for the erection of a boathouse at the landing.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Cole, A.	61971	Barbados.....	Corozal	Oper. and Main.	May 16, 1915.
Hinds, Joseph.....	62300	Barbados.....	Colon	Panama Canal..	May 10, 1915.
Yearwood, Joseph.....	52888	Barbados.....	Balboa.....	Pacific term...	May 20, 1915.
Vaz, Harold.....	15426	Jamaica.....	Colon	Panama R. R....	May 22, 1915.
Scott, Benjamin.....	52976	Grenada.....	Panama.....	Fortifications...	May 7, 1915.
Telsie, Antonio, alias Julien Breleau.....	81793	Martinique.....	Balboa.....	Panama R. R....	May 12, 1915.
Jackson, Walter, alias Brown.	23113	Jamaica.....	Paraíso.....	Dredging Div....	May 29, 1915.

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

WEATHER CONDITIONS, CANAL ZONE, APRIL, 1915.

The rainfall for the month was above the station averages at all stations except Miraflores and Pedro Miguel. Almost three times the normal amount of rain fell over the Atlantic coast, while over the Pacific section, considered as a whole, conditions were nearer the normal, Balboa Heights being the only station with a marked excess. The rainfall there was almost double the average amount. Over the central section the excess of rainfall increased as the Atlantic coast was approached, the total at Culebra being only slightly above the average, but more than double the normal amount fell at both Frijoles and Monte Lirio. Monthly totals ranged from 2.39 inches at Pedro Miguel, to 15.90 inches, at Gatun. The maximum amount of precipitation recorded on any one day was 7.64 inches, at Gatun on the 3rd. Rainfall in excess of four inches occurred at Frijoles, Monte Lirio, Gatun, Brazos Brook, and Colon on April 3, and heavy showers occurred generally throughout the Zone on the 4th and 23rd of the month.

The estimated rainfall over the Chagres basin was 115 per cent above the average, or 9.98 inches against a 14-year average of 4.65 inches.

The average air temperature was below the normal on the Pacific coast and above the normal on the Atlantic side, the daily deficiency and excess being approximately one degree Fahrenheit. The atmospheric pressure was slightly below normal, while the relative humidity and daytime cloudiness were above normal at both coast stations. The wind movement was slightly below the average at Colon, and slightly above the average at Balboa Heights.

The only fogs observed during the month occurred at Alhajuela on April 24th and 25th, both of which were dissipated by 7.30 a. m.

Elevations of Gatun Lake, in feet above mean sealevel, were as follows: Mean for the month, 86.46; maximum, 86.89, on the 3rd; minimum, 86.37, on the 24th; evaporation from the lake surface, 5.781 inches.

The following is a summary of climatological conditions during the month of April:

STATIONS.	Press re (reduced to mean of 24 hours.)	Temperature.					Mean relative humidity.	Precipitation			Wind.			
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days of .01 inch or more.	Total movement (miles).	Prevailing direction.	Max. velocity in miles.	Direction.
Colon.....	29.855	81.5	89	Apr. 26	74	Apr. 28	85	10.42	4.19	18	9,477	N.	46	N.
*Balboa Heights...	29.846	80.5	93	April 1	71	Apr. 30	84	5.37	2.87	10	6,724	N.	39	N.

*Formerly Ancon.

OFFICIAL CIRCULARS.

Personal Injuries to Employees.

THE PANAMA CANAL,
EXECUTIVE OFFICE.

BALBOA HEIGHTS, C. Z., May 29, 1915.

To all concerned—It has been reported to me that foremen and other persons in a supervisory capacity with The Panama Canal and Panama Railroad Company have become negligent in making reports of personal injuries to employees.

Paragraph 6 of Circular No. 668 of April 1, 1914, reads as follows:

"Immediately after an injury to an employee resulting in his probable disability comes to the knowledge of a foreman or other person charged with the making of reports, it shall be the duty of such foreman or other person to make a report, at once, upon form A-18, to the Claim Officer. If any officer of The Panama Canal shall witness any injury to a man on the work, he shall ascertain immediately the facts connected therewith and make a report as provided above. In order to enforce compliance with the provisions of these regulations as to the rendition of reports of accidents, the Auditor of The Panama Canal will report to the Governor the failure of any officer to render reports as required."

Heads of departments and divisions are directed to bring to the attention of their subordinates that fact that a strict compliance with the regulations governing injury reports will be required of them.

CHESTER HARDING,
Acting Governor.

Monthly Reports.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., May 25, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

The attention of heads of departments and divisions is again directed to the previous instructions issued from this office that monthly reports should be submitted not later than the 10th day of each month. It is realized that the delay in their transmittal is due in some cases to the delay in the receipt of necessary data from heads of other divisions and departments, and it is accordingly requested that suitable instructions be issued to the end that the monthly reports of heads of departments and divisions may be received in this office on or before the 10th of the month.

CHESTER HARDING,
Acting Governor.

Steamboat Inspection Service—Fees for Inspection.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., May 15, 1915

CIRCULAR No. 644-2:

Circular 644-1 is amended to read as follows:

Paragraph 30 of Circular 644 is modified by inserting after the words "or which may hereafter be, allowed by law:" the words,

For each row or sail boat, or panga equipped with detachable motor.....\$1.

CHESTER HARDING,
Acting Governor.

Suspension of Charges for Rent, Fuel, and Lights.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., May 27, 1915.

To all concerned—The following cablegram received from the Washington office of The Panama Canal, under date of May 26, 1915, is quoted below for the information and guidance of all concerned:

"Referring to our cable of the seventeenth instant, Executive Order suspending rent, fuel, and lights, signed by the President, may twenty-fifth."

W. P. COPELAND,
Acting Executive Secretary.

Joint Land Commission Calendar.

Following is a calendar of claims set for hearing during the week ending June 12: *Monday, June 7*—Docket 837, Mrs. E. Maitland; docket 838, Rebecca Jackson; docket 839, C. A. Bacquie; docket 840, Wm. Morris. *Tuesday, June 8*—Docket 841, Ezequiel Carmichael; docket 842, Uriah Scott; docket 851, Antonio Baldeo; docket 852, Manuel George de Iglesias. *Wednesday, June 9*—Docket 854, Clarence McMackin; docket 855, Antonio Garcia; docket 866, Gumercinda Iglesias; docket 867, Abraham Johnson. *Thursday, June 10*—Docket 873, Joseph Osborne; docket 877, Mrs. Ann Williams; docket 879, Loice Loebel; docket 880, Juan Apericio (Aparicio); docket 1595, Juan Aparicio (Aparicio); *Friday, June 11*—Docket 1662, Juana Miranda.

WILLIAM TAYLOR,
Secretary.

COMMISSARY DEPARTMENT.

Sale of Shoes and Odds and Ends.

A sale of shoes and odds and ends will commence at the Cristobal commissary at 9.30 a. m., Monday, June 7, 1915.

How to Wash Palm Beach Suits.

The attention of commissary patrons is invited to the following washing instructions for Palm Beach clothes, given out by the Palm Beach mill:

"Every yard of Palm Beach cloth that leaves Palm Beach suit manufacturers is cold water shrunk, but in spite of that further shrinkage is possible if these garments are not washed correctly.

"The only correct way to wash a Palm Beach suit is with a neutral naphthalene soap, free from destructive alkali, and with cold or luke warm water.

"Hot water should never be used."

Commissary Hours.

The commissary stores at Las Cascadas, Empire, and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

The charges published below will be increased by 10 per cent in case of sales to commercial ships and foreign naval vessels, and by 20 per cent for yachts.

The following is a list of retail prices of cold storage provisions which will be effective June 3, 1915:

FRESH MEATS.

	Price.
Mutton—Stewing, per pound.....	14
Shoulder, trimmed, per pound.....	18
Leg (8 to 10 pounds), per pound.....	28
Short cut, chops, per pound.....	35
Shoulder, chops, per pound.....	21
Lamb—Stewing, per pound.....	12
Shoulder, trimmed, per pound.....	15
Leg, (5 to 8 pounds), per pound.....	24
Chops, per pound.....	29
Chops, shoulder, per pound.....	18
Veal—Stewing, per pound.....	12
Shoulder, for roasting (not under 4 lbs.), per pound.....	15
Chops, shoulder, per pound.....	20
Chops, per pound.....	30
Loins, for roasting, per pound.....	30
Cutlets, per pound.....	36
Beef—Suet, special, per pound.....	3½
Soup, special, per pound.....	7
Soup, bones, special, per pound.....	2½
Stews, special, per pound.....	11
native, per pound.....	8
Plates, special, per pound.....	12
native, per pound.....	8
Chuck roast, special (3 lbs. and over), per pound.....	12
Chuck roast, native (3 lbs. and over), per pound.....	8
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
Rib roast, second cut, native (3½ pounds and over), per pound.....	9
Rib roast, first cut (not under 3 pounds), special, per pound.....	19
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27
Rib roast, first cut, native (3 pounds and over), per pound.....	11
Pot roast, special, per pound.....	20
choice, per pound.....	28
native, per pound.....	12
Rump roast, special, per pound.....	20
choice, per pound.....	28
native, per pound.....	12
Porterhouse roast, special, per pound.....	22
choice, per pound.....	31
native, per pound.....	16
Steak, chuck, special, per pound.....	13
native, per pound.....	9
Round, bottom, special, per pound.....	13
choice, per pound.....	19
native, per pound.....	9
Round, top, special, per pound.....	15
choice, per pound.....	22
native, per pound.....	10
Sirloin, special, per pound.....	20
Sirloin, choice, per pound.....	28
Sirloin, native, per pound.....	12
Sirloin, choice cut, special, per pound.....	23

	Price.
Sirloin, choice cut, choice, per pound.....	32
Sirloin, choice cut, native, per lb.....	16
Rump, special, per pound.....	20
choice, per pound.....	28
native, per pound.....	12
Porterhouse (not less than 1½ pounds), special, per pound.....	23
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse (1½ pounds and over), native, per pound.....	17
Porterhouse, short, Delmonico special, per pound.....	20
Porterhouse, short, Delmonico choice, per pound.....	28
Porterhouse, short, native, per lb.....	12
Tenderloin, Western, special, per pound.....	35
Tenderloin, Western, choice, per pound.....	46
Tenderloin, Western, native, per lb.....	25

NOTE.—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders placed with commissary storekeepers before 11 a. m., will be shipped for delivery on the following morning.

Pork—Hams, fresh, per pound.....	\$23
Shoulders, fresh, per pound.....	\$19
Loins, chop, or roast, per pound.....	20
Pigs' feet, fresh, each.....	8
Pigs' head, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23
Spate ribs, per pound.....	15
Ox tails, per pound.....	9
Beef tongue, native, whole, per pound.....	20

MISCELLANEOUS.

Brains, calves', per pound.....	10
Calves' head, each.....	80
Kidneys, beef, per pound.....	12
Livers—Beef, per pound.....	10
Calf, each.....	70
half, each.....	35
Steak—Hamburger, packages.....	17
Hamburger, 20-pound containers, per pound.....	11
Sausage—Bologna, per pound.....	14
Frankfurter, per pound.....	*12
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	10
Pork, per pound.....	15
Sweetbread, beef, per pound.....	20
Eggs, fresh, per dozen.....	29
per ½ dozen.....	15
Bloaters, fancy, each.....	5
Bluefish, per pound.....	8
Halibut, fresh, per pound.....	5
Salmon, per pound.....	5
Whitefish, smoked, per pound.....	21
Yeast, per pound.....	21
per cake.....	2
Pate de foie gras, per jar.....	50
CURED AND PICKLED MEATS.	
Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Minced, "Bologna style," per pound.....	*14
Sugar cured, boneless, whole, per pound.....	21
Sugar cured, whole, per pound.....	18
Half, per pound.....	20
Sliced, per pound.....	24
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	25
Half, boiled, per pound.....	27
Sliced, boiled, per pound.....	33
Shoulders, sugar cured, whole shoulder, per pound.....	14
Bacon—Breakfast, sliced, per pound.....	*28
Whole piece, per pound.....	*27
Strips, whole, per pound.....	20
Sliced, jar.....	30
Tin.....	27
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	8
Tongues, per pound.....	22

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound.....	27
Chickens—Fancy, roasting, corn fed, per pound.....	25
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	27
Capons, per pound.....	32
Broilers, milk fed, per pound.....	32
Broilers, corn fed, per pound.....	*30
Turkeys, per pound.....	28
Squabs, each.....	40
Geese, per pound.....	19
Grouse, each.....	1.00
Mallard ducks, 2 to 2½ pounds, each.....	2.35
Pheasants, each.....	1.35

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	†40
Creamery, 60-62-lb. tub, whole tub, per pound.....	†39
Sheffield Farms, extra fancy, per lb.....	58
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	22
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29

	Price.
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	**15
Fermilac, bottle.....	**25
Ice cream, quart.....	125
1/2-gallon.....	150
Cream, 30 per cent, quart.....	**45
1-pint.....	**23
1/2-pint.....	**12

VEGETABLES.	
Beans, string, per pound.....	9
Beets, per pound.....	2
Cabbage, per pound.....	*4
Carrots, per pound.....	2 1/2
Celery, per head.....	15
Lettuce, per pound.....	16
Onions, per pound.....	4
Spring, per pound.....	4
Parsley, per pound.....	17
Parsnips, per pound.....	*3 1/2
Peppers, green, per pound.....	12
Plantains, per dozen.....	15
Potatoes, white, per pound.....	2
New, per pound.....	5
Sweet, per pound.....	2
Rhubarb, per pound.....	4
Turnips, per pound.....	3
Tomatoes, per pound.....	10
Yams, Lucea, per pound.....	3

FRUITS.	
Apples, per pound.....	6
Grape fruit—Select, each.....	5
Tropical, each.....	3 1/2
Lemons, per dozen.....	*15
Limes, per 100.....	75
Oranges—Select, each.....	2
Tropical, per dozen.....	12
Coconuts, each.....	4
Bananas, per bunch.....	38
Bananas, each.....	1/2
Apples, evaporated, per pound.....	12
Apricots, evaporated, per pound.....	13
Pears, evaporated, per pound.....	23
Pineapples, each.....	14
Figs, dried, 12-oz. packages.....	8
Figs, dried, 5-oz. packages.....	5
Raisins, seedless, package.....	11
table, cluster, per pound.....	20
Currants, cleaned, package.....	12
Prunes, stewing, per pound.....	12
Alligator pears, tropical, each.....	5

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than 1/2 ham or 1/2 shoulders of fresh pork will be sold.

Price Changes.

The following is a list of changes in prices which became effective May 29:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Camphor balls, box.....	.06	.16
Pajamas, boys', suit.....	.66	.59
Suits, bathing, mens', ea.....	2.15	2.40
Suits, bathing, mens', ea.....	1.00	.92
Plates, pie, ea.....	.16	.14
Dishes, bakers', ea.....	1.00	1.15

Additions to Stock.

Lace:	
Corset cover, 8 1/2" yd.....	.20
Corset cover, 13" yd.....	.24
Corset cover, 13 1/2" yd.....	.25
Corset cover, 14 1/2" yd.....	.27
Corset cover, 15 1/2" yd.....	.27
Net, all-over, 18" yd.....	.15
Net, all-over, 18" yd.....	.20
Cotton, point d'esprit, 18" yd.....	.21
Cotton, point d'esprit, 18" yd.....	.20
Shadow, 18" yd.....	.20
Shadow, flouncing, 11 1/2" yd.....	.25
Shadow, flouncing, 17 1/2" yd.....	.35
Shadow, flouncing, 11" yd.....	.30
Shadow, flouncing, 17 1/2" yd.....	.40
Shadow, flouncing, 22 1/2" yd.....	.60
Shadow, flouncing, 22 1/2" yd.....	.50
Shoulder strap, 2 1/2" yd.....	.06
Shoulder strap, 2 1/2" yd.....	.09
Shadow, flouncing, 9 1/2" yd.....	.18
Flouncing, 15 1/2" yd.....	.45
Flouncing, 26 1/2" yd.....	.75
Flouncing, 27 1/2" yd.....	.65
All-over, 18" yd.....	.24
All-over, 18" yd.....	.20
All-over, 18" yd.....	.36
All-over, 18" yd.....	.39
Shadow, flouncing, 11 1/2" yd.....	.18
Corset cover, 14 1/2" yd.....	.20
Flouncing, 17" yd.....	.40
Flouncing, 17 1/2" yd.....	.60
Ties, middy blouse, ea.....	.80
Collar supports, ea.....	.04
Snap fasteners on tape, white, yd.....	.19
Snap fasteners on tape, black, yd.....	.19
Tape, lingerie, piece.....	.08
Ties, wash, four-in-hand, ea.....	.22
Coconut, dessicated, tin.....	.20

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in the following table:

JUNE.		Time and height of high and low water.			
DATE.					
Tues., June 1.....	6:05	12:15	18:20		
	15.8	0.4	15.6		
Wed., June 2.....	0:41	6:57	13:08	19:13	
	-0.5	15.2	1.1	14.7	
Thurs., June 3.....	1:34	7:50	14:03	20:09	
	.04	14.5	1.9	13.6	
Fri., June 4.....	2:27	8:44	15:03	21:10	
	1.5	13.8	2.6	12.6	
Sat., June 5.....	3:23	9:48	16:04	22:17	
	2.4	13.1	3.2	11.9	
Sun., June 6.....	4:23	10:52	17:06	23:28	
	3.2	12.6	3.4	11.5	
Mon., June 7.....	5:24	11:55	18:06		
	3.7	12.4	3.4		
Tues., June 8.....	0:33	6:22	12:51	19:01	
	11.5	3.9	12.4	3.1	
Wed., June 9.....	1:31	7:15	13:41	19:49	
	11.8	3.8	12.6	2.7	
Thurs., June 10.....	2:18	8:04	14:24	20:33	
	12.2	3.6	12.9	2.3	
Fri., June 11.....	3:00	8:49	15:04	21:16	
	12.6	3.2	13.3	1.8	
Sat., June 12.....	3:39	9:31	15:41	21:56	
	13.0	2.9	13.6	1.5	
Sun., June 13.....	4:15	10:12	16:17	22:35	
	13.3	2.6	13.8	1.2	
Mon., June 14.....	4:51	10:52	16:54	23:14	
	13.5	2.5	13.9	1.1	
Tues., June 15.....	5:26	11:32	17:30	23:53	
	13.7	2.4	13.9	1.1	
Wed., June 16.....	6:02	12:12	18:06		
	13.7	2.4	13.7		
Thurs., June 17.....	0:31	6:40	12:53	18:45	
	1.3	13.7	2.5	13.4	
Fri., June 18.....	1:11	7:17	13:37	19:27	
	1.6	13.7	2.6	13.1	
Sat., June 19.....	1:53	7:58	14:24	20:12	
	1.9	13.6	2.7	12.8	
Sun., June 20.....	2:40	8:43	15:16	21:05	
	2.3	13.6	2.7	12.5	
Mon., June 21.....	3:31	9:36	16:11	22:06	
	2.6	13.6	2.6	12.4	
Tue., June 22.....	4:28	10:35	17:11	23:13	
	2.7	13.7	2.2	12.5	
Wed., June 23.....	5:28	11:38	18:12		
	2.6	14.0	1.7		
Thurs., June 24.....	0:21	6:31	12:42	19:12	
	13.0	2.3	14.5	1.0	
Fri., June 25.....	1:25	7:33	13:43	20:10	
	13.6	1.8	15.0	0.2	
Sat., June 26.....	2:25	8:31	14:41	21:04	
	14.4	1.1	15.6	-0.5	
Sun., June 27.....	3:22	9:25	15:36	21:57	
	15.1	0.6	16.0	-1.0	
Mon., June 28.....	4:14	10:19	16:29	22:47	
	15.7	0.2	16.2	-1.2	
Tues., June 29.....	5:05	11:11	17:19	23:37	
	16.0	0.1	16.0	-1.0	
Wed., June 30.....	5:54	12:01	18:08		
	15.9	0.3	15.5		

JULY.

DATE.	Time and height of high and low water.			
Thurs., July 1.....	0:25	6:43	12:51	18:59
	-0.5	15.6	0.8	14.8
Fri., July 2.....	1:13	7:30	13:42	19:47
	.03	15.0	1.4	13.8
Sat., July 3.....	2:02	8:18	14:34	20:40
	1.3	14.1	2.2	12.9
Sun., July 4.....	2:51	9:09	15:26	21:34
	2.3	13.3	2.9	12.0
Mon., July 5.....	3:43	10:02	16:22	22:35
	3.3	12.6	3.4	11.3
Tues., July 6.....	4:38	11:00	17:20	23:44
	4.1	12.0	3.7	11.0
Wed., July 7.....	5:37	12:01	18:19	
	4.5	11.8	3.7	

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.*

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

*NOTE.—The sailings on Monday, June 28, and July 26, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4 leaving Panama at 7:10 a. m., connects with the despatches for the two sailings mentioned above.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, May 29, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gatun.	Gatun Lake.	Miraflores Lake.
Sun., May 23.....	132.10	96.85	85.51	85.50	53.95
Mon., May 24.....	128.80	94.89	85.52	85.50	53.93
Tues., May 25.....	128.80	93.98	85.48	85.43	54.20
Wed., May 26.....	137.45	100.70	85.68	85.63	54.20
Thurs., May 27.....	133.80	99.50	85.41	85.45	54.28
Fri., May 28.....	128.50	94.21	85.48	85.49	54.06
Sat., May 29.....	127.65	93.78	85.47	85.46	54.28
Heights of low water to nearest foot.....	125.00	91.00			

Misdirected Letters.

BALBOA HEIGHTS, C. Z., June 1, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressee:

Barton, Elliott*	Mann, Dr. Chas. C. (2)
Borcerine, Sra. Felicitas C.	Mayer, Mrs. Frank
Brown, Lieut. Carey H.*	Miranda, José
Cotter, John H.	Murphy, Thomas A.
Dowell, Paul H.	Nelly, C. J. M.
Doying, W. A. E.	Rowe, Mrs. C.
Falk, Capt. Harry	Rowe, Gilbert
Hallinan, Thos.	Rudder, Mrs. Sam*
Hennessy, Walter	Stark, John
Jones, Simon B.	Walker, J. Abner
Kopald, Charles	Ware, Wm.
Lether, Lieut. W. R.	Whitaker, William
McClellan, Fred	Woolnough, Mrs. A.
McFarlane, S. R. W.	Writer Company.

* Paper.

Fuel and Supplies.

Fuel oil may be obtained at Balboa or Cristobal from plants of The Panama Canal or from private corporations. The present price from the Canal is \$1.25 per barrel. Prices from the corporations may be obtained on application to them.

Diesel engine oil is for sale by several companies, at approximately 45 shillings per ton of seven barrels.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Panama;" in the United States, "Panacanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

Sailings of Vessels in Regular Service with the Isthmus.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal; and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailings, via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United

(Continued on page 366.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., May 30, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
May 24....	Margaret.....	Swedish.....	Johnson Line.....	Christiania.....	Valparaiso.....	General cargo.....	1,000	1,374	871
May 24....	Beckenham.....	British.....	Watts, Watts, & Co.....	Norfolk, Va.....	Cruz Grande.....	Coke.....	4,719	4,943	3,508
May 25....	Peru.....	British.....	Pacific Steam Navigation Co.....	Cristobal.....	Balboa.....	General cargo.....	930	4,038	2,626
May 25....	Curaca.....	British.....	New York and Pacific S. S. Co.....	Savona.....	Iquique.....	Ballast.....		6,503	4,612
May 25....	Kronprinsessan Margarita.....	Swedish.....	Johnson Line.....	Göteborg.....	Puntarenas.....	General cargo.....	747	5,289	3,995
May 25....	Palena.....	Chilean.....	South American Steamship Co.....	Cristobal.....	Balboa.....			3,639	2,537
May 26....	Peter H. Crowell.....	American.....	Crowell & Thurlow.....	New York.....	San Francisco.....	General cargo.....	4,500	3,345	2,360
May 26....	St. Helens.....	American.....	E. J. Dodge.....	Newport News.....	San Francisco.....	Coal.....	1,941	1,642	775
May 27....	Barotse.....	British.....	Ellerman & Bucknell Lines.....	New York.....	Melbourne.....	General cargo.....	5,050	4,468	2,849
May 27....	Montanan.....	American.....	American-Hawaiian Line.....	New York.....	San Diego.....	General cargo.....	7,079	6,857	4,706
May 27....	Colusa.....	American.....	New York and Pacific S. S. Co.....	Newport News.....	San Francisco.....	Coal.....	6,986	6,639	4,781
May 27....	Santa Clara.....	American.....	Atlantic and Pacific S. S. Co.....	New York.....	Los Angeles.....	General cargo.....	8,500	6,747	4,492
May 27....	City of Madrid.....	British.....	G. Smith & Sons.....	New York.....	Townsville.....	Oil products.....	6,000	5,685	4,163
May 28....	Salvador.....	British.....	Salvador R. R. Co.....	Cristobal.....	Balboa.....	General mdse.....	840	1,190	692
May 28....	Kroomland.....	American.....	Panama Pacific Line.....	New York.....	San Francisco.....	General cargo.....	4,200	13,076	8,551
May 29....	Strinda.....	Norwegian.....	Akties J. L. Mowinckels Dmpk S.....	New York.....	Manila.....	Petroleum.....	9,000	7,369	5,052
May 29....	Guatemala.....	British.....	Pacific Steam Navigation Co.....	Cristobal.....	Peru.....	General cargo.....	548	4,249	1,075
May 29....	Columbio.....	American.....	Wilson Bros. & Co.....	Philadelphia.....	San Francisco.....	Coal.....	2,164	2,174	1,398
May 29....	Alvarado.....	American.....	Long Beach S. S. Co.....	Newport News.....	San Diego.....	Coal.....	1,774	1,607	1,041
May 30....	Indrawadi.....	British.....	Indra Line, Ltd.....	New York.....	Vladivostok.....	General cargo.....	7,200	5,637	4,176
May 30....	Panama.....	American.....	Panama Railroad S. S. Line.....	New York.....	Balboa.....	General mdse.....	1,581	5,866	4,222
May 30....	Newport.....	American.....	New York Marine School.....	New York.....	Honolulu.....	Ballast.....		*1,050	

*Displacement tonnage.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

May 24....	Honolulu.....	American.....	American-Hawaiian Line.....	San Francisco.....	New York.....	General cargo.....	7,091	7,825	5,715
May 24....	Strathairn.....	British.....	Strath Line.....	Mejillones.....	Colon (orders).....	Nitrates.....	6,700	4,684	3,439
May 24....	Capac.....	British.....	New York & Pacific S. S. Co.....	Calita Buena.....	New York.....	Nitrates, wool, etc.....	4,338	3,221	2,206
May 24....	Hawaiian.....	American.....	American-Hawaiian Line.....	Seattle.....	New York.....	General, lumber.....	8,865	5,903	4,193
May 24....	Guatemala.....	British.....	Pacific Steam Nav. Co.....	Callao.....	Cristobal.....	General cargo.....	668	4,249	2,772
May 25....	Suecia.....	Swedish.....	Johnson Line.....	San Francisco.....	Stockholm.....	General, sugar.....	6,060	5,275	3,986
May 25....	St. Egbert.....	British.....	Rankin-Gilmour & Co.....	Manila.....	Norfolk.....	General cargo.....	6,700	6,344	4,622
May 26....	Jason.....	American.....	U. S. Navy.....	San Francisco.....	New York.....	Passengers.....		11,365	6,346
May 26....	Panamon.....	American.....	American-Hawaiian Line.....	Calita Buena.....	Norfolk.....	Nitrates.....	9,000	6,937	4,760
May 26....	Homgarth.....	British.....	Homgarth S. S. Co.....	Mejillones.....	Colon (orders).....	Nitrates.....	6,130	4,324	3,282
May 26....	Franklor.....	British.....	McVickor Marshall.....	Iquique.....	Newport News.....	Nitrates.....	7,500	5,480	3,895
May 27....	Advance.....	American.....	Panama Railroad S. S. Line.....	Balboa.....	New York.....	General.....		2,965	2,161
May 27....	Strathairn.....	British.....	Strath Line.....	Antofagasta.....	Colon (orders).....	Nitrates.....	6,800	4,680	3,363
May 28....	J. L. Luckenbach.....	American.....	Luckenbach S. S. Line.....	San Francisco.....	New York.....	General, lumber.....	2,658	5,114	3,258
May 28....	Wm. Chatham.....	American.....	Loop Lumber Co.....	Iquique.....	Colon (orders).....	Nitrates.....	2,050	1,707	823
May 30....	Rosalie Mahoney.....	American.....	Olson & Mahoney.....	Bellingham.....	New York.....	Lumber.....	1,500	1,006	652

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From	Date	Vessel	Line	From
May 26....	Panama.....	Panama Railroad S. S. Line	New York.	June 5....		American-Hawaiian Line...	Calita Buena.
May 29....	Teno.....	South American S. S. Co...	Norfolk.				
May 30....	Egyptian Transport	Empire Transport Co.....	Norfolk.				

PORT OF CRISTOBAL.

*ARRIVALS.

*DEPARTURES.

Date	Vessel	Line	From	Date	Vessel	Line	To
May 26....	Tagus.....	Royal Mail S. P. Co.....	United Kingdom.	May 25....	Tordenskjold.....	Earn Line.....	Daiquiri.
May 29....	Haiti.....	Cie. Generale Transatlan'que	Bordeaux.	May 26....	Oranian.....	Leyland Line.....	Port Limon.
				May 27....	Buford.....	U. S. transport.....	Galveston.
				May 27....	Wilhelmina.....	McCreighton.....	Bluefields.
				May 28....	Tagus.....	Royal Mail S. P. Co.....	United Kingdom.

*EXPECTED ARRIVALS.

*EXPECTED DEPARTURES.

				June 4....	Haiti.....	Cie. Generale Transatlan'que	Bordeaux.
					Zeta.....	Robert Wilcox.....	Unknown.

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

*DEPARTURES.

May 27....	Wm. Chatham.....	Loop Lumber Co.....	Iquique.	May 24....	Ucayali.....	Peruvian S. S. Co.....	Balboa.
				May 24....	Jamaica.....	Pacific Steam Nav. Co.....	Balboa.

*EXPECTED ARRIVALS.

*EXPECTED DEPARTURES.

	Columbia.....	W. R. Grace.....	North Pacific.....	May 31....	Peru.....	Pacific Mail S. S. Co.....	San Francisco.
	Pachito.....	Peruvian S. S. Co.....	Callao.				

*Other than vessels passing through the Canal.

(Continued from page 365.)

Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails.		Arrives.	
NEW YORK TO CRISTOBAL-COLON.			
Zacapa.....	U. F. C. May 26	June 2	
Allianca.....	P. R. R. May 27	June 2	
Calamares.....	U. F. C. May 29	June 6	
Carrillo.....	U. F. C. June 2	June 9	
Colon.....	P. R. R. June 3	June 9	
Tenadores.....	U. F. C. June 5	June 13	
Santa Marta.....	U. F. C. June 9	June 16	
Advance.....	P. R. R. June 10	June 17	
Metapan.....	U. F. C. June 12	June 21	
Almirante.....	U. F. C. June 16	June 23	
Panama.....	P. R. R. June 5	June 11	
Pastores.....	U. F. C. June 7	June 14	
Zacapa.....	U. F. C. June 10	June 17	
Allianca.....	P. R. R. June 12	June 18	
Calamares.....	U. F. C. June 14	June 21	
Carrillo.....	U. F. C. June 17	June 24	
Colon.....	P. R. R. June 19	June 25	
NEW ORLEANS TO CRISTOBAL-COLON.			
Heredia.....	U. F. C. May 29	June 3	
Abangarez.....	U. F. C. June 2	June 9	
Parismina.....	U. F. C. June 5	June 10	
Atenas.....	U. F. C. June 9	June 16	
Cartago.....	U. F. C. June 12	June 17	
Turrialba.....	U. F. C. June 16	June 23	
Heredia.....	U. F. C. June 19	June 24	
Abangarez.....	U. F. C. June 23	June 30	
CRISTOBAL-COLON TO NEW ORLEANS.			
Cartago.....	U. F. C. June 3	June 8	
Turrialba.....	U. F. C. June 3	June 10	
Heredia.....	U. F. C. June 10	June 15	
Abangarez.....	U. F. C. June 10	June 17	
Parismina.....	U. F. C. June 17	June 22	
Atenas.....	U. F. C. June 17	June 24	
Cartago.....	U. F. C. June 24	June 29	
Turrialba.....	U. F. C. June 24	July 1	



The Canal Record

Official publication of The Panama Canal.

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All subscriptions expire on December 31. Domestic subscriptions are accordingly charged as beginning from the first of the quarter of the year in which received. Remittances should be made to pay only to December 31, on this basis: Sent between April 1 and July 1, 75 cents; July 1 to October 1, 50 cents; October 1 to January 1, 25 cents. For foreign subscriptions the year is divided into thirds: Between January 1 and May 1, \$1.50; May 1 to September 1, \$1; September 1 to January 1, 50 cents.

Remittances for subscriptions may be forwarded to The Panama Canal, Washington, D. C., or to The Canal Record at the address given below.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Darien Radio Station Handling Government Messages.

The handling of Government messages between the Canal Zone and Washington, D. C., by way of Arlington, Va., was begun by the high-power Naval radio station at Darien on Saturday, April 5. This marks the working establishment of direct radio communication between the headquarters of the National Government and the Canal Zone, and is an important step in the establishment of a series of high-power stations by which messages may be relayed to vessels over almost all the central and north Atlantic, and over the Pacific north of latitude 30° South. The transmission of messages through the Darien station will be confined to official business, primarily that of the Navy, the Army, and the Department of State.

Governing Lockages at Gatun.

The following procedure has been adopted to govern the lockages of ships at Gatun, and the working force at Gatun has been so arranged that vessels will be locked on arrival, with exceptions noted below, beginning at 8 a. m., preferably with southbound ships, *i. e.*, those bound from the Atlantic to the Pacific.

Northbound ships arriving in the afternoon will be locked as they arrive, and the pilots will maintain their sequence in the channel, except that a faster vessel is permitted to pass a slower in Gatun Lake, if safety allows, and thereby change her sequence number. If the vessel whose sequence entitles her to enter the locks first does not get under way within 15 minutes of receiving the arrow signal on the approach wall to advance for lockage, the next ship on turn may proceed and the first will lose one turn.

If there are a number of northbound ships in any afternoon, and more desire to dock at Cristobal than berths are available for, the one or ones which need not be locked down in the afternoon will anchor in the basin in Gatun Lake, to proceed to Cristobal early the next morning. But if the ships are bound for sea or to available docks, all will be locked down in the evening of arrival at Gatun Locks.

By a readjustment of the locks force, operations are carried on till 11 p. m. The new arrangement assures prompt despatching and with the coaling operations carried on at Cristobal by night it is possible for vessels to reach Gatun, northbound, at 7 in the evening, lock down, coal at Cristobal, and put to sea before day.

Mustering Passengers and Crew for Quarantine Inspection.

Vessels entering the ports at the terminals of the Canal, or entering the Canal for transit, and especially passenger vessels, will secure *pratique* more promptly by having the crew and passengers mustered for inspection by the time the quarantine officer comes aboard. Cabin passengers are to be assembled in the main saloon, steerage passengers in a suitable place on the main deck, and the crew by departments, such as deck department, engine room department, etc. The process of mustering the passengers and crew is in all cases to be carried out by the ship's officers, so that, with the lists furnished by the purser, the quarantine officer may make prompt inspection.

No appreciable difficulty in this respect has occurred with the freighters using the Canal, but it has happened that on passenger vessels, especially large ships carrying numbers of excursionists and sightseers, many of whom appeared unfamiliar with the customary practices in marine travel, considerable delay has occurred in bringing all of the passengers together as required. Failure to do so has caused several hours of delay, and if such occurred on a vessel arriving at a port of entry relatively late in the day the loss of time in this manner might delay the transit of the vessel to the next day.

Argentine Training Ship to Visit the Canal.

The Argentine naval training school frigate *Presidente Sarmiento* is due to arrive at Balboa on July 1 on a practice cruise, and to pass through the Canal on the way to Havana. The schedule allows stopping two days at Balboa, passing through the Canal on July 3, lying at Colon two days, and sailing for Havana on July 6. The Canal authorities will make arrangements by which the personnel will have opportunity to inspect the Canal.

Submarines C-2, C-3, and C-5 of the flotilla of five stationed in Isthmian waters are in dry dock at Cristobal for a general overhauling.

LIGHTHOUSE EXPEDITION.

Force Despatched from Balboa for Establishment of Light at Cape Mala.

An expedition for the erection of the new light on Cape Mala at the western point of the Gulf of Panama left Balboa on Thursday afternoon, June 3, equipped with all requisite supplies and under orders to complete the light and start it burning. It is anticipated that about a month will be required for the fulfillment of the mission.

Description of the Cape Mala, Bona Island, and Taboguilla Island lights, all provided for in the same Congressional appropriation, and the revised sailing directions governing the passage through the Gulf from the Pacific Ocean to be put in effect by the establishment of the new lights, were published in THE CANAL RECORD of April 21, 1915, and otherwise distributed as a notice to mariners, in Canal circular No. 643-13. The Cape Mala light will mark the entrance to the Gulf of Panama, around the point which has come to be called "Bad Cape" (*Punta Mala*) and is to be the largest as well as the most important of the new aids to navigation.

Cape Mala is situated about 95 miles from Balboa, and the expedition for the erection of the light was transported down the bay in a barge in tow of the tug *Cocoli*, the voyage requiring 10 hours. The force on the expedition consists of five white men, including three erectors from the works of the contractor, the American Gasaccumulator Company, of Philadelphia, and 32 silver employees, including a cook and waiters loaned by the Supply Department. Food supplies were taken sufficient for a month, and the Health Department furnished such simple remedies as quinine, cathartics, aspirin, and iodine, as well as a schedule of sanitary observances, to safeguard the health of the men.

The work of the expedition will be the erection on the concrete foundations of the 100-foot tower and light complete, and the erection of a tank house for the storage of gas containers, and a cottage to quarter the keeper of the light. The tower and lamp were assembled complete at the works of the contractor prior to shipment, and all the parts numbered, so that the erection at Cape Mala will be a relatively simple task of reassembling. The houses, which are to be erected by the Building Division of The Panama Canal, had both been completely erected at Balboa, and then dismantled in sections for shipment. A liberal supply of extra lumber, spare bolts, nails, etc., was taken. The lists of tools and supplies had been checked carefully by the several divisions concerned, and every measure taken to make the expedition self-contained, to assure the satisfactory completion of the light without delay.

The erection of the light on Cape Mala will meet a need which has been felt for many years. Since the middle of the last century,

at the time of the California gold rush, when traffic through the Gulf of Panama was greatly stimulated, complaints and recommendations have been made by mariners in the hope of having a light established at this point, and experienced navigators of the west coast have emphasized the need.

The light is very necessary in order that mariners may find their position when making the Gulf of Panama, from either the northward or the southward, since the coast in the vicinity of Cape Mala is low, difficult to see, and devoid of any distinguishing features; besides which, there are dangerous outlying reefs and varying currents, which sometimes reach a velocity of $1\frac{1}{2}$ knots an hour.

When once a vessel has found her position off Cape Mala, the light, in conjunction with the Bona Island and Taboguilla Island lights, which will be established at about the same time, will so simplify navigation of the Gulf that a vessel should find her way up to the entrance to the Canal as easily, almost, as into any port in the world. Coupled with the fact that vessels may find a good anchorage anywhere after passing Bona Island, and that there is rarely, if ever, any seriously heavy weather in this vicinity, navigation will be rendered extremely simple and with the usual precautions can be accomplished in perfect safety.

The original scheme for the aids to navigation in the Gulf contemplated the establishment of a light on a high point in the Pearl Islands, but since the opening of the Canal it has been demonstrated that there is no need of one there. Ships would rarely, if ever, go so far out of the course and even if they should the islands are high and easily visible, with no outlying dangers on the southwesterly side.

The following matter concerning the characteristics of the Cape Mala light is quoted from the "Sailing Directions":

Cape Mala Light—First order, flashing, white, with two red sectors; light 5 seconds, eclipsed 15 seconds, at an elevation of 140 feet, visible 18 miles, through the following arcs and with the following colors:

Visible from 340° (N. 20° W.) to 245° (S. 65° W.) through East.

Red sector from 340° (N. 20° W.) to 20° (N. 20° E.).

White sector from 20° (N. 20° E.) to 215° (S. 35° W.).

Red sector from 215° (S. 35° W.) to 245° (S. 65° W.).

Obscured from 245° (S. 65° W.) to 320° (N. 20° W.) through West.

The structure will be a skeleton steel tower, with battens on two sides, all painted white, so that it may be used as a day mark.

Caution—The red sector to the northward covers Iguana Island and reef, and vessels standing to the southward leaving the Canal, which find themselves in it should immediately change course to the eastward until the light shows white.

The red sector to southwestward covers North and South Fraile Rocks which are distant about 12 miles from Cape Mala, and vessels bound for the Canal which find themselves in this red sector should immediately change course to southeast until the light shows white. This light will be the principal fix for vessels entering or leaving the Gulf of Panama.

The approximate position of the light will be Latitude $7^{\circ} 27' 30''$ N.; Longitude $79^{\circ} 59' 30''$ W.

Proclamation of Neutrality between Italy and Austria-Hungary.

The President of the United States issued on May 24 a proclamation of the neutrality of the United States and the territories under its jurisdiction in the war between Italy and Austria-Hungary. The provisions and injunctions are similar to those embodied in the proclamation of neutrality between Belgium and Germany, issued on August 18, 1914, and published in THE CANAL RECORD of September 9, 1914. The date from and after which "no ship of war or privateer of any belligerent shall be permitted to make use of any port, harbor, roadstead or other waters within the jurisdiction of the United States as a station or place of resort for any warlike purpose or for the purpose of obtaining any facilities of warlike equipment" was established by the Italy-Austria-Hungary Proclamation as May 25, 1915.

FIRE AREA CLEARED UP.

Panama Railroad Has Removed Debris.—Preparations for Rebuilding.

The clearing up of the debris on the 19 acres of lots in Colon devastated by fire on April 30 was completed last week by the forces of the Panama Railroad Company. The cost of this work was as follows:

Labor, section and extra gangs.....	\$4,545.25
Engine service.....	581.50
Team service.....	101.50

Total..... \$5,228.25

This amount is to be prorated among the 214 occupied lots in the burned area and the items collected from the lessees.

The government of Panama has issued a decree requiring that all new buildings erected in any part of Colon, including the burned area, be of concrete or other noninflammable material, and one building permit under the new conditions, for the rehabilitation of a partly destroyed concrete building, has been issued. The Panama Railroad Company is preparing new leases to govern construction on its lots, as set forth in this circular letter from the Land Agent to the lessees, issued on Monday, June 7:

THE PANAMA RAILROAD COMPANY,
OFFICE OF LAND AGENT,
ANCON, C. Z., June 7, 1915.

To lessees of Panama railroad lots in the burned area of Colon—We are in receipt of advice from the Panama Government authorities that a decree is to be issued requiring that new buildings to be erected in the area which was destroyed by fire on April 30, 1915, be constructed of concrete or other noninflammable material. Permits for the construction of such buildings will be issued immediately by the authorities in Colon upon request.

In view of the fact that approximately two-thirds of all Panama railroad leases to lots in the burned area will expire within the next six or seven years, and as the Panama Government will not permit the reconstruction of wooden buildings, the Panama Railroad Company is disposed to issue new leases for a period of 25 years to those lessees who are desirous of releasing their present contracts. These new leases will be dated July 1, 1915, for 25 years and will provide in article 3, that the lessee will commence construction within a period of one year and will finish such construction within a period of two years from date of lease. A new article, numbered 10, will be included in this new lease, which will provide that at any time prior to the expiration of the lease period should the Government of the United States, The Panama Canal, or the Panama Railroad Company have need for the leased lot, the lessor company shall have a right to terminate the lease upon one year's notice in writing, upon the payment at that time of the fair and reasonable value of any or all buildings or other improvements that the lessee has constructed upon the property. Value of the improvements will be determined by arbitration, each party to the contract appointing one arbitrator, and the two so nominated shall select a third party.

Although the Panama Railroad Company is willing to issue new leases as above indicated, nevertheless lessees will be permitted to construct under the terms of their old leases with the exception of the class of building to be placed on the premises, which naturally will have to conform to the requirements of the decree to be issued by the Panama Government authorities.

The Panama Railroad Company will furnish gravel for concrete buildings to be constructed in this burned area for a period of one year at cost price.

Will you kindly advise me as soon as possible what action you expect to take in connection with your property in this area?

R. S. CARLSON,
Land Agent.

Approved:
C. H. MOTSETT,
Superintendent.

Red Cross Statement.

The following financial statement of the Canal Zone chapter of the American National Red Cross shows receipts and expenditures between April 1 and June 4, 1915. It includes numerous contributions for the relief of victims of the fire in Colon on April 30, but not the greater part of the disbursements in this work, as bills for the principal



MAP SHOWING SITUATION OF CAPE MALA.
("X" mark indicates Fraile Rocks.)

performances have not been presented to date. Up to May 19, the expenditure in connection with the fire amounted to \$1,531.65, according to the chairman of the local committee, and by this time the amount has reached approximately \$2,000. This is the statement to June 4:

RECEIPTS.	
Balance on hand April 1, 1915.....	\$3,546.34
April 16, Reimbursement by National Red Cross account amount advanced Louis de la Pena.....	100.00
April 30, Proceeds of ball—additional.....	25.00
SUBSCRIPTIONS AND DONATIONS FOR RELIEF OF COLON FIRE SUFFERERS.	
May 1, General Geo. W. Goethals.....	20.00
May 3, Cristobal Union Sunday School.....	25.00
May 4, Red Cross Nurse, No. 3988.....	1.00
May 4, Canal Zone Humane Society.....	52.15
May 6, Knights of Columbus Cristobal Council.....	100.00
May 6, Altar Guild, Christ Church.....	45.65
May 6, British Consul.....	50.00
May 6, Colon Humane Society.....	50.00
May 6, Employees Mechanical Division, Balboa.....	5.00
May 6, Employees Old Administration Building.....	12.50
May 6, Post-office employees, Ancon.....	11.00
May 6, Ehrman & Co., Panama.....	25.00
May 6, De Sola, Panama.....	15.00
May 6, Maduro & Co., Panama.....	25.00
May 6, Huertemate & Co., Panama.....	50.00
May 6, José Misteli, Panama.....	25.00
May 6, Cardoze & Pereira.....	15.00
May 6, E. Lyons.....	50.00
May 6, Piza, Piza & Co.....	25.00
May 6, Panama Agencies Co.....	50.00
May 6, Royal Mail Steam Packet Co.....	100.00
May 6, Union Club.....	200.00
May 6, Panama railroad employees.....	13.50
May 6, University Club.....	56.35
May 6, Sojourners' Lodge, Cristobal.....	100.00
May 11, Century Club.....	73.50
May 11, Subscriptions received by Mrs. Porras and Lady Mallet.....	566.50
May 12, American Bridge Co.....	10.00
May 12, Union and Tivoli Clubs.....	28.20
May 12, C. G. Morton.....	1.00
May 14, Sale Casino tickets.....	12.00
May 14, Panama Canal Baseball League.....	48.56
May 15, Canal Zone police, Balboa.....	24.00
May 15, Brigadier-Gen. C. R. Edwards.....	12.00
May 17, Local chairman of committee, Corozal.....	85.50
May 17, Ancon Hospital.....	23.00
May 20, Subscriptions received by Mrs. Porras and Lady Mallet.....	288.20
May 20, Employees of Mechanical Division.....	120.00
May 20, R. J. Stoddard.....	1.00
May 20, Panama railroad employees at Balboa docks.....	23.50
May 21, Printers' Social Club, Mount Hope.....	10.50
May 24, Cristobal school.....	91.79
May 24, Ladies' Aid Society, Cristobal.....	101.30
May 25, J. M. Billingslea.....	1.00
May 25, Panama railroad for relief of families of Panama railroad dock laborers.....	100.00
May 25, Simons & Hart.....	19.30

May 28, Employees of the Administration Building.....	99.50
May 29, Panama Canal Baseball League.....	2.50
May 29, Citizens of Paraiso.....	240.10
May 30, Wesleyan Church, Colon.....	20.00
May 30, Ladies Aid Society, Colon.....	2.00
May 30, Employees of Quartermaster's Department, Ancon.....	14.50
Total.....	\$6,812.94
DISBURSEMENTS.	
April 12, Relief of family.....	\$20.00
April 17, Loan.....	5.00
April 23, Loan.....	50.00
May 1, Loan to destitute American.....	10.00
May 4, Relief of American family.....	50.00
May 14, Miscellaneous disbursements account of fire sufferers.....	20.00
May 14, Commissary books, account of fire sufferers.....	45.00
May 14, Pencils and index cards, Mt. Hope.....	2.19
May 20, Commissary books, account of fire sufferers.....	45.00
May 20, Miscellaneous disbursements, account of fire.....	30.00
May 20, Relief of destitute American seaman.....	5.00
May 21, Relief of Jamaican woman and five children.....	10.00
May 21, Relief of American and family.....	20.00
May 24, Relief of American (loan).....	2.00
May 24, Relief of American (loan).....	2.00
May 24, Relief of Spanish woman and children.....	15.00
May 28, Cash advanced to make payments on sewing machines and charcoal braziers.....	50.00
May 28, Stamps.....	.50
May 28, Relief of destitute seaman.....	5.00
Total.....	\$386.69
June 4, Balance on hand.....	\$6,426.25
	\$6,812.94

Extending the Thanks of Panama.

The following is a translation of a letter sent to the American Minister in Panama by the Secretary of Foreign Affairs of Panama, expressing appreciation of the help given by the various American organizations and individuals in connection with the fire at Colon on April 30:

I have the honor to acknowledge the receipt of the very gracious and courteous note from Your Excellency, F. O. No. 175, of the 1st instant, by means of which you have had the kindness to express personally and officially to the Government of Panama and to the undersigned your feelings and sympathy for the tremendous disaster of which the city of Colon has been the victim.

Such expressions of feeling as those contained in the letter to which I have the honor to answer are particularly worthy of appreciation and serve as consolation and solace in those works which naturally follow a catastrophe such as occurred recently, and therefore, I present to Your Excellency in the name of my Government, and from myself personally, the most sincere expressions of gratitude.

I take this opportunity to herewith express our gratitude to the authorities of the Government of Your Excellency, to whom I beg to transmit it, and especially to Colonel Cronkrite, Major Cole, Captains Carpenter, Fulton, Maybach, and Hawes, the fire department of Cristobal, and to the members of the Red Cross, and all those compatriots of Your Excellency who distinguished themselves by their self-denying efforts on the occasion of this so unfortunate event.

I take this opportunity to express to Your Excellency the expressions of my highest and most distinguished consideration and personal esteem.

(Signed) E. T. LEFEBVRE.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Bryce, Michael.....	2684	U. S. A.....	Paraiso.....	Oper. & Maint..	June 4, 1915.
Rice, Theopolis.....	61438	Barbados.....	Panama.....	O. M. D.....	May 23, 1915.
Ellis, Cyril J.....	34147	Jamaica.....	Mount Hope.....	Mun. Eng. Div.	May 28, 1915.

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

BOUNDARY CONVENTION.

Changes in Lines between the Canal Zone and the Republic of Panama.

The new boundary convention between the United States and the Republic of Panama has effected a trade of territory between the Canal Zone and Panama for the benefit of both countries. The negotiations consummated by the convention had been under way for about four years. The convention was made on September 2, 1914, the exchange of the ratifications by the two governments was made on February 11, 1915, and the delivery of possession of the exchanged areas was made on May 1.

The principal change was in the reversion of the Sabanas district to Panama, and the extension of the municipality of Panama to reach the former outer boundary of the Canal Zone, five miles from the Canal, thus removing the area of Canal Zone jurisdiction which had separated the capital of the country from the remainder of the Republic. The city is no longer shut off between the Canal Zone and the sea, and has now room for indefinite expansion to the northeast. This was a point strongly desired by officials of Panama, for both "sentimental" and commercial reasons. It adds about six and a half square miles of territory to the city.

Another change with respect to the city of Panama was a movement of the line slightly to the eastward between Fourth of July Street and De Lesseps Park, to make the boundary line conform to the property line, and bring into the Canal Zone a few buildings belonging to the United States which formerly lay in Panama. From the northwest corner of De Lesseps Park, near the Tivoli Hotel, the line was changed to follow the north curb line of the park to a point near Calidonia Bridge, thence across the railroad on a line parallel with the bridge to the eastern line of the railroad right-of-way, and thence along that line northerly to the Curundu River. The old line ran almost due north in front of the Tivoli Hotel and cut off a part of the Santa Cruz district of the city of Panama. The new line puts all the Santa Cruz district in the city, but extends the Canal Zone to take in the buildings in front of the Tivoli Hotel, between it and the Panama railroad, and known as "Pueblo Nuevo".

In the lines between the city of Colon and the Canal Zone, alterations were made in the limits of Colon harbor, so that all of the new terminal construction along the mole extending to the northward of Cristobal, and all of the water area in front of Toro Point in Limon Bay, in the lee of the breakwater, will lie within the Canal Zone. Another change was made to enlarge the area formerly occupied by the Panama railroad lighthouse, at the northwest corner of Manzanillo Island, near the Washington Hotel. The lighthouse site was included in the Canal Zone by the Davis boundary agreement of 1904, and continues in the Zone under the new convention, with the increased area on which Battery Morgan is situated.

In addition to the changes in the lines between the Canal Zone and the cities, the convention establishes the boundaries of all lands in the Gatun Lake area up to the 100-foot contour, all islands in the lake, and all peninsulas to which access can be gained only across the waters of the lake or from land in the Canal Zone, which had heretofore been taken

and nineteen minutes east (N. 3° 19' E.) one hundred and forty-eight and forty-six one-hundredths (148.46) meters to an iron rail property monument; thence north eight degrees and fourteen minutes and forty seconds west (N. 8° 14' 40" W.) one hundred and fifty-one and thirty-three one-hundredths meters (151.33) to a point; thence north thirty-seven degrees and forty-five minutes east (N. 37° 45' E.) fourteen and thirty-three one-hundredths meters to a point in the road on the present boundary line; thence along said present boundary north no degrees and forty-seven minutes west (N. 0° 47' W.) sixty-six and forty-four one-hundredths meters (66.44) to a point; thence north seventy-six degrees and fifty-nine minutes east (N. 76° 59' E.) forty-two and forty-five one-hundredths (42.45) meters to a point; thence south seventy-two degrees and eleven minutes east (S. 72° 11' E.) one hundred and fifty-nine and twenty-seven one-hundredths (159.27) meters to a point near Calidonia Bridge; thence north three degrees and eight minutes east (N. 3° 8' E.) crossing the Panama Railroad Company's tracks, seventy-seven and three-tenths (77.3) meters to a point twelve and two-tenths (12.2) meters from the center line of the main track of the said Panama Railroad; thence parallel to the said railroad in a north-westerly direction, two hundred and ninety and five-tenths (290.5) meters to a point on the present boundary line; thence north forty-nine degrees, thirteen minutes and ten seconds west (N. 49° 13' 10" W.) one hundred and sixty-five and thirty-seven one-hundredths (165.37) meters to an iron rail monument, twelve and three-tenths meters from the center of the main line track of the Panama Railroad; thence north forty-six degrees, thirty-nine minutes and thirty seconds west (N. 46° 39' 30" W.) two hundred and twenty and four one-hundredths (220.04) meters to a Panama Railroad Boundary monument twenty-two and one-tenth (22.1) meters from the center line of Panama Railroad main track; thence north forty-nine degrees and fourteen minutes west (N. 49° 14' W.) and parallel with the Panama Railroad track two hundred and ninety and thirty-six one-hundredths (290.36) meters to Rio Curundu; thence following the course of Rio Curundu upstream to a point (marked "E" on the map) where the said Rio Curundu is intersected by a straight line drawn through the point of intersection on the canal axis (marked "Cocoli" on the map) perpendicular to that part of the Canal axis of A. D. 1906 which extends in a straight line southeasterly from the said point marked "Cocoli" to the point of intersection (marked "Bay" on the map) the former point of intersection being situated between Miraflores and Corozal, and the latter point in Ancon Harbor; thence from "E" north sixty-three degrees and thirty minutes east (N. 63° 30' E.) two thousand and eight and six-tenths (2,008.6) meters to a concrete monument (marked "F" on the map) on the present boundary between the Canal Zone and the Republic of Panama; thence along this boundary south twenty-six degrees and thirty-four minutes east (S. 26° 34' E.) about four thousand seven hundred and forty-four and five-tenths (4,744.5) meters to monument No. 99 and thence continuing on this line to the shore of Panama Bay at low water mark; thence following the mean low water line around the shore of Panama Bay to a point on the boundary line between Panama Harbor and Ancon Harbor; thence north seventy-two degrees, fourteen minutes west (N. 72° 14' W.) to a monument "A," the point of beginning, except that the entire area of the middle island on the map called Las Tres Hermanas shall be under the jurisdiction of the United States of America.

Points "A," "B" and "C," above referred to, are the same points mentioned in the original agreement between the Government of the Republic of Panama and the Canal Zone Government, dated June 15, 1904.

All bearings in this description and on the map mentioned above are referred to true meridian and all coordinates are in accordance with the Panama-Colon Datum.

The Government of Panama agrees that the portion of the roadway now existing between the Ancon Post Office and the Tivoli Dispensary and connecting the Tivoli Road with the roads leading to Balboa and the Ancon Hosiotal grounds, which will fall within Panamanian jurisdiction as a result of the boundary lines established in accordance with the foregoing description, will be kept open and of the same grade as same now is and will be maintained in good serviceable condition by the said Government of Panama so that it will afford a free, uninterrupted and unobstructed permanent public thoroughfare, unless in the future provided otherwise by the mutual agreement of the chief executive authorities of the Republic of Panama and the Panama Canal.

IV.

It is agreed that the harbor of the City of Panama shall include the maritime waters in front of the City of Panama lying to the north and east of a line beginning at a concrete monument set on "Punta Mala" marked "A" on the map already referred to in this Convention,

and running south seventy-two degrees and fourteen minutes east (S. 72° 14' E.) through the middle island of the three islands known as "Las Tres Hermanas," but excluding the said middle island, and extending three marine miles from mean low water mark at Punta Mala; and that the harbor of Ancon shall include the waters lying south and west of said line, but including the said middle island which shall be deemed to be within the harbor of Ancon. The said middle island hereby included within the harbor of Ancon is situated about south twelve degrees, thirty minutes west (S. 12° 30' W.) eight hundred and fifty-six (856) meters from the point of Las Bovedas and lies in latitude north eight degrees, fifty-six minutes (N. 8° 56') plus one thousand and fifty-eight and eighty-eight hundredths (1,058.88) meters and longitude west seventy-nine degrees, thirty-two minutes (W. 79° 32') plus three hundred forty-two and six-tenths (342.6) meters, the datum of said latitude and longitude being what is generally known as the Panama-Colon Datum. All bearings are referred to true meridian.

The foregoing description of the City of Panama and Panama Harbor conform to the accompanying blue print marked exhibit "B."

V.

It is agreed that the permanent boundary line between the City of Colon and the Canal Zone shall be as follows:

Beginning at a point on the western shore of Boca Chica (sometimes called Folks River) marked "A" on the map, and fifty (50) meters to the eastward of the center line of the main line of track of the Panama Railroad; thence northward and northwestward, always parallel with said railroad track, and at a uniform distance of fifty (50) meters from the center line thereof to the center of Bolivar Street (sometimes called "C" street), said point being marked "B" on the map; thence northerly along the center line of said Bolivar Street, to the center line of Eleventh Street, this point of intersection being marked "C" on the map; thence westerly along the center line of Eleventh Street, a distance of one hundred sixty-two and fifty-three hundredths (162.53) meters to a cross on the sea wall along Limon Bay, said point being marked "D" on the map; thence north seventy-eight degrees, thirty minutes and thirty seconds west (N. 78° 30' 30" W.) to the shore of Limon Bay at mean low water mark; thence following the mean low water line around the shore on the northerly, easterly, southerly, and westerly direction to the point of beginning, except that at the site of the old Colon lighthouse a detour is made, as shown on the map, to exclude an area of land to be used as the site for a United States battery, which site shall be deemed to be within the Canal Zone.

The site for a United States battery above mentioned, which is to be included within the jurisdiction of the Canal Zone, is described as follows:

The initial point is a tack in a stake on Colon point, situated with reference to certain prominent points as follows: South forty-one degrees, six minutes east (S. 41° 6' E.) twenty-five and twenty-two one-hundredths (25.22) feet from the southwest interior corner of the upper pavement of the swimming pool; south eleven degrees, thirty-seven minutes west (S. 11° 37' W.) one hundred twenty-seven and sixty-eight one-hundredths (127.68) feet from a cross mark on a bolt set in a concrete base thirteen and nine-tenths (13.9) feet to the northeast of the center of the northeastern edge of the swimming pool; south thirty-five degrees, eighteen minutes west (S. 35° 18' W.) two hundred sixty-six and seventy-five one-hundredths (266.75) feet from the northwestern corner of the Hotel Washington; and north sixty-eight degrees, twenty-nine minutes west (N. 68° 29' W.) five hundred forty-three and ninety-five one-hundredths (543.95) feet from the cross mark on a rail set in a concrete base at a point where the south building line of Second Street intersects the center line of Bottle Alley; from this initial point south forty-three degrees, no minutes west (S. 43° 00' W.) two hundred fifty-eight and five-tenths (258.5) feet to a point; thence north forty-seven degrees, no minutes west (N. 47° 00' W.) ninety and sixty-four one-hundredths (90.64) feet to a point; thence by a curve to the right with a radius of fifty-six and eighty-six one-hundredths (56.86) feet and a central angle of forty-five degrees, no minutes (45° 00'), forty-four and sixty-six one-hundredths (44.66) feet to a point; thence by a curve to the right with a radius of ninety-one (91) feet and a central angle of forty-five degrees, no minutes (45° 00'), seventy-one and forty-seven one-hundredths (71.47) feet to a point; thence north forty-three degrees, no minutes east (N. 43° 00' E.) one hundred seventy-seven and five-tenths (177.5) feet to a point; thence south forty-seven degrees, no minutes east (S. 47° 00' E.) one hundred fifty-seven and five-tenths (157.5) feet to the point of beginning, containing ninety-one one-hundredths (0.91) acres, more or less. All bearings are referred to true meridian (Panama-Colon Datum).

VI.

The harbor of Colon shall consist of those maritime

waters lying to the westward of the City of Colon and bounded as follows:

The southerly boundary of the harbor of Colon is in a line running north seventy-eight degrees, thirty minutes and thirty seconds west (N. 78° 30' 30" W.), which begins at a cross cut in the concrete sea wall on the easterly side of Limon Bay and on the center line of Eleventh Street, Colon, produced westerly. This point is marked "D" on the map designated exhibit "C." Beginning at mean low water mark on Limon Bay on the above-described line the boundary runs northerly westerly along said line to a point in Limon Bay marked "E" on the map, and located three hundred and thirty (330) meters east of the center line of the Panama Canal; thence turning to the right and running in a northerly direction the line runs parallel with the above mentioned center line and at a distance of three hundred and thirty (330) meters easterly therefrom until it meets an imaginary straight line drawn through the lighthouse on Toro Point having a bearing of south seventy-eight degrees and thirty minutes and thirty seconds east (S. 78° 30' 30" E.), this intersection point being marked "F" on the map; thence turning to the right and running along the above-mentioned line south seventy-eight degrees, thirty minutes and thirty seconds east (S. 78° 30' 30" E.) to a point on the boundary of the above-mentioned site for the United States battery; thence turning to the right and running along the said boundary line of said site to the mean low water line of Limon Bay; thence turning to the right and running along said water line in a generally southerly direction to the point of beginning at the foot of Eleventh Street.

All bearings in this description and on the plan mentioned above are referred to true meridian (Panama-Colon Datum).

The foregoing description of the City of Colon and Colon Harbor conform to the accompanying blue print marked exhibit "C."

VII.

It is agreed that the Republic of Panama shall have an easement over and through the waters of the Canal Zone in and about Limon and Manzanillo bays to the end that vessels trading with the City of Colon may have access to and exit from the harbor of Colon, subject to the police laws and quarantine and sanitary rules and regulations of the United States and of the Canal Zone established for said waters.

The United States also agrees that small vessels may land at the east wall which extends along the shore to the south of the foot of Ninth Street and recently constructed by the Panama Railroad Company in the harbor of Colon free of any wharfage or landing charges that might otherwise accrue to the said company under the terms of its concessions from the Government of Colombia; and the United States further agrees that it will construct and maintain a landing pier in a small cove on the southerly side of Manzanillo Island in the northwesterly portion of the arm of the sea known as Boca Chica (sometimes called Folks River), to be used as a shelter harbor for small coasting boats of the Republic of Panama, without any wharfage or other landing charges.

VIII.

Inasmuch as the highway known as the "Sabanias Road" will come entirely within the bounds of the City of Panama under this agreement the authorities of the Canal Zone are hereby relieved of the duty to repair and maintain such road, or any part of it, and the same shall be done henceforth by the authorities of the Republic at their cost and expense.

IX.

It is agreed that the Republic of Panama will not construct nor allow the construction of any railway across the Sabanas or other territory hereby transferred to that Republic without a mutually satisfactory agreement having been previously arrived at between the two governments; and this shall be without prejudice to any right the United States may have to object to such railway projection under any of the provisions of the Canal Treaty of November 18, 1903.

X.

The contracting parties hereby agree that this Convention shall not diminish, exhaust, or alter any rights acquired by them heretofore in conformity with the Canal Treaty of November 18, 1903, and it is further expressly agreed that the United States, in the exercise of the rights granted to it under articles II and III of the said Canal Treaty and subject to article VI of said Treaty, may enter upon and use, occupy, and control the whole or any portion of the Sabanas land, or other territory hereby transferred to the Republic of Panama, as the same may be necessary, or convenient, for the construction, maintenance, operation, sanitation, or protection of the Canal or of any auxiliary canals, or other works necessary and convenient for the construction, maintenance, operation, sanitation, or protection of said enterprise.

XI.

This agreement shall not be construed to modify the rights of the authorities of the Canal Zone to employ

citizens of the Republic of Panama residing in the territory of the Republic as provided in section V of the above-mentioned agreement of June 15, 1904, and for which purpose the Government of the Republic granted the permission required by paragraph 2 of article 7 of the Panamanian Constitution.

XII.

The civil and criminal cases pending in the courts of the Canal Zone and the Republic of Panama at the time of the execution of this Convention shall not be affected hereby but the same shall be proceeded with final judgment and disposed of in the courts where they are now pending as though this agreement had not been entered into.

XIII.

The exhibits accompanying this agreement are signed by the representatives of the respective governments for identification. This Convention, when signed by the plenipotentiaries of the high contracting parties, will be ratified by the two governments in conformity with their respective constitutional laws, and the ratifications shall be exchanged at Panama at the earliest date possible.

In faith whereof the respective plenipotentiaries have signed the present Convention in duplicate and have hereunto affixed their respective seals.

Done at the City of Panama, the second day of September, in the year of our Lord, nineteen hundred and fourteen.

[SEAL.]

WILLIAM JENNINGS PRICE,

[SEAL.]

E. T. LEFEVRE

And whereas the said Convention has been duly ratified on both parts and the ratifications of the said Convention were exchanged in the City of Panama on the eleventh day of February, one thousand nine hundred and fifteen:

Now, therefore, be it known that I, Woodrow Wilson, President of the United States of America, have caused the said Convention to be made public to the end that the same and every article and clause thereof may be observed and fulfilled with good faith by the United States and the citizens thereof.

In testimony whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington this eighteenth day of February in the year of our Lord one thousand nine hundred and fifteen, and of the Independence

[SEAL.]

of the United States of America the one hundred and thirty-ninth.

WOODROW WILSON.

By the President:

W. J. BRYAN,

Secretary of State.

Signed at Panama, September 2, 1914.

Ratification advised by the Senate, October 22, 1914.

Ratified by the President, January 4, 1915.

Ratified by Panama, February 8, 1915.

Ratifications exchanged at Panama, February 11, 1915.

Proclaimed, February 18, 1915.

OFFICIAL CIRCULARS.

Private Vegetable Gardens near Quarters.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., May 29, 1915.

To all concerned—Occupants of gold quarters may operate vegetable gardens in the vicinity of their quarters, providing the location is approved by the district quartermaster and the garden is conducted in a manner satisfactory to the sanitary inspector. These gardens must not occupy ground in front of the rear line of the quarters, and must not be enclosed by unsightly fences or violate sanitary regulations.

CHESTER HARDING,

Acting Governor.

Clearance at Balboa Heights Station.

THE PANAMA RAILROAD COMPANY,

OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., June 4, 1915.

CIRCULAR No. 92:

To all concerned—The canopy roof of the new Balboa Heights station has a clearance of 12 feet 5½ inches from top of rail; from center line of track five feet 11½ inches, and from gage line of nearest rail, three feet 5½ inches.

It is requested that all departments, in loading material for shipment to Panama, refrain from loading cars in excess of this clearance, and where the load is such as to exceed these measurements, the matter should be called to the attention of the terminal trainmaster in order that he may arrange for handling the movement of such loads southward on the northbound track between cross-overs north and south of the Balboa Heights station.

C. H. MOTSETT,

Superintendent.

Permits for Visiting Military Reservations.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., June 3, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

As all permits to military reservations expire June 30, 1915, it is requested that you submit, by June 15, the names of employees of your department or division whose duties necessitate frequent visits to the reservations.

It is desired to issue extended permits only as above outlined, and names of employees who make but occasional trips to reservations should not be submitted. These should be covered by individual request from head of department or division whenever necessity requires.

CHESTER HARDING,

Acting Governor.

Traveling Engineer and Roundhouse Foremen.

THE PANAMA CANAL,

MECHANICAL DIVISION,

BALBOA, C. Z., May 27, 1915.

To all concerned—Effective May 27, Mr. R. A. Compton, night roundhouse foreman, will be transferred as day roundhouse foreman in charge, vice Mr. W. H. Readle, who has been assigned to duty as traveling engineer.

Effective May 27, Mr. A. H. Harvey is appointed night roundhouse foreman, vice Mr. R. A. Compton.

D. C. NUTTING,

Superintendent, Mechanical Division.

Electrical Division Orders.

THE PANAMA CANAL,

ELECTRICAL DIVISION,

BALBOA HEIGHTS, C. Z., June 1, 1915.

To all concerned—Effective June 2, 1915, and during the absence of Supervisor J. A. Martin on leave, Foreman A. M. Horle will have supervision over the electrical construction and maintenance at Cristobal and Gatun.

Effective June 2, 1915, and until the return of Supervisor W. L. Hersh, operators in charge of substations and transmission linemen will report direct to me.

H. ROWE,

Electrical Superintendent.

Approved:

W. H. ROSE,

Electrical Engineer.

Superintendent in Building Division.

THE PANAMA CANAL,

BUILDING DIVISION,

BALBOA HEIGHTS, C. Z., May 27, 1915.

To all concerned—Effective May 27, 1915, Mr. James Cosgrove is appointed superintendent of the northern district, Building Division, with headquarters at Cristobal.

GEO. M. WELLS,

Resident Engineer.

Examination by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, June 16, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the captain of the port of Cristobal on Friday, June 18, 1915, beginning at 9 a. m. Applicants should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.

F. M. NIXON,

Recorder, Board of Local Inspectors.

COMMISSARY DEPARTMENT.

Shipments of Strawberries.

Advice has been received by cable from New York to the effect that shipments of strawberries have been delayed on account of wet and cold weather during the past month and that shipments will be made at the first opportunity.

It is hoped that some will come forward on the steamship *Advance*, due June 17. It is probable that not more than two or three shipments will be received, on account of the lateness of the season.

New Order for Royal Doulton China.

A large order has been placed in Europe for Royal Doulton chinaware, punch bowls, mugs, and beakers, both hunting and coaching scenes, and these articles will be carried as regular items of stock in future. It is probable that this shipment will not arrive for two or three months.

A complete list of Royal Doulton chinaware pieces, hunting and coaching scenes, which it is intended to carry as regular items of stock, and for which no deposits to cover are required, is as follows: Tea plates; bread and butter plates; cups and saucers; punch bowls, with and without pedestals; beakers, large and small; and mugs, large and small.

Cold Storage Prices.

The charges published below will be increased by 10 per cent in case of sales to commercial ships and foreign naval vessels, and by 20 per cent for yachts.

The following is a list of retail prices of cold storage provisions which will be effective June 10, 1915:

FRESH MEATS.

There are no changes in the prices of fresh meats since publication in THE CANAL RECORD of June 2, except the reduction of spare ribs from 15 cents to 11 cents per pound.

	Price.
MISCELLANEOUS.	
Brains, calves', per pound.....	10
Calves' head, each.....	80
Kidneys, beef, per pound.....	12
Livers—Beef, per pound.....	10
Calf, each.....	70
half, each.....	35
Steak—Hamburger, packages.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	11
Frankfurter, per pound.....	*13
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	10
Pork, per pound.....	*14
Sweetbread, beef, per pound.....	20
Eggs, fresh, per dozen.....	*27
per ½ dozen.....	*14
Bloaters, fancy, each.....	5
Bluefish, per pound.....	8
Halibut, fresh, per pound.....	*11
Salmon, per pound.....	*9
Whetfish, smoked, per pound.....	21
Yeast, per pound.....	31
per cake.....	2
Paté de foies gras, per jar.....	50
CURED AND PICKLED MEATS.	
Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Minced, "Bologna style," per pound.....	14
Sugar cured, boneless, whole, per pound.....	21
Sugar cured, whole, per pound.....	*19
Half, per pound.....	*21
Sliced, per pound.....	*25
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	25
Half, boiled, per pound.....	27
Sliced, boiled, per pound.....	33
Shoulders, sugar cured, whole shoulder, per pound.....	14
Bacon—Breakfast, sliced, per pound.....	*29
Whole piece, per pound.....	*28
Strips, whole, per pound.....	20
Sliced, jar.....	30
Tin.....	27
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Pork bellies, per pound.....	14
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	8
Tongues, per pound.....	22

Price.

POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound.	27
Chickens—Fancy, roasting, corn fed, per pound.	25
Fowls, per pound.	24
Fowls, light, per pound.	21
Ducks, Western, per pound.	27
Capons, per pound.	32
Broilers, milk fed, per pound.	*14
Broilers, corn fed, per pound.	30
Turkeys, per pound.	28
Squabs, each.	40
Geese, per pound.	*23
Grouse, each.	1.00
Mallard ducks, 2 to 2½ pounds, each.	2.35
Pheasants, each.	1.35

DAIRY PRODUCTS.	
Butter—Creamery, special, per pound.	40
Creamery, 60-62-lb. tub, whole tub, per pound.	39
Sheffield Farms, extra fancy, per lb.	58
Oleomargarine, per pound carton.	20
Cheese—Philadelphia cream, cake.	9
Roquefort, per pound.	41
Young America, per pound.	*23
Swiss, per pound.	30
Edam, each.	90
Edam, tin.	20
Parmesan, per pound.	38
Gouda, per pound.	26
Snappy, per cake.	9
Milk, Sheffield Farms, per quart.	**15
Fermeilac, bottle.	**25
Ice cream, quart.	125
½-gallon.	150
Crema, 30 per cent, quart.	**45
½-pint.	**23
¼-pint.	**12

VEGETABLES.	
Beans, string, per pound.	9
Beets, per pound.	2
Cabbage, per pound.	4
Carrots, per pound.	2½
Celery, per head.	*6
Lettuce, per pound.	†12
Onions, per pound.	†2½
Spring, per pound.	4
Parsley, per pound.	7
Parsnips, per pound.	*1
Peppers, green, per pound.	12
Plantains, per dozen.	15
Potatoes, white, per pound.	2
New, per pound.	†3
Sweet, per pound.	2
Radishes, per pound.	5
Rhubarb, per pound.	†2½
Turnips, per pound.	3
Tomatoes, per pound.	†8
Yams, Lucra, per pound.	3

FRUITS.	
Apples, per pound.	*8
Grape fruit—Select, each.	*6
Tropical, each.	3½
Lemons, per dozen.	†13
Limes, per 100.	†50
Oranges—Select, each.	*3
Tropical, per dozen.	12
Coconuts, each.	4
Bananas, per bunch.	38
Bananas, each.	½
Apples, evaporated, per pound.	12
Apricots, evaporated, per pound.	13
Pears, evaporated, per pound.	23
Pineapples, each.	8
Figs, dried, 12-oz. packages.	14
Figs, dried, 5-oz. packages.	5
Raisins, seedless, package.	11
table, cluster, per pound.	20
Currents, cleaned, package.	12
Prunes, stewing, per pound.	12
Alligator pears, tropical, each.	5

* Indicates advance from preceding list.
 **Indicates five cents allowed for return of bottle.
 † Indicates reduction from preceding list.
 ‡ Sold only from commissaries, no orders taken for delivery.
 § Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Additions to Stock.

Camphor, gum, 1-oz. cake.	\$.04
Sheeting, linen, bleached, 90", yd.	1.05
Lawn, linen, bleached, 36", yd.	.29
Lawn, linen, bleached, 36", yd.	.46
Cambric, linen, bleached, 36", yd.	.34
Vests, ladies', ea.	.25
Vests, ladies', ea.	.33
Hats, Palm Beach, ea.	.62
Go baskets, ea.	7.15
Pots, Bower, ornamental, 12", ea.	.68
Flavoring, kitchen bouquet, ¼-pt. bot.	.22
Peas, petit pois, tin.	.13
Water, Deep Rater, split.	.05
Water, Deep Rock, pint.	.08
Water, Deep Rock, quart.	.12
Chocolate fondant cherries, small box.	.30
Chocolate fondant cherries, medium box.	.45
Chocolate fondant cherries, large box.	.58
Crystallized ginger, ½-lb. tin.	.12
Crystallized ginger, ¼-lb. tin.	.23
Chocolate nougats, box.	.08
Chocolate caramels, box.	.08
Chocolate peppermint creams, ¼-lb. tin.	.17
Chocolate cordial fruits, 1-lb. carton.	.72

SHIPPING INFORMATION.

Tide Predictions.
 Panama (Balboa) tide predictions for the next five weeks are given in the following table:

JUNE	
DATE.	Time and height of high and low water.
Wed., June 9.....	1:31 7:15 13:41 19:49
Thurs., June 10....	11:8 3:8 12:6 2:7
Fri., June 11.....	2:18 8:04 14:24 20:33
Sat., June 12.....	12:2 3:6 12:9 2:3
Sun., June 13.....	3:00 8:40 15:04 21:16
Mon., June 14.....	12:6 3:2 13:3 1:8
Tues., June 15.....	3:39 9:31 15:41 21:56
Wed., June 16.....	13:0 2:9 13:6 1:5
Thurs., June 17....	4:15 10:12 16:17 22:35
Fri., June 18.....	13:3 2:6 13:8 1:2
Sat., June 19.....	4:51 10:52 16:54 23:14
Sun., June 20.....	13:5 2:5 13:9 1:1
Mon., June 21.....	5:26 11:32 17:30 23:53
Tues., June 22.....	13:7 2:4 13:9 1:1
Wed., June 23.....	6:02 12:12 18:06 24:00
Thurs., June 24....	13:7 2:4 13:7 1:1
Fri., June 25.....	0:31 6:40 12:53 18:45
Sat., June 26.....	1:3 13:7 2:5 13:4
Sun., June 27.....	1:11 7:17 13:37 19:27
Mon., June 28.....	1:6 13:7 2:6 13:1
Tues., June 29.....	1:53 7:58 14:24 20:12
Wed., June 30.....	1:9 13:6 2:7 12:8
Thurs., June 1.....	2:40 8:43 15:16 21:05
Fri., June 2.....	2:3 13:6 2:7 12:5
Sat., June 3.....	3:31 9:36 16:11 22:06
Sun., June 4.....	2:0 13:6 2:6 12:4
Mon., June 5.....	4:28 10:35 17:11 23:13
Tues., June 6.....	2:7 13:7 2:2 12:5
Wed., June 7.....	5:28 11:38 18:12 24:00
Thurs., June 8.....	2:6 14:0 1:7 12:1
Fri., June 9.....	0:21 6:31 12:42 19:12
Sat., June 10.....	13:0 2:3 14:5 1:0
Sun., June 11.....	1:25 7:33 13:43 20:10
Mon., June 12.....	13:6 1:8 15:0 0:2
Tues., June 13.....	2:25 8:31 14:41 21:04
Wed., June 14.....	14:4 1:1 15:6 -0:5
Thurs., June 15.....	3:22 9:25 15:36 21:57
Fri., June 16.....	15:1 0:6 16:0 -1:0
Sat., June 17.....	4:14 10:19 16:29 22:47
Sun., June 18.....	15:7 0:2 16:2 -1:2
Mon., June 19.....	5:05 11:11 17:19 23:37
Tues., June 20.....	16:0 0:1 16:0 -1:0
Wed., June 21.....	5:54 12:01 18:08 24:00
Thurs., June 22.....	15:9 0:3 15:5 0:0

JULY.

DATE.	Time and height of high and low water.
Thurs., July 1.....	0:25 6:43 12:51 18:59
Fri., July 2.....	-0:5 15:6 0:8 14:8
Sat., July 3.....	1:13 7:30 13:42 19:47
Sun., July 4.....	0:3 15:0 1:4 13:8
Mon., July 5.....	2:02 8:18 14:34 20:40
Tues., July 6.....	1:3 14:1 2:2 12:9
Wed., July 7.....	2:51 9:09 15:26 21:34
Thurs., July 8.....	2:3 13:3 2:9 12:0
Fri., July 9.....	3:43 10:02 16:22 22:35
Sat., July 10.....	3:3 12:6 3:4 11:3
Sun., July 11.....	4:38 11:00 17:20 23:44
Mon., July 12.....	4:1 12:0 3:7 11:0
Tues., July 13.....	5:37 12:01 18:19 24:00
Wed., July 14.....	4:5 11:8 3:7 10:15
Thurs., July 15.....	0:50 6:37 13:00 19:15
Fri., July 16.....	11:1 4:5 11:9 3:5
Sat., July 17.....	1:47 7:33 13:52 20:05
Sun., July 18.....	11:4 4:3 12:2 3:0
Mon., July 19.....	2:35 8:20 14:39 20:51
Tues., July 20.....	11:9 3:9 12:7 2:4
Wed., July 21.....	3:17 9:08 15:19 21:33
Thurs., July 22.....	12:5 3:3 13:2 1:8
Fri., July 23.....	3:55 9:51 15:58 22:12
Sat., July 24.....	13:1 2:8 13:7 1:3
Sun., July 25.....	4:31 10:28 16:34 22:51
Mon., July 26.....	13:7 2:3 14:1 0:9
Tues., July 27.....	5:06 11:10 17:11 23:29
Wed., July 28.....	14:2 1:9 14:3 0:6

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Panama;" in the United States, "Panacanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C." for delivery in the United States.

Rainfall from May 1 to 31, 1915, inclusive.

STATIONS.		Maximum in one day.	Date.	Total for period.
Pacific Section—				
Balboa.....	Ins.	1.09	5	7.97
Balboa Heights.....	Ins.	.88	15	6.42
Miraflores.....	Ins.	2.37	15	13.38
Pedro Miguel.....	Ins.	2.11	29	10.24
Rio Grande.....	Ins.	1.97	24	9.32
Central Section—				
Culebra.....	Ins.	1.54	26	7.28
*Camacho.....	Ins.	1.76	6	7.56
Empire.....	Ins.	1.80	6	8.56
Gamboa.....	Ins.	1.01	26	5.10
*Juan Mina.....	Ins.	1.27	20	5.90
Alhajuela.....	Ins.	3.56	20	8.20
*El Vigia.....	Ins.	4.21	20	10.88
Frijoles.....	Ins.	2.26	8	10.71
*Trinidad.....	Ins.	2.00	7	8.51
*Monte Lirio.....	Ins.	2.65	26	11.17
Atlantic Section—				
Gatun.....	Ins.	2.31	23	10.24
*Brazos Brook.....	Ins.	1.92	21	6.41
Colon.....	Ins.	2.10	7	7.75

Rainfall from June 1 to 5, 1915, inclusive.

STATIONS.		Ins.	Date.	Ins.
Pacific Section—				
Balboa.....	Ins.	.27	5	.49
Balboa Heights.....	Ins.	.50	5	.75
Miraflores.....	Ins.	.46	3	1.07
Pedro Miguel.....	Ins.	.45	4	1.19
Rio Grande.....	Ins.	.36	1	1.07
Central Section—				
Culebra.....	Ins.	.26	5	.85
*Camacho.....	Ins.	.37	5	.81
Empire.....	Ins.	.41	1	1.05
Gamboa.....	Ins.	1.19	3	2.93
*Juan Mina.....	Ins.	1.97	1	2.98
Alhajuela.....	Ins.	1.34	1	2.73
*El Vigia.....	Ins.	1.38	3	4.69
Frijoles.....	Ins.	.82	5	1.68
*Trinidad.....	Ins.	.80	5	1.50
*Monte Lirio.....	Ins.	.80	5	1.50
Atlantic Section—				
Gatun.....	Ins.	1.20	5	1.79
*Brazos Brook.....	Ins.	1.20	5	2.03
Colon.....	Ins.	1.08	5	1.70

*Standard rain gage—readings at 5 p. m. daily.
 Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

DAY AND DATE.		STATIONS.				
		Vigia.	Alhajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., May 30.....	129.60	94.48	85.49	85.52	54.20	
Mon., May 31.....	128.80	94.62	85.47	85.47	54.10	
Tues., June 1.....	130.40	95.69	85.55	85.54	53.87	
Wed., June 2.....	128.40	95.05	85.42	85.44	54.02	
Thurs., June 3.....	127.04	93.81	85.57	85.50	54.04	
Fri., June 4.....	128.35	94.15	85.48	85.45	54.04	
Sat., June 5.....	129.25	95.00	85.47	85.53	53.96	
Heights of low water to nearest foot....		125.00	91.00			

Misdirected Letters.

BALBOA HEIGHTS, C. Z., June 9, 1915.
 The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressees:
 Altman, Mal Holmberg, H.
 Bartell, A. C.* Lawmer, Rev. Wm. F. (2)
 Boone, W. D. Lee, J. S.*
 Byne, Srita Hayde Michael, Dr. W. H.
 Byrne, W. S.* Oliver, L. C.
 Carder, Mort. A. Parrish, Horace
 Clendenin, Edith Plank, Joe
 Coons, John Rief, Aug. J.
 Copeland, Lewis* Robinson, Hubert
 Dickieson, Fred W. Smith, C.*
 Doying, W. Sterling, John A.
 Edgerton, A. H. Waters, Frank
 Greeley, H. L. Wilkins, W. E.
 *Card.

Sailings of Vessels in Regular Service with the Isthmus.

Sails.		Arrives.	
NEW YORK TO CRISTOBAL-COLON.			
Carrillo.....	U. F. C. June	2....	June
Colon.....	P. R. R. June	3....	June 9
Tenadores.....	U. F. C. June	5....	June 13
Santa Marta.....	U. F. C. June	9....	June 16

(Continued on page 374.)

(Continued on page 374.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., June 6, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
May 31....	Egyptian Transport.	British.....	Empire Transport Co.....	Norfolk, Va.....	San Diego.....	Coal.....	7,300	5,175	3,812
May 31....	Dakotan.....	American.....	American-Hawaiian Line.....	New York.....	Los Angeles.....	General mdse.....	6,260	6,891	4,751
June 1....	Gishui Maru.....	Japanese.....	Goshi Kaisha Tatsumo Sh'kai.....	New York.....	Nagasaki.....	Oil, case.....	4,800	4,101	2,948
June 2....	Teno.....	Chilean.....	South American Steamship Co.....	Norfolk, Va.....	Valparaiso.....	Coal.....	1,095	2,749	1,780
June 3....	Araburn.....	British.....	British Government.....	Cardiff.....	San Francisco.....	Ballast.....	.....	6,221	4,441
June 3....	Chinese Prince.....	British.....	Prince Line, Ltd.....	New York.....	Vladivostok.....	Oil, general cargo.....	7,100	6,269	4,540
June 3....	Conch.....	British.....	Anglo-Saxon Petroleum Co.....	New Orleans.....	Shanghai.....	Petroleum.....	6,863	5,980	4,345
June 3....	Frankmere.....	British.....	Palace Shipping Co.....	Newport News.....	Calita Colusa.....	Ballast.....	.....	5,899	4,206
June 3....	Finchley.....	British.....	Britann S. S. Co., Ltd.....	Norfolk, Va.....	Mejillones.....	Ballast.....	.....	4,785	3,573
June 4....	Otto Trechmann.....	British.....	Trechmann S. S. Co., Ltd.....	Kingston, Ja.....	Sea.....	Coal.....	5,600	4,819	3,618
June 5....	Hattie Luckenbach.....	American.....	Luckenbach Line.....	Norfolk, Va.....	San Francisco.....	Coal.....	6,169	4,708	3,637
June 5....	Florence Luckenbach.....	American.....	Luckenbach Line.....	New York.....	San Francisco.....	General cargo.....	7,100	5,835	4,564
June 6....	Jamaica.....	British.....	Royal Mail S. S. P. Co.....	Cristobal.....	Balboa.....	General cargo.....	732	1,170	620
June 6....	Allianca.....	American.....	Panama Railroad S. S. Line.....	New York.....	Balboa.....	General cargo.....	1,024	4,120	2,670
June 6....	Navajo.....	American.....	Western Steam Navigation Co.....	Norfolk, Va.....	Callao.....	Cement, coal, dynamite.....	2,784	2,705	1,779

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

May 31....	Jamaica.....	British.....	Pacific Steam Nav. Co.....	Tumaco.....	Colon.....	General cargo.....	599	1,170	620
May 31....	Terrier.....	Norwegian.....	W. Wilhelmsen.....	Iquique.....	Colon (orders).....	Nitrates.....	7,993	5,495	4,032
May 31....	Georgian.....	American.....	American-Hawaiian Line.....	Honolulu.....	Philadelphia.....	Sugar.....	7,520	6,920	4,908
June 1....	Carolyn.....	American.....	Luckenbach Line.....	San Francisco.....	New York.....	General cargo.....	4,600	3,425	2,322
June 1....	Boverie.....	British.....	A. Weir & Co.....	Port Townsend.....	London.....	Lumber.....	6,600	4,931	3,815
June 2....	Limari.....	Chilean.....	South American Steamship Co.....	Talcahuano.....	Cristobal.....	General cargo.....	1,687	3,631	2,421
June 2....	Iowan.....	American.....	American-Hawaiian Line.....	Tacoma.....	Charleston.....	General cargo.....	7,430	6,819	4,668
June 2....	Kongoson Maru.....	Japanese.....	Lyato Kisen Kaisha.....	Mejillones.....	Colon (orders).....	Nitrates.....	7,750	5,634	4,193
June 3....	Agamemnon.....	Dutch.....	Royal Netherland S. S. Co.....	Guayaquil.....	Colon (orders).....	Cocoa.....	1,895	2,927	2,044
June 3....	Panama.....	American.....	Panama Railroad S. S. Line.....	Balboa.....	New York.....	General cargo.....	1,445	5,866	4,222
June 3....	Santa Cecilia.....	American.....	W. R. Grace & Co.....	San Pedro.....	New York.....	General, lumber.....	7,053	6,748	4,476
June 4....	Forderdale.....	British.....	Jas. Little & Co.....	Iquique.....	Norfolk (orders).....	Nitrates.....	6,600	4,959	3,642
June 4....	Bellerano.....	British.....	Bell Bros. & Co.....	Antofagasta.....	Colon (orders).....	Nitrates, oil.....	7,028	5,101	3,587
June 5....	John C. Meyer.....	American.....	Sudden & Christenson.....	Portland.....	Quebec.....	108,700 ft. lumber.....	.....	997	848
June 5....	Manningtry.....	British.....	Imperial S. S. Co.....	Calita Buena.....	Alexandria.....	Nitrates.....	6,200	4,342	3,212
June 5....	Eggsford.....	British.....	Tatem Steam Nav. Co.....	Sea.....	Kingston.....	Ballast.....	.....	5,335	4,103
June 5....	Kansan.....	American.....	American-Hawaiian Line.....	Hilo.....	Del. Breakwater.....	Sugar.....	11,004	10,353	7,596
June 6....	Acajutla.....	British.....	Salvador R. R. Co.....	Salina Cruz.....	Cristobal.....	Coffee, hides, sug'r.....	654	1,219	627
June 6....	Finland.....	American.....	Panama Pacific Line.....	San Francisco.....	New York.....	General cargo.....	4,200	13,122	8,485
June 7....	Bertha E. May.....	Honduran.....	H. R. Wood.....	Panama.....	Bonocca.....	Ballast.....	.....	78	50
June 7....	Chile.....	British.....	Pacific Steam Nav. Co.....	Valparaiso.....	Cristobal.....	General cargo.....	557	.....	.....
June 7....	River Forth.....	British.....	River Forth S. S. Co.....	Iquique.....	Swansea.....	Nitrates.....	6,750	4,852	4,567

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
June 6....	Kandahar.....	Ellerman & Bucknell.....	New York.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
June 12....	Minnesotan.....	American-Hawaiian Line.....	Los Angeles.
June 15....	Virginian.....	American-Hawaiian Line.....	Hilo.
	Coya.....		

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
June 3....	Savoia.....	Italian Line.....	Genoa.
June 6....	Chiswick.....	Earn Line.....	Norfolk.

*DEPARTURES.

Date	Vessel	Line	To
June 4....	Haiti.....	French Line.....	Bordeaux.
June 5....	Zeta.....	Robert Wilcox.....	Mobile.

*EXPECTED ARRIVALS.

June 7....	Belgian.....	Leyland Line.....	Liverpool.
June 8....	Venezuela.....	French Line.....	Martinique.
June 9....	Legaspi.....	Spanish Line.....	Barcelona.
June 9....	Taucred.....	Earn Line.....	Norfolk.
June 10....	Edda.....	Philadelpia.....	Philadelpia.
June 22....	Meltonian.....	Leyland Line.....	Liverpool.

*EXPECTED DEPARTURES.

June 7....	Savoia.....	Italian Line.....	Genoa.
June 12....	Legaspi.....	Spanish Line.....	Barcelona.
	Venezuela.....	French Line.....	
	Taucred.....	Earn Line.....	
	Chiswick.....	Earn Line.....	
	Meltonian.....	Leyland Line.....	
	Edda.....		

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

June 1....	Cordelia.....	Union Oil Copany.....	Port Harford.
June 2....	Hualaga.....	Peruvian S. S. Co.....	Callao.

*DEPARTURES.

May 31....	Guatemala.....	Pacific Steam Nav. Co.....	Callao.
June 3....	Cordelia.....	Union Oil Co.....	Port Harford.

*EXPECTED ARRIVALS.

June 5....	Pennsylvania.....	Pacific Mail S. S. Co.....	San Francisco.
June 7....	Chile.....	Pacific Steam Nav. Co.....	
June 13....	San Jose.....	Pacific Mail S. S. Co.....	San Francisco.

*EXPECTED DEPARTURES.

June 7....	Hualaga.....	Peruvian S. S. Co.....	Callao.
June 9....	Victoria.....	Pacific Steam Nav. Co.....	Valparaiso.

*Other than vessels passing through the Canal.

(Continued from page 373.)

Advance.....	P. R. R. June 10....	June 17	Tenadores.....	U. F. C. June 21....	June 28	Atenas.....	U. F. C. June 30....	July 7
Metapan.....	U. F. C. June 12....	June 21	Santa Marta.....	U. F. C. June 24....	July 1	Cartago.....	U. F. C. July 3....	July 8
Almirante.....	U. F. C. June 16....	June 23	Advance.....	P. R. R. June 26....	July 3	Turrialba.....	U. F. C. July 7....	July 14
Panama.....	P. R. R. June 17....	June 23	Metapan.....	U. F. C. June 28....	July 6	CRISTOBAL-COLON TO NEW ORLEANS.		
Pastores.....	U. F. C. June 19....	June 27	Almirante.....	U. F. C. July 1....	July 8	Heredia.....	U. F. C. June 10....	June 15
Zacapa.....	U. F. C. June 23....	June 30	Panama.....	P. R. R. July 3....	July 9	Abangarez.....	U. F. C. June 10....	June 17
Allianca.....	P. R. R. June 24....	June 30	NEW ORLEANS TO CRISTOBAL-COLON.			Parismina.....	U. F. C. June 17....	June 22
CRISTOBAL-COLON TO NEW YORK.			Parismina.....	U. F. C. June 5....	June 10	Atenas.....	U. F. C. June 17....	June 24
Zacapa.....	U. F. C. June 10....	June 17	Atenas.....	U. F. C. June 9....	June 16	Cartago.....	U. F. C. June 24....	June 29
Allianca.....	P. R. R. June 12....	June 18	Cartago.....	U. F. C. June 12....	June 17	Turrialba.....	U. F. C. June 24....	July 1
Calamares.....	U. F. C. June 14....	June 21	Turrialba.....	U. F. C. June 16....	June 23	Heredia.....	U. F. C. July 1....	July 6
Carrillo.....	U. F. C. June 17....	June 24	Heredia.....	U. F. C. June 19....	June 24	Abangarez.....	U. F. C. July 1....	July 8
Colon.....	P. R. R. June 19....	June 25	Abangarez.....	U. F. C. June 23....	June 30	Parismina.....	U. F. C. July 8....	July 13
			Parismina.....	U. F. C. June 26....	July 1	Atenas.....	U. F. C. July 8....	July 15

CANAL



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Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Large Sailing Ships Using the Canal.

The four-masted steel bark *Bell*, which was despatched from Balboa on June 10 after passing through the Canal on the way to Japan from Philadelphia, and the bark *Daylight*, due at Colon any day from New York, are practically sister ships and among the largest sailing vessels in the world. The *Bell* is 352½ feet long by 49 feet in the beam and 28 feet deep and has a net tonnage of 3,609; the *Daylight* is one foot less in length than the *Bell*, with her other dimensions the same, and has a net tonnage of 3,599. The *Bell* was launched as the *Brilliant*, having been built, like the *Daylight*, for the oil trade and named like her for a brand of oil. They went into service in 1902.

The largest sailing ship now in service is the *France*, a five-masted bark built at Bordeaux in 1912; her dimensions are 418.8 feet by 56 feet by 25 feet, and her net tonnage is 4,544. The *France* is equipped with auxiliary power, using oil engines. The seven-masted American schooner *Thomas W. Lawson*, built in 1902 and lost at sea in 1908, was in her time the largest American sailing vessel on the high seas. Her length was 375 feet, beam 50 feet, and net tonnage 4,914. The *Thomas W. Lawson* was exceeded in length and beam by the German bark *Preussen*, which had dimensions of 407 by 53 by 27 feet and net tonnage of 4,765.

Peruvian Line Vessel from Callao to Baltimore.

The passenger steamship *Mantaro* of the Peruvian Line, which has been engaged in a coastwise service between Callao and Balboa since her completion in 1910, will pass through the Canal next week, sailing from Cristobal

on June 26, on the way to Baltimore with a cargo of nitrates. Other vessels of this line have made use of the Canal in traffic with Europe. Efforts have been made to effect agreements with commercial associations of American ports to guarantee a certain quantity of freight for vessels of this line if a regular service were established between Peru and the United States, and it is possible some such arrangement will be made. The *Mantaro* is a twin-screw steamer rated at a speed of 13½ knots, which would enable her to make the distance of 1,903 miles from Cristobal to Baltimore in approximately six days, or the 3,290 miles between Callao and Baltimore in about 10½ days, allowing 10 hours for the transit of the Canal. The rate for first-class passenger transportation between Cristobal and Baltimore on this vessel will be \$65.

Payment for Pacific Mail Pier at Colon.

Final papers have been signed in the agreement by which the Panama Railroad Company pays the Pacific Mail Steamship Company \$150,000 for the latter's timber pier at Colon, known as Pier No. 5. The superstructure of the pier has been demolished as a step in the campaign to have only rat-proof piers for the sake of plague prevention.

Panama Railroad Steamship Line Using Additional Pier in New York Harbor.

On account of the increased amount of cargo handled to New York from the Isthmus by the Panama Railroad Steamship Line, following the discontinuance of the services between New York and the Isthmus of the Royal Mail Steam Packet Company and the Hamburg-American Line, the Panama Railroad Steamship Line has been using in addition to its regular terminals in New York Pier 65, North River, leased from the Hamburg-American Line for \$1,500 per month, subject to cancellation on 15 days' notice from either party to the contract. The pier is used only for the handling of cargo, and departures of passenger-carrying vessels of the line are all made from Pier 67, North River, as heretofore.

Over \$4,000,000 in Tolls.

The earnings of tolls for the use of the Canal reached and passed the \$4,000,000 mark on Sunday, June 6. The earnings during May were \$547,054.60, which brought the total for the period between the beginning of handling of cargo through the Canal, in May, 1914, and June 1, 1915, to \$3,897,693.61, and the earning of the additional hundred thousand dollars required to make up four million was accomplished in less than six days in June.

Building for American Bible Society at Cristobal.

The lease of lot No. 4 on the waterfront at Cristobal, near the entrance to Pier 9, has been granted to the American Bible Society for the erection of a building to serve as its

office, warehouse, and quarters for the local agent, in the work of the society in distributing books to sailors and other passing through the Canal. The lot is in the area of eight lots set aside for steamship offices and other enterprises with maritime connections, and adjoins the lot, No. 3, leased to La Veloce, the Italian Line, for the erection of an office building. Lots 1 and 2 are occupied respectively by the office buildings of the United Fruit Company and the Hamburg-American Line.

One of the provisions of the lease is that the building erected shall be of construction in keeping with the other buildings, and it is the expectation of the society to expend about \$10,000 on it. It is proposed to erect a building very similar to the four-family concrete quarters at Balboa, with modifications to suit its proposed uses. The Panama Canal has agreed to do the work, at cost plus a 10 per cent surcharge.

In view of the fact that this is a philanthropic enterprise, conducted without profit for the primary purpose of furnishing Bibles at low cost, it has been decided to charge the society only a nominal rental for the lot, instead of \$400 per year, which is the charge to the steamship companies for the adjacent lots.

In applying for the lease, the president of the society pointed out that similar work has been conducted at the Suez Canal for a number of years by a British society. He stated that the American Bible Society, organized in 1816, is now conducting 12 foreign and nine home agencies, through which approximately 5,000,000 Bibles, printed in over 100 different languages, are distributed each year.

Concerning Sailing Directions for Sailing Vessels.

In view of the increasing use of the Canal by sailing vessels, and the likelihood that more extensive knowledge of seasonal winds over various areas would be of value in connection with this traffic, the Marine Superintendent has requested the United States Hydrographic Office to furnish to The Panama Canal information as to these six general routes: For sailing both ways, between the Canal and the west coast of the United States, the west coast of South America, the east coast of the United States, the Gulf coast of the United States, European ports, and ports across the Pacific.

It is the intention to formulate this information in sailing directions for sailing vessels and publish it as a notice to mariners. The use of the Canal involves a considerable shifting of routes for these vessels, and as some of the areas to be crossed have not been frequented a great deal heretofore by sailing ships, accurate sailing directions are not at present available.

The steamship *Agamemnon* of the Dutch Royal Mail, which passed through the Canal on April 17 on the way to Guayaquil, returned through the Canal on June 3, laden with 1,895 tons of cacao for Amsterdam.

RECEIPTS AND EXPENSES.

Toll Earnings Within the Fiscal Year Nearly Equal Cost of Operation and Maintenance.

The tolls earned during the month of April were greater than the cost of operation and maintenance of the Canal by \$84,108.41. Tolls earned amounted to \$442,415.49, and the cost to \$358,307.08, which was the least for any month since the opening of the Canal to commercial traffic, in August, 1914. Costs for the preceding three months have been: January, \$435,025.74; February, \$408,001.26; March, \$423,275.32. The decrease of \$64,968.24 from the cost in March was due in large part to diminished dredging operations, as the latter cost \$42,199.40 less in April than in the preceding month; to the fact that there was no expenditure for maintenance of backfill at Pedro Miguel and Miraflores Locks, where a total of \$7,927.44 had been spent in March; and to a saving of \$3,141.28 in the prorated cost of Health Department work and \$6,187.-

26 in administration. Approximately 35 per cent of the total overhead expense is charged to operation and maintenance.

For the 10 months which had elapsed in the present fiscal year, from July 1, 1914, to May 1, 1915, the total cost of operation and maintenance was \$3,377,195.73; and during the period the tolls earned were \$3,337,715.69. The deficit is \$39,480.04, or a loss of 1.17 per cent on the expenditure, not counting anything for interest on the money invested or depreciation of plant.

Tolls earned in May amounted to \$547,054.60. The cost of operation and maintenance for that month will be sufficiently below the amount of toll earnings to wipe out the deficit and show a profit for the Canal during the 11 months ending May 31, 1915.

Detailed summary of the various items of expenditure for April and March, and of the aggregate for the 10 months ending April 30, is given in the following table:

ITEMS.	Month of April, 1915	Month of March, 1915	Total since June 30, 1914
Civil Government, proportion.....	\$20,379.61	\$19,944.39	\$192,689.30
Health Department, proportion.....	17,102.59	20,243.87	200,583.95
Administration, proportion.....	77,209.98	83,397.24	735,178.04
Operation and maintenance:			
Admeasurement of vessels.....	794.92	1,008.16	8,410.99
Local inspection.....	445.46	373.49	3,286.31
Aids to navigation.....	4,184.55	4,777.69	40,099.93
Pilotage.....	5,899.78	6,752.18	47,900.06
Damages to vessels.....	28.22	720.63	2,197.31
Maintenance of transportation tracks.....	3,171.22	5,969.73	33,030.53
Gatun Locks:			
Superintendence.....	1,031.82	1,338.22	14,763.10
Operation.....	7,795.86	8,183.68	84,094.17
Maintenance of operating machinery and equipment.....	5,708.22	2,926.54	29,896.43
Maintenance and care of emergency dams.....	832.17	934.28	10,958.74
Maintenance of gates.....		11.36	2,733.25
Maintenance of valves.....			785.28
Maintenance of towing track system.....	577.05	714.21	5,648.76
Maintenance of towing locomotives, lines, and hawsers.....	1,549.92	1,184.07	11,314.17
Maintenance of lighting and telephone system.....	175.70	202.59	2,399.37
Maintenance of power control and lighting cables.....	22.30	2.85	280.16
Maintenance of structures.....	1,843.25	1,959.68	20,608.17
Maintenance of backfill.....	10.52	190.41	6,382.96
Miscellaneous supplies and expenses.....	87.60	148.25	2,278.14
Gatun Spillway:			
Operation.....	179.51	83.67	1,000.60
Maintenance of operation machinery and equipment.....			1,030.51
Maintenance of gates and caissons.....	354.25	668.84	3,330.09
Maintenance of structures.....	248.82	329.57	5,335.41
Gatun Dam, maintenance.....	11,342.79	10,539.14	38,209.81
Pedro Miguel Lock:			
Superintendence.....	793.34	1,516.75	12,374.31
Operation.....	5,170.73	5,132.16	65,742.26
Maintenance of operating machinery and equipment.....	1,993.53	2,046.94	18,995.16
Maintenance and care of emergency dams.....	346.57	433.39	6,208.53
Maintenance of gates.....	286.25		1,377.02
Maintenance of valves.....	126.05		243.22
Maintenance of towing track system.....		19.63	114.82
Maintenance of towing locomotives, lines, and hawsers.....	881.39	940.10	7,328.21
Maintenance of lighting and telephone system.....	286.76	184.36	1,610.68
Maintenance of power control and lighting cables.....	2.61		878.74
Maintenance of structures.....	965.05	1,123.14	7,079.35
Maintenance of backfill.....		4,438.80	15,800.96
Miscellaneous supplies and expenses.....	281.45	197.35	1,554.73
Pedro Miguel Dam, maintenance.....			42.00
Miraflores Locks:			
Superintendence.....	1,022.75	1,656.24	14,697.82
Operation.....	7,548.03	7,721.72	85,329.68
Maintenance of operating machinery and equipment.....	966.90	1,230.79	14,323.43
Maintenance and care of emergency dams.....	467.45	1,682.70	6,862.65
Maintenance of gates.....	1,847.75	1,588.89	24,326.13
Maintenance of valves.....	693.20	1,357.30	10,113.62
Maintenance of towing track system.....			1,045.17
Maintenance of towing locomotives, lines, and hawsers.....	529.93	525.13	5,976.72
Maintenance of lighting and telephone system.....	95.87	138.74	1,568.28
Maintenance of power control and lighting cables.....		775.87	135.48
Maintenance of structures.....	696.17		7,696.03
Maintenance of backfill.....		3,488.64	12,659.01
Miscellaneous supplies and expenses.....	344.84	230.82	2,797.37
Miraflores East Dam and Spillway:			
Operation.....			651.50
Maintenance of operating machinery and equipment.....	86.59	116.61	5,043.45
Maintenance of gates and caissons.....		117.44	3,118.43
Maintenance of structures.....		51.38	648.74
Miraflores West Dam, maintenance.....			377.17
Dredging:			
Atlantic entrance.....	5,444.66	16,930.57	123,093.99
Gaillard Cut.....	160,899.02	195,262.52	1,368,856.93
Pacific entrance.....	3,649.99		8,628.79
Maintenance of Gatun Lake.....	1,721.36	1,762.66	12,260.19
Gatun-Mindi Levee, maintenance.....	100.10		22,665.06
Colon Breakwater, maintenance.....	82.63		82.63
Naos Island Breakwater, maintenance.....			461.93
Total, operation and maintenance.....	\$358,307.08	\$423,275.32	\$3,377,195.73
Tolls earned.....	442,415.49	560,784.96	3,337,715.69
Tolls earned in excess of expenses.....	\$84,108.41	\$137,509.64	
Expenses in excess of tolls earned.....			39,480.04

PASSAGE OF "JOHN C. MEYER"

Sailing Vessel on the Way from Portland, Oregon., to Quebec.

The barkentine *John C. Meyer* of San Francisco, in the service of Sudden & Christenson, arrived at Balboa in the afternoon of Friday, June 4, from Portland, Oreg., and started through the Canal the next day in tow of the tug *Cocoli*. She is bound for Quebec with a cargo of 108,700 feet of lumber.

The *John C. Meyer* sailed from Portland on April 3 and, accordingly, took two months and a day for the voyage to Balboa. For the first month she encountered head winds and heavy seas, which made slow going under a load that made a draft of 20 feet and only four feet of freeboard. On May 9 she was sighted in the Gulf of Tehuantepec, off Salina Cruz, in latitude approximately 17° North and longitude approximately 95° West, about 1,000 miles from Panama. Here, on account of the seasons, the winds were irregular. Calms were the rule, interspersed with short squalls and lightning. The remainder of the voyage to Panama, which might have been made in six days with good winds, required nearly a month.

The voyage from Colon to Quebec may be expected to take about five weeks, so that the entire voyage will run to nearly 100 days. Around Cape Horn the *John C. Meyer* would probably have taken 150 days from Portland to Quebec at this time of the year. The Canal may be said to have saved, even under the unfavorable conditions encountered in the Gulf of Tehuantepec, about 50 days.

The vessel is 200 feet long by 40 feet in the beam and carries a crew of 13. Her Canal tolls were \$992.50 and a charge of \$150 was made for towage, bringing her total Canal bill to \$1,142.50. This expense prorated among the 50 days saved is equivalent to a charge of \$22.85 per day. In other words, if the vessel's operating expenses are not less than \$22.85 per day she should "break even" on the use of the Canal for this voyage. The pay of the crew alone will run close to that figure, and subsistence expenses will probably carry the *per diem* above it; while in addition to possible saving in the actual daily operating expenses the operators will gain by a great saving in the wear and tear on the sails and rigging, which is a considerable item for a large ship in a voyage around the Horn, and will gain by being able to discharge cargo and ship another in approximately a third less time than had the vessel been traveling over the longer route. This last is a very important item especially at this time, in view of the prevailing high prices for charters.

On the voyage from Portland to Balboa the *John C. Meyer* ran close to the coast, following to a considerable extent the course of steamships between these ports, and was frequently in sight of land. Operators of sailing vessels making this voyage would do well to make arrangements with as many as possible of the regular steamship lines plying between San Francisco and Balboa to pick up their sailing vessels out of the area of doldrums west of Central America and tow them into Panama. It will be noted that the *John C. Meyer*, after making fair progress under only partly favorable conditions, lost about three weeks in the Central American area, out of which she might have been towed by one of a fairly great number of steamships plying through the section.

Carrying Naturalization Papers for Entry to United States.

It is suggested that naturalized citizens of the United States going from the Canal Zone to the United States be sure to take their naturalization papers with them in order to avoid delay in entering the country. If the wife of a naturalized citizen is traveling alone, she should have her husband's papers, for the same purpose.

During the voyage the purser prepares for the immigration officers lists of citizens and of noncitizens of the United States, the latter being subject to immigration restrictions not imposed on citizens. As citizens are listed those who are native of the United States and those who have taken out final naturalization papers. In case of naturalization, it is required to "give name and location of court which issued naturalization papers, and date of papers." It has been found that many naturalized citizens or members of their families are not able readily to satisfy the immigration officers, who board the ship at quarantine for the purpose of checking up the passengers. Such cases occasion delay and irritation, which will be spared the naturalized citizen by his having his papers at hand.

Automobiles and Motorcycles.

On June 12, 1915, there were 190 automobiles and 85 motorcycles licensed in the Canal Zone. Nine of the motorcycle licenses were reciprocal, being held by residents of Panama and Colon and the remaining 76 were issued to residents of the Canal Zone. Of the 190 automobiles licensed, 62 were owned by residents of the Canal Zone, and 128 by residents of Panama or Colon. Automobile licenses are divided into three classes—for pleasure only, for hacking, or carrying passengers for hire, and for trucking. The 62 original Canal Zone licenses comprised 56 for pleasure only, four for hacking, and two for trucking. Of the 128 reciprocal licenses in force, 60 were for pleasure, 51 for carrying passengers for hire, and seven for trucking. A resident of the Canal Zone secures his original license in the Zone, and is granted a reciprocal rate in Panama or Colon, at a reduced fee. The same holds good in the Zone for residents of Panama or Colon who have obtained the original license in Panama territory.

In the Canal Zone a charge of \$1 is made for a tag, which, once lost or replaced by another, is not used again. These licenses are issued by the Chief of the Division of Civil Affairs, Balboa Heights, and no fee is accepted for less than one quarter of the fiscal year.

The first Canal Zone automobile license was issued on December 3, 1910, and the first 50 tags were granted indiscriminately to automobiles or motorcycles. Of this number, 18 were motorcycle licenses. Thereafter distinct tags were issued, so that, although the highest automobile license tag granted up to June 13 was 379, and the highest motorcycle tag was 167, the total number of motorcycle licenses up to that date was 185, and automobile licenses, 361, inasmuch as the new series commenced with number 1 for motorcycles and number 51 for automobiles.

On September 1, 1912, there were in service 65 automobiles, 14 belonging to residents of the Canal Zone, and 31 motorcycles, 28 of which were the property of residents of the Canal Zone.

LABOR FORCE AND QUARTERS IN MAY.

The force report of May 26, 1915, shows the actual working force of The Panama Canal on that date to have been 21,565; of the Panama railroad, 4,590; and of contractors, 279, a total effective working force of 26,434. This is an increase of 1,619 from the force on April 21, which was 24,815; is 2,660 more than the force on March 24 (which was 23,374); and is 3,089 more than the force employed on February 24 (numbering 23,345). There was an increase of 1,509 in the silver force of the Panama railroad, as compared with the force on April 21. These were principally laborers employed at the docks during a period of congestion and hence their numbers are not accurate indices of the ordinary labor conditions.

The gold force on the Isthmus, composed almost exclusively of white Americans, was 3,615, an increase of 254 over the force reported on April 21, an increase of 190 as compared with March 24, and an increase of 121 since February 24. The gold force on May 26, amounting to 3,615, was divided as follows: The Panama Canal, 3,271; the Panama Railroad Company, 296; contractors, 48. Detailed figures of the Canal force employed on the Isthmus, follow:

DEPARTMENT OR DIVISION	SILVER EMPLOYEES*											Total silver.	Total gold.	Grand total.	
	Artisans.						Laborers.								
	Monthly.	Special.	22 cents.	18 cents.	15 cents.	12 cents.	Special.	Euro- pean 16 cents.	13 cents.	10 cents.	7 cents.	5 cents.			
Operation and Main- tenance; office & locks	413	...	3	22	53	7	6	15	19	416	...	2	956	156	1,112
Terminal Construct'n	408	...	59	258	568	179	66	38	435	595	2	27	2,626	261	2,887
Building Division	57	20	285	456	540	28	...	...	357	254	...	12	2,009	163	2,172
Electrical	98	7	49	70	161	218	...	1	144	81	...	9	838	181	1,019
Municipal Eng.	279	...	63	201	360	172	...	17	154	935	5	36	2,162	82	2,244
Dredging	1,712	...	8	29	76	11	...	12	135	67	1	1	2,052	280	2,332
Mechanical	158	8	80	121	572	558	...	11	44	191	9	4	1,756	943	2,699
Marine Division	143	...	...	...	...	...	19	...	...	...	...	...	162	51	213
Fortifications	77	...	49	79	195	32	15	...	105	296	...	4	852	102	954
General Construct'n	19	...	...	1	3	3	...	130	42	73	...	2	273	8	281
Total	3,364	35	596	1,237	2,468	1,199	106	224	1,435	2,908	17	97	13,686	2,227	15,913
Supply: main office	...	...	...	...	...	...	...	...	...	...	...	...	13	13	26
Commissary	712	...	...	7	10	25	244	6	...	123	18	...	1,150	153	1,303
Subsistence	517	...	3	1	1	2	...	...	...	...	...	...	524	26	550
Quartermaster	781	28	75	91	100	...	43	17	99	710	...	2	1,946	75	2,021
Accounting	24	...	...	...	...	...	...	...	...	...	...	...	24	194	218
Health	404	...	3	4	6	...	16	...	14	323	8	17	795	169	964
Executive	164	2	1	2	...	...	...	...	...	...	...	...	169	414	583
Panama railroad	273	205	68	196	364	841	1,288	25	477	551	1	5	4,294	296	4,590
Contractors	46	6	...	1	2	...	137	...	21	10	...	8	231	48	279
Grand total	6,285	276	751	1,539	2,951	2,067	1,834	277	2,046	4,625	44	129	22,819	3,615	26,434
Month previous	6,111	139	729	1,397	2,839	1,894	1,625	319	1,726	4,506	39	130	21,454	3,361	24,815
Changes	+174	+137	+22	+142	+112	+173	+299	-47	+320	+119	+5	-1	+1,365	+254	+1,619

*The wages are stated in United States currency.

A summary of the occupation of Government quarters on May 31, 1915, is given below:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Children	Men	Women	Children	Men	Women	Children
Balboa ¹	883	226	247	87 ²	9	25	1,682 ³	488	619
Ancon	911	423	415	4	...	...	217	14	...
Corozal ⁴	280	210	201	76 ⁵	1	2	502 ⁶	56	65
Pedro Miguel	182	102	133	8	...	...	205 ⁷	21	26
Paraiso	272	78	94	98	6	23	350	108	110
Culebra ⁸	22	14	19	1	1	6	420 ⁹	280	333
Gamboia	23	6	8	...	...	...	103	25	27
Gatun	205	163	180	83	3	6	241	103	107
Cristobal ¹⁰	899	353	447	...	...	...	998 ¹¹	184	380
Total	3,677	1,575	1,744	357	20	62	4,718	1,279	1,667

(1) Includes Taboga Island, Naos Island, and Palo Seco. (2) Includes 25 Asiatics. (3) Includes 12 American negroes, 60 Colombians and Panamanians, and two Panamanians on the gold roll. (4) Includes Miraflores. (5) Includes one Asiatic. (6) Includes 56 Panamanians. (7) Includes 27 Panamanians. (8) Includes Empire, Las Cascadas, and Bas Obispo. (9) Includes 10 Panamanians. (10) Includes Colon Beach and Colon Hospital. (11) Includes 29 East Indians, 13 American citizens, and 79 Panamanians. Gold force of contractors, included above, occupying Government quarters, 43 bachelors.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Adlem, Abraham, alias James Smalling	88843	Jamaica	Colon	P. R. R.	June 10, 1915.
Blake, Beresford	91727	Jamaica	Las Cascadas	P. R. R.	June 9, 1915.
Peters, Joseph, alias Pierre Joseph	94582	Grenada	Paraiso	O. & M.	June 8, 1915.
Grovenor, James	39066	Trinidad	Panama	Marine Div.	June 7, 1915.
Roberts, Alfred	60434	Bahamas	La Boca	P. R. R.	June 3, 1915.
Singh, Indes	80346	India	Colon	P. R. R.	June 8, 1915.
Walker, Charles	90316	Jamaica	Panama	P. R. R.	June 8, 1915.
	81584				

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER, Administrator of Estates.

NEW PLANTS FOR THE ZONE.

Extensive Activities of Horticulturist's Forces for Improving Landscapes.

The second lot of economic plants presented to The Panama Canal by the United States Department of Agriculture, through the Canal horticulturist, is being distributed from the nurseries at Ancon. This collection comprises over 400 specimens, of some 25 species. The number of new fruits represented is regarded as remarkably large. There are included the jaboticaba from Brazil, the lansón of the Philippines, and other new plants from New Zealand, Paraguay, Morocco, Mozambique, Italy, and Guatemala.

The new propagating house near the Canal hotel at Ancon is filling with the decorative plants, which are to be placed on sale in the commissary stores as soon as practicable. The benches at the propagating house will hold about 5,000 plants, and the outside stands and patio will give space to hundreds of tubs and boxes for the larger ornamental plants. Some 300 varieties of shrubs, trees, palms, ferns, and other plants are being propagated in this building at present.

A new hedge-plant nursery has been established on the hillside near the Ancon schoolhouse. This will contain the overflow from the main nursery, and from it will be taken many thousands of the new hedge plants which are relied upon to take a prominent part in the beautification of the landscape along the southern end of the Canal.

At Cristobal two small nurseries and a propagating house have been established. It has been found necessary to surround these by fences and take extra precautions to prevent loss and injury by children. Pending improvement in the community attitude to-

ward the plants, it may be decided not to put out the higher grade of ornamentals in Cristobal.

A fine collection of hibiscus, including about two dozen varieties, all of which are probably new to the Isthmus, has been presented by the horticulturist of the Experiment Station of Hawaii. Among these are some white, orange, and yellow specimens which the Canal horticulturist believes will show to advantage among the reds and pinks so common on the Isthmus.

Arrangements are being made by which householders in Ancon and Balboa who desire to have flower beds may send in requests for labor or material to the district quartermaster; and orders for porch boxes, plant tubs, pot stands, etc., may be given in the same way. Advance orders for palms, ferns, roses, and pot plants will be placed on file, to be filled within two or three months.

Agricultural Possibilities in Maryland.

The Bureau of Immigration of the State of Maryland has forwarded to The Panama Canal 48 copies of two pamphlets giving information about the lands, products, and industries of the State, and description of farms for sale, listed by the owners with the Bureau. Those interested may obtain copies on application to the Executive Secretary; if requests should exceed the available supply, the surplus requests will be forwarded to the Bureau of Immigration of Maryland.

Swimming Pool Closed.

On account of the cleaning out of the Colon storm sewer, which is to be begun on Wednesday, June 16, it will be necessary to close the swimming pool at the Hotel Washington for about two weeks from date.

WEATHER CONDITIONS, CANAL ZONE, MAY, 1915.

The rainfall for the month was deficient at all stations except Miraflores. This deficiency was greater over the Atlantic and central sections, while on the Pacific coast conditions were nearer the normal. Monthly totals ranged from 5.10 inches at Gamboa to 13.38 inches at Miraflores. The maximum amount of precipitation recorded in any one day was 4.21 inches, at El Vigia on May 20. This was the only station having a daily rain in excess of four inches, and the deficiency in rainfall was slight as compared with other stations in the central section. Rainfall occurred generally throughout the Zone on the 7th, 15th, 20th, 21st, and 26th of the month, and heavy showers were reported on these dates at many of the stations.

The estimated rainfall over the Chagres River basin was 34 per cent below the average, or 8.57 inches against a 15-year average of 12.94 inches.

The average air temperature was slightly above normal on the Pacific coast, while on the Atlantic coast the daily excess was approximately two degrees Fahrenheit. The atmospheric pressure and daytime cloudiness were below normal, and the wind movement, evaporation, and temperature of the sea water were above normal on both coasts. The relative humidity of the atmosphere was slightly above normal at Balboa Heights, while at Colon normal conditions prevailed.

No fogs occurred on the Atlantic coast, and only one was observed on the Pacific coast. Several night and early morning fogs occurred at interior stations, 75 per cent of which were dissipated by 6.30 a. m., 92 per cent by 7.30 a. m., and all lifted or were dissipated by 8 a. m. Light fogs were observed at Gatun in the afternoon of the 23d and 27th.

The elevations of Gatun Lake, in feet above mean sealevel, may be summarized as follows: Mean for the month, 85.68; maximum (on the 7th), 86.54; minimum (on the 22d), 85.36; evaporation from the lake surface, 5.361 inches.

The following is a summary of climatological conditions during the month of May:

STATIONS.	Press're (reduced to mean of 24 hours.)	Temperature.							Precipitation.			Wind.				
		Mean.	Maximum.	Date.	Minimum.	Date.	Mean relative humidity.	Total inches.	Station average.	Days of .01 inch or more.	Total movement (miles)	Prevailing direction.	Max. velocity in miles.	Direction.	Date.	
Colon.....	29.806	82.0	89	May 6	74	May 27	88	7.75	12.66	20	6,404	S. E.	23	S. W.	May 15	
* Balboa Heights ...	29.804	81.2	93	May 3	72	May 26	89	6.42	8.67	19	5,096	N.	47	S. W.	May 26	

*Formerly Ancon.

EXECUTIVE ORDER.

Suspending Charges for Rent, Fuel, and Lights.

By virtue of the authority vested in me, it is hereby ordered that the Executive Order of January 15, 1915, relative to charges for rent, fuel, and electric current furnished employees of The Panama Canal and the Panama Railroad Company on the Isthmus of Panama, is hereby modified by suspending from the operation thereof so much as relates to rent, fuel, and lights during the period of actual construction of The Panama Canal but not later than June 30, 1916.

WOODROW WILSON.

THE WHITE HOUSE,

May 25, 1915.

[No. 2204.]

The foregoing Executive Order is being published locally as Panama Canal circular No. 601-46.

Protection of Commissary Store during Colon Fire.

The value of the stock moved out of the Cristobal commissary store during the fire in Colon on April 30 was, according to a report by an accountant from the office of the Auditor of The Panama Canal, \$113,974.55. The value of the stock lost or stolen was \$4,959.87. There was a loss by reduction in price of some of the saved goods amounting to \$3,372.84, of which \$1,052.74 is a reduction in the shoe stock, most of which was included in the lot of goods which could not be moved on account of smoke and water and had to be left in the building until after the fire. With the addition of the cost of repairs, replacement of packing, extra labor, etc., necessitated by the fire, the total loss runs between \$9,200 and \$9,500.

This loss is approximately one-twelfth of the value of the goods moved. As some of the shelving was scorched and it was generally thought the building would not survive the fire, much credit is due to those whose special efforts were directed toward saving the building and removing the goods. Among these were employees of the commissary branch, the district quartermaster's force, members of the Coast Artillery Corps, men from the dry dock shops, and many volunteer employees of the Canal and Panama railroad.

Reduction of Passenger Rates for the Trip through Canal.

Effective June 19, 1915, the passenger rates through the Canal on steamships of the Panama Railroad Steamship Line will be as follows:

For adults, \$3; for children under 12 years of age, \$1.50.

Employees, \$2 and \$1, respectively.

The rates include meals aboard ship and berth when necessary.

Family Quarters.

Applications for married quarters on file on May 31, 1915, were as follows:

STATIONS	Number of applications.
ALCON.....	311 (117)
Corozal.....	50 (14)
Paraiso.....	135 (36)
Gatun.....	32 (6)
Cristobal.....	107 (26)
Total.....	635 (199)

NOTE—The figures in parentheses show the number of applicants already occupying regular or non-house-keeping family quarters at stations other than those at which applications are filed.

OFFICIAL CIRCULARS.

Quarters for Gold Employees.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., May 25, 1915.

CIRCULAR No. 627-9: (Superseding circulars Nos. 627, 627-2, 627-3, 627-4, 627-5, 627-6, 627-8.)

1. Effective May 25, 1915, Circulars Nos. 627-3, dated February 24, 1915; 627-4, dated February 26, 1915; 627-5, dated March 12, 1915; 627-6, dated March 20, 1915; and 627-8, dated May 12, 1915, are canceled and the following rules will govern the assignment of quarters to gold employees:

CLASSES.

2. Family quarters for assignment will be divided into four classes according to rate of pay. Class "A" will include all quarters regularly assignable to employees drawing less than \$200 per month; class "B" to employees drawing \$200 and less than \$250 per month; class "C" to employees drawing \$250 and less than \$350 per month; and Class "D," official type house, to be assigned by the Chief Quartermaster with the approval of the Governor.

3. Family quarters will be assigned to classes as follows: Class "A," types 5, 7, 14, 15, 4-family concrete, miscellaneous class "A" and portable houses; class "B," types 1, 4, 17, 19, 27; class "C," types 6, 10, 13, 2-family concrete; class "D," types 3, 8, 20 to 26, and special houses.

APPLICATIONS.

4. Applications for original assignment in a district will be placed on one list according to the date of employee's last entrance into the service, and opposite each man's name will be indicated the class of quarters to which his rate of pay entitles him.

5. A list showing all applications on file for each district will be posted in the office of the district quartermaster and will be open to inspection. Employees are responsible that changes in their classification are made known to district quartermasters.

6. An employee may, at the request of the head of his department, file an application for family quarters at, or transfer his application to, one point other than that at which he is employed.

7. All applications of employees working within a district will take precedence over applications of any employees working elsewhere regardless of class.

8. Applications for transfers of quarters within a district must be filed in writing with the district quartermaster, and the rules governing original assignment will be applied to transfers within a district. Applications for transfer from without a district will be placed on the assignment list according to date of employee's last entrance into service.

9. An applicant on the waiting list for family quarters, when he becomes eligible for assignment, will be given an opportunity to refuse three separate and distinct tenders. If he does not accept the third tender, his application will be canceled and he will not be allowed to file a new application for similar quarters for a period of 10 days.

10. When an employee forfeits family quarters through failure to occupy them within the time limit, he will not be allowed to file a new application for a period of 10 days.

11. All family quarters distinctly and definitely within hospital grounds shall be regarded as for the use of doctors and nurses, but the assignment of same shall remain under the jurisdiction of the Chief Quartermaster.

12. Applicants for hospital quarters can not place application for quarters outside of hospital grounds.

13. The wife constitutes the family of an employee, and no consideration can be given applications for family quarters for occupancy by other members of a family than the wife, except from widow or widower employees having dependent children residing with them; unless there are no other applicants on file.

14. Aliens, whether employed in the United States or on the Isthmus, will not be entitled to gold quarters until applicants have been assigned.

ASSIGNMENTS.

15. Quarters in each class will be assigned to applicants according to date of last entrance into the service, subject to the following exceptions: An employee in any class, due for assignment to family quarters, in his class, may be assigned to quarters of a class above his own where no applicants of said class desire them; or he may waive assignment in his class, and await in turn, according to date of last entry into the service, his assignment to quarters in any class below his own. Where service has been equal rate of pay will govern.

16. Employees will be required to accept or reject tender of quarters within 10 days from date of tender.

17. The rules applying to assignment of family quarters will be applicable in the assignment of bachelors to bachelor quarters, as far as practicable, except that there will be no class distinction as to bachelor quarters

18. Family quarters may, with the approval of the Chief Quartermaster, be assigned to bachelors with dependent relatives if there are no other applications on file for the quarters. Houses coming under the official class may be assigned to bachelors by the direction of the Governor.

19. Exchange of quarters will be permitted only when the rights of no other employees will be interfered with.

HOLDING QUARTERS.

20. Family quarters may be held for 90 days during the absence of an employee to whom they are assigned or his family, or both simultaneously, provided that this privilege shall not be granted for more than one period of 90 days in any service year. If vacated a second time during the service year, either by the employee, his family, or both simultaneously, quarters will be held not more than 30 days. The two periods can not be taken advantage of continuously or allowed to lap each other, either during the absence of both employee and family at the same time or of either separately. The two periods must be regarded as entirely separate and distinct, and the quarters must be reoccupied both by the employee and his family after the first period of absence before they can be vacated, without forfeiture, for the second period of absence.

21. When family quarters are assigned, an employee will be given nine weeks from date stated in tender in which to occupy the quarters, but this does not apply in case of transfers.

22. An employee, whose family is not on the Isthmus, and who has been assigned quarters on an original application will not be allowed to occupy the apartment until 10 days prior to the arrival of his family, nor will he be permitted to allow others to do so.

23. Services of employees discharged or resigned, securing immediate employment in some other department or division, are considered continuous as far as quarters are concerned, and they may hold quarters or have their applications remain on the list as of original date. Cases of this nature arising, however, should be referred to the Chief Quartermaster.

24. Whenever by reason of temporary decrease of work, or other cause, employees have been furloughed without pay for a period not exceeding 30 days, they will retain the rights of quarters during that time.

25. When an employee's services are terminated he will be expected to vacate quarters within 10 days from the date of termination of service.

26. A widow can hold quarters after death of husband until arrangements can be made for her departure.

FURNITURE.

27. The allowance of furniture for regular family quarters will be as follows:

1 range	2 center tables
2 kitchen chairs	1 dresser
1 chiffonier	1 refrigerator
1 sideboard	6 dining chairs
1 double bed	1 dining table
1 double mattress	3 wicker rockers
1 kitchen table	

In official houses the following additional articles are authorized:

3 dining chairs	1 porch swing
1 Morris chair	1 parlor wicker rocker
2 towel racks	1 serving table
1 parlor desk	1 dresser
2 parlor chairs	1 double parlor seat
1 chiffonier	

Employees occupying nonhousekeeping quarters will be given such furniture as may be available but in no case more than is provided above for regular family quarters.

28. The issue of beds, mattresses, and one dresser in excess of this allowance is authorized to families with children. Employees moving from one house to another in the same district will be permitted to take with them, at their own expense, if they so desire, beds, mattresses, and refrigerators.

ALTERATIONS.

29. No alterations or additions will be made to any house by the occupant without the approval of the Chief Quartermaster, and then only at his own expense.

CHESTER HARDING,
Acting Governor.

Preparation of Data for Annual Estimates.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., June 9, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Within a few weeks it is intended to issue formal instructions as to the preparation of estimates for the fiscal year 1917. In the meantime, please commence the tabulation of the necessary data immediately, so that no delay will be experienced when the formal instructions are given.

No radical change will be made in the form of estimate blanks used last year.

CHESTER HARDING,
Acting Governor.

Inspection of Cattle and Other Food Animals.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., June 1, 1915.

CIRCULAR No. 700:

1. All cattle, calves, hogs, sheep, goats, and other food animals imported into or offered for sale as food in the Canal Zone must be inspected by a veterinary inspector of the Health Department, and any such animal found in a manner dangerous to other animals, or any carcass held or offered for food, found to be unfit, shall be condemned and destroyed, and the owner of such diseased animal or unfit food shall be not compensated therefor.

2. Veterinary inspection will be charged for as follows:

Beef cattle, ante- and post-mortem inspection.....	\$0.50
Beef cattle, quarantine inspection.....	.25
Pigs, calves, goats, and sheep, any inspection.....	.25

3. The above rates are for animals inspected in lots of 10 or more. The rates for single animals or lots of less than 10 are twice as great. All moneys derived from such inspections shall be turned in to the Collector of The Panama Canal.

CHESTER HARDING,
Acting Governor.

Prices of Chagres River Sand and Gravel.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., May 24, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective June 1, 1915, sand and gravel from the Chagres River will be invoiced to departments and divisions of The Panama Canal and Panama Railroad Company at 60 cents per cubic yard.

Sand and gravel from the Chagres River will be sold to employees of The Panama Canal and Panama Railroad Company, and to others entitled to the same rates as employees, at \$1.50 per cubic yard, delivered on board cars.

CHESTER HARDING,
Acting Governor.

Releasing East Breakwater Cars.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., June 7, 1915.

To the heads of departments—I am informed by Mr. H. H. Rousseau that in the near future his department will again start shipping heavy rock to the East Breakwater at Coco Solo. Please instruct your foremen and subforemen not to load "E. B." cars of any kind and to release all "E. B." cars now under load in order that they may be properly inspected and such cars as may be in need of repairs sent to the shops for overhauling. Your cooperation is desired.

C. H. MOTSETT,
Superintendent.

Closing Down Balboa Store on Account of Annual Inventory.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., June 8, 1915.

To all concerned—On account of the taking of the annual inventory, Balboa storehouse will be closed for business from June 27 to July 1, both dates inclusive, except for emergency orders. Heads of departments and divisions, and storekeepers are requested to draw any material they may need during this period, prior to June 27, 1915. Rather than embarrass the work the storehouse will fill emergency orders at the request of the head of the department or division requiring the material, but it is requested that such requests be minimized as much as possible. It is also requested that no material be returned to stock between June 15 and July 15, inclusive.

W. R. GROVE,
Chief Quartermaster.

Approved:
CHESTER HARDING,
Acting Governor.

Milk for Sale.

As the milk production at the Corozal Hospital dairy shows an increased output, the dairy is again prepared to supply a limited number of customers with prime quality of milk at 25 cents per quart.

Customers so supplied, in order to retain the privilege, must return the identical empty bottles promptly.

Stray Cow.

Strayed from the Corozal Hospital farm, about two weeks ago, a dark fawn cow, age about 3 years, black points, solid color, weight about 650 lbs., has two horns, left horn branded with figure 30, hair-brand 30 on left hip.

Anyone having knowledge of her whereabouts, will please notify the Superintendent, Corozal Hospital, or the Canal Zone police.

COMMISSARY DEPARTMENT

Commissary Hours.

The commissary stores at Las Cascadas, Empire and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

The charges published below will be increased by 10 per cent in case of sales to commercial ships and foreign naval vessels, and by 20 per cent for yachts.

The following is a list of retail prices of cold storage provisions which will be effective June 17, 1915:

FRESH MEATS.

	Price.
Mutton—Stewing, per pound.....	14
Shoulder, trimmed, per pound.....	18
Leg (8 to 10 pounds), per pound.....	28
Short cut, chops, per pound.....	35
Shoulder, chops, per pound.....	21
Lamb—Stewing, per pound.....	12
Shoulder, trimmed, per pound.....	15
Leg, (5 to 8 pounds), per pound.....	24
Chops, per pound.....	29
Chops, shoulder, per pound.....	18
Veal—Stewing, per pound.....	12
Shoulder, for roasting (not under 4 lbs.), per pound.....	15
Chops, shoulder, per pound.....	20
Chops, per pound.....	30
Loin, for roasting, per pound.....	30
Cutlets, per pound.....	36
Beef—Suet, special, per pound.....	3½
Soup, special, per pound.....	7
Soup, bones, special, per pound.....	2½
Stews, special, per pound.....	11
native, per pound.....	8
Plates, special, per pound.....	12
native, per pound.....	8
Chuck roast, special (3 lbs. and over), per pound.....	12
Chuck roast, native (3 lbs. and over), per pound.....	8
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
Rib roast, second cut, native (3½ pounds and over), per pound.....	9
Rib roast, first cut (not under 3 pounds), special, per pound.....	19
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27
Rib roast, first cut, native (3 pounds and over), per pound.....	11
Pot roast, special, per pound.....	20
choice, per pound.....	28
native, per pound.....	12
Rump roast, special, per pound.....	20
choice, per pound.....	28
native, per pound.....	12
Porterhouse roast, special, per pound.....	22
choice, per pound.....	31
native, per pound.....	16
Steak, chuck, special, per pound.....	13
native, per pound.....	9
Round, bottom, special, per pound.....	13
choice, per pound.....	19
native, per pound.....	9
Round, top, special, per pound.....	15
choice, per pound.....	22
native, per pound.....	10
Sirloin, special, per pound.....	20
Sirloin, choice, per pound.....	28
Sirloin, native, per pound.....	12
Sirloin, choice cut, special, per pound.....	23
Sirloin, choice cut, choice, per pound.....	32
Sirloin, choice cut, native, per lb.....	16
Rump, special, per pound.....	20
choice, per pound.....	28
native, per pound.....	12
Porterhouse (not less than 1½ pounds), special, per pound.....	23
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse (1½ pounds and over), native, per pound.....	17
Porterhouse, short, Delmonico special, per pound.....	20
Porterhouse, short, Delmonico choice, per pound.....	28
Porterhouse, short, native, per lb.....	12
Tenderloin, Western, special, per pound.....	35
Tenderloin, Western, choice, per pound.....	46
Tenderloin, Western, native, per lb.....	25

NOTE.—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders placed with commissary storekeepers before 11 a. m., will be shipped for delivery on the following morning.

Pork—Hams, fresh, per pound.....	\$23
Shoulders, fresh, per pound.....	\$19
Loin, chop, or roast, per pound.....	20
Pigs' feet, fresh, each.....	8

	Price.
Pigs' head, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23
Spare ribs, per pound.....	11
Ox tails, per pound.....	9
Beef tongue, native, whole, per pound.....	20
MISCELLANEOUS.	
Beef hearts, per pound.....	12
Brains, calves', per pound.....	18
Calves' head, each.....	80
Kidneys, beef, per pound.....	12
Livers—Beef, per pound.....	10
Calf, each.....	70
half, each.....	35
Steak—Hamburger, packages.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	11
Frankfurter, per pound.....	13
Frankfurter, imported, tin.....	14
Lieberwurst, per pound.....	10
Pork, per pound.....	14
Sweetbread, beef, per pound.....	17
Eggs, fresh, per dozen.....	\$29
per ½ dozen.....	\$15
Bloaters, fancy, each.....	5
Bluefish, per pound.....	8
Halibut, fresh, per pound.....	11
Salmon, per pound.....	9
Whitefish, smoked, per pound.....	21
Yeast, per pound.....	31
per cake.....	2
Paté de foies gras, per jar.....	50
CURED AND PICKLED MEATS.	
Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Mince, "Bologna style", per pound.....	14
Sugar cured, boneless, whole, per pound.....	21
Sugar cured, whole, per pound.....	19
Half, per pound.....	21
Sliced, per pound.....	25
Hocks, per pound.....	10
Butt end, per pound.....	12
Whole, boiled, per pound.....	*26
Half, boiled, per pound.....	*28
Sliced, boiled, per pound.....	*34
Shoulders, sugar cured, whole shoulder, per pound.....	14
Bacon—Breakfast, sliced, per pound.....	29
Whole piece, per pound.....	28
Strips, whole, per pound.....	20
Sliced, jar.....	30
Tin.....	27
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Pork bellies, per pound.....	14
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	8
Tongues, per pound.....	22
POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound.....	27
Chickens—Fancy, roasting, corn fed, per pound.....	25
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	*23
Capons, per pound.....	32
Broilers, milk fed, per pound.....	34
Broilers, corn fed, per pound.....	30
Turkeys, per pound.....	28
Squabs, each.....	40
Geese, per pound.....	23
Grouse, each.....	1.00
Mallard ducks, 2 to 2½ pounds, each.....	2.35
Pheasants, each.....	1.35
DAIRY PRODUCTS.	
Butter—Creamery, special, per pound.....	40
Creamery, 60-62-lb. tub, whole tub, per pound.....	39
Sheffield Farms, extra fancy, per lb.....	58
Oleomargarine, per pound carton.....	29
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	23
Swiss, per pound.....	30
Edam, each.....	90
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	*15
Ferrellac, bottle.....	*25
Ice cream, quart.....	125
½-gallon.....	150
Cream, 30 per cent, quart.....	*15
pint.....	*23
½-pint.....	*12
VEGETABLES.	
Beans, string, per pound.....	15
Beets, per pound.....	*2½
Cabbage, per pound.....	4
Carrots, per pound.....	2½
Celery, per head.....	6
Cucumbers, per pound.....	5
Egg plant, per pound.....	8
Lettuce, per pound.....	18
Onions, per pound.....	2½
Spring, per pound.....	4
Parsley, per pound.....	7
Parsnips, per pound.....	*6
Peppers, green, per pound.....	12
Plantains, per dozen.....	15
Potatoes, white, per pound.....	2
New, per pound.....	3
Sweet, per pound.....	2

	Price.
Radishes, per pound.....	5
Rhubarb, per pound.....	2½
Squash, white, per pound.....	4
Turnips, per pound.....	*3½
Tomatoes, per pound.....	8
Yams, Lucea, per pound.....	3
FRUITS.	
Apples, per pound.....	8
Grape fruit—Select, each.....	6
Tropical, each.....	13
Lemons, per dozen.....	13
Limes, per 100.....	140
Oranges—Select, each.....	3
Tropical, per dozen.....	12
Coconuts, each.....	4
Bananas, per bunch.....	38
Bananas, each.....	12
Apples, evaporated, per pound.....	12
Apricots, evaporated, per pound.....	112
Pears, evaporated, per pound.....	23
Pineapples, each.....	*12
Figs, dried, 12-oz. packages.....	14
Figs, dried, 5-oz. packages.....	5
Raisins, seedless, package.....	11
table, cluster, per pound.....	20
Currants, cleaned, package.....	12
Prunes, stewing, per pound.....	12
Alligator pears, tropical, each.....	5

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective June 5 and 12, as indicated:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
EFFECTIVE JUNE 5.		
Peas, gal.....	.39	.49
EFFECTIVE JUNE 12.		
Brushes, hair, ea.....	.87	1.15
Drill, brown linen, yd.....	.23	.26
Linen, costume, yd.....	.24	.38
Capes, rain, ea.....	2.55	2.00
Thread, linen, spool.....	.11	.14
Cots, ea.....	2.25	2.35
Sprayers, insect powder, ea.....	.05	.07
Trowels, garden, 6", ea.....	.22	.11
Tea, Temple Garden, tin, 1s.....	.30	.35
Tea, Temple Garden, tin, 1s.....	.15	.18
Tea, Temple Garden, tin, 1s.....	.08	.10
Tennis racquets, ea.....	1.35	1.10
Tennis racquets, ea.....	8.00	6.60
Tennis balls, ea.....	.38	.32
Tea, Ceylon, English, lb.....	.32	.36

Additions to Stock.

Chili powder, 12-oz., tin.....	.57
Peas, small, tender, tin.....	.15
Pickles, dill, sliced, R. S., 5-gal. keg.....	2.00
Soap, salt water, bar.....	.19
Tea, English Breakfast, tin.....	.10
Tea, English Breakfast, tin.....	.18
Tea, English Breakfast, 1-lb., tin.....	.35

Rainfall from June 1 to 12, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>			
Balboa.....	<i>Ins.</i> .98	12	<i>Ins.</i> 1.60
Balboa Heights.....	.76	12	1.69
Miraflores.....	1.47	12	3.91
Pedro Miguel.....	2.17	12	4.17
Rio Grande.....	1.35	12	3.22
<i>Central Section—</i>			
Culebra.....	.85	12	2.40
*Camacho.....	.63	10	2.20
Empire.....	.41	1	1.93
Gamboa.....	1.19	3	3.80
*Juan Mina.....	1.97	1	5.53
Alhajuela.....	1.34	1	4.46
*El Vigia.....	1.40	8	7.46
Frijoles.....	.82	5	2.56
*Trinidad.....			
*Monte Lirio.....	1.15	10	3.00
<i>Atlantic Section—</i>			
Gatun.....	1.48	8	3.93
*Brazos Brook.....	4.04	8	7.32
Colon.....	1.84	8	6.13

*Standard rain gage—readings at 5 p. m. daily.

Automatic rain gage at unstarred stations—values midnight to midnight.

SHIPPING INFORMATION.

July Weather Probabilities.

The following conditions may be expected to prevail at the Canal entrances during the month of July, 1915. These predictions are based on the records at Colon and Ancon for the past seven and eight years, respectively.

Winds.—The winds over the Atlantic coast will continue to be light and variable, northerly winds predominating. The average hourly velocity will be about nine miles an hour, although a velocity of from 25 to 30 miles may be expected during rain or thunder squalls. A maximum velocity of 40 miles an hour was recorded during the month of July, 1908, but the chances for a reoccurrence of so high a velocity during the month are extremely remote.

Light northwest winds continue over the Pacific coast and the interior, with an average hourly velocity of about seven miles an hour. Variable winds may be expected at times, especially during the passage of local rain or thunder storms, and the wind may attain a velocity of as high as 25 miles an hour, but these storms are generally of short duration. A wind squall was recorded at Ancon on July 10, 1909, during which a maximum velocity of 59 miles an hour was reached. This, however, expresses only extreme conditions, and is not likely to occur during the month.

Rain.—Heavy showers may be expected on both coasts and over the interior. The average July rainfall at the Atlantic entrance to the Canal, for a period of 44 years, is 16.22 inches, while 7.76 inches is the average fall at the Pacific entrance, this average being for a period of 18 years. The average number of rainy days, (one on which 0.01 or more inches of rain is measured), is 20 on the Pacific coast and 25 on the Atlantic side, while the average number of days on which the rainfall equals or exceeds one inch are two and five, respectively.

Fogs.—No fogs are likely to occur on either coast, but night and early morning fogs will be numerous over the interior. Over the Gaillard Cut section of the Canal, the average number of nights with fogs is 20. Of these fogs 50 per cent are dense; a dense fog is one in which objects can not be distinguished at a distance of 1,000 feet. All fogs that occur may be expected to lift or become dissipated by 8.30 a. m., and will not prove a hindrance to the navigation of the Canal under the present operating conditions.

Temperature.—The average shade air temperature over both the Atlantic and Pacific entrances to the Canal will be approximately 80 degrees Fahrenheit. The temperature is not likely to rise above 89° F., or fall lower than 70° F. on the Atlantic coast, while at the Pacific entrance the maximum temperature may not be expected to exceed 95° F., or the minimum to be lower than 67° F. The mean daily range of the temperature will probably be about eight degrees at the Atlantic entrance, and about 15 degrees at the Pacific entrance, the range in temperature being greater on the Pacific coast than on the Atlantic, owing to the prevailing direction of the winds.

Barometric pressure.—As the Isthmus is without the regions affected by violent atmospheric disturbances, the barometric pressure over the Canal area is remarkably constant and uniform, and changes in pressure are very slight, except for the well marked diurnal

fluctuation caused by the daily changes in temperature, which have little value as indicators of future weather conditions. The average sealevel pressure for the month should be about 29.85 inches, while the maximum pressure is not likely to exceed 30 inches, or the minimum to be lower than 29.70 inches at either Canal entrance.

Storms.—Most of the storms during the rainy season are local wind, thunder, or rain squalls of more or less limited extent, produced by the ascensional movement of the air, due to its excessive heating under the rays of the tropical sun. These storms may be expected quite frequently during the month, the average number of days on which thunderstorms have occurred on the Atlantic and Pacific coasts being 16 and 17, respectively. During the passage of these storms, comparatively high wind velocities may be attained, but they are invariably of too short duration to cause rough seas.

The season from July to October is the season of the West Indian hurricanes, but the paths followed by them lie well to the northward of the Isthmus. A rough sea and heavy swell, accompanied by brisk northerly winds, may be occasionally experienced outside the breakwater, however, following the passage of a hurricane across the Caribbean Sea to the northward.

Generally cloudy weather will prevail over both coasts, and smooth to moderate seas can be expected at the Pacific entrance to the Canal.

Tides.—The average tidal amplitude at Colon is less than one foot, and the maximum amplitude is approximately two feet. Owing to this fact, no consideration need be given to tidal fluctuations while navigating the Atlantic entrance to the Canal.

At the Pacific entrance a maximum range of 20 feet sometimes occurs during spring tides, but the average tidal range is approximately 13 feet.

Panama (Balboa) tide predictions are given below:

JUNE				
DATE	Time and height of high and low water.			
Wed., June 16.....	6:02	12:12	18:06	.....
	13:7	2:4	13:7	.....
Thurs., June 17....	0:31	6:40	12:53	18:45
	1:3	13:7	2:5	13:4
Fri., June 18.....	1:11	7:17	13:37	19:27
	1:6	13:7	2:6	13:1
Sat., June 19.....	1:53	7:58	14:24	20:12
	1:9	13:6	2:7	12:8
Sun., June 20.....	2:40	8:43	15:16	21:05
	2:3	13:6	2:7	12:5
Mon., June 21.....	3:31	9:36	16:11	22:06
	2:6	13:6	2:6	12:4
Tue., June 22.....	4:28	10:35	17:11	23:13
	2:7	13:7	2:2	12:5
Wed., June 23.....	5:28	11:38	18:12	.....
	2:6	14:0	1:7	.....
Thurs., June 24....	0:21	6:31	12:42	19:12
	13:0	2:3	14:5	1:0
Fri., June 25.....	1:25	7:33	13:43	20:10
	13:6	1:8	15:0	0:2
Sat., June 26.....	2:25	8:31	14:41	21:04
	14:4	1:1	15:6	-0:5
Sun., June 27.....	3:22	9:25	15:36	21:57
	15:1	0:6	16:0	-1:0
Mon., June 28.....	4:14	10:19	16:29	22:47
	15:7	0:2	16:2	-1:2
Tues., June 29.....	5:05	11:11	17:19	23:37
	16:0	0:1	16:0	-1:0
Wed., June 30.....	5:54	12:01	18:08	.....
	15:9	0:3	15:5	.....

JULY.				
DATE	Time and height of high and low water.			
Thurs., July 1.....	0:25	6:43	12:51	18:59
	-0:5	15:6	0:8	14:8
Fri., July 2.....	1:13	7:30	13:42	19:47
	0:3	15:0	1:4	13:8
Sat., July 3.....	2:02	8:18	14:34	20:40
	1:3	14:1	2:2	12:9

DATE.	Time and height of high and low water.			
Sun., July 4.....	2:51	9:09	15:26	21:34
	2:3	13:3	2:9	12:0
Mon., July 5.....	3:43	10:02	16:22	22:35
	3:3	12:6	3:4	11:3
Tues., July 6.....	4:38	11:00	17:20	23:44
	4:1	12:0	3:7	11:0
Wed., July 7.....	5:37	12:01	18:19	.....
	4:5	11:8	3:7	.....
Thurs., July 8.....	0:50	6:37	13:00	19:15
	11:1	4:5	11:9	3:5
Fri., July 9.....	1:47	7:33	13:52	20:05
	11:4	4:3	12:2	3:0
Sat., July 10.....	2:35	8:20	14:39	20:51
	11:9	3:9	17:7	2:4
Sun., July 11.....	3:17	9:08	15:19	21:33
	12:5	3:3	13:2	1:8
Mon., July 12.....	3:55	9:51	15:58	22:12
	13:1	2:8	13:7	1:3
Tues., July 13.....	4:31	10:28	16:34	22:51
	13:7	2:3	14:1	0:9
Wed., July 14.....	5:06	11:10	17:11	23:29
	14:2	1:9	14:3	0:6
Thurs., July 15.....	5:40	11:49	17:46	.....
	14:5	1:6	14:4	.....
Fri., July 16.....	0:05	6:14	12:28	18:24
	0:6	14:7	1:4	14:3
Sat., July 17.....	0:44	6:49	13:09	19:03
	0:8	14:8	1:4	14:1
Sun., July 18.....	1:24	7:27	13:54	19:45
	1:1	14:8	1:5	13:7
Mon., July 19.....	2:08	8:10	14:42	20:35
	1:6	14:5	1:7	13:2
Tues., July 20.....	2:58	9:00	15:36	21:32
	2:1	14:2	2:0	12:8
Wed., July 21.....	3:55	9:50	16:39	22:40
	2:6	13:9	2:1	12:5

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from Oh (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

May Rainfall for Three Years.

STATIONS.	1913	1914	1915	Station Av.	Years of record	Rainy days '15
<i>Pacific Section—</i>						
Balboa.....	Ins.	Ins.	Ins.	Ins.	17	19
Balboa Heights.....	8.04	8.16	7.92	8.21	17	19
Miraflores.....	8.27	6.98	6.42	8.67	17	19
Pedro Miguel.....	12.33	10.96	13.38	10.51	7	23
Rio Grande.....	13.48	13.16	10.24	11.23	8	24
<i>Central Section—</i>						
Culebra.....	12.33	10.77	9.32	10.88	11	18
Camacho.....	11.74	13.26	7.28	11.11	24	19
Empire.....	16.03	14.15	7.56	11.79	9	13
Gamboa.....	11.74	12.87	8.56	10.02	11	15
Juan Mina.....	15.13	10.28	5.10	10.85	34	20
Alhajuela.....	13.20	8.40	6.91	11.05	5	21
El Vigia.....	12.63	5.66	8.20	11.97	15	20
Fríjoles.....	13.35	7.47	10.88	11.59	7	19
Trinidad.....	21.07	14.33	10.71	14.10	4	23
Monte Lirio.....	17.73	13.58	8.51	13.78	8	18
<i>Atlantic Section—</i>						
Gatun.....	16.29	11.42	11.17	13.82	8	15
Brazos Brook.....	17.06	10.91	10.24	14.87	11	21
Colon.....	18.77	13.17	6.41	13.05	9	25
	22.60	17.76	7.75	12.66	45	20

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, June 12, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa	Gatun Lake.	Miraflores Lake.
Sun., June 6.....	128.50	94.90	85.37	85.46	51.06
Mon., June 7.....	127.00	93.50	85.40	85.46	54.00
Tues., June 8.....	131.40	96.57	85.52	85.48	54.00
Wed., June 9.....	128.80	95.45	85.55	85.45	54.00
Thurs., June 10.....	127.75	93.65	85.55	85.45	54.00
Fri., June 11.....	128.90	94.47	85.55	85.45	54.00
Sat., June 12.....	128.25	94.40	85.55	85.45	54.00
Heights of low water to nearest foot....	125.00	91.00			

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., June 13, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
June 7	Kandahar	British	Ellerman & Bucknell	New York	Vladivostok	General cargo	9,592	7,702	5,904
June 8	Canargo	British	Australian Government	Norfolk	Littleton	General cargo	7,700	5,282	4,006
June 8	Caldergrove	British	Clutha Shipping Co., Ltd.	Philadelphia	Auckland	Kerosene	6,400	4,771	3,589
June 8	Merchant	British	Harrison Line	Liverpool	Los Angeles	General cargo	2,000	4,001	2,871
June 8	Limari	Chilean	South American Steamship Co.	Cristobal	Guayaquil	General cargo	1,400	3,631	2,421
June 9	Saint Louis	French	Cie. Navale de L'Océanie	Philadelphia	Papeete	General cargo	6,800	5,855	4,232
June 9	Luz Blanca	British	London & Pacific Pet. Co.	London	Talara	Ballast		5,147	3,268
June 9	Bell (bark)	Norwegian	Alf. Monsen	Philadelphia	Japan	Case oil		3,836	3,524
June 9	Victoria	British	Royal Mail S. P. Co.	London, way ports.	Valparaiso	General cargo	400	6,840	4,546
June 10	Thor	Norwegian	Sudden & Christenson	Newport News	Tiburou	Coal	7,323	4,879	3,368
June 10	Penwith Castle	British	Lancashire Shipping Co.	New York	Chefu	Case oil	5,555	4,368	3,320
June 10	Lord Templeton	British	S. Lord Templeton Co.	Leith, Eng.	San Francisco	Coke	3,293	2,200	2,020
June 11	Torsdale	Norwegian	Aktieselsk Torsdale	Cardiff	Antofagasta	Ballast		3,860	2,726

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

June 7	L. K. Thurlow	American	Crowell & Thurlow	San Francisco	New York	Lumber, shingles		3,441	2,444
June 8	Pleides	American	Luckenbach Line	San Francisco	New York	General cargo	4,000	4,147	3,255
June 8	Falls City	British	W. R. Smith & Sons	Cruc Grande	Fayal	Nitrates	7,750	5,202	3,809
June 8	Panama Transport	British	Empire Transport Co.	Philadelphia	New York	General	7,350	5,333	3,821
June 9	Allianca	American	Panama Railroad S. S. Line	Balboa	Christiana	General		4,120	2,670
June 10	Bravo	Norwegian	Acties. Bouheut	San Francisco	Philadelphia	Lumber	1,700	1,548	1,018
June 10	Stallery Dollar	American	Dollar Line	Santa Rosalia	Cristobal (orders)	General, lumber	7,000	5,519	3,908
June 10	Buenaventura	American	U. S. Steel Products Co.	Valparaiso	Liverpool	General, lumber	3,887	6,804	4,438
June 12	Panama	British	Pacific Steam Nav. Co.	Balboa	Gatun Lake	Passenger		5	8
June 13	Chucumaque	American	J. A. Walker	Guayaquil	Cristobal	General cargo	710	4,038	2,626
June 13	Peru	British	Pacific Steam Nav. Co.	Seattle	New York	General cargo	8,000	6,875	4,610
June 13	Minnesota	American	American-Hawaiian Line						

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
June 9	Colon	Panama Railroad S. S. Line	New York
June 9	Brutus	U. S. Navy	Guantanamo
June 13	Finn	Acties. S. S. Finn	New York

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
June 15	Virginian	American-Hawaiian Line	Hilo
June 15	Strathes	Strath Line	
June 15	Queen Elizabeth	Merito Shipping Co., Ltd.	
June 15	Mathilda	Acties. Mathilda	

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
June 7	Belgian	Leyland Line	Liverpool
June 8	Venezuela	French Line	Martinique
June 8	Logician	Harrison Line	Liverpool
June 9	Leonidas	U. S. Navy	Bocas
June 9	Legaspi	Spanish Line	Barcelona
June 9	Tancred	Earn Line	Norfolk
June 10	Wegadesk	Earn Line	Norfolk
June 11	Wilhelmina	McCraighton	Bluefields
June 13	Edda	K. S. Nordgrun	Philadelphia

*DEPARTURES.

Date	Vessel	Line	To
June 7	Savio	Italian Line	Genoa
June 9	Chiswick	Earn Line	Santiago
June 9	Belgian	Leyland Line	Galveston
June 12	Logician	Harrison Line	Galveston
June 12	Legaspi	Spanish Line	Barcelona
June 12	Venezuela	French Line	Bordeaux

*EXPECTED ARRIVALS.

June 15	Perou	French Line	Bordeaux
June 22	Meltonian	Leyland Line	Liverpool

*EXPECTED DEPARTURES.

	Meltonian	Leyland Line	Unknown
	Leonidas	U. S. Navy	Unknown
	Wilhelmina	McCraighton	Bluefields
	Edda	K. S. Nordgrun	
June 17	Tancred	Earn Line	Daiquiri
June 17	Wegadesk	Earn Line	Felton
June 17	Perou	French Line	Bordeaux

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

June 7	Annapolis	U. S. Navy	
June 8	Pennsylvania	Pacific Mail S. S. Co.	San Francisco
June 8	Delmacia	Antonia Girisich	Guopi
June 10	J. A. Moffett	Standard Oil Co.	San Francisco
June 11	Manavi	Pacific Steam Nav. Co.	Taboga
June 10	Jamaica	Pacific Steam Nav. Co.	Taboga

*DEPARTURES.

June 7	Huallaga	Peruvian S. S. Co.	Callao
June 7	Manavi	Pacific Steam Nav. Co.	Taboga
June 11	Jamaica	Pacific Steam Nav. Co.	Tumaco
June 12	J. A. Moffett	Standard Oil Co.	San Francisco
June 12	Manavi	Pacific Steam Nav. Co.	Guayaquil
June 13	Pennsylvania	Pacific Mail S. S. Co.	San Francisco

*EXPECTED ARRIVALS.

June 13	San Jose	Pacific Mail S. S. Co.	San Francisco
June 16	Ucayali	Peruvian S. S. Co.	Callao

*EXPECTED DEPARTURES.

	Annapolis	U. S. Navy	
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*Other than vessels passing through the Canal.

Sailings of Vessels in Regular Service with the Isthmus.

NEW YORK TO CRISTOBAL-COLON.

Sails	Arrives
Advance	P. R. R. June 10
Metapan	U. F. C. June 12
Almirante	U. F. C. June 16
Panama	P. R. R. June 17
Pastores	U. F. C. June 19
Zacapa	U. F. C. June 23
Allianca	P. R. R. June 24
Calamares	U. F. C. June 26
Carrillo	U. F. C. June 30
Colon	P. R. R. July 1
Tenadores	U. F. C. July 3

CRISTOBAL-COLON TO NEW YORK.

Carrillo	U. F. C. June 17
Colon	P. R. R. June 19
Tenadores	U. F. C. June 21
Santa Marta	U. F. C. June 24
Advance	P. R. R. June 26
Metapan	U. F. C. June 28
Almirante	U. F. C. July 1
Panama	P. R. R. July 3
Pastores	U. F. C. July 5
Zacapa	U. F. C. July 8
Allianca	P. R. R. July 10
Calamares	U. F. C. July 12

NEW ORLEANS TO CRISTOBAL-COLON.

Cartago	U. F. C. June 12
Turrialba	U. F. C. June 16

Heredia	U. F. C. June 19
Abangarez	U. F. C. June 23
Parismina	U. F. C. June 26
Atenas	U. F. C. June 30
Cartago	U. F. C. July 3
Turrialba	U. F. C. July 7
Heredia	U. F. C. July 10
Abangarez	U. F. C. July 14
Parismina	U. F. C. July 17
Atenas	U. F. C. July 21
Cartago	U. F. C. July 24
Turrialba	U. F. C. July 28
Heredia	U. F. C. July 31
Abangarez	U. F. C. Aug 4
Parismina	U. F. C. Aug 7
Atenas	U. F. C. Aug 11
Cartago	U. F. C. Aug 14
Turrialba	U. F. C. Aug 18



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Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Second Canal Collier in Service.

The second of the new Canal colliers, the *Achilles*, sister ship of the *Ulysses*, arrived at Cristobal on her maiden voyage on Thursday, June 17, carrying 12,500 tons of coal, with which she had sailed from Norfolk on Friday, June 11. She is discharging at the Brown hoist coal wharf at Mount Hope and is due to clear on Friday of this week.

The *Ulysses* arrived with her third cargo on Sunday, June 20, and has been lying in the bay off Cristobal, awaiting her turn at the unloading wharf. By the time she will have discharged the *Achilles* will be about ready to clear from Norfolk on her second trip and an approximately regular schedule can be established.

Houseboat Makes Use of the Canal.

The houseboat *John A.* was towed through the greater part of the Canal on Saturday, June 19, on its way from Balboa to Buena Vista, on the southern shore of Gatun Lake. The houseboat is the property of Mr. John A. Walker and is to be used by him as quarters at the Buena Vista plantation of the Central American Land and Improvement Company. The plantation is situated on the west bank of the east valley of the Trinidad River, several miles above Escoval. Escoval is just within the Canal Zone, or approximately five miles from the center line of the Canal. The plantation contains about 15,000 acres, on which the principal cultivations at present are 100 acres of cane, an orchard of 2,000 aguacate (alligator pear) trees, and an area of wild plant similar to pineapple, from which fibre is to be manufactured.

The *John A.* was towed by the tug *Cocoli* and accompanied by the launch *Mary J.*, which serves as a tender to the houseboat. The houseboat had nine passengers aboard. The quarters on it contain eight rooms, with verandas, the whole being considered more commodious than a type-17 Canal cottage. The hull was recovered from an obsolete French dredge, and the entire house cost about \$4,500.

The "Colon" Transferred in Payment for Wharf Work.

The steamship *Colon*, originally purchased by the Isthmian Canal Commission for operation primarily in connection with the Canal work, and operated by the Panama Railroad Steamship Line, has been transferred to the steamship line by The Panama Canal to effect payment to the Panama Railroad Company for its expenditures in the construction of the concrete wharf at Balboa, since included in the permanent terminals of The Panama Canal. The debt which was liquidated by the transfer amounted to \$388,700.58.

Balboa Shops Completed.

Balboa shops have been declared completed, with the exception of minor installations and changes classified as repairs, and were turned over by the Division of Terminal Construction to the Mechanical Division for maintenance at the close of business on June 15. Work remaining to be done includes the installation of some louvers, doors, piping, and plumbing, and work in the dry kiln, and is in buildings Nos. 1, 4, 9, 10, 12, 14, and 23 and in the shop tunnel. The remaining work in grading the roads and sidewalks will be assigned to the Municipal Division, and exterior lighting will be installed as a part of the illumination of the Canal Zone.

The railroad yards being nearly finished, they were turned over on the same date to the Panama railroad for maintenance.

Making Oil Barges from Wreck of the "Teredo."

The second half of the hull of the drill barge *Teredo*, which was sunk at the base of Cucaracha slide by a premature explosion of dynamite on July 20, 1914, is being overhauled at Paraiso and fitted for service as an oil barge to carry fuel oil to equipment in the Dredging Division fleet. After the sinking of the barge it was found impracticable to raise it without cutting the barge in two. This was done, and the two sections, each about 56 feet long by 36 feet in the beam and eight feet deep, subsequently removed from the channel. The first section was shortly afterward salvaged and made into an oil barge, and week before last the floating crane *Hercules* and a railway wrecking crane laid the second half on the bank of the Canal south of Paraiso, where forces from Paraiso shops are now working on it. When the new oil barge goes into service it will replace an old French barge now about ready for retirement.

DRY DOCK CONSTRUCTION.

Main Walls Completed and Erection of Entrance Gate in Progress.

The main walls of dry dock No. 1 at Balboa which, like the locks of the Canal, will be capable of handling the largest vessels afloat, have been completed with the exception of minor work around the entrance and at the tops, where machinery is to be installed, and the erection of the steel gate at the entrance is in progress.

The first girder was laid for the south leaf of the gate on June 12 and by June 16 the skeleton had been carried to its full height of 56 feet, with the exception of the top girder, which is withheld for greater convenience in the construction. The bottom girder for the north leaf was laid in the morning of Monday, June 21. It is expected that skeleton erection for both leaves will be completed this week and that sheathing will be in progress next week. The steel is handled by locomotive cranes, working on the bottom of the dry dock chamber and entrance, and the erection of a leaf to the height of a four-story house in approximately four days is regarded as rapid work.

The dry dock gate will have the same general construction as the lock gates. Its girders are exactly like the lock gate girders, being interchangeable with them, and were fabricated by the lock gate contractor, the McClintic-Marshall Construction Company, of Pittsburgh, under a supplementary contract. The length and thickness, 65 feet by seven feet, of the dry dock gate leaves will be the same as for the leaves of the lock gates. The height, by a different spacing of girders, will be 56 feet, to which the nearest approach among the lock gates is 54 feet eight inches, the height of the upper guard gates at Pedro Miguel and Gatun Locks. The lock gates vary in height from 47 feet four inches, for the upper guard gates of Miraflores Locks, to 82 feet, for the lower operating gates of Miraflores Locks.

The top of the sill for the dry dock gate will be at elevation 39.5 feet below mean sealevel, which will give a depth of water over the sill at extreme high tide of nearly 50 feet, and at extreme low tide of scarcely less than 30 feet. The sill is practically completed. It is of granite, a facing of smooth stones set in concrete. This is a variation from the practice adopted for the lock gates, the sills of which consisted of greenheart timber set in iron castings, embedded in concrete. The bottom of each leaf will have a timber facing, as the lock gates have, to make a close contact with the sill.

A further variation from the lock gate construction will be in the use on the dry dock gate of wooden quoins and niter posts, instead of rolled steel. The hollow quoins at the hinge ends of the leaves will be of granite. The placing of this granite has been begun. On account of the use of the timber bearings the

pinholes of the leaves will be set six inches farther apart, center to center, than was done in the case of the lock gates. In provision for the replacement of the timbers, as well as any other repairs which may be required by the dry dock gates after the removal of the coffer dam, a seat has been built in the entrance, as at the entrances to the locks, for the use of the floating caisson. In the locks the seat consists of an offset, or niche, in the concrete of the walls, faced with castings, but for the dry dock it was decided to strengthen the shoulder by embedding horizontal steel brackets in the concrete. The bearing surfaces of the caisson will be of granite.

Of the estimated 175,000 cubic yards of concrete required for the dry dock, 145,282 cubic yards had been placed up to Monday, June 21. This is approximately four-fifths of the total amount, but it does not mean that the dry dock is four-fifths completed. Practically all of the concrete which has been placed in it has been mass construction, in heavy walls, where concrete could be placed as fast as mixed. Very little machinery has been placed, and practically none of the reinforced concrete which must be placed very carefully in connection with the erection of machinery, and in the general finishing work. The floor of the dry dock is about two-thirds completed. As referred to the time element, it may be said that the dry dock is a little over half finished, and that it may be expected to be in service within approximately 10 months from the present.

Refund of Rents.

In accordance with the Executive Order of May 25, 1915, (Panama Canal circular No. 601-46) modifying the Executive Order of January 15, 1915, (Panama Canal circular No. 601-37) "by suspending from the operation thereof so much as relates to rent, fuel, and lights during the period of actual construction of The Panama Canal but not later than June 30, 1916", employees of The Panama Canal and the Panama Railroad Company on the gold roll are entitled to a refund of the amount paid for rent and electric light for the period after May 24, 1915. Those who paid in advance for the month of May are entitled to a refund of one-fifth of the amount paid for that month. Those who paid in advance for the month of June or subsequent months are entitled to a refund of the amount so paid. Any arrearages for rent or electric light for the period from March 1 to May 24, 1915, inclusive, will be offset against the amount of refund to which the employee is entitled.

To secure this refund the employee should observe and strictly follow this procedure:

Mail or deliver to the *Auditor, Panama Canal, Balboa Heights*, the receipt or receipts showing payment of rent and electric light for the month of May or subsequent months on which refund is claimed with the following information endorsed on the back of the receipt:

Correct name (if different from that shown on the receipt);

Metal check number;

Department and division where employed;

Present post-office address.

No letter of transmittal is needed. A pay receipt similar in form to that now in use for the payment of salaries will be mailed or delivered to the claimant as soon as the roll can be prepared.

H. A. A. SMITH,
Auditor, The Panama Canal.

EXECUTIVE ORDER.

Flag of the Governor of The Panama Canal.

It is hereby ordered that the Governor of The Panama Canal shall have a distinctive flag for use in his official capacity, which shall be known as the Flag of the Governor of The Panama Canal.

This flag shall be made in two dimensions, as follows: Large flag, 6 feet hoist, by 7 feet 6 inches fly; small flag, 2 feet hoist, by 2 feet 6 inches fly. The body of the flag shall be dark blue. In the center of the flag shall be a white circle, the diameter of which shall be approximately one-half of the fly length of the flag. In the center of the circle, on each side of the flag, shall be the Seal of the Canal Zone, of which the following is a description:

"The seal consists of a shield, showing in base a Spanish galleon of the Fifteenth Century under full sail coming head on between two high banks, all purple, the sky yellow with the glow of sunset; in the chief are the colors of the arms of the United States. Under the shield is the motto: 'The land divided; the world united!'"

The flag of the Governor of The Panama Canal shall be used as follows:

When the Governor of The Panama Canal is embarked in a boat for the purpose of making an official call, his flag shall be carried on a staff at the bow of the boat in which he is embarked.

While on board in his official capacity, or when taking passage on any Canal craft, his flag shall be carried at the mainmast head.

WOODROW WILSON.

THE WHITE HOUSE,

June 8, 1915.

[No. 2208.]

The foregoing Executive Order is being published locally as Canal circular No. 601-47.

Shipment of Household Goods to United States.

Some of the employees taking their household goods to the United States under the seal of inspection of the Canal Zone customs authorities have had their goods shipped a week prior to their own departure. This has resulted in their shipments arriving a week ahead of the owners and consequently, after being allowed to remain 48 hours on the pier, being sent by the customs officials in New York to the customs storehouse to await the appearance of the claimant. When the owner reaches New York he is accordingly compelled to follow his shipment and make claim for it; whereas, if he had arrived on the same vessel as his goods he could have had them passed on the pier without difficulty. This information is published for the benefit of employees, in order that they may avoid a needless inconvenience.

Obituary.

Michael Bryce, a boilermaker at Paraiso shops, was drowned in the Canal at Paraiso on June 4, as the result of falling from a ladder while at work. He was a naturalized American citizen, native of Ireland, and his address in the United States was 274 Fifty-fourth Street, Brooklyn, N. Y.

The Navy tug *Potomac* sailed from Cristobal with the tender *Severn* and submarine flotilla for Bocas del Toro on June 22.

CANAL WORK IN MAY.

Monthly Report of the Acting Governor to the Secretary of War.

BALBOA HEIGHTS, C. Z., June 15, 1915.
The Honorable the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of operations on the Isthmus for the month of May, 1915:

Department of Operation and Maintenance.

Lock operation and maintenance—In addition to the usual maintenance and repair work at the locks, one fender chain was installed, which completes the placing of all apparatus of that class, except for the hanging of one chain at Miraflores; an electrically operated lockage whistle signal was installed at Pedro Miguel Lock, and the work of grading the dams and backfill, and grass planting at the Pacific locks, continued. The following commercial lockages were made:

Gatun—140 lockages, 143 vessels; *Pedro Miguel*, 141 lockages, 142 vessels; *Miraflores*—142 lockages, 142 vessels.

Electrical Division—The net output of the power plants was as follows: Gatun hydro-electric station, 2,367,000 kilowatt-hours; Miraflores steam station, 45,690 kilowatt-hours; Balboa steam station, 828 kilowatt-hours; total 2,413,518, kilowatt-hours.

The output of the Balboa air compressor plant was 120,760,010 cubic feet of free air compressed to 105 pounds. Construction work was carried on in connection with the installation of underground conduit systems and street lighting systems in the Ancon-Balboa, Cristobal, Gatun, and Pedro Miguel districts, and electrical work in connection with the new concrete barracks and quarters at Fort Grant, and various other buildings for The Panama Canal. Construction work also progressed in connection with the permanent telephone system for The Panama Canal and the railway signal system for the Panama railroad.

Municipal Engineering Division—On May 10, Mr. D. E. Wright was placed in charge of the Division as Municipal Engineer, vice Mr. G. M. Wells, assigned to other duties. In addition to the work incident to maintenance, operation, and repairs, the following construction work was in progress: The installation of water mains in the oil tank farm at Mount Hope; grading work and sewer main installation for the Army stables at Corozal; municipal work for the Coast Artillery post at Fort Amador and the staff headquarters; the widening and asphaltting of the road from Ancon to the Administration Building; the construction of a road from the Ancon post-office to the Tivoli Road; municipal work in Balboa; grading around the Miraflores steam purification plant, and the extension of the Miraflores steam power plant, this latter work being turned over to the Building Division on May 10.

Meteorology and hydrography—The rainfall was deficient at all stations except Miraflores. The monthly totals ranged from 5.10 inches at Gamboa to 13.38 inches at Miraflores. The maximum precipitation recorded in any one day was 4.21 inches, at El Vigia on May 20. The estimated rainfall over the Chagres River basin was 34 per cent below the average, or 8.57 inches against a 15-year average of 12.94 inches. The discharge at Alhajuela was 39 per cent above the 26-year May normal.

The elevation of Gatun Lake varied from 86.54 feet on the 7th to 85.36 feet on the 22nd, averaging 85.68 feet. Miraflores Lake varied in elevation from 54.28 feet on the 28th to 53.60 feet on the 1st, averaging 53.93 feet.

Division of Terminal Construction. PACIFIC TERMINALS.

Shops—Concrete sill at the east end of the north leanto of building No. 12 was poured, and the reinforcing of the curtain wall in building No. 9 was started. The planing mill exhaust system was practically completed, and bids for painting same were advertised for. The work of erecting incomplected louver panels on the south ends of buildings Nos. 1, 2, and 4, and at the east and west ends of building No. 12, was started, and the work of making double operations out of the north louvers in the east leanto of buildings Nos. 1, 2, and 4 was completed.

Dry dock—Hand excavation was started for the footings of the compressor house and five were completed. During the month 11,825 cubic yards of concrete were placed, of which 7,693 cubic yards were classified as mass. Work on the granite sill progressed satisfactorily and the sill on the south side was completed. The piers on which the south gate will be erected have been poured, and work of erection is about to commence. Two hundred and eighty-nine thousand fifty-four pounds of reinforcing and rail anchorage, and 62,788 pounds of fixed steel were placed. Work on the crane rail piers progressed favorably and the work on the wall supporting the outer crane rail around the headwall of dry dock No. 1 is being pushed forward.

Entrance pier—Thirty-five thousand two hundred and fifty-seven pounds of rail reinforcing for the piers for the support of the deck were placed, and 375 cubic yards of mass, and 27 cubic yards of reinforced concrete, making a total of 402 cubic yards, placed in the piers and buttresses.

Coaling plant—The concrete covering the girders for the berm crane tracks was placed. In the unloader wharf 774 cubic yards of concrete were placed in the floor slab, 618 cubic yards in the apron and curtain wall, and 24 cubic yards in the footings for fender piles, making a total of 1,416 cubic yards. The floor system is now completed at station 2 plus 75 and eight panels of curtain wall have been completed. In the floor slab, apron, and curtain wall there was a total of 105,948 pounds of reinforcing used. For the reloader wharf there were nine caissons started. Excavation in the cylinders amounted to 1,277 cubic yards. A trestle was driven back of the "D" and "C" rows, as also guide piles for caissons, and in all 17,727 lineal feet of piling were driven during the month.

Excavation—The total excavation for the month amounted to 29,911 cubic yards, of which 16,971 cubic yards were classified as rock. Most of this material was obtained from Sosa Hill quarry, Diablo Hill, and the operations at the unloader wharf, and was used on the Cristobal mole, the fortifications, and the balance by other departments and divisions.

Quarantine boat landing—All of the pipe piles required have been driven, and 13 piles have been reinforced to date. During the month practically 27 per cent of the landing was erected. Due to the storm and the high tide prevailing May 26, 27, and 28, some damage was done to the contractor's erection platform that was supported on the piles.

ATLANTIC TERMINALS.

East Breakwater—On the shore trestle the trestle was advanced from bent 127 to bent 198, a distance of 1,137.8 lineal feet, and on the outside trestle from bent 368 to bent 380, a distance of 174 lineal feet; 1,311.8 lineal feet of single-track trestle and 30,320 lineal feet of piling were driven. All through the month scows dumped dredged material along the axis of the shore trestle ahead of the driving.

Coaling plant—The filling of caissons under the reloader and unloader wharves continued satisfactorily. At the end of the month there remained only two caissons to be filled for the unloader and 40 for the reloader wharf. Two thousand nine hundred and sixteen cubic yards of concrete filler were poured. The pouring of girder encasement and floor slab continued on both unloader and reloader wharves, and 592 cubic yards were poured into the former and 1,768 cubic yards into the latter. No work, except application of second coat of paint, was done on bridges of diggers during the month, under Washington order No. 40483, though the installation of machinery by the contractor might have proceeded had the material and forces been on the site. Work continued in a satisfactory manner on the four unloader towers, under Washington order No. 40587. The installation of machinery, concrete floors, etc., was started in two north towers, which are being rushed as much as possible. Except for a few minor members, all structural erection is completed and riveting is being pushed. No material was received or work done on reloader towers under Washington order No. 40483. Intermittent erection was done on viaduct system on south end of plant and on completed south 500 feet of reloader wharf. The total excavation at the Cristobal coaling plant for the month amounted to 639 cubic yards.

Fuel oil plants—General circular concerning the storage and handling of fuel oils at the Canal terminals was prepared for issuing to individuals and companies erecting tanks on the Isthmus, and others concerned. The erection of housing over manifolds at the Atlantic and Pacific terminal plants was 50 per cent completed. Installation of concrete drains and sewer lines for the Pacific terminal plant was 75 per cent completed.

Marine Division.

One hundred and forty-one vessels passed through the Canal in May, 66 southbound (not including one launch) and 75 northbound. Of this number 58 vessels were of American register and 53 of British register. Collections of tolls amounted to \$547,053.60. Twelve vessels were measured and 123 were inspected to see whether their certificates conformed to the rules.

Dredging Division.

The total excavation for the month, including earth, rock, and gravel was 1,092,637 cubic yards. Of this total 15,932 cubic yards were removed between the Pacific entrance and Miraflores Locks, 123,282 cubic yards from Balboa inner harbor, 671,149 cubic yards from Gaillard Cut, 45,602 cubic yards from Miraflores Lake, and 81,321 cubic yards from Gatun Locks to the Atlantic entrance. The hydraulic grader was engaged in sluicing slide north of Gold Hill and in cutting two of the Obispo Diversion ditches. The work of exterminating water hyacinths continued. The so-called floating islands seem to be breaking up and dying.

Mechanical Division.

Shop orders authorized during the month numbered 858, a decrease of 29 from the previous month, those left over from April being 492, those completed during the month numbering 863, and those carried forward into June numbering 487. The output of the foundry was 101,397 pounds of iron, 73,735 pounds of steel, and 13,553 pounds of brass. Hostling was done on 4,711 pieces of equipment, and shop and field repairs were made on 6,930 cars. In addition, 1,129 light repair jobs were done on equipment and eight cases of extended repairs. The fuel oil handling plant at Balboa handled 77,067.73 barrels and the plant at Mount Hope handled 27,333.58 barrels.

Building Division.

Effective May 10, upon the resignation of Capt. R. E. Wood, the title of Constructing Quartermaster was abolished, and Mr. G. M. Wells, Resident Engineer, was placed in charge of the Building Division. Construction work was in progress on the following buildings at the places named: At Fort Amador—Headquarters building, four barracks, three non-commissioned officers' quarters, two four-family lieutenants' quarters, three two-family captains' quarters, and two field officers' quarters. At Corozal—Stables, wagon sheds, and miscellaneous structures for the mobile army, the railroad station, and two one-family frame quarters. At Balboa—The residence of General Edwards, 11 four-family concrete quarters, three four-family and one two-family frame quarters, and 10 type-17 cottages. The Corozal block plant continued in operation during the month.

Supply Department.

The force report for the half month ending May 12 showed a total of 25,874 employees of The Panama Canal and Panama railroad, of whom 3,373 were white Americans and 22,501 were laborers. Of the latter approximately 316 were Europeans and the remainder West Indian negroes. There was an increase of 2,384 laborers and a decrease of 75 Americans, making a net increase of 2,309.

The occupants of Government quarters numbered 6,996 white Americans, of whom 3,677 were men, 1,575 women, and 1,744 children; 7,664 West Indians, of whom 4,718 were men, 1,279 women, and 1,667 children.

The value of material received during the month was \$544,527.93. It came forward in 27 steamers; the total weight of cargo, exclusive of lumber and piles, was 13,755 tons. Some of the principal items were 2,616,362 feet, board measure, of lumber for stock, 38,540 lineal feet of piles, and 148,955 bags of Portland cement.

Health Department.

General—No case of yellow fever, smallpox, or plague originated on or was brought to the Isthmus during the month. Thirty-six deaths occurred in the Canal Zone. The death rate for disease for the Canal Zone, based upon a population of 34,560, was 10.41 per thousand, as compared with 5.71 for the preceding month and 12.93 for the corresponding month of last year.

Employees—The health of employees continued good. The number of names on the pay rolls for the preceding month was 34,600. On this basis the admission to hospitals and quarters, 886, gave a rate of 307.28 per thousand, as compared with 282.02 for the preceding month and 407.92 for the corresponding month of last year. The admission rates

to hospitals for all diseases were: White, 307.19; blacks, 102.70; Europeans, 866.56; and Americans, 224.04. The admission rates for malaria to hospitals and quarters were: Whites, 104.84; blacks, 21.83; Europeans, 414.44; and Americans, 58.81. The total number of deaths from all causes was 13. Of these seven died from disease, or 2.43 per thousand as compared with 1.76 for the preceding month and 5.74 for the corresponding month of last year. No American died during the month.

Executive Department.

DIVISION OF CIVIL AFFAIRS.

One hundred and twenty-two licenses of all kinds were issued. Eight estates, having a total value of \$1,289.50, were settled. At the port of Balboa 103 vessels entered and 107 cleared, and at the port of Cristobal 144 vessels entered and 142 cleared.

Postal service—Postmasters remitted on account of stamp sales, second class mail collections, postage due collections, and box rent receipts \$7,475.48. Money orders issued aggregated \$334,845.86. Of this total \$110,510 represents the value of deposit money orders issued without fee, in lieu of postal savings certificates. Deposit money orders to the amount of \$106,590, and postal savings certificates to the amount of \$63,471 were paid. The balance of postal savings deposits on hand at the close of the month, represented by the unpaid certificates and deposit money orders, aggregated \$499,740, as compared with \$559,291 at the close of the previous month.

POLICE AND FIRE DIVISION.

Four hundred and thirty-one arrests were made during the month. Of these 400 were males and 31 females. Sixty-one convicts were confined in the penitentiary at the close of the month. Ten persons were deported, five of whom were convicts who had completed their sentences in the penitentiary, and five of whom were prisoners who had served terms in jail.

Twelve fires occurred during the month, and the damage to The Panama Canal and Panama railroad property amounted to \$3. Private property, however, suffered to the extent of about \$101,500, the larger losses being that suffered by the steamship *Pennsylvania* which caught fire at sea and returned to Balboa, the damage to which ship and cargo amounted to approximately \$95,000; a fire in a private residence at Gatun, beyond the water limit, resulting in a loss of \$5,700, and a fire in the Masonic temple at Ancon, resulting in a loss of \$750. The property of the United States Army suffered no loss.

COURTS.

In the District Court three civil, nine probate, and 50 criminal cases were settled; nine civil, 14 probate, and 42 criminal cases were filed, and 103 cases of all kinds were pending at the close of the month. In the magistrate's courts 16 civil and 431 criminal cases were tried.

DIVISION OF SCHOOLS.

The total enrollment in Canal Zone schools was 1,737 for the white schools and 1,599 for the colored schools. In the white schools the net enrollment was 1,139 and the average number belonging 891.8, the average daily attendance being 859.5. In the colored schools the net enrollment was 1,420, the average number belonging 786.5, and the average daily attendance 623.8.

Panama Railroad.

The cargo handled at the Colon and Balboa agencies aggregated 150,212 tons, of which 18,451 tons were handled through the Canal on steamers of the Panama Railroad Steamship Line, as follows: From New York to Balboa, 2,921 tons; from Colon to Balboa, 3,321 tons, total, 6,242 tons. From Balboa to New York, 10,169 tons; from Balboa to Colon, 2,040 tons, total, 12,209 tons; grand total, 18,451 tons.

The work on the terminal docks at Cristobal continued satisfactorily. Two thousand and two hundred lineal feet of steel cylinders were driven for Dock 7, making this item 83 per cent complete. Excavation in cylinders was 66 per cent complete, and 68 per cent of the required amount of concrete had been placed in cylinders. Twenty-eight caissons were completed during the month, making a total to date of 137, or 60 per cent of the total number required.

Respectfully,

CHESTER HARDING,
Acting Governor.

Cafeteria at Balboa.

The Balboa cafeteria will be ready to open on July 1. Meals will not be served outside of regular meal hours, except at the request of heads of departments or divisions. The following will be the meal hours:

Week days—Breakfast, 5 to 7.30; lunch, 11 to 1.30; supper, 5 to 7.30.

Sundays and holidays—Breakfast, 6 to 8.30; lunch, 11.30 to 1.30; supper, 5.30 to 7.30.

The cigar stand will be open only during regular meal hours. At first, until the new system is established, there will be no waiter service.

Bicycle License and Hunting Permits.

Bicycle licenses and hunting permits expiring on June 30 may now be renewed. The fee in each case is one dollar (\$1) for the fiscal year. Check or money order should be made payable to "Collector, Panama Canal," and forwarded to the Chief of the Division of Civil Affairs, Balboa Heights. The issuing of these licenses will be greatly facilitated if applicants for renewal will give the number of the previous license held. Applicants for bicycle licenses should give the name and factory number of the machine when no previous license has been granted. Those who make application for hunting permits for the first time may secure blank forms from any police station or from the Chief of the Division of Civil Affairs. These forms need not be filled out if a permit is to be renewed.

New Station at Corozal Nearly Ready for Use.

The waiting platforms of the new concrete railroad station at Corozal have been placed in use, the roof and walls are completed, the application of finishing plaster is in progress, and it is expected that the office of the station agent will be moved into the new station before the end of the month. The new station is directly to the north of the old, which will be torn down when the new is occupied. The general features of the Corozal station are in harmony with the design of the new station at Balboa Heights, both using concrete throughout and both supporting the roofs over the platforms on cantilever beams supported on single or double rows of columns.

FOR THE FOURTH OF JULY.

Americans Preparing to Hold Celebration at Balboa.

Employees of The Panama Canal and the Panama railroad are planning a celebration of the Fourth of July to be held at Balboa on Monday, July 5. Unlike the previous celebrations of the day, which were under semi-official management, the celebration this year is to be entirely in the hands of volunteer committees of the employees. The movement to have an unofficial celebration was started after it had been decided not to have the usual official celebration.

Features of the day will be athletic events, parades, music, patriotic exercises, and exhibition movements by various units of the Army stationed on the Isthmus. The Army forces on the Isthmus are now greater than at any preceding time and they will have a prominent part in the day's entertainments.

During the afternoon, called at 1.30 p. m., there will be a championship ball game between a picked team from the military forces on the Isthmus and a picked team from all civilians, both teams to be, in opinion of those selecting, the strongest lineup available from the players of all teams in Army or Isthmian leagues. The game is to be called early to enable the soldiers to return to line stations before evening. Arrangements may be made to follow the baseball game by the first football game to be played on the Isthmus.

In the evening there will be fireworks on Ancon Hill, and an open air dance will be held on the promenade along the front of the Administration Building. Preceding the dance and fireworks, there will be folk dancing and gymnastic drills on the prado, beginning at about 7 p. m.

The detailed program is in preparation in the hands of several committees, and will be ready for publication by the latter part of this week.

OFFICIAL CIRCULARS.

Rate for Special Trains.

THE PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., June 16, 1915.

To all concerned—I have to advise for your information that, effective the 19th instant, the Acting Governor has authorized a rate of \$60 to outside parties for special train, consisting of engine, baggage or buffer car, and one coach, seating not to exceed 60 passengers, for eight hours or fraction thereof, and a charge of \$7.50 for each additional hour, not to exceed four, per hour or fraction thereof.

Passes or tickets will be required on these trains for transportation, and trains making the round trip with midnight intervening and those consuming more than 12 hours will be charged as two trains.

The new tariff is being printed, and copies will be furnished to all concerned.

C. H. MOTSETT,
Superintendent.

Annual Reports.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 19, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

It is requested that annual reports for the fiscal year ending June 30, 1915, be submitted to this office not later than July 15, 1915.

The reports will be prepared in quintuplicate, on the same size and grade paper as that used for previous annual reports, namely, eight inches by 14 inches. Reports will be submitted to the Governor by heads of departments and divisions, covering the work under their jurisdiction as follows: the Engineer of Maintenance; the Division of Terminal Construction; the Marine Division; the Dredging Division; the Mechanical Division; the Fortification Division; the Building Division; the Purchasing Department; the Supply

Department; the Health Department; the Accounting Department; the Executive Secretary; the Washington Office; and the Special Attorney.

Where certain duties or certain parts of the work have been transferred from one department or division to another, or where new departments or divisions have been created, the department or division in which the work or duties are lodged as of June 30, 1915, will submit report for the entire fiscal year, obtaining any necessary data from the official previously in charge of the work, or from the records maintained by him if such official has left the service.

The official photographer will take appropriate photographs to illustrate the report. Those departments or divisions whose reports require illustrations should notify this office immediately what photographs are desired, in order that the work may be properly planned. The photographs are intended to show the progress of the work, especially new features, and no photographs will be included the subject of which has been sufficiently covered in a previous report.

CHESTER HARDING,
Acting Governor.

Treatment in Hospitals and Elsewhere.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., May 15, 1915.

CIRCULAR No. 618-5. (Superseding all previous Circulars of the 618 series and modifying Circular 624.)

The following rates and regulations governing hospital and medical services are effective on and after June 16, 1915:

1. Employees of The Panama Canal and the Panama Railroad Company in case of illness or injury will receive free treatment in the hospitals of The Panama Canal, except in cases of alcoholism, drug habit, or venereal disease, and for operations of election.

2. Employees will be admitted to such hospitals upon request made by a physician in the employ of the Health Department or by the official head of the department or division in which they are employed.

3. In sending sick employees to local physicians for treatment, request form must always be properly filled in so as to give the physician the necessary information in case he wishes to send the employee to hospital. The necessities of patients will be given first consideration, and no one in the urgent need of hospital care will be refused admission.

4. Officials who issue requests for medical treatment or forms for admission to hospitals will see that they bear not only the brass check number but the name of the employee as it appears on the pay roll. Special care should be used in case of foreign names, as much difficulty is experienced in identifying employees (on account of incorrect names being given) who have been sick or who have died in hospitals.

5. Employees living with their families in Government quarters who, in the opinion of the visiting physician, can not safely or conveniently report at the dispensary for treatment shall, if they so desire, be treated at their home without charge, except when in the opinion of the district physician convalescence may be unduly prolonged.

6. The family of an employee shall be understood to include those persons who are members of his immediate household, and dependent upon him.

7. The members of families of employees may consult their district physician free of charge. On the recommendation of their district physician they may also consult hospital physicians free of charge.

8. American seamen may be admitted to The Panama Canal hospitals upon the request of a representative of the Public Health Service.

9. Persons having, or suspected of having, contagious or infectious diseases, who are sent to hospital for the protection of the public, shall receive treatment without charge.

10. The indigent sick, insane, and lepers of the Republic of Panama, shall be admitted to such hospitals as may be designated for their reception, upon the request of a duly authorized official of the Republic, bills to be rendered against the Republic of Panama.

11. When Canal Zone school children are sent to hospital upon the recommendation of the district physician as a result of his inspection, no charge will be made for any necessary operation.

12. Charges for elective operations upon employees, dependent members of their families and others entitled to the same rates (as shown in the accompanying schedule), will be made on the basis of one per cent of the approved charge for the particular operation for each \$10 of monthly salary received by the person responsible for the charges, with a minimum charge of \$1 for an employee receiving \$50 or less per month, \$2 for an employee receiving more than \$50 and not exceeding \$100 per month, and \$5 for an employee receiving more than \$100 per month.

For employees and their families all operations listed in the schedule of operations at a price greater than \$250

shall be rated at \$250, and the percentage charge shall be made on that basis.

13. In case of emergency, or where humanity or the public good requires it, a physician may depart from these regulations, but in each such case a written report shall be made immediately to the Chief Health Officer. The Superintendent of Ancon Hospital may, when necessary on account of lack of means of the patient, reduce the charges herein prescribed not exceeding 50 per cent. A written report of all such cases shall be made immediately to the Chief Health Officer, and a copy forwarded to the Auditor of The Panama Canal. The Chief Health Officer may in cases of destitution remit the charges entirely.

14. The charges for treatment shall be as shown in the accompanying table. Where the charges in any case are not specifically provided for in the accompanying table or in the schedule of operations, the charges shall be fixed by the Chief Health Officer, based on the charges herein prescribed.

CHESTER HARDING,
Acting Governor.

SCHEDULE OF OPERATIONS. (See footnote.)

Abscess, liver.....	\$400.00
Adenectomy, cervical, simple.....	50.00
Adenectomy, cervical, radical.....	200.00
Adenectomy, inguinal incision.....	25.00
Adenectomy, inguinal, radical..... (Elective).....	100.00
Amputation, cervix..... (Elective).....	150.00
Amputation, finger, toe.....	25.00
Amputation, foot, hand.....	200.00
Amputation, leg, forearm, arm.....	250.00
Amputation, thigh.....	300.00
Amputation, shoulder.....	350.00
Amputation, hip.....	400.00
Anesthesia (for examination purposes).....	10.00
Appendectomy, simple, chronic.....	150.00
Appendectomy, acute.....	300.00
Appendectomy, complicated.....	500.00
Breast, enucleation of tumors..... (Elective).....	100.00
Breast, excision or amputation.....	150.00
Breast, excision, radical.....	500.00
Bunion..... (Elective).....	100.00
Cancer, lip.....	100.00
Cancer, tongue.....	200.00
Cancer, rectum.....	500.00
Cholecystectomy..... (Elective).....	400.00
Cholecystotomy..... (Elective).....	300.00
Circumcision..... (Elective).....	25.00
Colostomy.....	200.00
Craniotomy, exploratory.....	400.00
Curettage uteri..... (Elective).....	50.00
Cystotomy..... (Elective).....	200.00
Dislocation, reduction, simple.....	50.00
Dislocation, reduction, operative.....	200.00
Fistula in ano.....	50.00
Fractures, reduction (except small bones).....	50.00
Fractures, open operation, simple.....	150.00
Fractures, open operation, complicated.....	300.00
Gastro-enterostomy..... (Elective).....	400.00
Goiter, simple (thyroidectomy)..... (Elective).....	200.00
Goiter, complicated.....	400.00
Harelip..... (Elective).....	100.00
Hemorrhoids, linear excision..... (Elective).....	100.00
Hemorrhoids, radical..... (Elective).....	200.00
Hernia, inguinal..... (Elective).....	150.00
Hernia, femoral..... (Elective).....	150.00
Hernia, ventral (umbilical) simple..... (Elective).....	150.00
Hernia, ventral, large, plastic..... (Elective).....	300.00
Hydrocele..... (Elective).....	100.00
Hysterectomy, simple..... (Elective).....	200.00
Hysterectomy, radical.....	500.00
Hysterectomy, supravaginal..... (Elective).....	300.00
Hysteromyomectomy..... (Elective).....	400.00
Ingrowing toe nail..... (Elective).....	25.00
Laminectomy.....	300.00
Laparotomy, exploratory..... (Elective).....	250.00
Myomectomy..... (Elective).....	250.00
Nephrectomy.....	400.00
Nephropexy..... (Elective).....	200.00
Nephrotomy..... (Elective).....	400.00
Oophorectomy, simple..... (Elective).....	150.00
Oophorectomy, cystic, large..... (Elective).....	300.00
Orchidectomy.....	100.00
Parotid gland tumor, resection.....	250.00
Pelvic peritonitis, chronic, plastic operation..... (Elective).....	300.00
Perineorrhaphy.....	150.00
Plastic surface operation, simple.....	100.00
Plastic surface operation, complicated.....	250.00
Prolapse of rectum.....	300.00
Prolapsus uteri, plastic operation, simple..... (Elective).....	250.00
Prolapsus uteri, plastic operation, complicated.....	400.00
Prostatectomy.....	400.00
Resection of stomach.....	500.00
Resection of bowel.....	500.00
Rodent ulcer, excision of.....	50.00
Salpingo-oophorectomy.....	200.00
Salvarsan or neosalvarsan injection.....	10.00

Skin graft, small.....	50.00
Skin graft, large.....	100.00
Surface tumors, etc., small.....	25.00
Surface tumors, etc., large.....	50.00
Suspensio uteri.....	200.00
Thoracoplasty.....	300.00
Thoracotomy.....	150.00
Trachelorrhaphy.....	100.00

Ureterotomy.....	300.00
Urethrotomy, combined.....	150.00
Urethrotomy, internal.....	100.00

Vaginal puncture.....	50.00
Varicocele..... (Elective).....	100.00
Varicocele and amputation scrotum.....	150.00
Varicose veins.....	100.00
Various minor operations..... (Elective).....	5 to 50

Extraction of teeth, if anesthetic is given, \$5 for first tooth and \$1 for each subsequent tooth.

X-ray.....	10 to 30
Combined operations, (See footnote.) Obstetrical.....	

Low forceps.....	50.00
High forceps.....	100.00
Version.....	200.00
Cesarean, vaginal.....	200.00
Cesarean, abdominal.....	300.00

Eye.

Advancement..... (Elective).....	100.00
Capsulectomy.....	50.00
Cataract extraction.....	300.00
Cataract needling.....	50.00
Corneal trephining.....	75.00
Enucleation.....	50.00
Evisceration.....	75.00
Expression.....	25.00
Iridectomy.....	100.00
Lachrymal operations..... (Elective).....	50.00
Lid plastics..... (Elective).....	75.00
Paracentesis.....	25.00
Pterygium..... (Elective).....	25.00
Refraction..... (Elective).....	10.00
Resection of rectus..... (Elective).....	100.00
Sclerotomy.....	25.00
Tarsallectomy..... (Elective).....	75.00
Tenotomy..... (Elective).....	75.00
Various minor operations..... (Elective).....	10.00

Ear.

Furuncle.....	25.00
Mastoid, simple.....	150.00
Mastoid, radical.....	200.00
Ossiculectomy..... (Elective).....	100.00
Paracentesis.....	25.00
Plastic.....	100.00
Various minor operations.....	10.00

Nose.

Sinus, ethmoid.....	50.00
Sinus, frontal, simple.....	75.00
Sinus, frontal, radical.....	200.00
Sinus, maxillary.....	100.00
Sinus, sphenoid.....	200.00
Spur..... (Elective).....	50.00
Submucous resection..... (Elective).....	75.00
Turbineotomy..... (Elective).....	50.00
Various minor operations.....	10.00

Throat.

Adenoidectomy..... (Elective).....	25.00
Cleft palate..... (Elective).....	150.00
Intubation.....	50.00
Laryngeal resection.....	300.00
Phlegmonous infiltration.....	25.00
Removal of foreign body from trachea or esophagus.....	75.00
Tonsillectomy, single..... (Elective).....	50.00
Tracheotomy.....	75.00
Tumors of larynx.....	100.00
Various minor operations.....	10.00

NOTE.—The word "Elective" after an operation indicates that it is usually an elective operation, and its absence, that the operation is regarded as one of necessity. Neither thing is invariably true, and the arrangement is to be taken merely as a general guide. In general, an operation is considered necessary when indicated for the saving of life, limb, or efficiency, the operating surgeon deciding whether or not such is the case.

Combined operations: (a) When two or more operations are performed on the same patient at the same time the regular charge will be made for the more expensive operation and one-half of the regular charge for the less expensive operation, i. e., for hernia single, \$150, and for hernia double, \$225; for perineorrhaphy, \$150, and with trachelorrhaphy, \$200. (b) Curettage uteri is included in all female operations without extra charge. (c) For appendectomy in the course of some other abdominal operation, \$50 extra.

Charges will not be made for laboratory examinations for contagious, infectious, or quarantinable diseases other than venereal diseases. For other laboratory work charges will be made according to this schedule, except when certified to by the attending physician as necessary for diagnosis. Laboratory work not specified in this schedule will be charged for according to time spent and materials used, with a surcharge for work requiring expert knowledge or skill. This schedule will supersede all charges heretofore announced in other circulars.

Schedules of laboratory and miscellaneous charges are published on the following page:

SCHEDULE OF CHARGES FOR HOSPITAL AND OTHER MEDICAL TREATMENT.

	Ordinary care and treatment in hospital ward per day.	Care of alcoholism, drug habit or venereal disease in hospital ward per day.	Care of alcoholism, drug habit or venereal disease in private room (including cell room) per day.	Private room, when requested by patient, per day in addition to ward charges. ⁽¹⁹⁾	Ordinary care and treatment in insane ward per day.	Special nurse in hospital each per day, when requested by patient. ⁽¹⁹⁾	Special maid or attendant in hospital each per day, when requested by patient. ⁽¹⁹⁾	Obstetrical case, including 10 days' ward charges (complications to be charged surgical rates in addition.)	Obstetrical case, including 10 days' private room charges (complications to be charged surgical rates in addition.)	Obstetrical case, outside of hospital (complications to be charged surgical rates in addition.)	Surgical operations, elective.	Surgical operations, not elective.	Office consultation at hospital or dispensary.	Home visit, first, if unable to go to dispensary.	Home visit after first.
1. Employees of The Panama Canal or the Panama Railroad Company: (a) Monthly pay \$50 or less. (b) Monthly pay more than \$50.	Free Free	\$0 75 1 50	\$2 25 3 00	\$1 50 1 50	Free Free	\$4 00 4 00	\$1 50 1 50				(9) (9)	Free Free	Free Free	Free Free	\$0 50 1 00
2. Families of employees of Panama Canal or Panama Railroad Company: (a) Monthly pay of employee \$30 or less. (b) Monthly pay of employee more than \$30 and not more than \$50. (c) Monthly pay of employee more than \$50 and not more than \$100. (d) Monthly pay of employee more than \$100 and not more than \$150. (e) Monthly pay of employee more than \$150: Male. Female.	\$0 30 .50 1 00 1 50 1 50 1 50 2 50			1 50 1 50 1 50 1 50 1 50 1 50	\$8 30 .50 1 00 1 00 1 00 1 00		1 50 1 50 1 50 1 50 1 50 1 50	\$15 00 15 00 20 00 25 00 25 00 25 00		\$10 00 10 00 15 00 15 00 15 00 15 00	(9) (9) (9) (9) (9) (9)	Free Free Free Free Free Free	Free Free Free Free Free Free	\$8 50 1 50 1 75 1 00 1 00 1 00	\$0 50 1 50 1 75 1 00 1 00 1 00
3. Servants of employees of The Panama Canal or Panama Railroad Company: (a) Black. (b) White.	.30 .75	.75 1 50	2 25 3 00	1 50 1 50	.30 .75		1 50 1 50	15 00 20 00		10 00 15 00	(10) (10)	Free Free	Free Free	1 50 1 50	1 50 1 50
4. Non-dependent visitors of employees of The Panama Canal or Panama Railroad Company.	3 00	4 00	6 00	2 00	2 00	5 00	2 00	50 00	70 00	30 00	(9)	(9)	12 00	13 00	13 00
5. Employees of contractors under The Panama Canal: ¹⁷ (a) Monthly pay \$50 or less. (b) Monthly pay more than \$50 and not more than \$100. (c) Monthly pay more than \$100.	Free Free Free	.75 1 50 1 50	2 25 3 00 3 00	1 50 1 50 1 50	Free Free 1 00		1 50 1 50 1 50				(9) (9) (9)	Free Free Free	Free Free Free	Free Free Free	1 50 1 00 1 00
6. Families of employees of contractors under The Panama Canal, same rates as families of employees of The Panama Canal. ¹⁶															
7. Army, Navy, Marine Corps, and Public Health Service: (a) Officers and enlisted men. (b) Families of officers— Male. Female. (c) Families of enlisted men: ¹⁶ Male. Female. (d) Servants of officers.	1 50 1 50 2 50 .75 .75 1 50 (18)	1 50 1 50 1 50 1 50 1 50 1 50 (18)	3 00 3 00 3 00 1 50 1 50 1 50 (18)	1 50 1 50 1 50 1 50 1 50 1 50 (18)	1 00 1 00 1 00 1 00 1 00 1 00 (18)	4 00 4 00 4 00 4 00 4 00 4 00 (18)	1 50 1 50 1 50 1 50 1 50 1 50 (18)		25 00 30 00 30 00 15 00 15 00 15 00 (18)	40 00 40 00 40 00 10 00 10 00 10 00 (18)	(10) (10) (10) (10) (10) (10) (10)	Free Free Free Free Free Free (18)	(12) (12) (12) (12) (12) (12) (12)	(12) (12) (12) (12) (12) (12) (12)	(12) (12) (12) (12) (12) (12) (12)
8. Other employees of the United States and their families.	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
Servants of other employees of the United States.	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
9. American seamen.	1 50	1 50	3 00	1 50	1 50	4 00	1 50				(10)	Free	Free		
10. Foreign seamen.	1 50	1 50	3 00	1 50	1 50	4 00	1 50				(10)	Free	Free	1 00	
11. Persons with contagious or infectious diseases.	Free			1 50		4 00	1 50				Free	Free			
12. Patients of Republic of Panama. ¹⁶	.75				.75						Free	Free			
13. Private pay patients.	4 00	4 00	6 00	2 00	2 00	5 00	2 00	50 00	70 00	30 00	(9)	(9)	13 00	15 00	15 00
14. Physicians and nurses not in employ of The Panama Canal.	2 50	4 00	6 00	1 50	1 00	5 00	2 00				(11)	(11)	Free	Free	Free
15. Companions: same rates as if a patient but in case less than \$1.50 per day when in ward.															
16. Persons engaged solely in charitable and religious work in the Canal Zone and their families.	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)

(1) No charge for permanently demented member of employee's family when incurability is certified to by physician in charge of asylum. (2) Surgical dressings without consultation, half price of consultation fee. (3) For visit to two or more in same family, full price for first and half price for each additional patient. (4) No charge for home visits to members of family of officer of Army, Navy, Marine Corps, or Public Health Service on duty with The Panama Canal who receives no extra compensation from The Panama Canal. (5) Prior to July 1, 1915, \$1. (6) At Colon Hospital, average per capita daily cost for this class of patients during preceding month. (7) For nursing mother, accompanying sick nursing child rates may be reduced or remitted by Superintendent of Hospital. (8) Children under 8 years of age, same rates as for male adults. (9) See schedule of operations. (10) Ten per cent of schedule. (11) Twenty-five per cent of schedule. (12) Free when Army medical officer is not available. (13) \$1 when Army medical officer is not available. (14) 50 cents when Army medical officer is not available. (15) Same rates as families of employees of The Panama Canal. (16) Deposit sufficient to cover charges required on admission. (17) Letter on admission required from contractor guaranteeing payment of charges; otherwise deposit required on admission sufficient to cover charges. (18) Same rates as servants of employees of The Panama Canal. (19) Free when not requested by patient but certified to by attending physician as necessary. (20) Charges based on servant's pay as in case of employees.

SCHEDULE OF LABORATORY AND MISCELLANEOUS CHARGES.

	COFFIN.		Cremation.	Disinterment.	Embalming.	Funeral direction.	Hearse.	Interments.	Lining and Sealing Caskets.		Preparation of salvasanized serum.	Receptacles for ashes of cremated.
	Adult's.	Child's.							Adult's.	Child's.		
1. Employees of The Panama Canal and the Panama Railroad Company or of contractors under The Panama Canal. (a) Monthly pay \$50 or less. (b) Monthly pay more than \$50.	Free Free	Free Free	Free Free	Free Free	Free Free	Free Free	Free Free	Free Free	Free Free	Free Free	5 00 10 00	Free
2. Families of employees of The Panama Canal or Panama Railroad Company or of contractors under The Panama Canal: (a) Monthly pay of employee \$50 or less. (b) Monthly pay of employee more than \$50.	\$3 25 3 25	\$1 25 1 25	\$2 00 10 00	\$5 00 5 00	\$10 00 10 00	Free \$5 00	Free Free	\$3 00 3 00	\$10 00 10 00	\$5 00 5 00	5 00 10 00	\$1 00 1 00
3. Servants of employees of The Panama Canal or Panama Railroad Company and others in the service of the United States, and contractors under The Panama Canal.	3 25	1 25	2 00	5 00	10 00	Free	Free	3 00	10 00	5 00	5 00	1 00
4. Officers and enlisted men of the Army, Navy, Marine Corps, and Public Health Service and their families.	3 25	1 25	10 00	5 00	10 00	5 00	Free	3 00	10 00	5 00	10 00	1 00
5. Other employees of the United States and their families.	3 25	1 25	(1)	5 00	10 00	(1)	Free	3 00	10 00	5 00	(1)	1 00
6. Private pay patients.	5 00	2 00	30 00	5 00	10 00	10 00	10 00	5 00	10 00	10 00	10 00	1 00

(1) From hospital morgue to Corozal cemetery, \$5. (2) From hospital morgue to Corozal cemetery, \$5. From Ancon Hospital morgue to Panama cemetery, \$2.50. (3) Same rates as families of employees of The Panama Canal.

NOTE.—The following items are free to all classes of patients except private pay patients, who shall be charged the following rates: Urine examination, \$2; Wassermann test, \$10; anti-smallpox vaccination, \$1; antogonous vaccine, for first vial, \$5; for each vial of this vaccine after the first, \$2; anti-typhoid vaccine, per dose, \$1. (This is free to all residents of the Canal Zone or Republic of Panama. Price when sold in bulk, \$5 per 10 c. c. bottle); anti-tetanus vaccine, per dose, \$5.

COMMISSARY DEPARTMENT

The "Ancon" Makes Trip for Beef Cattle.

The *Ancon* of the Panama Railroad Steamship Line made a special trip from Cristobal to Port Limon, Costa Rica, between Sunday, June 20, and 10 p.m., Tuesday June 22, for a cargo of about 416 head of cattle which are to be slaughtered on the Canal Zone and sold by the Commissary branch of the Supply Department, to ships and to employes through the commissary stores.

Commissary Hours.

The commissary stores at Las Cascadas, Empire, and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

The charges published below will be increased by 10 per cent in case of sales to commercial ships and foreign naval vessels, and by 20 per cent for yachts.

The following is a list of retail prices of cold storage provisions which will be effective June 24, 1915:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....	10	
Shoulder, trimmed, per pound.....	12	
Leg (8 to 10 pounds), per pound.....	19	
Short cut, chops, per pound.....	23	
Shoulder, chops, per pound.....	14	
Lamb—Stewing, per pound.....	12	
Shoulder, trimmed, per pound.....	15	
Leg, (5 to 8 pounds), per pound.....	24	
Chops, per pound.....	29	
Chops, shoulder, per pound.....	18	
Veal—Stewing, per pound.....	12	
Shoulder, for roasting (not under 4 lbs.), per pound.....	15	
Chops, shoulder, per pound.....	20	
Chops, per pound.....	30	
Loin, for roasting, per pound.....	30	
Cutlets, per pound.....	36	
Beef—Suet, special, per pound.....	31	
Soup, special, per pound.....	7	
Soup, bones, special, per pound.....	21	
Stews, special, per pound.....	11	
native, per pound.....	8	
Plates, special, per pound.....	12	
native, per pound.....	8	
Chuck roast, special (3 lbs. and over), per pound.....	12	
Chuck roast, native (3 lbs. and over), per pound.....	8	
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16	
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24	
Rib roast, second cut, native (3½ pounds and over), per pound.....	9	
Rib roast, first cut (not under 3 pounds), special, per pound.....	19	
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27	
Rib roast, first cut, native (3 pounds and over), per pound.....	11	
Pot roast, special, per pound.....	20	
choice, per pound.....	28	
native, per pound.....	12	
Rump roast, special, per pound.....	20	
choice, per pound.....	28	
native, per pound.....	12	
Porterhouse roast, special, per pound.....	22	
choice, per pound.....	31	
native, per pound.....	16	
Steak, chuck, special, per pound.....	13	
native, per pound.....	9	
Round, bottom, special, per pound.....	13	
choice, per pound.....	19	
native, per pound.....	10	
Round, top, special, per pound.....	15	
choice, per pound.....	22	
native, per pound.....	10	
Sirloin, special, per pound.....	20	
Sirloin, choice, per pound.....	28	
Sirloin, native, per pound.....	12	
Sirloin, choice cut, special, per pound.....	23	
Sirloin, choice cut, choice, per pound.....	32	
Sirloin, choice cut, native, per lb.....	16	
Rump, special, per pound.....	20	
choice, per pound.....	28	
native, per pound.....	12	
Porterhouse (not less than 1½ pounds), special, per pound.....	23	
Porterhouse (not less than 1½ pounds), choice, per pound.....	34	
Porterhouse (1½ pounds and over), native, per pound.....	17	
Porterhouse, short, Delmonico special, per pound.....	20	

		Price.
Porterhouse, short, Delmonico choice, per pound.....	28	
Porterhouse, short, native, per lb.....	12	
Tenderloin, Western, special, per pound.....	35	
Tenderloin, Western, choice, per pound.....	46	
Tenderloin, Western, native, per lb.....	25	

NOTE.—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders placed with commissary storekeepers before 11 a. m., will be shipped for delivery on the following morning.

Pork—Hams, fresh, per pound.....	\$23
Shoulders, fresh, per pound.....	\$19
Loin, chop, or roast, per pound.....	\$19
Pigs' feet, fresh, each.....	2
Pigs' head, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23
Spare ribs, per pound.....	11
Ox tails, per pound.....	9
Beef tongue, native, whole, per pound.....	20

MISCELLANEOUS.

There were no important changes in prices of vegetables, fruits, etc.

* Indicates advance from preceding list.

† Indicates reduction from preceding list.

‡ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective June 22:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Curtain, net, yd.....	15	11
1 rib, unbleached, yd.....	10	08
Linen, costume, yd.....	38	29
Overalls, pr.....	92	1.05
Pots, flower, 12", ea.....	37	60
Pots, Azalea, 12", ea.....	34	60
Soap, Life Buoy, small cake.....	04	06
Tea, English Breakfast, ½ tin.....	16	18
Walnuts, Cresca, jar.....	22	26

Misdirected Letters.

BALBOA HEIGHTS, C. Z., June 23, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressee:

Bennett, Everett, W.	McGrath, Master Lawrence M.
*Connolly, Mrs. P. H.	Mott, Geo. T.
*Cowan, Maximilian	Neville, Mrs. Edward
Cripps, Mrs. Ernest	Orfila, Sra. Cleonencia L.
*Harrington, Mrs. F.	*Richard, C. E.
Higgins, E. J.	Sawyer, Grover
Holmes, Dr. Frank	Soluskey, Alexander
Holt, J. M.	†Williamson, R. A.
Mahoney, S.	

LETTERS UNCALLED FOR JUNE 16.

†Baczewski, Kas.	Green, John
Biel, Frank	Greene, Dr. O. I.
†Bruce, Charles	*Holtzen, Geo.
Byrne, Srta. Hayde	Hughes, James
Cain, Elmer	†Keenan, Mrs. H.
Crouch, William T.	Mecom, W. T.
Dillon, Capt. T. H.	*Millington, S. T.
†Dowell, Paul H.	Payne, Robt. T.
†Dulin, C.	†Sanders, Frank H.
Elcock, Mrs. Nathaniel	Shuff, Mrs. Asa
Elliott, Irby	Walker, Miss Mabel
Ferguson, Fred	Whitehead, Sherman
Gardiner, F. W.	Yount, Jessie
*Card.	†Paper.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday June 19, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gatun Lake.	Miraflores Lake.	
Sun., June 13.....	133.95	98.3085	48.85	44.54	54.15
Mon., June 14.....	130.35	96.4085	54.85	48.54	50.10
Tues., June 15.....	131.35	96.3085	62.85	56.53	97
Wed., June 16.....	128.85	95.0085	47.85	47.53	86
Thurs., June 17.....	126.95	93.3085	50.85	50.54	00
Fri., June 18.....	126.60	93.0685	50.85	42.54	06
Sat., June 19.....	126.65	92.9785	52.85	45.54	14
Heights of low water to nearest foot....	125.00	91.00			

SHIPPING INFORMATION.

Panama (Balboa) tide predictions for the next five weeks are given in this table:

JUNE				
DATE.	Time and height of high and low water.			
Wed., June 23.....	5:28	11:38	18:12	
	2 6	14 0	1 7	
Thurs., June 24.....	0 21	6:31	12:42	19:12
	13 0	2 3	14 5	1 0
Fri., June 25.....	1:25	7:33	13:43	20:10
	13 6	1 8	15 0	0 2
Sat., June 26.....	2:25	8:31	14:41	21:04
	14 4	1 1	15 6	-0 5
Sun., June 27.....	3:22	9:25	15:36	21:57
	15 1	0 6	16 0	-1 0
Mon., June 28.....	4:14	10:19	16:29	22:47
	15 7	0 2	16 2	-1 2
Tues., June 29.....	5:05	11:11	17:19	23:37
	16 0	0 1	16 0	-1 0
Wed., June 30.....	5:54	12:01	18:08	
	15 9	0 3	15 5	
Thurs., July 1.....	0:25	6:43	12:51	18:59
	-0 5	15 6	0 8	14 8
Fri., July 2.....	1:13	7:30	13:42	19:47
	03	15 0	1 4	13 8
Sat., July 3.....	2:02	8:18	14:34	20:40
	1 3	14 1	2 2	12 9

JULY.

DATE.	Time and height of high and low water.			
Sun., July 4.....	2:51	9:09	15:26	21:34
	2 3	13 3	2 9	12 0
Mon., July 5.....	3:43	10:02	16:22	22:35
	3 3	12 6	3 4	11 3
Tues., July 6.....	4:38	11:00	17:20	23:44
	4 1	12 0	3 7	11 0
Wed., July 7.....	5:37	12:01	18:19	
	4 5	11 8	3 7	
Thurs., July 8.....	0:50	6:57	13:00	19:15
	11 1	4 5	11 0	3 5
Fri., July 9.....	1:47	7:53	13:52	20:05
	11 4	4 3	12 2	3 0
Sat., July 10.....	2:35	8:20	14:39	20:51
	11 9	3 9	12 7	2 4
Sun., July 11.....	3:17	9:08	15:19	21:33
	12 5	3 3	13 2	1 8
Mon., July 12.....	3:55	9:51	15:58	22:12
	13 1	2 8	13 7	1 3
Tues., July 13.....	4:31	10:28	16:34	22:51
	13 7	2 3	14 1	0 9
Wed., July 14.....	5:06	11:10	17:11	23:29
	14 2	1 9	14 3	0 6
Thurs., July 15.....	5:40	11:49	17:46	
	14 5	1 6	14 4	
Fri., July 16.....	0:05	6:14	12:28	18:24
	0 6	14 7	1 4	14 3
Sat., July 17.....	0:44	6:49	13:09	19:03
	0 8	14 8	1 4	14 1
Sun., July 18.....	1:24	7:27	13:54	19:45
	1 1	14 8	1 5	13 7
Mon., July 19.....	2:08	8:10	14:42	20:35
	1 6	14 5	1 7	13 2
Tues., July 20.....	2:58	9:00	15:36	21:32
	2 1	14 2	2 0	12 8
Wed., July 21.....	3:55	9:59	16:39	22:40
	2 6	13 9	2 1	12 5
Thurs., July 22.....	5:00	11:07	17:46	23:56
	2 9	13 7	2 0	12 6
Fri., July 23.....	6:08	12:20	18:52	
	2 8	13 8	1 6	
Sat., July 24.....	1:09	7:16	13:30	19:55
	13 1	2 4	14 3	0 9
Sun., July 25.....	2:15	8:20	14:33	20:52
	13 9	1 7	14 9	0 1
Mon., July 26.....	3:14	9:15	15:30	21:44
	14 8	1 0	15 5	-0 5
Tues., July 27.....	4:05	10:08	16:21	22:34
	15 6	0 4	15 8	-0 8
Wed., July 28.....	4:53	10:57	17:06	23:20
	16 0	0 1	15 8	-0 8

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3.47 p. m.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Panama;" in the United States, "Panacanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., June 20, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross ²	Net
June 14	Finn	Norwegian	Acties S. S. Finn	New York	Eten, Peru	General	5,310	4,163	3,044
June 14	Colon	American	Panama Railroad S. S. Line	New York	Balboa	General	1,830	5,866	4,222
June 14	Brutus	American	U. S. Navy	Guantanamo	Gatun Lake	Coal	2,700	2,816	1,788
June 15	Chile	British	Pacific Steam Navigation Co.	Cristobal	Guayaquil	General	1,014	4,040	2,628
June 15	Harry Luckenbach	American	Luckenbach Line	New York	Los Angeles	General	2,500	3,001	2,047
June 15	Totori Maru	Japanese	Nippon Yusen Kabushiki Kaisha	New York	Taku Bar, China	Pet'r'l'm, general	8,900	6,417	4,650
June 15	Isthmion	American	American-Hawaiian Line	New York	Los Angeles	General	7,077	8,677	3,975
June 15	Cordium	British	Anglo-Saxon Petroleum Co.	New Orleans	Los Angeles	Petroleum	7,615	6,386	4,745
June 15	Howick Hall	American	U. S. Steel Products Co.	New York	Callao	General	7,050	6,048	4,348
June 16	Arizonan	American	American-Hawaiian Line	New York	Los Angeles	General	9,769	8,989	6,864
June 17	Bessie Dollar	American	Dollar S. S. Line	New York	Vladivostok	General	5,600	4,855	3,660
June 17	Santa Catalina	American	W. R. Grace & Co.	New York	Iquique	Ballast		6,657	4,409
June 17	Coral	British	British Government	Liverpool	San Francisco	Ballast		5,544	3,940
June 18	Peru	British	Pacific Steam Navigation Co.	Cristobal	Guayaquil	General	597	4,038	2,626
June 18	Guernsey	Norwegian	Dampsk Acties Guernsey	Philadelphia	Junin	Ballast		4,418	3,273
June 18	Terrier	Norwegian	Dampsk Acties Wilhelmsens	New Orleans	Tocopillo	Ballast		5,495	4,032
June 19	William Chatham	American	Wm. Chatham S. S. Co.	Newport News	Tiburon	Coal	1,916	1,702	823
June 19	Rene	French	L. Guillon	Philadelphia	Hiogo	Petroleum		2,577	2,324
June 19	Acajulla	British	Salvador R. R. Co.	Cristobal	Corinto	General	933	1,219	627
June 20	Indraghiri	British	Indra Line, Ltd.	New York	Vladivostok	General	7,575	6,707	4,606
June 20	Kim	Norwegian	P. Johannessen	New York	Calita Buena	Ballast		7,552	5,605

THROUGH THE CANAL—PACIFIC TO ATLANTIC

June 14	Craster Hall	American	U. S. Steel Products Co.	Antofagasta	Colon	Nitrates	6,900	4,882	3,552
June 14	Inverkip	British	R. J. Rowat Co.	Junin	Norfolk	Nitrates	6,853	4,803	3,620
June 15	Virginian	American	American-Hawaiian Line	Hilo	Delwr. Breakwtr	Sugar, pineapples	11,400	10,312	7,684
June 16	Falcon	American	Chas. Nelson Co.	San Francisco	Boston	Lumber	2,000	1,826	1,052
June 16	Chas. Nelson	American	Chas. Nelson Co.	San Francisco	Boston	Lumber	1,400	716	609
June 16	Curaco	British	N. Y. and Pacific Line	Iquique	Baltimore	Nitrates	9,000	6,503	4,612
June 16	Frederick Luckenbach	American	Luckenbach Line	Los Angeles	Phila. and N. Y.	General, lumber	3,400	3,006	2,042
June 16	Huasco	Chilean	South American S. S. Co.	Valparaiso	Cristobal	General	1,291	4,563	3,121
June 17	Colon	American	Panama Railroad S. S. Line	Balboa	New York	General		5,866	4,222
June 19	John A.	American	J. A. Walker	Balboa	Gatun Lake	General		213	140
June 19	Bolton Castle	British	J. Chambers & Co.	Comax	Boston	General	117	6,437	4,863
June 20	American	American	American-Hawaiian Line	Tacoma	Poughkeepsie	Lumber	6,300	5,973	4,153
June 20	Queen Elizabeth	British	Thos. Dunlop & Sons	Junin	Cristobal (orders)	Nitrates	6,898	4,631	3,381

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
June 18	Advance	Panama R. R. S. S. Line	New York

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
June 24	Salvador	Salvador Railway Co.	Salina Cruz.
June 25	Alaskan	American-Hawaiian Line	Hilo.
June 25	Montaro	Peruvian S. S. Co.	Callao.
June 25	Celia		Chilean ports.

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
June 15	Perou	French Line	Bordeaux.
June 19	Coronado	Elders & Fyffes	Port Limon.
June 20	Danube	Royal Mail S. P. Co.	Southampton.

*DEPARTURES.

Date	Vessel	Line	To
June 15	Edda	K. S. Nordgreen	Havana, Cuba.
June 18	Wegadesk	Earn Line	Felton, Cuba.
June 18	Tancred	Earn Line	Daiquiri, Cuba.
June 19	Coronado	Elders & Fyffes	Bristol, Eng.
June 20	Perou	French Line	Bordeaux.
June 20	Leonidas	U. S. Navy	San Blas coast.

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
June 21	Meltonian	Leyland Line	Liverpool.
June 23	Ocland	Earn Line	Norfolk.

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
June 21	Wilhelmina	McCreighton	Bluefields.
June 22	Danube	Royal Mail S. P. Co.	Southampton
	Meltonian	Leyland Line	Galveston.
	Ocland	Earn Line	Cuba.

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Date	Vessel	Line	From
June 15	San Jose	Pacific Mail S. S. Co.	San Francisco.
June 17	Ucayali	Peruvian S. S. Co.	Callao.
June 19	Newport	Pacific Mail S. S. Co.	San Francisco.

*DEPARTURES.

Date	Vessel	Line	To
June 14	Annapolis	U. S. Navy	Corinto.
June 19	San Jose	Pacific Mail S. S. Co.	San Francisco.

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
June 25	Columbia	North Pacific	Chilean ports.
June 25	Anjo Maru	Toyo Kisen Kaisha	San Francisco.
June 28	San Juan	Pacific Mail S. S. Co.	San Francisco.

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
June 21	Ucayali	Peruvian S. S. Co.	Callao.
June 26	Newport	Pacific Mail S. S. Co.	San Francisco.

*Other than vessels passing through the Canal.

Sailings of Vessels in Regular Service with the Isthmus.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal; and every Thursday, direct from New York; between Colon and New York by the United Fruit Company, sailings via Kingston weekly and via Havana weekly; between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

NEW YORK TO CRISTOBAL-COLON.

Sails	Arrives
Almirante	U. F. C. June 16
Panama	P. R. R. June 17
Pastores	U. F. C. June 19

Zacapa	U. F. C. June 23
Allianca	P. R. R. June 24
Calamares	U. F. C. June 26
Carrillo	U. F. C. June 30
Colon	P. R. R. July 1
Tenadores	U. F. C. July 3

CRISTOBAL-COLON TO NEW YORK.

Santa Marta	U. F. C. June 24
Advance	P. R. R. June 26
Metapan	U. F. C. June 28
Almirante	U. F. C. July 1
Panama	P. R. R. July 3
Pastores	U. F. C. July 5
Zacapa	U. F. C. July 8
Allianca	P. R. R. July 10
Calamares	U. F. C. July 12

NEW ORLEANS TO CRISTOBAL-COLON.

Turrialba	U. F. C. June 16
Heredia	U. F. C. June 19
Abangarez	U. F. C. June 23
Parismina	U. F. C. June 26
Atenas	U. F. C. June 30
Cartago	U. F. C. July 3
Turrialba	U. F. C. July 7
Heredia	U. F. C. July 10

CRISTOBAL-COLON TO NEW ORLEANS.

Cartago	U. F. C. June 24
Turrialba	U. F. C. June 24
Heredia	U. F. C. July 1
Abangarez	U. F. C. July 1
Parismina	U. F. C. July 8
Atenas	U. F. C. July 8
Cartago	U. F. C. July 15

CANAL



RECORD

Volume VIII.

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No. 45.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly. The subscription rate is \$1 per year in the United States and its possessions, and in Canada, Cuba, Mexico, and Panama (domestic postage), and \$1.50 in other countries (foreign postage). The paper is furnished free to United States Government departments, representatives of foreign governments, public libraries, and employees of The Panama Canal and the Panama Railroad Company whose names are on the gold roll.

All subscriptions expire on December 31. Domestic subscriptions are accordingly charged as beginning from the first of the quarter of the year in which received. Remittances should be made to pay only to December 31, on this basis: Sent between April 1 and July 1, 75 cents; July 1 to October 1, 50 cents; October 1 to January 1, 25 cents. For foreign subscriptions the year is divided into thirds: Between January 1 and May 1, \$1.50; May 1 to September 1, \$1; September 1 to January 1, 50 cents.

Remittances for subscriptions may be forwarded to The Panama Canal, Washington, D. C., or to The Canal Record at the address given below.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Gasoline Storage Tanks for Terminal Oil Plants.

Operations have begun for the erection of gasoline storage tanks in connection with the oil handling plants at the terminals of the Canal. Two tanks of approximately 5,300 barrels capacity each, situated on the west side of the locks at Gatun and formerly used for the storage of fuel oil for the electric plant at Gatun, are being emptied of oil and will be transferred to the terminal oil plants, for use in the storage of gasoline. Upon the completion of their erection, and of the pipeline connections with the handling plants and the oil cribs, it will be possible to supply gasoline to vessels with the ease and quickness with which fuel oil and Diesel oil are now supplied. Previous handling of gasoline has been in drums and cases.

Electric Trucks for Terminal Piers.

In order to expedite the handling of cargo on the piers at Cristobal the Panama Railroad Company has placed an order for electric trucks, in the expectation of increasing the use of such equipment if the results from their operation and the developments of traffic warrant. The order placed was for four electric tractor trucks, each equipped with three trailers, to be furnished by the Buda Company, of Chicago; and in addition eight trucks of different type are to be selected by the New York office of the company and sent to the Isthmus.

Each of the tractor trucks ordered is six feet long over all by 40 inches wide, has a wheel base of 42 inches and wheel gage of 32 inches, four wheels 16 inches in diameter, and a clearance of its working parts of six inches above the floor. Equipped with two sets of storage batteries, each weighs approximately

2,500 pounds. The steering radius is five feet and the speed, with three speeds forward and three in reverse, is from one to seven miles per hour. Each tractor is rated to haul 20,000 pounds on trailers.

It is proposed in the selection of additional trucks to experiment with types equipped with small cranes, making a unit capable of lifting cargo in a sling, transporting it, and delivering it, with a minimum of dependence on human labor.

Completing New Freight House in Panama.

The roof over the south wing of the new concrete freight house of the Panama railroad for the city of Panama was finished last week and the final plastering of the walls of hollow concrete blocks, and the painting of the roof trusses are in progress. The entire building is 75 by 600 feet in plan, with a two-story section in the center 40 feet long, the upper story of which is used for offices, and, after allowing for depressed tracks occupying a width of 12 feet for practically the length of the building, affords about 36,000 square feet of storage space in addition to the office space. The north wing has been in use several months, and with the virtual completion of the south wing, the entire building is now in service.

Vessels May Take Boiler Water from Gatun Lake.

Steamship masters are advised that, with the agreement of the pilot, excellent boiler water may be taken up in Gatun Lake, preferably between Gatun Locks and Darien. South of Darien the water is likely to be muddied by the dredging operations in the Cut or by high waters in the Chagres River. The pilot can advise of the best place to take water.

Southbound vessels of deep draft should confer with the pilot as to the advisability of taking water in Gatun Lake, as an increase in draft may affect the facility of handling the vessel past the part of the channel affected by slides. Northbound vessels which have passed through the Cut may take up all the water desired, without charge.

The water in Miraflores Lake is slightly saline, as a result of infiltration from the Pacific Ocean. At present the degree of salinity is not sufficient to be distinctly injurious but it is better to take the entirely fresh water of Gatun Lake.

The four-masted steel bark *Daylight* arrived at Cristobal on June 26 from New York, and entered the Canal the next day in tow of tugs, on her way to Shanghai. She is carrying 144,600 cases of refined petroleum and 5,000 cases of naphtha, loaded at New York.

The steamship *Anyo Maru* of the Toyo Kisen Kaisha called at Balboa on her way from Chilean ports to Hongkong with a cargo of 9,010 tons of nitrates and hides, to take on 1,800 tons of coal. She cleared from Balboa on Tuesday, June 29.

CANAL TRAFFIC IN MAY.

Number of Ships Using Canal Greater than in Any Previous Month—Summary of Movements.

The number of oceangoing vessels which passed through the Canal during the month of May was 141. This is more than used the Canal during any preceding month. The previous highest number was 136, for March. Cargo passing through the Canal in May amounted to 578,708 tons, which exceeded all previous months except March. The cargo traffic during March amounted to 635,057 tons.

Cargo reached and passed the 4,000,000-ton mark in May. The total which had gone through the Canal from its opening to June 1, was 4,347,568 tons.

During May 75 vessels passed through the Canal eastbound, or from the Pacific to the Atlantic, and 66 westbound, or from Atlantic to Pacific. Eastbound cargo amounted to 332,174 tons, and westbound to 246,534 tons.

A summary of the traffic eastbound and westbound by months since the opening of the Canal to commercial traffic, on August 15, 1914, is given herewith:

Month	Eastbound.		Westbound.		Total.	
	Ves-sels	Cargo.	Ves-sels.	Cargo.	Ves-sels.	Cargo.
Aug...	12	57,182	12	49,106	24	106,288
Sept...	30	186,776	27	135,262	57	322,038
Oct...	40	252,288	44	168,069	84	420,357
Nov...	38	242,291	54	206,510	92	448,801
Dec...	57	261,680	42	177,235	99	439,915
Jan...	54	240,875	44	208,082	98	448,957
Feb...	53	274,619	39	149,987	92	424,606
Mar...	80	417,610	56	217,447	136	635,057
April...	60	285,457	59	237,384	119	522,841
May...	75	332,174	66	246,534	141	578,708
Total	99	2,550,952	443	1,796,616	942	4,347,568

According to nationality, the vessels passing through the Canal during the month consisted of 60 American ships, 56 British, 10 Norwegian, five Swedish, four Danish, two Chilean, and one each of Italian, Canadian, Dutch, and Peruvian.

Thirteen of the vessels passing through the Canal in May were in ballast. The average loading of the 128 vessels which carried cargo was 4,961.3 tons.

In the eastbound traffic, two vessels were in ballast, and the average loading of the 73 cargo-carrying ships was 4,550.3 tons. Westbound, 11 vessels were in ballast, and the 55 laden ships averaged each 4,482.4 tons.

To June 1st, 83 vessels, not including launches and Canal craft, which are not counted in these summaries, had passed through the Canal in ballast, and 859 ships had carried cargo through the Canal.

The average daily transit of cargo through the Canal in May was 18,668 tons, exceeding all previous months except March.

The numbers of ballast and laden vessels using the Canal each month since its opening, the average amount of cargo in each of the laden vessels each month, and the average

daily transit of cargo are summarized in this table:

	Bal- last	Lad- en	Average loading	Daily movement
August.....	4	20	5,314.4	6,643.0
September.....	8	49	6,572.2	10,734.6
October.....	12	72	5,838.3	13,559.9
November.....	7	85	5,280.0	14,960.0
December.....	6	91	4,724.3	14,190.8
January.....	6	92	4,879.9	14,482.5
February.....	4	88	4,825.1	15,164.5
March.....	10	126	5,040.1	20,485.7
April.....	13	106	4,932.5	17,428.0
May.....	13	128	4,961.3	18,668.0

The average loading for all of the 859 laden vessels which had made use of the Canal up to June 1, 1915, was 5,166 tons.

The tolls earned during the month of May amounted to \$547,054.60. The earnings by months have been:

Prior to July 1, 1914.....	\$14,618.68
July.....	7,598.40
August.....	88,401.80
September.....	*266,513.28
October.....	375,787.44
November.....	381,533.28
December.....	410,043.60
January, 1915.....	419,037.12
February.....	383,904.96
March.....	560,784.96
April.....	442,415.49
May.....	547,054.60
Total.....	3,897,693.61

*Reduced from \$268,204.64 by remission of \$1,695.36 on account of making rate of 72 cents instead of \$1.20 on United States Army transport *Buford*, passing through the Canal on September 9.

The cargo passing through the Canal during May was carried over five principal routes, as follows:

Route.	Ves- sels	Tons of cargo
U. S. coastwise, eastbound.....	19	73,501
U. S. coastwise, westbound.....	22	118,375
Total.....	41	191,876
U. S. Pacific coast to Europe.....	8	43,543
Europe to U. S. Pacific coast.....	2	6,873
Total.....	10	50,416
South America to Europe.....	*21	95,045
Europe to South America.....	13	9,820
Total.....	*34	104,865
South America to United States.....	12	87,805
United States to South America.....	10	43,406
Total.....	*22	131,211
United States to Far East.....	12	65,772
Far East to United States.....	6	29,632
Total.....	18	95,404
Miscellaneous eastbound.....	2	2,648
Miscellaneous westbound.....	1	2,288
Total.....	3	4,936
Vessels in ballast.....	13	

*Vessels making Cristobal or Balboa their destination after passing through the Canal, for discharging cargo for connecting carriers, are classified in the South American-European or North American-South American routes according to the ultimate destination of the greater part of the cargo of the respective vessels.

The miscellaneous westbound vessel was the *John A. Hooper*, carrying 2,288 tons of sugar from Matanzas to Vancouver. The eastbound vessels rated as on miscellaneous routing were the bark *John Palmer*, carrying 2,335 tons of lumber from the west coast to Quebec, and the walrus hunting vessel *Kit*, with 313 tons of hides, oil, curios, rice, etc. from the Arctic Ocean and Japan to Sandefjord.

Cargo declarations made by the masters of vessels passing through the Canal during May listed 141 commodities; of these, 31 were carried through the Canal in both directions.

Distribution of the listed commodities was as follows:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.	Remarks.
	Tons.	Tons.	Tons.	
Alfalfa meal.....		190	190	San Francisco to New York.
Apricot kernels.....		40	40	San Francisco to Scandinavian ports.
Animal food.....	18		18	New York to San Francisco.
Antimony ore.....		858	858	China and Chile to New York, Boston, and Liverpool.
Asphalt.....		140	140	San Francisco and Los Angeles to New York and London.
Balsam.....		2	2	Central American ports to Scandinavian ports.
Bamboo.....		1,200	1,200	Japan and China to New York and Boston.
Bark.....		5	5	Guayaquil to Colon.
Barley.....		7,417	7,417	See explanation.
Bathtubs.....	500		500	New York to San Francisco.
Beans.....	148	52	200	New York, San Francisco and Salina Cruz.
Beans, lima.....		814	814	North Pacific ports, New York and Stockholm.
Beans, vanilla.....		6	6	San Francisco to Copenhagen.
Beef.....	10		10	New Orleans to South Pacific ports.
Beer.....	62		62	New York to San Francisco.
Bismuth.....		35	35	Antofagasta to Liverpool.
Books.....	6		6	New York to San Francisco.
Bran.....		831	831	Valparaiso to Copenhagen.
Bricks.....	250		250	New York to Los Angeles.
Cacao.....	1	3,002	3,003	South Pacific ports, Colon, New York, and Scandinavian ports.
Canned goods:				
Miscellaneous.....	300	2,200	2,500	New York to Portland, and Los Angeles to Liverpool.
Fish.....	480	2,848	3,328	North Pacific, North Atlantic and Scandinavian ports.
Fruit.....	45	638	683	North Pacific, North Atlantic and European ports.
Meat.....	200		200	New York to Portland, Oreg.
Vegetables.....	106	305	411	New York and west coast.
Cement.....	766		766	New York and Denmark to west coast.
Cereals, miscellaneous.....		710	710	San Francisco and Los Angeles to New York.
Chalk.....	51		51	Copenhagen to San Francisco.
Cheese.....	80		80	Genoa to San Francisco and Los Angeles.
Chemicals.....	1,426		1,426	Genoa to San Francisco.
Clay.....	102		102	Copenhagen to Los Angeles.
Coal.....	21,195	1,200	22,395	See explanation.
Cocoa leaves.....		17	17	Peru to New York and Colon.
Coconut cake.....		542	542	San Francisco to Stockholm.
Coffee.....	732	6,775	7,507	See explanation.
Coke.....	4,719		4,719	Virginia to Cruz Grande.
Copper.....	368	4,541	4,909	See explanation.
Copper ore.....		5,530	5,530	See explanation.
Copra.....		567	567	Manila and San Francisco to New York.
Cork.....	13		13	New York to San Francisco.
Corn.....	100		100	New Orleans to Central American ports.
Cosmetics.....	3		3	New York to San Francisco.
Cotton.....	1,128	1,733	2,861	Europe, New York, north Pacific ports, Hawaii, and Shanghai.
Creosote.....	3,664		3,664	Manchester, Eng., to Eagle Harbor.
Curios.....		350	350	Japan to New York and Boston.
Drygoods.....	18		18	New York to San Francisco.
Explosives.....	31	79	110	New York to San Francisco, and Cavite to Virginia.
Flour.....	152	1,252	1,404	North Atlantic ports, Scandinavian ports and west coast.
Fruit, dried.....		2,610	2,610	North Pacific ports to New York, Boston and Scandinavian ports.
Furniture.....	25		25	Genoa to Los Angeles.
General cargo.....	86,545	23,833	110,378	See explanation.
Ginger, dry.....		100	100	Japan to New York.
Glass, rough wire.....	281		281	New York to San Francisco.
Gold.....		1	1	Salina Cruz to Colon.
Grease.....	15		15	New York to San Francisco.
Guano.....	130		130	Colon to Balboa.
Hair, human.....		40	40	Shanghai to New York.
Hams.....	25		25	New Orleans to south Pacific ports.
Hay.....		19	19	San Francisco to New York.
Hemp.....		4,275	4,275	Manila to Boston, New York, and Virginia.
Hops.....		40	40	San Francisco to New York.
Iodine.....		14	14	Chile to Liverpool.
Iron.....	34		34	Gottenberg to San Francisco and Seattle.
Iron ore.....		6,250	6,250	Cruz Grande to Philadelphia.
Iron sulphate.....	36		36	Liverpool to Valparaiso.
Ivory nuts.....		700	700	Ecuador to Colon.
Jute.....	36	38	74	Colon to Salaverry, and San Francisco to Liverpool.
Lard.....	52		52	New Orleans to south Pacific ports.
Lead.....	6,105	247	6,352	See explanation.
Leather.....		12	12	Guayaquil to Colon.
Linoleum.....	178		178	New York to San Francisco and Los Angeles.
Liquors.....	420	2	422	Liverpool, Genoa, New York to west coast.
Lumber.....	650	17,723	18,373	See explanation.
Macaroni.....	250		250	Genoa to San Francisco.
Manganese.....		950	950	China and Japan to New York.
Manufactured goods:				
Iron and steel.....	32,492	676	33,168	See explanation.
Machinery.....	2,732	10	2,742	New York to west coast and Melbourne.
Railroad material.....	4,350		4,350	New York to west coast.
Textiles.....	970	386	1,356	Between Liverpool, New York and west coast.
Miscellaneous.....	4,048	663	4,711	See explanation.
Marble.....	126		126	Genoa and New York to San Francisco.
Milk, evaporated.....	16		16	New York to San Francisco.
Nails, wire.....	800		800	New York to San Francisco.
Nitrates.....	146	135,394	135,540	See explanation.
Nuts.....	24		24	New York to San Francisco.
Oats.....		5,550	5,550	See explanation.
Oils, animal.....		145	145	Yokohama to Sandefjord.
Oil, crude.....	650		650	New York to Valparaiso and San Francisco.
Oil, lubricating.....	237		237	New York to San Francisco.
Oils, vegetable.....	630	2,857	3,507	New York, Genoa, west coast and Orient.
Oils, mineral.....	17,214		17,214	See explanation.
Paint.....	119		119	New York to San Francisco and Los Angeles.
Panama hats.....		67	67	Ecuador to Colon.
Paper.....	2,125		2,125	729 Norway to Chile; 1,301 New York to north Pacific ports.
Petroleum, refined.....	28,240	82	28,322	See explanation.
Phosphates.....	500		500	Genoa to San Francisco.
Pipes.....	500		500	New York to San Francisco.
Preserves.....	8		8	New York to San Francisco.
Printed matter.....	23		23	New York and Liverpool to west coast.

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.	Remarks.
Pulp.....	451	451	902	Los Angeles to New York; Europe to S. A.
Pumps.....	200		200	New York to Los Angeles.
Quillay.....		73	73	Valparaiso to New York.
Quina.....		18	18	Antofagasta to New York.
Rags.....	10		10	Copenhagen to San Francisco.
Rice.....		2,178	2,178	San Francisco to New York.
Rubber.....	2	43	45	New York to west coast.
Rubber, old.....		38	38	Los Angeles to New York.
Saddlery.....	2		2	New York to San Francisco.
Salt.....	19		19	Liverpool and New York to west coast.
Scrap metal.....		2,551	2,551	Manila and west coast to Atlantic ports and Liverpool.
Seed.....		52	52	South Pacific ports to New York and Colon.
Silver.....		20	20	South Pacific ports to New York and Liverpool.
Silver ore.....		1,621	1,621	Chile to New Jersey.
Skins and hides.....		1,963	1,963	New York, China, Arctic Ocean, and west coast to Japan, New York, Boston, Colo., and Sandefjord.
Soap.....	752		752	New York and Genoa to San Francisco.
Soft drinks.....	35		35	New York to San Francisco.
Steel.....	36		36	Göteborg to San Francisco.
Stoves, oil.....	3,757		3,757	New York to Townsville, Australia.
Straw matting.....		50	50	Japan to New York.
Sugar.....	5,939	37,083	43,022	See explanation.
Table relishes.....	24		24	New York to San Francisco.
Tallow.....		344	344	San Francisco and Los Angeles to New York, England, and Scandinavian ports.
Tartar, crude.....	51		51	New York to San Francisco.
Tea.....	94	70	164	Liverpool, New York, west coast and Shanghai.
Textiles, miscellaneous.....	256	65	315	New York to south Pacific ports, and San Francisco to New York.
Tiles, floor.....	19		19	New York to San Francisco.
Tin.....	3,038	757	3,795	New York, San Francisco, Hawaii, and Orient.
Tin ore.....		1,460	1,460	Chile and Seattle to Liverpool and New York.
Tin plates.....	2,390		2,390	Liverpool and New York to West coast.
Tobacco.....	591		591	New York to San Francisco and Sydney.
Toys.....	50		50	New York to Los Angeles.
Twine.....	12		12	Liverpool to Antofagasta.
Wax.....	1,050	11	1,061	1,000, New York to Japan.
Wheat.....		20,140	20,140	See explanation.
Wines.....	100	1,125	1,225	New York Boston, Los Angeles, San Francisco.
Wire fencing.....	27		27	New York to San Francisco.
Wolfram.....		5	5	Antofagasta to Liverpool.
Woodenware.....	200		200	New York to San Francisco.
Wool.....		4,702	4,702	See explanation.
Zinc.....		1	1	Bahoa to New York.
Zinc concentrates.....		10,790	10,790	Port Pirie and Melbourne to Texas, Mobile, and Boston.
Total.....	246,534	332,174	578,708	

The principal commodities passing through the Canal during the month were barley, coal, coffee, copper, copper ore, lead, iron ore, lumber, manufactures of iron and steel, nitrates, mineral oils, petroleum, sugar, wheat, wool, and zinc concentrates. Analysis of the larger movements follows:

Barley amounted to 7,417 tons (about 341,000 bushels), all shipped from the west coast of the United States to Europe. Five hundred and fifteen tons were consigned to Liverpool, 2,000 to Copenhagen, and 4,902 tons to Stockholm.

Coal, including 1,200 tons passing from the Pacific to the Atlantic for ships' use but in cargo space, amounted to 22,395 tons. Ten tons were from Liverpool to Callao, carried as cargo but for ship's use, and 21,185 tons were shipped from the Atlantic coast of the United States; 1,020 tons to Sydney, 9,074 tons to San Diego, and 11,091 tons to San Francisco.

Coffee was shipped in both directions; 732 tons of roasted coffee from New York to Los Angeles and San Francisco, and 6,775 tons of the green bean from Central and South America to Europe and the United States, the United States receiving 865 and Europe 5,910 tons. Of the latter quantity, 1,832 tons went to Copenhagen and 3,212 tons to Norway and Sweden.

Copper, manufactured and in bars, amounted to 4,909 tons, of which 368 tons were shipped from New York to San Francisco. Of the eastward movement, 800 tons were from Japan for New York, 1,831 tons from South Pacific ports for New York, 360 tons from the west coast of the United States for New York and Boston, and 750 tons from Chile for Liverpool.

Copper ore amounting to 5,530 tons passed through the Canal in May from Chilean and

Peruvian ports for the United States and Europe; 552 tons went to Europe and 4,978 tons to the United States.

Under the rating of general cargo, which included great quantities of minor shipments not readily classified, 86,545 tons were carried through the Canal during the month from Atlantic to Pacific. Of this, 5,887 tons were from Europe, all for South and Central America except 262 tons for Los Angeles and San Francisco. The remainder, 80,658 tons, originated in the United States; 46,462 tons were in the coastwise trade, 10,730 tons were shipped to Australia, 8,457 tons to Vladivostok, and 15,009 tons to South America.

In the westward movement classified as general cargo, there was a total of 23,833 tons, of which 476 tons were from Japan and the Philippines for the United States; 3,712 tons from South America to the United States; 852 tons from South America for Europe; 60 tons from Vancouver to Jamaica; 13,554 tons in the United States coastwise trade; and 5,079 tons from Tacoma to Liverpool.

Of lead, 6,100 tons were shipped from New York to San Francisco, five tons from Liverpool to Valparaiso, a total of 6,105 tons moving westward; eastward shipments amounted to 247 tons, consigned to New York, 11 tons from Callao and 236 tons from San Francisco.

Lumber shipments included 500 tons from New York to Australia and 150 tons from New York to Antofagasta, moving westward. The eastward shipments amounted to 17,723 tons, 12 tons from Cavite to Hampton Roads, and the remainder from Pacific ports of the United States, excepting 2,400 tons from Vancouver for Jamaica. Of this, 3,147 tons were for Great Britain, 2,335 tons for Quebec, and 9,829 tons to United States ports.

Manufactured goods of iron and steel included one eastward shipment, of 676 tons

from Los Angeles to New York and Boston, and 32,492 tons from New York. The shipments out of New York were distributed to the west coast of the United States, 7,792 tons; to South America, 17,600 tons; and to Australia, 7,100 tons.

Of miscellaneous manufactured goods, there were 663 tons moving eastward in the United States coastwise trade, and 3,995 tons moving westward in the coastwise trade, in addition to 53 tons from Göteborg for San Francisco.

Oats amounted to 5,550 tons, from Chile to Liverpool and London.

Mineral oils amounting to 17,214 tons were shipped from New York, 171 tons in the coastwise trade, 2,243 tons to Australia, 5,800 tons to Japan, and 9,000 tons to Manila.

Paper shipments through the Canal during May amounted to 2,125 tons, all from Atlantic to Pacific; 729 tons were from Norway for Chilean ports, 229 tons from Göteborg for San Francisco, and 1,167 tons were shipped from New York to the west coast of the United States.

Nitrates were the largest single item during the month, amounting to 135,540 tons. This is the largest quantity of any item which has passed through the Canal during any month. The tonnage of nitrate cargo in March was 48,076 and in April, 68,277. The great increase is ascribed to the increasing use of nitrates in the manufacture of ammunition. Shipments from Chile amounted to 135,394 tons, of which 62,817 tons went to the United States and 72,577 tons to Europe. A single westward shipment, from Christiania to Valparaiso, contained 146 tons.

Sugar shipments westward consisted of 1,745 tons from New York to Vancouver, 2,288 tons from Matanzas to Port Angeles, and 1,906 tons from Liverpool to South America. The eastward shipments consisted of 30,409 tons from the Hawaiian Islands to Philadelphia and New York, and 6,674 tons from Peru, of which 6,101 tons went to France and 573 tons to the United States.

Wheat amounted to 20,140 tons (approximately 745,000 bushels). All of it was shipped from the west coast of the United States; 5,400 tons went to United States Atlantic ports and 14,740 tons to Europe.

Wool shipments were entirely from the west to New York, Boston, and Europe. Two hundred and forty-five tons were shipped from California to the Atlantic seaboard of the United States; Australia shipped 3,273 tons to Boston and 23 tons to New York; 800 tons came from Shanghai, for New York; and 361 tons originating in South America were distributed, 86 tons to Europe and 275 tons to the United States.

The "Ranger" Arrives at Cristobal.

The United States Navy gunboat *Ranger*, in service as a training ship with the nautical training school of the State of Massachusetts, arrived at Cristobal on Saturday, June 26, from Boston by way of the West Indies. The vessel will not pass through the Canal but her men are being given opportunity to inspect it. Through the courtesy of the local representative of the United States Steel Products Company, they were taken through the Canal aboard the steamship *Charlton Hall*, which made the transit on Tuesday, June 29, on her way from New York to Callao in the service of the New York and South American Line.

NOTICE TO STEAMSHIP LINES.

Increase in Price of Coal Supplied at Canal Terminals.

On account of the increased cost of ocean transportation due to the prevailing scarcity of bottoms and the general high prices of charters, resulting from conditions made by the war in Europe, the price of the coal delivered to vessels at the Canal is to be advanced, as set forth in this notice issued under date of June 16:

On and after September 1, 1915, the following prices will obtain at the Panama Canal for coal supplied steamships, including warships of all nations:

Cristobal-Colon.

Delivered alongside of vessel in lighters or in cars on the wharves, trimmed in bunkers, when handled by ship's gear.....(per ton)... \$6

Balboa.

Delivered alongside of vessels in lighters or in cars on the wharves, trimmed in bunkers, when handled by ship's gear.....(per ton).... \$7

An additional charge of \$1 per hour will be made for the use of each mechanical hoist or crane furnished by the Panama Railroad Company. Provisions are being completed by which an ample supply of coal will be kept on hand in lighters ready for delivery upon arrival of vessels. These lighters will be fitted with mechanical hoists which should deliver coal as fast as it can be stowed.

These changes will apply to the prices given on page 41 of the revised edition of April, 1915, of the Sailing Directions and General Information, The Panama Canal.

CHESTER HARDING,
Acting Governor.

Motor Bus Service.

The four motor busses recently purchased by the Panama Railroad Company for service between East Balboa, Balboa Heights, and Ancon, which have been undergoing alterations at Balboa Shops, are now complete and ready for service.

One bus was placed in service last Friday morning, operating between the Panama railroad steel dock, East Balboa, and the Hotel Tivoli, Ancon, via the hospital grounds. A second car was placed in operation Sunday morning over the same route, running on a 30-minute headway.

All four cars will be placed in regular service commencing Thursday, July 1, on a con-

tinuous service between the hours of 6 a. m. and 11 p. m., operating on a 20-minute headway.

On account of the Bishop's Hollow road being out of service during reconstruction, all cars are operating via the hospital grounds. As soon as rebuilding the Bishop's Hollow road shall have been completed, which it is expected will be by July 15, the cars will be operated via both the hospital grounds and Bishop's Hollow, to and from the Administration Building in each direction, continuing on through to and from East Balboa.

Rest Room for Women Employees at Administration Building.

Two rooms on the third floor of the north wing of the Administration Building at Balboa Heights are being fitted up as a place of resting and recreation for the women employees in the building. The rooms are No. 325, originally assigned to the official photographer, and No. 329, adjoining, which was occupied by the superintendent of telephones and telegraphs before his work was transferred to the Electrical Division. No. 325 will be fitted out as a reading and sitting room, and No. 329 as a retiring room. There are 36 women employees at the building, exclusive of the 13 telephone operators, who have their own rest room at the end of the south wing, on the third floor, adjoining the exchange.

No room has yet been found available for a reading room for the gold men employees in the building, of whom there are about 375. Pool and billiard tables have been installed in the basement, but all of the rooms in the building which might serve as a suitable reading room have been occupied. The Canal library is so filled with reading matter as to leave little room for readers.

Pilots' Expenses at Government Hotels.

On account of the long and irregular hours at which the pilot force works, members of the force stay over night frequently at the opposite end of the Canal from that at which officially stationed. In order to simplify the handling of expense accounts, and to make matters more convenient for the pilots, the Auditor has authorized the Tivoli and Washington Hotels to render bills directly against the Marine Division for services to pilots. Pilots will certify on the memorandum bills presented by the hotel offices that the services charged for have been performed for them while they were on official duty, and the hotels will use these memoranda to support their regular bills against the Marine Division.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Jennings, Sidney.....	56371	Jamaica.....	Colon.....	Mechanical Div.	June 3, 1915
Douglas, Phillip.....	67943	Jamaica.....	Colon.....	Term. Cons. Div.	June 14, 1915
Clark, Joseph.....	46056	Barbados.....	Panama.....	Supply Dept.	June 18, 1915
Escobar, Amador.....	26330	Panama.....	Panama.....	Mech. Div.	June 21, 1915
Rivera, Felix.....	68443	Panama.....	Panama.....	Mun. Eng. Div.	June 21, 1915
Smith, Charles.....	86012	Jamaica.....	Colon.....	P. R. R.....	June 21, 1915

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

INDEPENDENCE DAY PROGRAM.

Outline of Features—Special Schedule on the Panama Railroad.

The program for the observance of Independence Day on Monday, July 5, at Balboa, has arranged for the holding of athletic events between 8 a. m. and 9.45 a. m.; military exercises, oration, and reading of the Declaration of Independence, to begin at 10 a. m.; a parade, with three brass bands, and various organizations; after the lunch hour, a wall-scaling contest between military units; baseball game between picked teams; athletic exhibition and folk dancing on the prado; and in the evening a band concert, followed by an exhibition of fireworks, and a dance at the Administration Building, beginning at 9 o'clock.

A special train schedule has been provided on the Panama Railroad for July 5.

On the main line the regular daily service will be augmented by a late train each way on the holiday; one leaving Panama at 12.01 a. m. the morning of the 6th, reaching Colon at 1.45 a. m., and one leaving Colon at 9.30 p. m., reaching Balboa Heights at 11.10 and Panama at 11.15 p. m.

Trains will leave Colon for Panama at 7.15 a. m., 11.05 a. m., 5.10 p. m., and 9.30 p. m.; and will leave Panama for Colon at 7.10 a. m., 11 a. m., 5.05 p. m., and 12.01 a. m.

On the Las Cascadas branch, trains will leave Las Cascadas for Panama at 7 a. m., 9.30 a. m., 10.40 a. m., 1.10 p. m., 4 p. m., 7.20 p. m., 11.40 p. m., and 1.40 a. m. (morning of the 6th).

Trains will leave Panama for Las Cascadas at 4.30 a. m., 8.10 a. m., 8.30 a. m., 12.10 p. m., 3.05 p. m., 6.15 p. m., 10.40 p. m., and 12.40 a. m. (morning of the 6th.)

The trains will run through in each direction, without change of cars at Pedro Miguel.

The Canal hotel at Balboa will be open throughout the day.

Fourth of July Launch Service to Taboga.

For the accommodation of employees wishing to spend July 4 and 5 at Taboga, the regular schedule of launches will be supplemented on Saturday, July 3, by a boat leaving Balboa at 1.30 p. m., for passengers from the line on the noon train, and a boat from Balboa at 7.30 p. m., for those on the evening train.

The following is the regular schedule, in addition to which the special launches will be operated:

Leave Balboa dredge landing—Daily, except Thursday; at 5.30 p. m.: Monday, Thursday, Saturday, and Sunday, at 9.40 a. m.

Leave Taboga—Daily, except Friday, at 7 a. m. (On Mondays and days following holidays, one hour earlier), Monday, Thursday, and Saturday at 1.30 p. m.; Sunday at 7.15 p. m. The 9.40 a. m. trips from Balboa await the arrival of Panama railroad trains.

Earthquake Shock.

An earthquake shock was felt over the Isthmus in the early morning of Monday, June 28. According to the records of the seismographs at the Balboa Heights observatory, the seismic disturbance began at 3:27:58 and ceased at 3:29:31, lasting one minute and 33 seconds. The maximum amplitude of movement was 13 millimeters, and the distance to the epicenter of disturbance was approximately 100 miles. The intensity was III on the Rossi-Forel scale of I to X. No damage has been reported.

QUARANTINE ACTIVITIES.

Work Increasing with Growing Traffic to Canal and Terminal Ports.

Emigration from the Isthmus to foreign ports during the month of May exceeded immigration by 410 persons. This brings the net emigration since July 1, 1913, during a period of 23 months, to 26,299. The greater part of the emigration has been of people formerly employed on the Canal and the Panama railroad. The force of employes on June 25, 1913, was 42,262; that reported as of May 26, 1915, was 26,434, showing a net decrease of employes in the period of 15,828. The net emigration of all classes from the Isthmus, 26,299, has averaged 1,143.4 persons per month, or for the 700 days in the period from July 1, 1913, to May 31, 1915, has amounted to 37.5 per day.

The activities at the quarantine stations during May were greater than for the preceding month; 201 vessels were inspected, as compared with 185 in April, and 17,163 persons were examined (an average of 553 a day), as compared with 14,637 in April. A summary of the activities and of the movements of persons through the ports of Balboa-Panama and Cristobal-Colon is given in this consolidated report:

Number of vessels inspected and passed	190	
Number of vessels held in quarantine..	11	
Total.....		201
Number of vessels fumigated on arrival.	9	
Number of vessels fumigated on departure	0	
Total.....		9
Number of crew examined.....	11,772	
Number of passengers examined (including 908 U. S. troops).....	5,391	
Total.....		17,163
Number of persons vaccinated at ports of arrival because of compulsory vaccination law.....	582	
Number of persons vaccinated at ports of departure or en route because of compulsory vaccination law.....	622	
Total.....		1,204
Number of persons held in quarantine at the detention houses to complete period of incubation of yellow fever and plague.....	386	
Number of persons held in quarantine to complete period of incubation of yellow fever and plague.....	1,232	
Total.....		1,618
Number of persons landed from foreign ports:		
Cabin.....	1,862	
Steorage.....	1,709	
Total.....		3,571
Number of persons embarked for foreign ports:		
Cabin.....	2,811	
Steorage.....	1,180	
Total.....		3,981
Number of persons arriving from coast towns on small launches and sailing craft.....	2,947	
Number of persons sailing for coast towns on small launches and sailing craft.....	1,649	
Apparent increase for month from coast towns.....	1,298	
Apparent decrease for month from foreign ports:		
Cabin (decrease).....	949	
Steorage (increase).....	539	
Total.....		410
Number of immigrants recommended for deportation.....	46	
Number of bills of health issued or vised.....	198	
Total number of persons landed.....	6,518	
Less number for Pacific ports.....	124	
Total number of persons sailing.....	5,630	
Total apparent decrease for month.....		764

OFFICIAL CIRCULARS.

General Inspector, Health Department.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., June 10, 1915.

CIRCULAR No. 661-17:

Effective this date, Maj. Elbert E. Persons, Medical Corps, U. S. A., is appointed General Inspector, Health Department, vice Maj. Percy M. Ashburn, U. S. A., relieved from duty with The Panama Canal. Major Persons will report direct to the Chief Health Officer.

CHESTER HARDING,
Acting Governor.

Selling Prices of Coal Effective September 1, 1915.

THE PANAMA RAILROAD COMPANY,

OFFICE OF SUPERINTENDENT,

BALBOA HEIGHTS, C. Z., June 10, 1915.

Per ton

AT COLON.

For steamships, including warships of all nations, delivered in lighters or cars, trimmed in bunkers, when ships use their own gear..... \$6.00
To parties taking carload lots..... 6.25
To parties taking small quantities from cars or bin..... 7.75

AT PANAMA AND BALBOA.

For steamships, including warships of all nations, delivered in lighters or cars, trimmed in bunkers, when ships use their own gear..... 7.00
To parties taking carload lots..... 7.60
To parties taking less than one carload at a time in cars..... 9.20
Santo Tomas Hospital (special rate)..... 6.00

An additional charge of \$1 per hour will be made for the use of steam hoist and crane when furnished by the railroad company.

All previous rates authorized are hereby cancelled.

C. H. MOTSETT,
Superintendent.

Empty Oil Drums Returned to Storehouses.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., June 15, 1915.

To all concerned—Your attention is invited to the fact that a great many oil drums are being received by the Balboa storehouse without bungs or plugs.

Please instruct all concerned to forward storekeeper, Balboa, without delay all bungs which they may be able to locate, or now have in their possession, as it is essential that all drums returned to the United States for credit be shipped complete with bungs. Please instruct all concerned when returning oil drums to storehouses, for credit, to ship same complete with bungs.

Your further attention is invited to the fact that the appearance of a great many of the drums returned to the storehouse indicates that the bungs have been removed with a cold chisel, which practice should be discontinued at once and I will thank you to so instruct all concerned. All bungs should be removed with a wrench.

WM. R. GROVE,
Chief Quartermaster.

Temporary Appointments in Classified Service.

THE PANAMA CANAL,

BOARD OF CIVIL SERVICE EXAMINERS.

BALBOA HEIGHTS, C. Z., June 9, 1915.

To heads of departments—The attention of heads of departments is called to the proper method to be pursued in making temporary appointments of employes in the classified service:

1. An employe placed in a regular position in the organization can be approved only until the position is filled by the certification of an eligible from the list, requisition for which must be made at the time that the temporary appointment is requested. Such temporary appointments are approved under section 1 of Rule VIII of the civil service rules governing the approval of temporary appointments.

2. An employe appointed for a brief period in a position which is temporary in nature and is a temporary position in the organization can be approved as a job appointment under section 4 of Rule VIII and this practice should not be extended to positions which, from the nature of the service, can not be considered as temporary work. These employes should not be shown in a regularly authorized position in the organization, but should be carried in a position authorized as temporary.

W. P. COPELAND,
Secretary.

JOINT LAND COMMISSION.

Awards.

In the matter of sundry claims, award No. 92, docket numbers as noted, June 22, 1915—An award is hereby made against the United States in favor of the persons hereinafter named, in the sum of \$1,558, United States currency.

This award shall be paid to the persons hereinafter named, in the amounts specified, on or before the 22nd day of July, 1915, and if payment or tender of payment of any of the items of this award is not made on or before that date, such item shall thereafter bear interest at the rate of six per centum per annum until paid.

Rebecca Jackson, docket No. 838—For all rights, claims, and other interests which the said Rebecca Jackson may possess or may have possessed in and to houses, crops, fruit trees, and any other improvements on lands claimed by the Schuber family near Corozal, the sum of \$398.

C. A. Bacquie, docket No. 839—For all rights, claims, and other interests which the said C. A. Bacquie may possess or may have possessed in and to houses, crops, fruit trees, and any other improvements on lands claimed by the Schuber family near Corozal, the sum of \$840.

Ezekiel Carmichael, docket No. 841—For all rights, claims, and other interests which the said Ezekiel Carmichael may possess or may have possessed in and to houses, crops, fruit trees, and any other improvements on lands claimed by the Schuber family near Corozal, the sum of \$320.

Total, \$1,558, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

In the matter of the claim of Dominico Pico for property located near Corozal, award No. 84, docket No. 779, June 1, 1915—An award is hereby made against the United States, in favor of the person hereinafter named, in the sum of \$225, United States currency.

This award shall be paid to the person hereinafter named, in the amount specified, on or before the 1st day of July, 1915, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

Dominico Pico, docket 779—For all rights, claims, and other interests which the said Dominico Pico may possess or may have possessed in and to houses, crops, fruit trees, and any other improvements situated upon the Schuber lands near Corozal, the sum of \$225.

FEDERICO BOYD, NICHOLAS CORNET, LEVI M. KAGY, S. Lewis, Commissioners.

In the matter of the claim of José Palma for property located near Matachin, award No. 85, docket No. 754, June 1, 1915—An award is hereby made against the United States, in favor of the person hereinafter named, in the sum of \$200, United States currency.

This award shall be paid to the person hereinafter named, in the amount specified, on or before the 1st day of July, 1915, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

José Palma, docket No. 754—For all rights, claims, and other interests which the said José Palma may possess or may have possessed in and to house tax No. 392, and crops, fruit trees, and any other improvements on lands near Matachin, Canal Zone, the sum of \$200.

FEDERICO BOYD, NICHOLAS CORNET, S. LEWIS, Commissioners.

The full Commission heard and considered the above claim, but Commissioner Kagy declined to join in the award. Believing it is not supported by the evidence, I therefore dissent from the award.

(Signed) LEVI MONROE KAGY.

In the matter of the claim of Zoraida Cabeza for property located near Matachin, award No. 83, docket No. 539, May 28, 1915—This claim came on for hearing on May 17, at which time a partial hearing only was had. Further hearing was had on May 19 and May 21, on which latter date counsel for claimant and counsel for the United States agreed upon a settlement in the sum of \$700, United States currency, and requested the Commission to award that amount.

An award is therefore made in the sum of \$700, United States currency, against the United States, in favor of Zoraida Cabeza for houses tax Nos. 425, 423, and 424, located near Matachin.

This award shall be paid to said Zoraida Cabeza in the amount specified on or before the 28th day of June, 1915, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

In the matter of the claim of Narciso Goray, attorney-in-fact for the Hurtado family, for property designated as "Cordenas y la Ramona," rule No. 184, amending award No. 82, docket No. 295, May 18, 1915.—Upon motion of the claimants, award No. 82 of the Joint Land Commission in the matter of the above entitled claim is hereby amended so as to correct the said award, in accordance with the facts, as to the parties to whom payment shall be made by the United States, as follows:

Said award is made payable to: José Marcelino Hurtado, Manuela Hurtado Fabrega, Amalia Hurtado de Bidwell, Josefa Hurtado, and Manuela Hurtado de Santa Maria, instead of José Marcelino Hurtado, Manuel José Hurtado, Amalia Hurtado de Bidwell, Carmen Hurtado de Hurtado, and Manuel Hurtado de Santa Maria.

The secretary of this Commission will give due notice of this amendment and correction of said award No. 82, to the attorneys for the above named claimants and to the attorney for the United States.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, *Commissioners*.

Rule of Dismissal.

In the matter of the claim of Mrs. R. Maitland, rule of dismissal No. 186, docket No. 837, June 13, 1915.—The claim of Mrs. R. Maitland, docket No. 837, filed with the Commission May 9, 1913, and which came on for public hearing on June 21, 1915, is hereby dismissed for the reason that the evidence submitted to the Commission does not justify an award being made.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, *Commissioners*.

Joint Land Commission Notice.

The public is hereby informed that the offices of the Commission are open for the transaction of business each week day during the hours from 8 a. m. to 12 m. and from 2 p. m. to 5 p. m. Any information desired by claimants or their attorneys, relative to claims filed before the Commission, may be procured at the office of the secretary.

By direction of the Commission.

WILLIAM TAYLOR,
Secretary.

Rainfall from June 1 to 19, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa.....	.98	12	1.88
Balboa Heights.....	.76	12	2.05
Miraflores.....	1.47	12	4.59
Pedro Miguel.....	2.17	12	5.22
Rio Grande.....	1.35	12	4.02
<i>Central Section—</i>			
Culebra.....	.85	12	3.38
*Camacho.....	.63	10	3.30
Empire.....	.41	1	2.74
Gamboa.....	1.19	3	4.73
*Juan Mina.....	1.97	1	6.52
Alhajuela.....	1.34	1	4.76
*El Vigia.....	1.40	8	8.71
Frijoles.....	1.36	15	5.24
*Trinidad.....			
*Monte Lirio.....	1.15	10	4.90
<i>Atlantic Section—</i>			
Gatun.....	1.66	16	6.57
*Brazos Brook.....	4.04	8	9.63
Colon.....	1.84	8	9.10

Rainfall from June 1 to 26, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa.....	.98	12	2.17
Balboa Heights.....	.76	12	2.39
Miraflores.....	1.47	12	4.69
Pedro Miguel.....	2.17	12	5.65
Rio Grande.....	1.76	26	5.85
<i>Central Section—</i>			
Culebra.....	1.16	26	4.70
*Camacho.....	1.06	26	4.46
Empire.....	.88	26	3.83
Gamboa.....	1.19	3	5.04
*Juan Mina.....	1.97	1	7.79
Alhajuela.....	1.34	1	5.43
*El Vigia.....	1.40	8	9.89
Frijoles.....	1.36	15	6.27
*Trinidad.....			
*Monte Lirio.....	1.15	10	7.42
<i>Atlantic Section—</i>			
Gatun.....	1.66	16	10.59
*Brazos Brook.....	4.04	8	13.15
Colon.....	1.84	8	12.11

*Standard rain gage—readings at 5 p. m. daily.
Automatic rain gage at unstarred stations—value midnight to midnight.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores at Las Cascadas, Empire, and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

These prices are increased by 10 per cent for sales to commercial and foreign naval vessels, and by 20 per cent for sales to yachts.

The following is a list of retail prices of cold storage provisions which will be effective July 1, 1915:

FRESH MEATS.	Price.
Mutton—Stewing, per pound.....	9
Shoulder, trimmed, per pound.....	12
Leg (8 to 10 pounds), per pound.....	19
Short cut, chops, per pound.....	23
Shoulder, chops, per pound.....	14
Lamb—Stewing, per pound.....	12
Shoulder, trimmed, per pound.....	15
Leg (5 to 8 pounds), per pound.....	24
Chops, per pound.....	29
Chops, shoulder, per pound.....	18
Veal—Stewing, per pound.....	12
Shoulder, for roasting (not under 4 lbs.), per pound.....	15
Chops, shoulder, per pound.....	20
Chops, per pound.....	30
Loin, for roasting, per pound.....	30
Cutlets, per pound.....	36
Beef—Suet, special, per pound.....	3
Soup, special, per pound.....	7
Native, per pound.....	5
Soup, bones, special, per pound.....	2½
Stews, special, per pound.....	11
Native, per pound.....	8
Plate, special, per pound.....	11
Native, per pound.....	8
Chuck roast, special (3 lbs. and over), per pound.....	12
Chuck roast, native (3 lbs. and over), per pound.....	8
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
Rib roast, second cut, native (3½ pounds and over), per pound.....	9
Rib roast, first cut (not under 3 pounds), special, per pound.....	19
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27
Rib roast, first cut, native (3 pounds and over), per pound.....	11
Pot roast, special, per pound.....	20
Choice, per pound.....	28
Native, per pound.....	12
Rump roast, special, per pound.....	20
Choice, per pound.....	28
Native, per pound.....	12
Porterhouse roast, special, per pound.....	22
Choice, per pound.....	31
Native, per pound.....	16
Steak, chuck, special, per pound.....	13
Native, per pound.....	9
Round, bottom, special, per pound.....	13
Choice, per pound.....	19
Native, per pound.....	9
Round, top, special, per pound.....	15
Choice, per pound.....	22
Native, per pound.....	10
Sirloin, special, per pound.....	20
Sirloin, choice, per pound.....	28
Sirloin, native, per pound.....	12
Round, choice cut, choice, per pound.....	23
Sirloin, choice cut, native, per lb.....	32
Rump, special, per pound.....	16
Choice, per pound.....	20
Native, per pound.....	28
Porterhouse (not less than 1½ pounds), special, per pound.....	12
Porterhouse (not less than 1½ pounds), choice, per pound.....	23
Porterhouse (1½ pounds and over), native, per pound.....	34
Porterhouse, short, Delmonico special, per pound.....	17
Porterhouse, short, Delmonico choice, per pound.....	20
Porterhouse, short, native, per lb.....	28
Tenderloin, Western, special, per pound.....	12
Tenderloin, Western, choice, per pound.....	35
NOTE.—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders placed with commissary storekeepers before 11 a. m. will be shipped for delivery on the following morning.	
Pork—Hams, fresh, per pound.....	\$23
Shoulders, fresh, per pound.....	\$19
Loin, chop, or roast, per pound.....	18
Spare ribs, per pound.....	11
Pigs' feet, fresh, per pound.....	5

Pigs' head, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23
Ox tails, per pound.....	9
MISCELLANEOUS.	
Brains, calves', per pound.....	10
Calves' head, each.....	80
Kidneys, beef, per pound.....	12
Livers—Beef, per pound.....	10
Calf, per pound.....	24
Steak—Hamburger, packages.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	11
Frankfurter, per pound.....	13
Frankfurter, imported, tin.....	11
Lieberwurst, per pound.....	10
Pork, per pound.....	*15
Sweetbread beef, per pound.....	17
Eggs, fresh, per dozen.....	128
per ½ dozen.....	114
Bloaters, fancy, each.....	5
Bluefish, per pound.....	*9
Haddock, smoked, per pound.....	14
Halibut, fresh, per pound.....	11
Salmon, per pound.....	9
Yeast, per pound.....	31
per cake.....	2
Pates de foies gras, per jar.....	*58
CURED AND PICKLED MEATS.	
Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Mince, "Bologna style," per pound.....	13
Sugar cured, boneless, whole, per pound.....	*17
Sugar cured, whole, per pound.....	*21
Half, per pound.....	*23
Sliced, per pound.....	*17
Whole, boiled, per pound.....	*27
Half, boiled, per pound.....	*20
Sliced, boiled, per pound.....	*35
Hocks, boiled, per pound.....	10
Shoulders, sugar cured, whole shoulder, per pound.....	*17
Bacon—Breakfast, sliced, per pound.....	*36
Whole piece, per pound.....	*29
Strips, whole, per pound.....	21
Sliced, jar.....	30
Sliced, tin.....	27
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	8
Tongues, per pound.....	22
POULTRY AND GAME.	
Chickens—Fancy roasting, milk fed, per pound.....	*29
Chickens—Fancy, roasting, corn fed, per pound.....	*26
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	23
Capons, per pound.....	32
Broilers, milk fed, per pound.....	34
Broilers, corn fed, per pound.....	30
Turkeys, per pound.....	28
Squabs, each.....	40
Geese, per pound.....	*21
Grouse, each.....	1 00
Mallard ducks, 2 to 2½ pounds, each.....	2.35
Pheasants, each.....	1.35
DAIRY PRODUCTS.	
Butter—Creamery, special, per pound.....	40
Creamery, 60-62 lb. tub, whole tub, per pound.....	39
Sheffield Farms, extra fancy, per lb.....	58
Oleomargarine, per pound carton.....	29
Cheese—Philadelphia crame, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	23
Swiss, per pound.....	34
Edam, each.....	92
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	*15
Fermillac, bottle.....	*25
Ice cream, quart.....	125
½-gallon.....	150
Cream, 30 per cent, quart.....	*45
pint.....	*25
½-pint.....	*15
VEGETABLES.	
Beans, string, per pound.....	14
Beets, per pound.....	*3
Cabbage, per pound.....	2½
Carrots, per pound.....	2½
Cucumbers, per pound.....	14
Egg plant, per pound.....	7
Lettuce, per pound.....	5
Onions, per pound.....	2½
Parsnips, per pound.....	4
Peppers, green, per pound.....	11
Plantains, per dozen.....	15
Potatoes, white, per pound.....	2
Sweet, per pound.....	2½
Rhubarb, per pound.....	3½
Turnips, per pound.....	2
Yams, Lucea, per pound.....	2
FRUITS.	
Apples, per pound.....	*10
Grape fruit—Select, each.....	*8
Tropical, each.....	3
Lemons, per dozen.....	11

	Price.
Limes, per 100	40
Oranges—Select, each	3
Oranges—Tropical, per dozen	12
Coconuts, each	4
Bananas, per bunch	38
Bananas, each	12
Apples, evaporated, per pound	12
Apricots, evaporated, per pound	23
Pears, evaporated, per pound	12
Pineapples, each	14
Figs, dried, 12-oz. packages	5
Figs, dried, 5-oz. packages	11
Raisins, seedless, package	20
table, cluster, per pound	12
Currents, cleaned, package	12
Prunes, stewing, per pound	12
Cherries, per pound	27
Cantalou, es, each	12
Watermelons, each	12
Plums, per pound	8
Peaches, per pound	8

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than $\frac{1}{2}$ ham or $\frac{1}{2}$ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective June 28:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Pots, Azalea, 9", ea.	\$ 15	\$ 22
Pots, flower, 7", ea.	07	09
Chocolate, cordial, fruits, P & T, tin.	72	89
Brushes, shaving, ea.	1.05	1.00
Brushes, clothes, ea.	.70	.75
Sheets, 90" by 90", ea.	.85	.74
Blankets, ea.	.55	.43
Voile, yd.	.17	.21
Serge, black, yd.	1.80	2.00
Pin books, per book	.04	.05
Memo books, ea.	.14	.11
Razors, ea.	.96	1.05
Knives, cook, ea.	.26	.40
Kettles, Berlin, ea.	.78	.66
Cups, enameled, ea.	.17	.11
Saucepans, ea.	.32	.26
Bird cages, No. 1, ea.	1.15	1.35
Bird cages, No. 2, ea.	.95	1.15
Bird cages, No. 3, ea.	.59	.95

Additions to Stock.

Cigarettes, Capstan, tin	.26
Blankets, ea.	.54
Blankets, white, ea.	.80
Trunk straps, ea.	.22
Trunk straps, ea.	.24
Saucers, Minton, A 4807, ea.	.18
Biscuits, assorted, N. B. Co., ctn	.08
Biscuits, assorted, N. B. Co., ctn	.04

Misdirected Letters.

BALBOA HEIGHTS, C. Z., June 30, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressees:

Bates, W. H.	Murphy, Thos. A.
Cawl, Capt. M.	Musham, Harry Albert
Cocheu, Capt. G. W.	Otis, Clay
Daudert, Chas.	Reffle, John
Edward, Mrs. Sarah	Riley, E. W.
Ensminger, Fred	Runyan, Wm. A.
Hall, Miss Norine	Shelton, Sam
Hershey, A. D.	Smith, C. W.
*Hohlt, Henry	Smith, M. W.
Holt, J. M.	Stimpson, H. L.
Jackson, David H.	Struogis, P.
Jones, Wallace	*Van Valkenburg, Mrs. L.
Kanin, Samuel J.	Villasenor, Amalia S. de
LeFev, Herbert G.	Webb, Gillis
Mahoney, J.	Williams, Chas. J.
Martin, E. K.	
*Card.	

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gatun	Gatun Lake.	Miraflores Lake.
Sun., June 20.....	126.80	93.06	85.50	85.46	54.00
Mon., June 21.....	126.65	92.99	85.43	85.38	53.92
Tues., June 22.....	126.40	92.66	85.55	85.43	53.80
Wed., June 23.....	126.50	92.80	85.52	85.47	54.00
Thurs., June 24.....	126.40	92.77	85.52	85.43	53.98
Fri., June 25.....	127.45	93.42	85.56	85.43	53.91
Sat., June 26.....	126.95	93.09	85.56	85.47	54.02
Heights of low water to nearest foot....	125.00	91.00			

SHIPPING INFORMATION.

Panama (Balboa) tide predictions for the next five weeks are given in this table:

JUNE.				
DATE.	Time and height of high and low water.			
Wed., June 30.....	5:54	12:01	18:08	.....
	15.9	0.3	15.5	.....
Thurs., July 1.....	0:25	6:43	12:51	18:59
	-0.5	15.6	0.8	14.8
Fri., July 2.....	1:13	7:30	13:42	19:47
	.03	15.0	1.4	13.8
Sat., July 3.....	2:02	8:18	14:34	20:40
	1.3	14.1	2.2	12.9

JULY.				
DATE.	Time and height of high and low water.			
Sun., July 4.....	2:51	9:09	15:26	21:34
	2.3	13.3	2.9	12.0
Mon., July 5.....	3:43	10:02	16:22	22:35
	3.3	12.6	3.4	11.3
Tues., July 6.....	4:38	11:00	17:20	23:44
	4.1	12.0	3.7	11.0
Wed., July 7.....	5:37	12:01	18:19	.....
	4.5	11.8	3.7	.....
Thurs., July 8.....	0:50	6:37	13:00	19:15
	11.1	4.5	11.9	3.5
Fri., July 9.....	1:47	7:33	13:52	20:05
	14.4	4.3	12.2	3.0
Sat., July 10.....	2:35	8:20	14:39	20:51
	11.9	3.9	12.7	2.4
Sun., July 11.....	3:17	9:08	15:19	21:33
	12.5	3.3	13.2	1.8
Mon., July 12.....	3:55	9:51	15:58	22:12
	13.1	2.8	13.7	1.3
Tues., July 13.....	4:31	10:28	16:34	22:51
	13.7	2.3	14.1	0.9
Wed., July 14.....	5:06	11:10	17:11	23:29
	14.2	1.9	14.3	0.6
Thurs., July 15.....	5:40	11:49	17:46	.....
	14.5	1.6	14.4	.....
Fri., July 16.....	0:05	6:14	12:28	18:24
	0.6	14.7	1.4	14.3
Sat., July 17.....	0:44	6:49	13:09	19:03
	0.8	14.8	1.4	14.1
Sun., July 18.....	1:24	7:27	13:54	19:45
	1.1	14.8	1.5	13.7
Mon., July 19.....	2:08	8:10	14:42	20:35
	1.6	14.5	1.7	13.2
Tues., July 20.....	2:58	9:00	15:36	21:32
	2.1	14.7	2.0	12.8
Wed., July 21.....	3:55	9:59	16:39	22:40
	2.6	13.9	2.1	12.5
Thurs., July 22.....	5:00	11:07	17:46	23:56
	2.9	13.7	2.0	12.6
Fri., July 23.....	6:08	12:20	18:52	.....
	2.8	13.8	1.6	.....
Sat., July 24.....	1:09	7:16	13:30	19:55
	13.1	2.4	14.3	0.9
Sun., July 25.....	2:15	8:20	14:33	20:52
	13.9	1.7	14.9	0.1
Mon., July 26.....	3:14	9:15	15:30	21:44
	14.8	1.0	15.5	-0.5
Tues., July 27.....	4:05	10:08	16:21	22:34
	15.6	0.4	15.8	-0.8
Wed., July 28.....	4:53	10:57	17:06	23:20
	16.0	0.1	15.8	-0.8
Thurs., July 29.....	5:37	11:44	17:53	.....
	16.1	0.1	15.5	.....
Fri., July 30.....	0:04	6:20	12:30	18:36
	-0.4	15.8	0.4	14.9
Sat., July 31.....	0:47	7:01	13:14	19:20
	0.3	15.2	1.0	14.0

AUGUST.

DATE.	Time and height of high and low water.			
Sun., Aug. 1.....	1:30	7:42	13:59	20:02
	1.3	14.3	1.8	13.1
Mon., Aug. 2.....	2:13	8:25	14:45	20:48
	2.4	13.3	2.7	12.1
Tues., Aug. 3.....	3:01	9:08	15:33	21:41
	3.5	12.4	3.5	11.2
Wed., Aug. 4.....	3:54	10:02	16:34	22:48
	4.4	11.6	4.1	10.6

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3.47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.*

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

NOTE.—The sailings on Monday, July 26, and August 23, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans, Train No. 4, leaving Panama at 7.10 a. m., connects with the despatches for the two sailings mentioned above.

Fuel and Supplies.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 400 and 650 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton either form of delivery.

Fuel oil may be obtained at Balboa or Cristobal from plants of The Panama Canal, or from private corporations. The present price from the Canal is \$1.25 per ton barrel. Prices from the corporations may be obtained on application to them.

Diesel engine oil is for sale by several companies at approximately 45 shillings per ton of seven barrels.

Water may be obtained in any quantity at either terminal. The price is 25 cents per 1,000 gallons, delivered at the dock with a minimum charge of \$3. Vessels may take up from the fresh water section of the Canal, without charge, all the boiler water they require. This water is, however, scarcely fit for drinking.

All standard lubricants, light and heavy hardware, cordage, and miscellaneous ship chandlery supplies are sold from the storehouses at Cristobal and Balboa.

Ice may be obtained in any reasonable quantity. The price is 30 cents per 100 pounds at Cristobal, and 35 cents per 100 pounds at Balboa.

Repairs to vessels may be made to any extent, except turning of the largest crank shafts or longest line shafts or work requiring dry docking of large vessels.

The Government hospital service is fully equipped for the treatment of medical and surgical cases. The charge for consultation at the dispensaries is \$3; for hospital per day. For American seamen, the charge for treatment in ward is \$1 per day; for foreign seamen, \$1.50 per day.

Subsistence supplies, including a large stock of fresh meats vegetables, canned groceries, fruits, bakery products, etc., are available for quick delivery at either terminal. Prices are generally lower than the retail prices in the United States, and compare favorably with prices in any port of the world.

Application for supplies, or for services, should be made to the Captain of the Port, Cristobal or Balboa.

Mail, other than registered, and cablegrams for men on ships which will call at the terminal ports, or pass through the Canal, may be addressed in care of the captains of the ports, if desired; or may be addressed to Cristobal or Balboa, general delivery, with the name of the vessel written plainly; or, in case the vessel has a known representative on the Isthmus, in care of such representative.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Panama;" in the United States, "Panacanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

Sailings of Vessels in Regular Service with the Isthmus.

	Sails.	Arrives.
NEW YORK TO CRISTOBAL-COLON.		
Zacapa.....	U. F. C., June 30	June 30
Allianca.....	P. R. R., June 24	June 30
Calamares.....	U. F. C., June 26	July 4
Carrillo.....	U. F. C., June 30	July 7
Colon.....	P. R. R., July 1	July 7

(Continued on page 398).

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., June 27, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
June 21....	Hawaiian.....	American....	American-Hawaiian Line.....	New York.....	San Diego.....	General.....	5,017	5,903	4,193
June 21....	Advance.....	American....	Panama Railroad S. S. Line.....	New York.....	Balboa.....	General.....		2,965	2,161
June 21....	Cape Corso.....	British.....	Cape Corso S. S. Co.....	New York.....	Taltal.....	Ballast.....		4,825	3,597
June 22....	Queen Amelie.....	British.....	Dunlop S. S. Co.....	New York.....	Taltal.....	Ballast.....		4,656	3,382
June 22....	Good Hope.....	British.....	World S. S. Co.....	Baltimore.....	Coquimbo.....	Coke.....	3,798	3,722	2,697
June 22....	Huasco.....	Chilean.....	South American S. S. Line.....	Cristobal.....	Valparaiso.....	General.....	1,000	1,563	3,121
June 23....	Copenhagen.....	British.....	Glasgow Shipowners Co.....	New York.....	Talcahuano.....	General.....	6,291	5,029	3,735
June 23....	Coyo.....	British.....	New York & Pacific S. S. Co.....	New York.....	Valparaiso.....	General.....	3,500	3,222	2,216
June 23....	Tallac.....	American....	Tallac S. S. Co.....	Philadelphia.....	San Francisco.....	General.....	1,882	1,584	1,125
June 24....	Columbia.....	American....	American-Hawaiian Line.....	New York.....	Los Angeles.....	General.....	8,305	8,990	6,736
June 24....	Jamaica.....	American....	Panama Pacific Line.....	New York.....	San Francisco.....	General.....	5,800	13,122	8,485
June 25....	Morazan.....	British.....	Royal Mail S. P. Co.....	Cristobal.....	Buenaventura.....	General.....	667	1,170	620
June 25....	Camino.....	British.....	Liverpool Shipping Co.....	Baltimore.....	Antofagasta.....	Coke.....	4,118	4,195	3,225
June 25....	Strathairly.....	American....	Western Steam Nav. Co.....	Norfolk.....	Callao.....	Coal and coke.....	3,700	3,325	2,207
June 25....	Guatemala.....	British.....	Strath Line.....	Norfolk.....	Antofagasta.....	Ballast.....		4,823	3,592
June 26....	Port Phillip.....	British.....	Pacific Steam Navigation Co.....	Cristobal.....	Valparaiso.....	General.....	962	4,249	2,772
June 26....	Tokusshima Maru.....	British.....	Commonwealth & Dcm. Line.....	New York.....	Wellington.....	General.....	7,000	5,103	3,798
June 26....	Canastota.....	Japanese....	Nippon Yusen Kaisha.....	New York.....	Wusung.....	Oil.....	10,830	6,411	4,661
June 26....	Honolulu.....	British.....	N. Y. and Australia S. S. Co.....	New York.....	New Zealand.....	General.....	7,000	5,485	4,071
June 26....	Strathairly.....	American....	American-Hawaiian Line.....	New York.....	Los Angeles.....	General.....	5,043	7,825	5,715
June 26....	Trafalgar.....	British.....	Strath Line.....	Newport News.....	Pisagua.....	Ballast.....		4,639	3,382
June 26....	Trafalgar.....	British.....	Strath Line.....	Norfolk.....	Pisagua.....	Ballast.....		4,680	3,363
June 26....	Trafalgar.....	British.....	Glasgow Shipowners Co.....	London.....	Calita Colusa.....	Ballast.....		5,089	3,816
June 27....	Jason.....	British.....	Ocean S. S. Co.....	Liverpool.....	San Francisco.....	Sugar, general.....	7,100	7,537	5,405
June 27....	Daylight.....	British.....	Tank Storage and Shipping Co.....	New York.....	Shanghai.....	Case oil, naphtha.....	5,800	3,817	3,535
June 27....	Panama.....	American....	Panama Railroad S. S. Line.....	New York.....	Balboa.....	General.....	1,331	5,866	4,222
June 27....	Hubert.....	British.....	Pooh S. S. Co.....	Liverpool.....	Tocopillo.....	Ballast.....			

THROUGH THE CANAL—PACIFIC TO ATLANTIC

June 21....	Guatemala.....	British.....	Pacific Steam Nav. Co.....	Callao.....	Cristobal.....	General.....	1,576	4,249	2,772
June 21....	Jamaica.....	British.....	Pacific Steam Nav. Co.....	Tumaco.....	Cristobal.....	General.....	418	1,170	620
June 22....	Cumber Hall.....	British.....	W. Hartlepool Steam Nav. Co.....	Mejillones.....	St. Thomas.....	Nitrates.....	5,903	3,989	2,911
June 22....	Calchas.....	British.....	A. Holt & Co.....	Seattle.....	London.....	General, lumber.....	6,800	6,669	4,672
June 24....	Luz Blanca.....	British.....	London & Pacific Pet. S. S. Co.....	Talara.....	London.....	Benzine.....	6,000	5,147	3,268
June 24....	Advance.....	American....	Panama Railroad S. S. Line.....	Balboa.....	New York.....	General.....		2,965	2,161
June 25....	Lewis Luckenbach.....	American....	Luckenbach Line.....	San Francisco.....	New York.....	General, lumber.....	4,350	4,599	3,492
June 25....	Alaskan.....	American....	American-Hawaiian Line.....	Hilo.....	Del. Breakwater.....	Sugar, general.....	12,040	8,868	6,509
June 25....	Montara.....	Peruvian....	Peruvian Steamship Co.....	Valparaiso.....	Baltimore.....	General.....	3,325	4,605	2,638
June 26....	Santa Cruz.....	American....	W. R. Grace & Co.....	Mejillones.....	Philadelphia.....	Nitrates.....	6,450	5,427	3,751

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
June 26....	Honolulu.....	American-Hawaiian Line.....	New York.
June 26....	J. L. Luckenbach.....	Luckenbach Line.....	New York.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
June 28....	Manavi.....	Pacific Steam Nav. Co.....	Guayaquil.
June 30....	English Monarch.....	Royal Mail.....	.....
July 4....	Seijo Maru.....	.....	.....
July 4....	Victoria.....	Pacific Steam Nav. Co.....	Valparaiso.

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
June 21....	Meltonian.....	Leyland Line.....	Liverpool.
June 21....	Ocland.....	Earn Line.....	Norfolk.
June 26....	Tordenskjold.....	Earn Line.....	Norfolk.
June 26....	Ranger.....	Mass. State Schoolship.....	Boston.

*DEPARTURES.

Date	Vessel	Line	To
June 21....	Wilhelmina.....	McCreightou.....	Bluefields.
June 21....	Danube.....	Royal Mail.....	Southampton.
June 23....	Meltonian.....	Leyland Line.....	Galvestou.

*EXPECTED ARRIVALS.

July 3....	Carina.....	Elders and Fyffes.....	Port Limon.
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*EXPECTED DEPARTURES.

.....	Ocland.....	Earn Line.....	Cuba.
.....	Tordenskjold.....	Earn Line.....	Cuba.
.....	Ranger.....	Mass. State Schoolship.....
July 3....	Carina.....	Elders and Fyffes.....	Bristol.

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

June 25....	Anjo Maru.....	Toyo Kisen Kaisha.....	Colon.....
June 22....	Huasco.....	South American S. S. Co.....	Cristobal.
June 25....	Jamaica.....	Pacific Steam Nav. Co.....	Cristobal.

*DEPARTURES.

June 21....	Ucayali.....	Peruvian S. S. Co.....	Callao.
June 21....	Peru.....	Pacific Mail S. S. Co.....	San Francisco.
June 23....	Huasco.....	South American S. S. Co.....	Valparaiso.
June 26....	Jamaica.....	Pacific Steam Nav. Co.....	Tumaco.

*EXPECTED ARRIVALS.

June 28....	San Juan.....	Pacific Mail S. S. Co.....	San Francisco.
June 28....	Colombia.....	.....	.....
July 13....	Edgar H. Vance.....	.....	San Francisco.

*EXPECTED DEPARTURES.

June 29....	Anjo Maru.....	Toyo Kisen Kaisha.....	Honolulu.
July 7....	San Juan.....	Pacific Mail S. S. Co.....	San Francisco.

*Other than vessels passing through the Canal.

(Continued from page 397.)

Tenadores.....	U. F. C. July 3....	11	Carrillo.....	U. F. C. July 15....	22	Parismina.....	U. F. C. July 17....	22
Santa Marta.....	U. F. C. July 7....	14	Colon.....	P. R. R. July 17....	23	Atenas.....	U. F. C. July 21....	28
Advance.....	P. R. R. July 8....	15	Tenadores.....	U. F. C. July 19....	26	Cartago.....	U. F. C. July 24....	29
Metapan.....	U. F. C. July 10....	19	Advance.....	U. F. C. July 22....	29	CRISTOBAL-COLON TO NEW ORLEANS.		
Almirante.....	U. F. C. July 14....	21	Metapan.....	P. R. R. July 24....	31	Heredia.....	U. F. C. July 1....	6
Panama.....	P. R. R. July 15....	21	Metapan.....	U. F. C. July 26....	3	Abangarez.....	U. F. C. July 1....	8
CRISTOBAL-COLON TO NEW YORK.			NEW ORLEANS TO CRISTOBAL-COLON.			Parismina.....	U. F. C. July 8....	13
Almirante.....	U. F. C. July 1....	8	Abangarez.....	U. F. C. June 23....	30	Atenas.....	U. F. C. July 8....	15
Panama.....	P. R. R. July 3....	9	Parismina.....	U. F. C. June 26....	1	Cartago.....	U. F. C. July 15....	20
Pastores.....	U. F. C. July 5....	12	Atenas.....	U. F. C. June 30....	7	Turrialba.....	U. F. C. July 15....	22
Zacapa.....	U. F. C. July 8....	15	Cartago.....	U. F. C. July 3....	8	Heredia.....	U. F. C. July 22....	27
Allianca.....	P. R. R. July 10....	16	Turrialba.....	U. F. C. July 7....	14	Abangarez.....	U. F. C. July 22....	29
Calamares.....	U. F. C. July 12....	19	Heredia.....	U. F. C. July 10....	15	Parismina.....	U. F. C. July 29....	3
			Abangarez.....	U. F. C. July 14....	21	Atenas.....	U. F. C. July 29....	5

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, JULY 7, 1915.

No. 46.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly. The subscription rate is \$1 per year in the United States and its possessions, and in Canada, Cuba, Mexico, and Panama (domestic postage), and \$1.50 in other countries (foreign postage). The paper is furnished free to United States Government departments, representatives of foreign governments, public libraries, and employees of The Panama Canal and the Panama Railroad Company whose names are on the gold roll.

All subscriptions expire on December 31. Domestic subscriptions are accordingly charged as beginning from the first of the quarter of the year in which received. Remittances should be made to pay only to December 31, on this basis: Sent between April 1 and July 1, 75 cents; July 1 to October 1, 50 cents; October 1 to January 1, 25 cents. For foreign subscriptions the year is divided into thirds: Between January 1 and May 1, \$1.50; May 1 to September 1, \$1; September 1 to January 1, 50 cents.

Remittances for subscriptions may be forwarded to The Panama Canal, Washington, D. C., or to The Canal Record at the address given below.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Starting a New Regular Service.

The Blue Funnel Line vessel *Idomeneus* arrived at Cristobal from Liverpool, by way of Kingston, with 700 tons of cargo for San Francisco on July 5. After the completion of coaling at Cristobal, she will go through the Canal on Thursday, July 8, and load 1,000 tons of pipe and 100 tons of machinery, belonging to the Union Oil Company, for Los Angeles. The passage of the *Idomeneus* marks the beginning of a regular service by this line between Great Britain and the west coast of the United States and Canada, with a sailing each way every month.

Continuing the Peruvian Service to Baltimore.

The steamship *Pachitea* of the Peruvian Line is due to sail from Cristobal for Baltimore on Thursday, July 8. This will be the second vessel of this line to have passed through the Canal on the way from Peru to Baltimore recently, the *Mantaro* having made the same trip in the latter part of June. The *Mantaro* is due back shortly and there are expectations of establishing a regular line over this course.

High Run with Half-Yard Mixers.

Seven hundred and seventeen cubic yards of concrete were placed by the Division of Terminal Construction on Thursday, June 17, in a large monolith in the north wall of dry dock No. 1 at Balboa, near the entrance, by two ½-yard cube mixers. The combined number of mixer-hours for the two mixers was 15½, giving an average amount of concrete per hour per mixer of 46.2 cubic yards. One of the mixers was on the south wall of the dry dock, and was operated under the supervision

of General Foreman M. N. Lenham, and the other was on the north side of the entrance pier, and was under the supervision of Foreman W. L. Green.

The total labor cost, including supervision, for operating the two mixers mixing the concrete was \$67.27, making the total labor cost per yard for mixing 9.4 cents.

Addressing Mail for Vessels at the Canal.

Instances occur of delay to mail for vessels or individuals on board them, which come to the Canal, on account of improper addressing. In order that this may be reduced, attention is called to the fact that mail should be addressed to the individual aboard the stated vessel in care of the Captain of the Port, Cristobal, Canal Zone, or Balboa, Canal Zone. Thus, for instance, using fictitious names:

MR. OLAF OLAFSEN,
Steamship *Hurodo*,
Care Captain of the Port,
Cristobal, Canal Zone.

It is important that mail be not addressed to Colon or Panama, as then it is delivered to the postal service of the Republic of Panama.

Each of the port captain's offices has developed a reliable system for the handling of ships' mail, filing it in readiness for delivery, and as soon as a vessel makes port her mail is despatched promptly. Where mail is properly addressed, as directed above, there is no trouble about its delivery.

Inasmuch as it seems inevitable that a great deal of the mail for sailors will be addressed incorrectly, for the reason that directions for the proper addressing of their mail can not be placed in the hands of all concerned, operators and masters of vessels are requested to spread this information among their men in order to reduce losses and promote their security and convenience.

Large Shipment of Oil for Delivery at Balboa.

The oil tank steamer *Lyman J. Stewart* of the Union Oil Company of California, which was launched on October 31, 1914, and described in THE CANAL RECORD of December 2, 1914, is due to arrive at Balboa on July 14 from Port San Luis, Cal., with a cargo of 60,000 barrels of fuel oil. The oil will be delivered to the company's tanks at Balboa, which have storage capacity of approximately 100,000 barrels.

Hospital Rates for Seamen.

The attention of shipping people is drawn to the change in rate for ward treatment of American sailors in the hospitals of The Panama Canal. Prior to July 1 it was \$1 per day, but, effective that date, it has become \$1.50 per day, which is the rate which has applied and still applies to foreign seamen. There is now no discrimination between them,

DEVELOPING LOCAL PRODUCE.

Supply Department to Assure Market for Panama's Fruits and Vegetables.

In order the more adequately to supply the needs of its patrons, both Canal employees and vessels making use of the Canal and its terminals, the Supply Department is entering on a movement for the encouragement of local growers of fruits and vegetables to increase their output. The essential element of the movement is pointing out the assured market for the produce and cooperating with the producers in the marketing of their goods.

The first step is the erection of a fruit and vegetable warehouse, for which the first lumber was delivered on the site on Saturday, July 3. It is to be situated on the site of the old engineers' quarters at the southeastern end of the Panama railroad yard, facing directly on North Avenue and almost directly opposite the head of the northern of the two inclined roads leading up from the harbor, at the Playa. This location makes it very convenient for receiving produce from the small sailing boats which anchor or beach at the Playa, as most of them do.

The warehouse will be a one-story structure, 25 by 50 feet in plan, suitably arranged for its purposes and equipped with a cold room in which fruits may be stored through the ripening stage. This will allow steady purchasing in greater quantities with relatively little danger of loss from spoiling, and do much to better the present situation, in which purchases are made from day to day as supply or demand may dictate, and in which there are violent fluctuations from no produce at all, of a given sort, to a glutting of the market and consequent loss to the grower.

The strength of the local market is seen in the fact that yams, for instance, which are profitably grown in Panama, are never equal to the demand, as about eight tons of them are imported each week from Jamaica. For sweet potatoes the conditions are similar; about five tons are imported per week, from Barbados.

Other vegetables which are grown locally with profit, but of which there is never a surplus, are tomatoes, string beans, cucumbers, green peppers, eggplant, radishes, both red and white, and the local squash, which is a sort of cross between an American squash and a pumpkin. Of limes, coconuts, mangoes, plantains, and bananas, there is an adequate supply. In the orange season the department uses about 30,000 oranges a week; out of the local season, the oranges are imported, principally from Jamaica. Grapefruit is not grown locally, and in experiments made with it there has been an abnormal development of size and pulpiness, with rather little juice or flavor, but if the right stock and conditions could be worked out, the department could assure a market of 30 barrels, or about 8,000 pieces, per week. Of papayas and aguacates

there are never too many. The locally produced aguacates are said to be growing less satisfactory year by year on account of lack of care, which could be remedied; and of papaya, 1,000 pounds a day could easily be disposed of. Of *melones*, a sort of canteloupe, though larger and not as piquant in flavor, there are never enough.

Prices can not be fixed and guaranteed, but the department feels that it can assure prices which will make profits for reasonable industry. Examples of present prices are \$2.40 gold per 100 pounds for yams, delivered at Colon, and \$1.55 gold for sweet potatoes, and \$2 gold per 100 pounds for papayas.

Some of the fruits and vegetables, as for instance, tomatoes and watermelons, are produced much more satisfactorily by the use of seed from the United States. For these cases the department is arranging for the local buyer at Panama to furnish the requisite seeds; and at all times the Canal horticulturist will be ready to advise with respect to the cultivation of any of the products.

"Local growers" are not only those living in the environs of Panama or Colon or the Canal Zone but all those who can transport their produce to Panama City within about two days of picking. This makes the market available over a wide area, and if the plans laid down are consistently pursued and responded to the arrangement may contain the seeds of important development within the Republic.

The steamship *Baron Lovat* of the Howgarth Shipping Company arrived at Cristobal from New York on her maiden voyage with cargo on Tuesday, July 6, and entered the Canal for transit on Wednesday, July 7. She is carrying oil for Dairen, China.

NAUTICAL TRAINING SCHOOL.

The Work on the "Ranger," in Training Young Men to Become Ships' Officers.

The Massachusetts Nautical Training School ship *Ranger*, which arrived at Cristobal on June 26 on her regular summer practice cruise, cleared on Tuesday, July 6, for Havana. From Havana she will go to Guatemala, proceeding thence up the coast to Boston, where she is due to arrive about October 1.

The *Ranger* has aboard 104 students and a supervisory and instructing staff of eight, headed by a captain on the retired list of the United States Navy, who is assisted by a lieutenant and a chief boatswain from the active list of the Navy, and five experienced officers from the merchant marine, several of whom are graduates of the Massachusetts school. The course of instruction lasts two years of two sessions each, and the students are accordingly divided into four classes, according to the date of their entrance. From October to May the training ship is docked at Boston, and a school of theoretical instruction is carried on aboard, with instruction for six hours daily. For entrance to the course the young men are required to have essentially the preparation necessary for entrance to a high school, but the requirements are not entirely rigid and exceptions may be made in cases of indicated ability and aptness. The studies during the winter are made to supplement the shortages of individuals and to extend their knowledge of arithmetic, grammar, history, geography, etc., as well as to instruct in the more directly technical fields of electricity, steam, wireless operation, seamanship, and navigation. The summer course is entirely practical, putting into practice the

theoretical knowledge attained during the winter session.

Upon graduation, the students are ready to become third mates, if they have specialized in navigation, or to begin as oilers if they have made a specialty of the engineering branch. About two-thirds of them take the navigators' course, and one-third follow the engineering branch. There has been no lack of employment for the graduates, and the commissioners in charge of the school have received more applications from steamship operators for its graduates than they have been able to fill. This has been the case especially since recent enlargements of the American merchant marine.

The school was founded in 1891, and is now on its twenty-fifth year. It has been supported entirely by the State of Massachusetts, and the students must be residents of that State. Among the 104 present students, there are citizens of 57 different cities and towns of the State, the enrollment being by no means confined to the seacoast places. According to the records kept by the commissioners, approximately 76 per cent of the graduates of the school have kept to the sea. There is no tuition charge. The school is filled to its capacity and has a waiting list of about 30 young men who have passed the entrance examinations.

The Massachusetts school and the New York school, the training ship for which, the *Newport*, passed through the Canal on May 30, are the only ones of their sort maintained in the United States. That formerly maintained by the State of Pennsylvania has been abandoned, though there has recently been talk of reinstituting it.

Captain P. W. Hourigan, U. S. N., retired, who is in command of the *Ranger*, has expressed his appreciation of the courtesies shown the school by the officials of the Canal and by the local representative of the United States Steel Products Company, in giving the men opportunity to see the Canal and observe something of its operation.

Fourth of July Celebration.

The Independence Day celebration of the Canal employes held at Balboa on Monday, July 5, was attended by a total estimated at about 5,000 people during all parts of the day and the various exercises passed off smoothly and with general enjoyment. The address of the day was delivered by Major Herbert A. White, Jr., and the Declaration of Independence was read by Mr. F. G. Swanson. The weather was clear throughout the greater part of the day, but rain in the evening, which did not interfere with the pyrotechnic display, made it necessary to abandon the outdoor dance. The dance was held later in two sections, at the Canal clubhouse at Balboa and at the Hotel Tivoli.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

DAY AND DATE.	STATIONS.				
	Vigia.	Altajuela.	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., June 27.....	134.05	96.88	85.64	85.47	54.44
Mon., June 28.....	135.40	99.10	85.66	85.56	54.03
Tues., June 29.....	130.75	96.78	85.88	85.78	54.20
Wed., June 30.....	135.09	98.90	86.99	85.96	54.21
Thurs., July 1.....	130.35	96.20	86.29	86.27	54.30
Fri., July 2.....	129.10	94.72	86.43	86.40	54.30
Sat., July 3.....	128.80	94.58	86.51	86.40	74.01
Heights of low water to nearest foot....	125.00	91.00			

WEATHER CONDITIONS, CANAL ZONE, JUNE, 1915.

The rainfall for the month was above the station averages at five stations and deficient at thirteen stations. Over the Atlantic section, considered as a whole, the rainfall was slightly above the normal; over the Central section, generally below normal; while over the Pacific section, the deficiency was well marked, the rainfall at Balboa and Balboa Heights being the lowest on record for a period of 19 and 18 years, respectively. Monthly totals ranged from 2.37 inches at Balboa to 16.48 inches at Brazos Brook. The maximum amount of precipitation recorded on any one day was 4.04 inches at Brazos Brook on June 8, this being the only station having a daily rain in excess of four inches.

Rainfall occurred generally throughout the Zone on the 1st, 5th, 10th, 12th, 15th, 17th, 20th, 26th, 28th, 29th, and 30th of the month, and heavy showers were reported on these dates at many of the stations.

The estimated rainfall over the Chagres River basin was four per cent above the average, or 12.55 inches, against a 15-year average of 12.11 inches.

The average air temperature was above normal on both coasts, the daily excess being approximately one degree Fahrenheit. The atmospheric pressure and relative humidity were slightly below normal, while the daytime cloudiness, wind movement, temperature of the sea water, and evaporation were above normal at both coast stations.

No fogs were observed during the month at either coast station, but several night and early morning fogs occurred at interior stations, 23 per cent of which were dissipated by 6.30 a. m., 86 per cent by 7.30 a. m., and all fogs lifted or were dissipated by 8.30 a. m.

The elevation of Gatun Lake, in feet above mean sealevel, may be summarized as follows: Mean for the month, 85.44; maximum, on the 30th, 85.96; minimum, on the 20th and 21st, 85.35; evaporation from the lake surface, 5.040 inches.

The following is a summary of the climatological conditions during the month of June:

STATIONS.	Press re (reduced to mean of 24 hours.)	Temperature.				Mean relative humidity.	Precipitation				Wind.			
		Mean.	Maximum.	Date.	Minimum.	Date.	Total inches.	Station average.	Days of 0.1 inch or more.	Total movement (miles)	Prevailing direction.	Max velocity in miles.	Direction.	Date.
Colon.....	29.826	81.2	89	Jun. 16	75	Jun. 8	89	16.01	13.44	25	5,206	S. E.	27	June 6
*Balboa Heights...	29.819	81.0	92	Jun. 16	74	Jun. 11	90	2.85	7.81	18	4,617	N. W.	25	June 6

*Formerly Ancon.

PERMANENT SHORE DIKES.

Completed Dikes and Groins on South Shore of Limon Bay Have Arrested Erosion.

The construction of the three permanent shore dikes on the south shore of Limon Bay, with the center one about a quarter of a mile west of the center line of the Canal where it passes from the bay into the hills at Mindi, has been completed, and the construction of 25 timber groins, which shall supplement the effect of the dikes in the prevention of erosion of the shore and consequent heavy silting in the Canal channel, will be completed within about a week.

A summary of the plans for the dikes, with a resumé of the observations and experiments with temporary timber dikes which led to the decision to build the permanent structures, was published in THE CANAL RECORD of October 21, 1914. Their construction was started in the early part of November, and completed on April 20. The general plans were carried out, with modifications, and the erection of the groins was begun after the completion of the dikes.

As completed, the three dikes are spaced 500 feet apart, center line to center line, and all are built parallel to the axis of the Canal. This makes them extend due north and south and lie practically at right angles to the original shore line. The dike nearest the Canal is

be handled by hand in the construction of the dike. The rock was loaded in solid bottom barges formerly used in the Porto Bello rock service, and towed through the Canal to the shore of the bay, at the site of construction. Here it was unloaded into Decanville cars, which were lifted out by a derrick and swung into the trucks, running on a narrow-gage track on the landing wharf. The track led to the sites of the dikes and was extended as filling advanced.

The groins which are to act as auxiliaries to the dikes in protecting the shore are heavy timber fences, built out at right angles to the shore line, and are, in effect, miniature dikes. Each reaches about a foot above high water and extends from the high water line to the low water line. As the contour varies, their length is not constant, but the fences average about 100 feet in length. Twenty-two of the groins were built along the shore to the westward of the dikes, on the other side from the Canal. They are spaced 400 feet apart, and reach from the dikes along the south shore of the bay and up the west shore to a low headland called Kinney's Bluff, within the lee of Limon Point. In addition to these 22 groins, two have been built in the two spaces between dikes, and one has been built between the first dike and the edge of the Canal.

As the erosive effect of currents along the south shore of the bay is greatest during the

ward and deposited a great deal of silt in the Canal channel. How extensive the diminution of silting will be can not be foretold, but the dikes are at least serving their fundamental purpose of arresting the erosion and recession of the south shore.

Concerning Rent.

The following letter is published by direction of the Secretary of War:

WAR DEPARTMENT.

WASHINGTON, D. C.,

June 17, 1915.

HAMILTON FOLEY, ESQ.,

Editor, *Panama News Letter*.

Hotel Tivoli.

Ancon, Canal Zone.

My dear Sir,

I am in receipt of your letter of June 5th. There is one matter adverted to therein which I desire to take this opportunity to clear up by a perfectly plain statement of the facts. I refer to the matter of rent of buildings occupied by Panama Canal Zone employees.

This matter, as you must know, was complicated by almost diverse legislative provisions—certainly by diverse legislative intentions. Upon considering all the facts, and aided as I was in my consideration by the kindly help of Secretary Wilson of the Department of Labor, I reached the conclusion that the nearest that I could come to carrying out the intention of Congress and doing the just and fair thing all around was to suspend the requirement of the payment of rent until the finishing of the construction of the Canal, not later than June 30, 1916. (You will recall that this was made the subject of a special provision in the Urgent Deficiency Act approved April 6, 1914.) This course was recommended to and adopted by the President.

With respect to the future, all that I said was that rent would have to be paid in accordance with the Executive Order, now suspended as above stated, so soon as the Canal was completed, provided that in any event payments must begin on and after June 30, 1916. I of course expressed no views as to what Congress might or might not do on the premises. I gave no advice to the men who visited me as to what course they should pursue in the premises. What I did state was that under existing legislation, it was plain that the furthestest period that the Executive could deal with the matter was June 30, 1916, and that after that, rent, under existing legislation, would have to be collected.

I thank you for the opportunity to straighten out any misunderstanding that may exist with respect to this subject matter.

Sincerely yours,

LINDLEY M. GARRISON.

Secretary of War.

Family Quarters.

Applications for married quarters on file on June 30, 1915, were as follows:

STATIONS.	Number of applications.
Ancon	274 (84)
Corozal	30
Paraiso	145 (37)
Gatun	55 (12)
Cristobal	129 (23)
Total	642 (156)

NOTE.—The figures in parentheses show the number of applicants already occupying regular or non-house-keeping family quarters at stations other than those at which applications are filed.



MAP SHOWING AREA OF CONSTRUCTION OF SHORE DIKES IN LIMON BAY.
(Dikes are directly west of range light No. 2, and groins are built as far as Limon Point.)

800 feet from the center line. This one is also the longest, being 700 feet in length, while the center dike is 400 feet long and the third one is 200 feet in length. Each dike is about eight feet wide at the top, which is approximately two feet mean sealevel, and the sides slope about one in one. Altogether, about 8,000 cubic yards of rock were used in their construction.

The rock was obtained from Gaillard Cut, in the slide at La Pita Point. The material was a hard rock and it was well broken up in excavation, so that most of the pieces could

dry season, under the northward driving of the trade wind, and the dikes and groins have been completed only since the close of the last dry season, they have not been subjected to a complete test. Their usefulness, however, was made apparent by the experimental timber dikes, and already the shore line, instead of continuing to recede, as heretofore, has been advancing slightly. This is due to the dropping of silt in suspension when the currents are arrested by the dikes and groins, and deflected back to the northward. In the original state, the currents swung to the east-

Except in cases of emergency, or conditions arising subsequent to and unforeseen at the time of submitting the annual estimates to Congress, and except for those employed in connection with the construction of permanent quarters, offices, and other necessary buildings, dry docks, repair shops, yards, docks, wharves, warehouses, and other necessary facilities and appurtenances for the purpose of providing coal and other materials, labor, repairs, and supplies, and except for the permanent operating organization under which the compensation of the various positions is limited by section four of the Panama Canal Act, there shall not be employed at any time during the fiscal year 1916 under any of the foregoing appropriations for the Panama Canal, any greater number of persons than are specified in the notes submitted respectively in connection with the estimates for each of said appropriations in the annual Book of Estimates for said year, nor shall there be paid to any such person during that fiscal year any greater rate of compensation than was authorized to be paid to persons occupying the same or like positions on the first day of July, 1914; and all em-

ployments made or compensation increased because of emergencies or conditions so arising shall be specifically set forth, with the reasons therefor, by the governor in his report for the fiscal year 1916.

In addition to the foregoing sums there is appropriated, for the fiscal year 1916, for expenditure and reinvestment under the several heads of appropriation aforesaid without being covered into the Treasury of the United States, all moneys received by The Panama Canal from services rendered or materials and supplies furnished to the United States, the Panama Railroad Company, the Canal Zone Government, or to their employees, respectively, or to the Panama Government; from hotel and hospital supplies and services; from rentals, wharfage, and like services; from labor, materials, and supplies and other services furnished to vessels other than those passing through the Canal, and to others unable to obtain the same elsewhere; from the sale of scrap and other by-products of manufacturing and shop operations; from the sale of obsolete and un-serviceable material, supplies, and equipment purchased or acquired for the operation, maintenance, protection, sanitation, and government of the canal and Canal Zone; and any net profits accruing from such business to The Panama Canal shall annually be covered into the Treasury of the United States.

In addition there is appropriated for the operation, maintenance, and extension of waterworks, sewers, and pavements in the cities of Panama and Colon, during the fiscal year 1916, the necessary portions of such sums as shall be paid as water rentals or directly by the Government of Panama for such expenses.

FORTIFICATIONS, PANAMA CANAL.

For fortifications and armament thereof for the Panama Canal, to be immediately available and to continue to be available until expended, namely:

Electric light and power plants: For the purchase and installation of electric light and power plants for the seacoast fortifications on the Canal Zone, \$3,081.

Searchlights: For the purchase and installation of searchlights for the seacoast fortifications on the Canal Zone, \$79,666.

Clearings and trails: For maintenance of clearings and trails, \$45,000.

For protection, preservation, and repair of the fortifications of the Panama Canal, including structures erected for torpedo defense, and for maintaining channels for access to torpedo wharves, \$15,000.

For maintenance and repair of searchlights and electric light and power equipment for the fortifications of the Panama Canal, and for tools, electrical and other supplies, and appliances to be used in their operation, \$7,500.

For reserve equipment for the fortifications of the Panama Canal, \$50,000.

Where the expenses of persons engaged in field work or traveling on official business are chargeable to appropriations herein for fortifications or other works of defense for the Panama Canal a per diem may be allowed in lieu of subsistence, pursuant to section 13 of the sundry civil appropriation Act for the fiscal year 1915.

For the purchase, manufacture, and test of ammunition for seacoast and land defense cannon, including the necessary experiments in connection therewith, and the machinery necessary for its manufacture at the arsenals, \$733,000.

Provided, That if, in the opinion of the Secretary of War, it should be to the best interests of the United States, not to exceed \$50,000 of the foregoing appropriations may be expended for the erection of a building at the Watertown Arsenal for the installation of machinery to be used in the manufacture of projectiles.

For the alteration, maintenance, and installation of the seacoast artillery, including the purchase and manufacture of machinery, tools, and materials necessary for the work, and expenses of civilian mechanics, and extra-duty pay of enlisted men engaged thereon, \$30,000.

For alteration, maintenance, and repair of submarine mine matériel, \$2,500;

Fire control: For the construction of fire-control stations and the purchase and installation of accessories therefor, \$383,301.30;

For continuing the construction on the Panama Canal Zone barracks, quarters, storehouses, and other buildings necessary for accommodating the mobile army and Coast Artillery troops to be stationed there, including water, sewer, and lighting systems, roads, walks, and so forth, and for repairing and remodeling existing buildings to render them suitable for sheltering troops, \$1,290,000;

In all, specifically for fortifications and armament thereof for the Panama Canal, \$2,639,048.30.

Sec. 2. No part of the money appropriated by this Act shall be used for payment of salaries or expenses of the Joint Land Commission, established under article 15 of the Treaty between the United States and the Republic of Panama, in adjudicating or settling any claim originating under any lease or contract for occupancy, made by the Panama Railroad Company in the Canal Zone, or for the payment of any awards made by said commission on account of any such claims.

Sec. 3. That in prescribing regulations under the provisions of section five of the sundry civil Act of August 1, 1914, the President shall provide that in lieu of furnishing to the Auditor individual detail collection vouchers, not provided for in said regulations, two competent persons, one from the office of the Auditor for the War Department, designated by the Auditor, and one from the office of the Comptroller of the Treasury, designated by the Comptroller, shall be sent semi-annually, at such time as may be designated by the Comptroller, to the Canal Zone to examine the accounts and vouchers and verify the submitted schedules of collections and report in triplicate to the Auditor for the War Department, the Comptroller of the Treasury, and the Auditor of The Panama Canal; and such persons shall make other examinations into the accounts of The Panama Canal as may be directed by the Comptroller, and for all such purposes they shall have access to all records and papers pertaining thereto. Such examination and inspection shall be made for the period covered by the persons designated as soon as practicable, and the report of such persons shall be promptly filed. Such persons shall be furnished their transportation going and returning, including meals, and be paid a per diem of \$4 from the day of sailing from the United States until return thereto, both days inclusive, in lieu of subsistence on the Isthmus and all other expenses, out of such appropriation for the Panama Canal as may be designated by the Governor.

Sec. 4. That appropriations herein for printing and binding shall not be used for any annual report or the accompanying documents unless the copy therefor is furnished to the Public Printer in the following manner: Copies of the documents accompanying such annual reports on or before the 15th day of October of each year; and complete revised proofs of the accompanying documents and the annual reports on the 10th and 12th days of November of each year, respectively. The provisions of this section shall not apply to the annual reports of the Smithsonian Institution, the Commissioner of Patents, or the Comptroller of the Currency.

Sec. 5. That no part of any money appropriated by this Act shall be used during the fiscal year 1916 for the purchase of any typewriting machine at a price in excess of the lowest price paid by the Government of the United States for the same make and substantially the same model of machine during the period of the fiscal years 1913 and 1914; such price shall include the value of any typewriting machine or machines in exchange but shall not apply to special prices granted on typewriting machines used in schools of the District of Columbia or of the Indian Service.

Sec. 6. That all sums appropriated by this Act for salaries of officers and employees of the Government shall be in full for such salaries for the fiscal year 1916, and all laws, or parts of laws to the extent they are in conflict with the provisions of this Act are repealed.

Approved, March 3, 1915.

Examination by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, July 14, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the captain of the port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the captain of the port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the captain of the port of Cristobal on Friday, July 16, 1915, beginning at 9 a. m. Applicants should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.

F. M. NIXON,

Recorder, Board of Local Inspectors.

COMMISSARY DEPARTMENT.

Articles Lost in Commissary Stores.

The acting storekeeper of the Ancon commissary has posted a notice near the entrance to the store, stating that numbers of articles, most notably umbrellas, have been left in the store by patrons and turned in at the office by the employees, and should be claimed.

In all the stores the employees have been directed to turn in such lost and found articles at the office. Patrons are requested to remember this and to make inquiry immediately for articles presumably lost in the stores.

Yamatoya Shirts.

The Depot Commissary has received a catalogue and samples of material from the Yamatoya Shirt Company, No. 6 Benton-dori, Yokohama, makers of shirts to individual order. The materials are silk, pongee, and crepe, in about 100 variations, and the shirts are listed at 27.60 yen (\$13.80) per dozen, up. The catalogue and samples will be retained in the office of the Depot Commissary, Cristobal, where orders may be placed at the catalogue prices, with the addition of the regular surcharge on shirts.

Improving Ventilation at Ancon Commissary.

Changes are being made in the building of the Ancon commissary store to increase the ventilation. The original monitor in the center of the roof is to be fitted with three superimposed monitors, two over the store proper and one over the warehouse, and a hole is to be cut in the upper part of the wall separating the two divisions. It is believed that these changes will considerably augment both ventilation and illumination.

Commissary Hours.

The commissary stores at Las Cascadas, Empire, and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

These prices are increased by 10 per cent for sales to commercial and foreign naval vessels, and by 20 per cent for sales to yachts.

The following is a list of retail prices of cold storage provisions which will be effective July 8, 1915:

FRESH MEATS.

No changes since publication last week except rise of price of ox tails to 13 cents per pound.

	Price.
MISCELLANEOUS.	
Brains, calves', per pound.....	†8
Calves' head, each.....	80
Kidneys, beef, per pound.....	12
Livers—Beef, per pound.....	10
Calf, per pound.....	24
Steak—Hamburger, packages.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	*12
Frankfurter, per pound.....	13
Frankfurter, imported, tin.....	11
Lieberwurst, per pound.....	10
Pork, per pound.....	15
Sweetbread beef, per pound.....	17
Eggs, fresh, per dozen.....	28
per ½ dozen.....	14
per ¼ dozen.....	5
Bloaters, fancy, each.....	5
Bluefish, per pound.....	*10
Haddock, smoked, per pound.....	14
Halibut, fresh, per pound.....	11
Salmon, per pound.....	9
Yeast, per pound.....	31
per cake.....	2
Pates de foies gras, per jar.....	58
CURED AND PICKLED MEATS.	
Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Native, per pound.....	12
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50

SHIPPING INFORMATION.

Concise Statement on Points of Primary Interest to Users of the Canal.

In order to spread as widely as possible this information of primary importance to users of the Panama Canal, there are published below concise statements on points of most immediate concern to them. More extensive information than may be published here may be obtained from the "Sailing Directions and General Information" issued by The Panama Canal. This is a booklet of 115 pages, thoroughly explicit and carefully indexed, in which are covered all matters involved in handling vessels through the Canal. Copies of this booklet are in the hands of United States consular officers all over the world, and in the offices of the collectors of customs at United States ports, or at United States branch hydrographic offices, and have been furnished to the principal governmental and commercial maritime agencies over the world. Copies may be obtained on application to The Panama Canal, Washington, D. C., or Balboa Heights, C. Z.

PAYMENT OF TOLLS AND OTHER CHARGES.

It is necessary to place funds on deposit to cover the tolls of a vessel before she will be allowed to enter the Canal. This deposit may be placed with any Assistant Treasurer of the United States (one of whom is situated at any of the larger United States ports); or with the Assistant Auditor of The Panama Canal in Washington, D. C.; or with the Collector of The Panama Canal, Balboa Heights. The Assistant Treasurer method seems to be the most convenient for operators, as it is the one most generally used.

In case deposit is made in the United States it is advisable to request at the time of making deposit that cable advice of same be sent to the Canal, in order that there may be no delay to a vessel when she presents herself for passage.

Foreign operators may handle such depositing with equal simplicity, by directing their bankers or shipping agents to have the deposit placed with the Assistant Treasurer in New York or San Francisco, for instance.

The Canal organization has been developed to handle the passage of vessels complete and to attend to their needs in the way of tolls, coal, supplies, cables, mail, etc., without delay or "red tape" and there is no need for operators to employ local agents for vessels which come to the Canal for the sole purpose of passing through it, without taking on or discharging freight or passengers in Canal waters. In fact the interposition of a third party in the arrangements for a vessel which is simply passing through the Canal is liable to result in confusion and delay. In other words, a local agent may be needed for commercial purposes, in looking after cargo and passengers if vessels handle either at the terminal ports; but he is not needed to look after the requirements of the ship herself as far as going through the Canal, communicating, taking on supplies, coal, etc., are concerned.

REFUNDING BALANCE.

As soon as a vessel has cleared from the Canal a statement of her expenses is forwarded to her operator, with a check on the Treasurer of the United States for the balance of the deposit. In the case of lines having frequent passages through the Canal it is permissible to allow such balance to apply on account, but

the statement of each vessel's expenses for each passage is sent in all cases.

CHARGES FOR TOLLS.

Tolls on loaded commercial vessels are charged at \$1.20 per net vessel ton—each 100 cubic feet of actual earning capacity—the net tonnage being determined by the rules for the measurement of vessels for the Panama Canal. Deck load is charged for in addition, at \$1.20 per 100 cubic feet of space occupied by deck load.

On vessels in ballast the toll charge is 72 cents per net vessel ton, Panama Canal rules of measurement.

These basic charges have been modified, however, by the ruling that loaded vessels shall not pay more than the equivalent of \$1.25 per net ton as determined by the rules of measurement for United States registry; and ballast vessels shall not pay less than 75 cents per net ton, United States registry measurement.

Hence, vessels coming to the Canal for passage should have certificates of measurement according to the Panama Canal rules and also according to the rules of United States registry. These certificates can be issued at the ports of entry to the Canal but this might cause several days' delay to a vessel.

CHARGES FOR SERVICES.

There is no charge for pilotage on vessels passing through the Canal which do not stop at either terminal port to discharge or take on passengers or cargo. Also there is no charge when they stop at terminal ports for the purpose of taking on coal, supplies, etc. Pilotage charges when levied are port charges and not a part of the expenses of passing through the Canal.

The only additional expenses to which a vessel may be put for Canal transit proper would be for services rendered necessary by the condition of the ship. Such are charges for furnishing extra men on deck to handle the lines in passing through the locks, when the ship's crew is not sufficient; and tug service for sailing vessels or steamships in condition requiring assistance. Under such conditions the tug charge is \$15 per hour; or for complete transit of the Canal, 10 cents per net Canal ton or four cents per displacement ton, with a minimum charge of \$150.

PANAMA RAILROAD COMPANY.

On account of the close relationship of the Panama Railroad Company (operating the Panama Railroad Steamship Line) to The Panama Canal the former can very advantageously act as agent for other steamship lines if desired. Upon regular request it will advance funds for payment of tolls, fuel, supplies, and attend to stevedoring, etc. The services of the company may be engaged by addressing its home office, 24 State Street, New York City, or the Superintendent, Balboa Heights, Canal Zone.

FUEL.

Coal is supplied to vessels at both terminal ports, at the rate of between 400 and 700 tons a day. The facilities are being improved. The present prices for delivery from lighters, trimmed in bunkers, are \$5.40 per ton, when handled by ship's gear, at Cristobal; and at Balboa, \$6.40. These prices will advance to \$6 and \$7, respectively, on September 1, 1915. The coal is Pocahontas standard.

Fuel oil may be obtained at either terminal

	Price.
Minced, "Bologna style," per pound	13
Sugar cured, boneless, whole, per pound	17
Sugar cured, whole, per pound	21
Half, per pound	23
Sliced, per pound	17
Whole, boiled, per pound	27
Half, boiled, per pound	29
Sliced, boiled, per pound	35
Hocks, boiled, per pound	10
Shoulders, sugar cured, whole shoulder, per pound	17
Bacon—Breakfast, sliced, per pound	*31
Whole piece, per pound	*30
Strips, whole, per pound	21
Sliced, jar	30
Sliced, tin	27
Ham, lunch, per pound	40
Pork, salt, family, per pound	14
Ox tongues, whole, 3 to 5 lbs., per pound	24
Pigs' feet, per pound	8
Tongues, per pound	22

POULTRY AND GAME.

Chickens—Fancy roasting, milk fed, per pound	29
Chickens—Fancy, roasting, corn fed, per pound	26
Fowls, per pound	24
Fowls, light, per pound	21
Ducks, Western, per pound	23
Capons, per pound	†3
Broilers, milk fed, per pound	34
Broilers, corn fed, per pound	30
Turkeys, per pound	28
Squabs, each	†33
Geese, per pound	21
Grouse, each	1.00
Mallard ducks, 2 to 2½ pounds, each	2.35
Pheasants, each	1.35

VEGETABLES.

Beans, string, per pound	4
Beets, per pound	3
Cabbage, per pound	†2
Carrots, per pound	*3
Cucumbers, per pound	4
Egg plant, per pound	7
Lettuce, per pound	5
Onions, per pound	2½
Peppers, green, per pound	11
Plantains, per dozen	15
Potatoes, white, per pound	2
Sweet, per pound	2
Rhubarb, per pound	2½
Squash, per pound	†4
Tomatoes, per pound	†5
Turnips, per pound	3½
Yams, Lucea, per pound	*3

FRUITS.

Apoles, per pound	10
Grape fruit—Select, each	†6
Tropical, each	3
Lemons, per dozen	†9
Limes, per 100	40
Oranges—Select, each	3
Tropical, per dozen	12
Coconuts, each	4
Bananas, per bunch	38
Bananas, each	½
Apples, evaporated, per pound	12
Apricots, evaporated, per pound	12
Pears, evaporated, per pound	23
Pineapples, each	†10
Figs, dried, 12-oz. packages	14
Figs, dried, 5-oz. packages	5
Raisins, seedless, package	11
table, cluster, per pound	20
Currants, cleaned, package	12
Prunes, stewing, per pound	12
Cherries, per pound	27
Cantaloupes, each	.....
Watermelons, each	.....
Plums, per pound	.....
Peaches, per pound	.....

* Indicates advance from preceding list.

**† Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective July 6:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Hammocks, ea.	2 80	3 00
Bedspreads, ea.	95	75
Towels, linen, ea.	23	26
Thimbles, ea.	02	01
Undershirts, ea.	33	29
Mattresses, ea.	4 60	5 25
Scissors, 7", pr.	29	44
Pans, muffin, ea.	23	27
Pans, fry, ea.	16	12
Buckets, ea.	26	30
Boards, pastry, ea.	48	44
Coolers, water, ea.	2 48	2 40
Trunks, ea.	4 05	4 35

from plants of The Panama Canal or from private corporations, at the rate of about 1,600 barrels an hour. The price from The Panama Canal is \$1.25 per barrel of 42 gallons, sold as dry oil at the local temperature, with subtraction of the amount of water contained, as shown by analysis. Prices from the corporations may be obtained on application to them.

Diesel engine oil is for sale by several corporations, one of which quotes a general price of 45 shillings per ton of seven barrels.

SUPPLIES.

Supplies in unlimited quantities, including meats, cold storage products, groceries, fruits, vegetables, etc., as well as ships' supplies—lubricants, cordage, ships' chandlery, standard articles for ships' use—can be purchased from The Panama Canal in either of the terminal ports and delivery can be made on short notice. By Governmental regulation these goods are sold at fixed prices very slightly above cost.

Ice is furnished for 30 cents per 100 pounds at Cristobal and 35 cents per 100 pounds at Balboa.

Laundry is handled quickly and no advance notice is required.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required or the turning of the largest crank shafts or longest line shafts.

Ships are boarded by a boarding officer immediately on arrival. He furnishes price lists and takes orders for all kinds of supplies or fuel. Any supplementary orders or requests for any kind of services may be sent to the Captain of the Port, communication with whom is always easy.

The Captain of the Port of entry is the local executive with whom, or his authorized immediate representatives, the master of a vessel coming into the Canal will have dealings. His office is the clearing house for all business with the ships, and is the local marine headquarters. It gives out chronometer comparisons, nautical information as to charts, sailing directions, etc., delivers and receives mail, and has supervision over the delivery of coal, supplies, etc., to vessels.

COMMUNICATIONS.

While by no means necessary it is advantageous if vessels can advise in advance when they will arrive, by mail, cable, or radio. Mail is received five times a week from the United States, and approximately a week after posting. The Canal is equipped with three radio stations, two for areas within 1,000 miles of the terminal ports and one which has a sending radius of approximately 3,000 miles.

Communications should be addressed to The Panama Canal, Balboa Heights, Canal Zone. The cable address of the Canal on the Isthmus is Pan Canal, Panama; of the Washington office, Pan Canal, Washington. Codes used are A. B. C. Telegraphic, 5th edition; Lieber's; Scott's Shipowners' Telegraphic (1906); Western Union Telegraphic (Universal Edition), etc.

Shipping people are invited to remember that the fundamental purpose of the Canal is to pass ships between the two oceans quickly. They are invited, accordingly, to make any suggestions by which this purpose may be even more completely realized, and to make inquiries for additional information.

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in this table:

JULY.				
DATE.	Time and height of high and low water.			
Thurs., July 8.....	0:50	6:37	13:00	19:15
	11.1	4.5	11.9	3.5
Fri., July 9.....	1:47	7:33	13:52	20:05
	11.4	4.3	12.2	3.0
Sat., July 10.....	2:35	8:20	14:39	20:51
	11.9	3.9	12.7	2.4
Sun., July 11.....	3:17	9:08	15:19	21:33
	12.5	3.3	13.2	1.8
Mon., July 12.....	3:55	9:51	15:58	22:12
	13.1	2.8	13.7	1.3
Tues., July 13.....	4:31	10:28	16:34	22:51
	13.7	2.3	14.1	0.9
Wed., July 14.....	5:06	11:10	17:11	23:29
	14.2	1.9	14.3	0.6
Thurs., July 15.....	5:40	11:49	17:46	.....
	14.5	1.6	14.4	.....
Fri., July 16.....	6:05	12:28	18:24	.....
	9.6	14.7	1.4	14.3
Sat., July 17.....	0:44	6:49	13:09	19:03
	0.8	14.8	1.4	14.1
Sun., July 18.....	1:24	7:27	13:54	19:45
	1.1	14.8	1.5	13.7
Mon., July 19.....	2:08	8:10	14:42	20:35
	1.6	14.5	1.7	13.2
Tues., July 20.....	2:58	9:00	15:36	21:32
	2.1	14.2	2.0	12.8
Wed., July 21.....	3:55	9:59	16:39	22:40
	2.6	13.9	2.1	12.5
Thurs., July 22.....	5:00	11:07	17:46	23:56
	2.9	13.7	2.0	12.6
Fri., July 23.....	6:08	12:20	18:52	.....
	2.8	13.8	1.6	.....
Sat., July 24.....	1:09	7:16	13:30	19:55
	13.1	2.4	14.3	0.9
Sun., July 25.....	2:15	8:20	14:33	20:52
	13.9	1.7	14.9	0.1
Mon., July 26.....	3:14	9:15	15:30	21:44
	14.8	1.0	15.5	-0.5
Tues., July 27.....	4:05	10:08	16:21	22:34
	15.6	0.4	15.8	-0.8
Wed., July 28.....	4:53	10:57	17:06	23:20
	16.0	0.1	15.8	-0.8
Thurs., July 29.....	5:37	11:44	17:53	.....
	16.1	0.1	15.5	.....
Fri., July 30.....	6:04	12:20	18:30	18:36
	-0.4	15.8	0.4	14.9
Sat., July 31.....	0:47	7:01	13:14	19:20
	0.3	15.2	1.0	14.0

AUGUST.

DATE.	Time and height of high and low water.			
Sun., Aug. 1.....	1:30	7:42	13:59	20:02
	1.3	14.3	1.8	13.1
Mon., Aug. 2.....	2:13	8:25	14:45	20:48
	2.4	13.3	2.7	12.1
Tues., Aug. 3.....	3:01	9:08	15:33	21:41
	3.5	12.4	3.5	11.2
Wed., Aug. 4.....	3:54	10:02	16:34	22:48
	4.4	11.6	4.1	10.6
Thurs., Aug. 5.....	4:54	11:08	17:37	.....
	5.0	11.2	4.3	.....
Fri., Aug. 6.....	5:05	11:58	18:20	18:40
	10.5	5.1	11.2	4.1
Sat., Aug. 7.....	1:16	7:03	13:23	19:37
	10.9	4.8	11.6	3.5
Sun., Aug. 8.....	2:10	7:58	14:15	20:25
	11.6	4.2	12.3	2.7
Mon., Aug. 9.....	2:53	8:44	14:57	21:08
	12.4	3.4	13.1	1.9
Tues., Aug. 10.....	3:29	9:26	15:35	21:46
	13.3	2.5	13.8	1.1
Wed., Aug. 11.....	4:04	10:05	16:12	22:22
	14.2	1.6	14.4	0.5

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3.47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.*

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

NOTE.—The sailings on Monday, July 26, and August 23, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7.10 a. m., connects with the despatches for the two sailings mentioned above.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., July 7, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of addressees:

Barrett, Chas. Irvin	Geidel, Paul
Baxley, H.	Harris, Federico
Carter, Arthur	Heiner, Jno. L.
Colhouer, Charles S.	Kraut, E. W.
Cook, Arthur	Mecom, Tommie
Crouch, William T.	McGowan, Arthur J.
Cunningham, Herbert N.	Schroyer, Gray
Currie, Robt.	Shanahan, T.
Dean, R. H.	Walwyn, Harry
Devlin, Raymond M.	Yarborough, I. M.
Edmunds, K. B.	

* Card.

† Paper.

Rainfall from June 1 to 30, 1915, Inclusive.

STATIONS.	Maximum one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa.....	.98	12	2.37
Balboa Heights.....	.76	12	2.85
Miraflores.....	1.47	12	3.46
Pedro Miguel.....	2.17	12	7.69
Rio Grande.....	1.76	26	8.01
<i>Central Section—</i>			
Culebra.....	2.19	28	10.03
*Camacho.....	1.08	28	6.06
Empire.....	1.96	28	7.11
Gamboa.....	2.06	27	9.01
*Juan Mina.....	3.75	28	15.14
Alhajuela.....	1.34	1	8.00
*El Vigia.....	1.40	8	12.48
Frijoles.....	2.50	28	10.54
*Trinidad.....	1.62	20	13.01
*Monte Lirio.....	1.75	27	10.40
<i>Atlantic Section—</i>			
Gatun.....	1.66	16	12.66
*Brazos Brook.....	4.04	8	16.48
Colon.....	2.12	29	16.01
*Bocas del Toro.....	1.84	27	4.55

*Standard rain gage—readings at 5 p. m. daily.

Automatic rain gage at unstarred stations—values midnight to midnight.

June Rainfall for Three Years.

STATIONS.	1913	1914	1915	Station Av.	Years of record	Rainy days '15
<i>Pacific Section—</i>	<i>Ins.</i>	<i>Ins.</i>	<i>Ins.</i>	<i>Ins.</i>		
Balboa.....	7.15	7.25	2.37	7.58	19	14
Balboa Heights.....	8.15	7.28	2.85	7.81	18	18
Miraflores.....	9.49	5.64	5.46	9.13	7	20
Pedro Miguel.....	9.00	11.35	7.69	9.95	8	21
Rio Grande.....	8.05	9.92	8.01	9.15	11	26
<i>Central Section—</i>						
Culebra.....	9.10	8.06	10.03	8.88	24	24
Camacho.....	9.65	10.46	6.06	9.65	9	20
Empire.....	11.48	8.87	7.11	8.49	12	26
Gamboa.....	8.02	17.78	9.01	9.86	34	26
Juan Mina.....	9.67	12.31	15.14	11.82	5	24
Alhajuela.....	11.51	12.35	8.09	12.36	16	26
El Vigia.....	10.80	17.34	12.48	13.74	7	28
Frijoles.....	8.72	13.05	10.54	11.39	4	23
Trinidad.....	11.20	9.61	13.01	12.26	8	21
Monte Lirio.....	10.71	14.55	10.40	12.87	8	16
<i>Atlantic Section—</i>						
Gatun.....	10.70	12.64	12.66	13.23	11	27
Brazos Brook.....	12.17	15.84	16.48	15.84	9	25
Colon.....	11.81	16.30	16.01	13.44	45	25

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., July 4, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
June 28.	J. L. Luckenbach.	American.	Luckenbach Line.	New York.	Los Angeles.	General.	4,650	5,114	3,258
June 28.	Veturia.	British.	Veturia S. S. Co., Ltd.	Norfolk.	San Diego.	Coal.	7,701	6,217	4,413
June 29.	Charlton Hall.	American.	U. S. Steel Products Co.	New York.	Callao.	General.	6,851	5,593	4,217
June 29.	Highbury.	British.	Britain S. S. Co. Ltd.	Norfolk.	Tiburón.	Coal.	7,450	5,382	3,615
June 29.	William O'Brien.	American.	East Coast Transportation Co.	Philadelphia.	Bremerton.	Coal.	5,300	5,514	3,995
June 29.	Tranquebar.	Danish.	East Asiatic Company.	St. Thomas.	Guayaquil.	General.	4,580	4,379	3,203
June 30.	Purley.	British.	Mitre Shipping Co.	New York.	Vladivostok.	General.	7,600	5,805	4,424
June 30.	Trader.	British.	London Traders S. S. Co.	Cardiff.	Balboa.	Coal.	5,100	3,967	2,977
June 30.	Panaman.	American.	American-Hawaiian Line.	New York.	Los Angeles.	General.	7,206	6,937	4,760
July 1.	Matoppe.	British.	Ellerman & Bucknell.	New York.	Melbourne.	General.	10,000	5,838	4,355
July 1.	Santa Cecilia.	American.	Atlantic and Pacific S. S. Co.	New York.	San Francisco.	General.	3,600	6,747	4,476
July 1.	Sinaloa.	Norwegian.	A. O. Lindvig.	New Castle.	Seward.	Ballast.		1,178	984
July 2.	Tsushima Maru.	Japanese.	Nippon Yusen Kabushiki Kaisha.	Philadelphia.	Yokohama.	General.	9,014	7,361	5,220
July 3.	Strathairn.	British.	Strath Line.	Boston.	Pisagua.	Ballast.		4,684	3,439
July 3.	Salvador.	British.	Salvador R. R. Co.	Cristobal.	Salina Cruz.	General.	883	1,193	692
July 4.	Manani.	British.	Pacific Steam Nav. Co.	Cristobal.	Guayaquil.	General.	726	1,205	745
July 4.	Allianco.	American.	Panama Railroad S. S. Line.	New York.	Balboa.	General.	1,190	4,120	2,670
July 4.	Whakarua.	British.	Commonwealth & Dom. Line.	New York.	Auckland.	General.	8,000	8,254	5,891

THROUGH THE CANAL—PACIFIC TO ATLANTIC

June 28.	Kroontland.	American.	Panama Pacific Line.	San Francisco.	New York.	General, pass'gers	6,000	13,076	8,551
June 28.	Celia.	British.	New York & Pacific Line.	Valparaiso.	New York.	Nitrates, cop. ore.	7,700	5,852	4,377
June 28.	S. V. Luckenbach.	American.	Luckenbach Line.	San Francisco.	New York.	General.	2,708	3,859	2,632
June 28.	Salvador.	British.	Salvador Railway Co.	Salina Cruz.	Cristobal.	General.	281	1,190	692
June 29.	Manani.	British.	Pacific Steam Nav. Company.	Guayaquil.	Cristobal.	Cocoa, coffee, gen.	501	1,205	745
June 30.	Palena.	Chilean.	South American S. S. Co.	Valparaiso.	Cristobal.	General.	1,350	3,639	2,537
June 30.	Ohican.	American.	American-Hawaiian Line.	Callita Buena.	New York.	Nitrates.	8,500	6,944	4,699
July 1.	Panama.	American.	Panama Railroad S. S. Line.	Balboa.	New York.	General.		5,866	4,222
July 1.	Natal.	Danish.	East Asiatic Company.	Port Pirie.	Mobile.	Zinc ore.	6,110	4,613	3,308
July 2.	Epsom.	British.	Watts, Watts & Co.	Portland.	London.	Grain.	6,480	4,914	3,460
July 3.	Strathesk.	British.	Burrell & Co.	Iquique.	England.	Nitrates.	6,785	4,773	3,565
July 3.	Nevadan.	American.	American-Hawaiian Line.	San Pedro.	New York.	General.	5,100	4,513	3,103
July 3.	Clan Ferguson.	British.	Cayzer Irvine & Co.	Junin.	St. Thomas.	Nitrates.	6,700	4,864	3,569

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From	Date	Vessel	Line	From
June 28.	Kenra.	Isthmian S. S. Co., Ltd.	New York.	July 4.	Victoria.	Pacific Steam Nav. Co.	Valparaiso.
June 30.	Allianco.	Panama R. R. S. S. Line.	New York.	July 4.	Kentuckian.	American-Hawaiian Line.	Hilo.
July 4.	Saint Quentin.	Brit. & Foreign S. S. Co.	New York.	July 8.	Margaret.		
July 4.	Carolyn.	Luckenbach Line.	New York.		Santa Catalina.	W. R. Grace & Co.	

PORT OF CRISTOBAL.

*ARRIVALS.

*DEPARTURES.

Date	Vessel	Line	From	Date	Vessel	Line	To
July 3.	Cavina.	Elders & Fyffes.	Port Limon.	July 1.	Ocland.	Earn Line.	Dalquiri.
				July 3.	Cavina.	Elders & Fyffes.	Bristol.

*EXPECTED ARRIVALS.

*EXPECTED DEPARTURES.

July 8.	Savoia.	La Veloce Line.	Genoa.	July 6.	Tordenskjold.	Earn Line.	Cuba.
July 9.	Antonio Lopez.	Spanish Line.	Barcelona.	July 6.	Ulysses.	Panama R. R. S. S. Line.	Norfolk.
				July 6.	Ranger.	Mass. School Ship.	Havana.
				July 10.	Savoia.	La Veloce Line.	Genoa.
				July 12.	Antonio Lopez.	Spanish Line.	Barcelona.

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

*DEPARTURES.

June 30.	San Juan.	Pacific Mail S. S. Co.	San Francisco.	June 29.	Anjo Maru.	Toyo Kisen Kaisha	Hongkong.
June 30.	Huallaga.	Peruvian S. S. Line.	Payta.				

*EXPECTED ARRIVALS.

*EXPECTED DEPARTURES.

July 5.	Seiyo Maru.	Toyo Kisen Kaisha.	Japan.	July 6.	San Juan.	Pacific Mail S. S. Co.	San Francisco.
July 8.	Pachitea.	Peruvian S. S. Line.	Callao.	July 6.	Huallaga.	Peruvian S. S. Line.	Callao.
	City of Para.	Pacific Mail S. S. Co.	San Francisco.				

*Other than vessels passing through the Canal.

Sailings of Vessels in Regular Service with the United States.

REGULAR CONNECTIONS THROUGH THE CANAL.

Approximately regular services between the Atlantic and the Pacific seaports from Boston, New York, Philadelphia, and Baltimore, occasionally Charleston and New Orleans, to San Pedro, San Francisco, Portland, and Puget Sound, and return, are maintained by the American-Hawaiian Steamship Company, with a sailing each way about every five days; the Luckenbach Steamship Company, with a sailing each way about every 10 days; Sudden and Christenson, approximately fortnightly; the Atlantic and Pacific Steamship Company, about every three weeks; and the Panama-Pacific Line, each way every three weeks.

Regular lines are maintained between Cristobal and New York by the Panama Railroad Steamship Line, vessels sailing every Saturday, direct from Cristobal, and every Thursday, direct from New York; between Colon and New York by the United Fruit Company; sailings via Kingston weekly and via Havana weekly;

between Cristobal and New Orleans by the United Fruit Company, two vessels a week each way. Following are the sailings in the near future:

Sails. Arrives.

NEW YORK TO CRISTOBAL-COLON.

Carrillo.	U. F. C.	June 30.	July 7
Colon.	P. R. R.	July 1.	July 7
Tenadores.	U. F. C.	July 3.	July 11
Santa Marta.	U. F. C.	July 7.	July 14
Advance.	P. R. R.	July 8.	July 15
Metapan.	U. F. C.	July 10.	July 19
Almirante.	U. F. C.	July 14.	July 21
Panama.	P. R. R.	July 15.	July 21

CRISTOBAL-COLON TO NEW YORK.

Zacapa.	U. F. C.	July 8.	July 15
Allianco.	P. R. R.	July 10.	July 16
Calamares.	U. F. C.	July 12.	July 19
Carrillo.	U. F. C.	July 15.	July 22
Colon.	P. R. R.	July 17.	July 23
Tenadores.	U. F. C.	July 19.	July 26
Santa Marta.	U. F. C.	July 22.	July 29

Advance.	P. R. R.	July 24.	July 31
Metapan.	U. F. C.	July 26.	Aug. 3

NEW ORLEANS TO CRISTOBAL-COLON.

Atenas.	U. F. C.	June 30.	July 7
Cartago.	U. F. C.	July 3.	July 8
Turrialba.	U. F. C.	July 7.	July 14
Heredia.	U. F. C.	July 10.	July 15
Abangarez.	U. F. C.	July 14.	July 21
Parismina.	U. F. C.	July 17.	July 22
Atenas.	U. F. C.	July 21.	July 28
Cartago.	U. F. C.	July 24.	July 29

CRISTOBAL-COLON TO NEW ORLEANS.

Parismina.	U. F. C.	July 8.	July 13
Atenas.	U. F. C.	July 8.	July 15
Cartago.	U. F. C.	July 15.	July 20
Turrialba.	U. F. C.	July 15.	July 22
Heredia.	U. F. C.	July 22.	July 27
Abangarez.	U. F. C.	July 22.	July 29
Parismina.	U. F. C.	July 29.	Aug. 3
Atenas.	U. F. C.	July 29.	Aug. 9

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, JULY 14, 1915.

No. 47.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly. The subscription rate is \$1 per year in the United States and its possessions, and in Canada, Cuba, Mexico, and Panama (domestic postage), and \$1.50 in other countries (foreign postage). The paper is furnished free to United States Government departments, representatives of foreign governments, public libraries, and employees of The Panama Canal and the Panama Railroad Company whose names are on the gold roll.

All subscriptions expire on December 31. Domestic subscriptions are accordingly charged as beginning from the first of the quarter of the year in which received. Remittances should be made to pay only to December 31, on this basis: Sent between April 1 and July 1, 75 cents; July 1 to October 1, 50 cents; October 1 to January 1, 25 cents. For foreign subscriptions the year is divided into thirds: Between January 1 and May 1, \$1.50; May 1 to September 1, \$1; September 1 to January 1, 50 cents.

Remittances for subscriptions may be forwarded to The Panama Canal, Washington, D. C., or to The Canal Record at the address given below.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Cape Mala Light in Service.

Mariners are advised that the new light at Cape Mala, at the western point of the Gulf of Panama, has been placed in service. It is equipped with a red sector to the northward covering Iguana Island and reef, and a red sector to the southward, covering the North and South Fraile Rocks, which are distant about 12 miles from Cape Mala. Complete sailing directions are given in the "Sailing Directions and General Information" for the Panama Canal, edition of April, 1915, and were published in THE CANAL RECORD of June 9.

Transfer Cargo through the Canal is About Four Per Cent of Total.

Approximately one twenty-fifth of the total amount of cargo passing through the Canal during recent months has been that which was transferred between carriers at the two terminal ports. The total of all cargo going through the Canal has been running over 500,000 tons per month. (Between January 1 and June 1 it averaged 522,034 tons). The transferred cargo shipped through the Canal has varied considerably but amounted to 19,323 tons in the month of May, when the total cargo was 578,708 tons.

The great body of the Canal cargo is through-shipped goods, traveling between ports remote from the Isthmus, and most of the vessels going through do not discharge or take on any cargo at the terminals. Their relation to the Canal in this respect is about the same as if they were passing through a strait. Most of the vessels stop to take on ship's supplies from the facilities provided by the Government to make the route attractive, but do not break cargo.

The relatively small portion which is transfer cargo affords a striking index to the fact that a great quantity of goods is passing through the Canal. For the transfer cargo now handled is about two-fifths of the movement of through freight handled over the Isthmus on the Panama railroad during the two years preceding the opening of the Canal, and it is recalled that the railroad at that time was supposed to handle more tons per mile than any other railroad in the world. Traffic one-twelfth as great as the present traffic of the Canal kept a well-equipped railroad exceedingly busy.

From the great quantities of transfer cargo to be seen on the piers at the terminals, an idea is gained of the vastly greater quantity of goods moving through the Canal without any breaking of cargo.

Advertising Space in Motor Omnibuses.

The Panama Railroad Company offers to carry advertising cards in the motor omnibuses which it is operating in the Canal Zone, at the rate of \$12.50 per month for a card in all of the four busses. Contracts are drawn for a period of one year, with the understanding that if the company should cease to maintain, control, or continue the advertising in the cars the advertiser shall be entitled to a rebate *pro rata* for the unexpired period. All cards are subject to the approval of the company as to style and copy.

Red Band Mileage Books Have Become Obsolete.

The holders of Panama railroad mileage books marked with the red band and issued prior to July 1, 1914, are advised that such books became obsolete at the end of June 30, 1915, and will not be accepted for transportation. Holders should turn in their books with unused mileage for redemption in cash. They may be presented at the office of the Paymaster at Balboa Heights or Cristobal, or sent by mail to the Auditor, The Panama Canal, Balboa Heights, C. Z.

Arrival of Practice Cruise Squadron.

The United States battleship *Wisconsin* will arrive in Limon Bay at about 3 o'clock in the afternoon of Wednesday, July 14, according to advice received by radio. The battleships *Ohio* and *Missouri* will arrive in the afternoon of July 15. The three vessels comprise the squadron for the summer practice cruise of the 680 midshipmen in the first, second, and third classes at the United States Naval Academy, and are on the way to San Francisco. They sailed from Annapolis on July 8, calling at Guantanamo for coal. Under the original schedule for the cruise, published in THE CANAL RECORD of May 19, the squadron should have left Annapolis on June 6, but the cruise was held up, pending an investigation at the Academy. The vessels will probably go into Gatun Lake on Thursday, July 16.

SUPPLYING BUNKER COAL.

Additional Equipment to Meet Needs Prior to Completion of Permanent Plants.

The difficulties of coaling vessels promptly at Cristobal, which have been experienced as the result of the increasing demands of vessels and the non-completion of the permanent coaling plants, have been lessened by the use, in addition to the previous facilities, of four motor-driven conveyors, or hoisters, which are used to discharge coal from barges and lighters alongside vessels into their bunkers. Two 500-ton barges have been fitted for this service, each with two conveyors. The conveyors are of the Demayo make and consist essentially of an endless chain of scoops, operating in a vertical steel casing about 25 feet high, from the top of which the material being handled is discharged into a pipe chute, passing by gravity to its destination. The elevators are suspended by cables from booms. This regulates their elevation while they dig into the coal and allows their being swung about to reach any point in the hold of the barge.

The first use of this new equipment on commercial vessels was in the coaling of the steamship *Finland* of the Panama Pacific Line, which passed through the Canal on her way from New York to San Francisco on June 24. On the second vessel coaled, the *Guatemala* of the Pacific Steam Navigation Company, the rate of supply was 26½ tons per hour. This is regarded as low for this equipment, and it is expected that when the operators shall have become thoroughly trained to their work each barge will supply approximately 60 tons per hour. If such effectiveness be attained the facilities for bunkering at Cristobal will have been practically quadrupled.

In the mean time, work is being pushed on the permanent coaling plant for the Atlantic entrance as rapidly as the material is supplied by the contractors. It is planned to complete two of the four unloader towers in September, and, by a modification of their construction, use them for both unloading colliers and loading into customer vessels from the stock pile. This is a temporary expedient, for use only until the regular reloader towers shall be completed, but as the two towers command a considerable storage space and each will be capable of handling about 250 tons an hour, it will in all probability meet the situation quite satisfactorily until the completed plant is in service.

All four of the towers for the plant have been erected, but the two toward the outer end of the wharf are those on which early completion is being pushed. The two stocking and reclaiming bridges have been practically completed with respect to the structural work, but the machinery is yet to be installed. They will probably be completed by the end of September. The material for the reloader towers has begun to arrive from the United States and their erection will begin shortly. The viaduct commanding the dry storage

space is about 50 per cent completed. The dredging alongside the wharves has advanced sufficiently to allow vessels access to the plant whenever desired.

At the Pacific plant, one of the two unloader towers is practically erected, and all four of the berm cranes, which will be used for stocking and reclaiming, have been erected. Work has not begun on the two reloaders, the wharf for which is yet to be built; the sinking of caissons for this wharf is in progress. This construction is intimately related to that of the dry dock, as the coaling plant will form one side of the entrance slip to the dry dock, and the work is held back somewhat by the needs of the dry dock construction. For instance, connecting the unloader wharf with the reloader wharf will require excavating through the cofferdam protecting the dry dock excavation, and this adds to the difficulty of the work. The preponderance of bunkering at the Atlantic end is such, on account of the prices being \$1 less per ton there, that the present commercial demand for a coaling plant at the Pacific entrance is slight.

Floating Caisson Transferred to Gatun Locks.

The floating caisson dam No. 1, for use in unwatering the lock chambers, was towed from Paraiso to Gatun Locks on Thursday, July 8, by the tug *Gorgona*. The caisson was drawing 33 feet of water at the time of passing through the Cut. It is to be used shortly for unwatering the lower and middle levels of the west flight, to allow the painting of the gates.

Civil Service Examinations.

Examinations for the following positions are scheduled to be held, probably on September 19 (date to be left blank in applications): Aid, Coast and Geodetic Survey; local inspector of boilers, local inspector of hulls, assistant inspector of boilers, assistant inspector of hulls, Steamboat Inspection Service (not for appointment in Canal Zone); clerk, Panama Canal service; computer, Coast and Geodetic Survey; copyist topographic draftsman and topographic draftsman, non-appointed Departmental service; junior engineer draftsman, Engineer Department at Large; matron, Indian service; pharmacist, Public Health service; physician, all services except Philippine; postal clerk, Panama Canal service; veterinarian.

The fall edition of the manual of examinations has arrived and is ready for distribution.

Announcement will be made later of the examinations to be held in October.

Applications should be secured from and filed with the office of the Civil Service Examiners, Balboa Heights. Applications will not be received after August 27; this date may be changed if necessary. A card of admission will be sent to those found eligible to be admitted, upon the receipt of the questions from the Civil Service Commission.

In answer to questions as to residence, applicants must show residence in a State or Territory of the United States, and county thereof, up to the time of filing application, a ruling having been made that employees of The Panama Canal can claim residence in the United States while temporarily employed on the Isthmus.

The attention of those desiring to compete in the clerk examination is called to the fact that it is probable that no examination will be held in January, as has been the former custom for stenographer and typewriter, and typewriter.

LABOR FORCE AND QUARTERS IN JUNE.

The force report of June 23, 1915, shows the actual working force of The Panama Canal on that date to have been 21,677; of the Panama Railroad, 4,845; and of contractors, 375, a total effective working force of 26,897. This is an increase of 463 from the force on May 26, which was 26,434; is 2,082 more than the force on April 21, which was 24,815; and is 3,523 more than the 23,374 employed on March 24. As compared with May 26, there was a decrease of 22 in the total number of gold employees, in spite of an increase of 38 in the gold force of the contractors, while there was an increase of 485 in the number of silver employees, of which 58 are employed by the contractors.

The gold force on the Isthmus, composed almost exclusively of white Americans, was 3,593, a decrease of 22 from the preceding month; an increase of 232 from the gold force on April 21, numbering 3,361; and an increase of 168 from the 3,425 gold employees on March 24. The gold force on June 23, amounting to 3,593, was divided as follows: The Panama Canal, 3,212; the Panama railroad, 295; contractors, 86. Detailed figures of the employment of the Canal force on the Isthmus follow:

DEPARTMENT OR DIVISION.	SILVER EMPLOYEES*												Total silver.	Total gold.	Grand total.
	Artisan.						Laborers.								
	Monthly.	Special.	22 cents.	18 cents.	15 cents.	12 cents.	Special.	Euro- pean 16 cents.	13 cents.	10 cents.	7 cents.	5 cents.			
Operation and Main- ten'ce; office & locks	422	....	2	28	49	3	25	8	4	147	...	2	690	144	834
Terminal Construc'tn	404	....	68	235	719	184	62	81	388	613	2	21	2,777	297	3,074
Building Division.	72	15	292	468	559	23	...	17	311	279	1	11	2,048	173	2,221
Electrical	97	5	47	76	156	145	...	1	117	25	...	8	677	178	855
Municipal Eng.	280	4	57	177	281	181	96	35	149	1,020	4	40	2,324	80	2,404
Dredging	1,702	1	9	28	74	12	...	14	163	74	1	2	2,080	302	2,382
Mechanical	157	12	73	113	587	611	...	13	48	186	8	4	1,812	863	2,675
Marine Division	148	...	...	...	...	24	...	...	...	...	...	...	172	51	223
Fortifications	73	...	40	71	214	23	35	...	65	241	...	5	773	98	871
General Construct'n	10	...	...	...	4	4	...	65	17	32	1	1	134	4	138
Total	3,365	37	594	1,196	2,643	1,186	242	234	1,262	2,617	17	94	13,487	2,190	15,677
Supply; main office.	...	...	...	...	...	...	...	...	...	...	...	...	14	...	14
Commissary	720	...	4	7	14	16	253	6	...	130	18	...	1,163	150	1,318
Subsistence	486	...	3	1	1	2	...	...	...	...	...	...	493	25	518
Quartermaster	791	28	76	94	126	...	51	39	135	963	...	5	2,308	76	2,384
Accounting	23	...	...	...	...	...	...	...	...	...	...	...	23	197	220
Health	397	...	3	4	6	...	11	...	14	360	10	17	822	160	982
Executive	159	2	1	2	...	...	...	...	...	...	...	...	164	400	564
Panama railroad	319	179	68	204	417	732	1,658	68	495	387	8	15	4,550	295	4,845
Contractors	83	2	2	7	26	...	121	...	37	4	...	7	289	86	375
Grand total.	6,343	248	751	1,515	3,233	1,936	2,336	347	1,943	4,461	53	138	23,304	3,593	26,897
Month previous	6,285	276	751	1,539	2,951	2,067	1,834	272	2,046	4,625	44	129	22,819	3,615	26,434
Changes	+58	-28	...	-24	+282	-131	+502	+75	-103	-164	+9	+9	+485	-22	+463

*The wages are stated in United States currency.

A summary of the occupation of Government quarters on June 30, 1915, is given below:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Children	Men	Women	Children	Men	Women	Children
Balboa ¹	893	230	250	96 ²	8	12	1,562 ³	496	627
Ancon	922	434	457	4	...	...	255	16	...
Corozal	237	200	190	1	1	2	296	35	46
Pedro Miguel	205	112	140	8	...	...	248 ⁴	40	42
Paraiso	282	75	88	95	7	23	378	108	110
Culebra ⁵	19	13	19	1	1	6	424 ⁶	277	313
Gambou ⁷	23	3	5	...	...	...	105	19	30
Gatun	214	171	190	73	3	6	211	103	106
Cristobal ⁸	931	345	443	66	...	...	1,140 ⁹	185	400
Total	3,726	1,583	1,782	344	20	49	4,619	1,279	1,674

(1) Includes Taboga Island, Naos Island, and Palo Seco. (2) Includes 20 Asiatics. (3) Includes 12 American negroes, 60 Colombians and Panamanians, and two Panamanians on the gold roll. (4) Includes Miraflores. (5) Includes 28 Panamanians. (6) Includes Emjire, Las Cascadas, and Bas Obispo. (7) Includes 10 Panamanians. (8) Includes Colon Beach and Colon Hospital. (9) Includes 35 East Indians, 15 American citizens, and 79 Panamanians. Gold force of contractors, occupying Government quarters, included above, 49 bachelors.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Basque, Julien	34276	Panama	Corozal	Mua. Eng.	June 26, 1915
Robinson, Daniel	38139	Barbados	Palo Seco	Health Dept.	June 28, 1915
Booth, Alfred	65317	Jamaica	Panama	Dredging Div.	July 6, 1915
Brown, Wm.	91925	Jamaica	Cristobal	P. R. R.	July 4, 1915
Madura, Lucano	97311	Curacao	Gatun	P. R. R.	July 5, 1915
Taylor, Humbert	21995	Barbados	Panama	Dredging Div.	July 6, 1915

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

RECEIPTS AND EXPENSES

Toll Earnings in May Wipe Out Deficit, Making Profit for Fiscal Year.

By the earnings of tolls on vessels passing through the Canal during May, the deficit on operation and maintenance of the Canal for the period from July 1, 1914, to May 1, 1915, which amounted to \$39,480.04, was wiped out, and a balance created in favor of the Canal, amounting to \$177,799.50 at the close of business on May 31. The excess of tolls earned over expenses, \$177,799.50, represents a profit of 4.79 per cent on the expenditure, not counting anything for interest on the money invested or for depreciation of plant.

Tolls earned in June amounted to \$541,181.55. The cost of operation and maintenance for that month will be less than that, thereby increasing the profit for the entire fiscal year.

The following detailed summary of the items

charged to operation and maintenance shows that under this classification are included all the diversified expenditures which have been made for keeping the Canal open and in order, and the work of handling vessels through; and in addition are charged prorated parts of the general expenses of civil government, sanitary work, and administration. Approximately a third of the total overhead expense of the Canal at present is charged to operation and maintenance. With respect to the actual operation and maintenance, the Canal has met and exceeded expenses; but with respect to the total investment involved, and the total of current expenditures, the receipts from tolls are not equalling expenses.

The cost for May was the least since August; this was due to the employment of a large part of the dredging equipment in the uncompleted channel, the cost of which is chargeable to construction.

QUARANTINE ACTIVITIES.

Net Emigration from Isthmus in Two Years.—Work Increasing.

Immigration to the Isthmus from foreign ports during the month of June exceeded emigration to foreign ports by 68 persons. This brings the net emigration since July 1, 1913, a period of exactly two years, to 26,231 persons. During the two-year period the decrease in the Canal force has been approximately 15,365. The force of employees on June 25, 1913, was 42,262; that reported as of June 23, 1915, was 26,897, showing a net decrease of employees amounting to 15,365. This is at the rate of 7,680 per year, or 640 per month, or 21 per day.

The activities at the quarantine stations during June exceeded slightly the activities in May. Two hundred and four vessels were inspected, as compared with 201 in May, and the number of persons examined, 17,725, was slightly over three per cent greater than the 17,163 in May. A summary of the activities and of the movements of persons through the ports of Balboa-Panama and Cristobal-Colon during June is given in this consolidated report for the two ports:

Number of vessels inspected and passed	189
Number of vessels held in quarantine	15
Total	204
Number of vessels fumigated on arrival	11
Number of vessels fumigated on departure	2
Total	13
Number of crew examined	12,756
Number of passengers examined (including 97 U. S. troops)	4,969
Total	17,725
Number of persons vaccinated at ports of arrival because of compulsory vaccination law	852
Number of persons vaccinated at ports of departure or en route because of compulsory vaccination law	848
Total	1,700
Number of persons held in quarantine at the detention houses to complete period of incubation of yellow fever and plague	318
Number of persons held in quarantine on board vessels to complete period of incubation of yellow fever and plague	1,615
Total	1,933
Number of persons landed from foreign ports:	
Cabin	2,345
Steorage	1,245
Total	3,590
Number of persons embarked for foreign ports:	
Cabin	1,839
Steorage	1,683
Total	3,522
Number of persons arriving from coast towns on small launches and sailing craft	2,216
Number of persons sailing for coast towns on small launches and sailing craft	1,748
Apparent increase for month from coast towns	468
Apparent increase for month from foreign ports:	
Cabin (increase)	506
Steorage (decrease)	438
Difference	68
Number of immigrants recommended for deportation	7
Number of bills of health issued or viséed	201
Number of inspections of docks	24
Number of inspections of vessels at docks	47
Total number of persons landed	5,806
Less number for Pacific ports	219
Total number of persons sailing	3,270
Total apparent increase for month	317

ITEMS.	Month of May, 1915.	Month of April, 1915.	Total since June 30, 1914.
Civil Government, proportion	\$20,913.33	\$20,379.61	\$213,602.63
Health Department, proportion	23,725.92	17,102.59	224,309.87
Administration, proportion	76,580.76	77,209.98	811,758.80
Operation and maintenance:			
Admeasurement of vessels	770.96	794.92	9,181.95
Local inspection	423.87	445.46	3,710.18
Aids to navigation	4,210.39	4,184.55	44,310.32
Pilotage	7,757.46	5,899.78	55,657.52
Damages to vessels	7.26	28.22	2,204.57
Maintenance of transportation tracks	2,911.19	3,171.22	35,941.72
Gatun Locks:			
Superintendence	1,142.71	1,031.82	15,905.81
Operation	8,391.03	7,795.86	92,485.20
Maintenance of operating machinery and equipment	2,248.90	5,708.22	32,145.33
Maintenance and care of emergency dams	790.06	832.17	11,748.80
Maintenance of gates	677.35		3,410.69
Maintenance of valves	462.45	377.05	785.28
Maintenance of towing track system	1,924.65	1,549.92	6,111.21
Maintenance of towing locomotives, lines, and hawsers	48.13	175.70	13,238.82
Maintenance of lighting and telephone systems	12.13	22.30	2,447.50
Maintenance of power control and lighting cables	2,893.49	1,843.25	292.29
Maintenance of structures		10.52	23,501.66
Maintenance of backfill	302.35	87.60	6,382.96
Miscellaneous supplies and expenses			2,587.49
Gatun Spillway:			
Operation	48.00	179.51	1,048.60
Maintenance of operating machinery and equipment	87.05		1,117.56
Maintenance of gates and caissons	66.79	354.25	3,396.88
Maintenance of structures	747.19	248.82	6,032.60
Gatun Dam, maintenance	5,094.19	11,342.79	43,304.00
Pedro Miguel Lock:			
Superintendence	1,020.64	793.34	13,394.95
Operation	6,889.45	5,170.73	72,631.71
Maintenance of operating machinery and equipment	2,073.34	1,993.53	21,068.50
Maintenance and care of emergency dams	315.37	346.57	6,523.90
Maintenance of gates	451.94	286.25	1,828.96
Maintenance of valves		126.05	243.22
Maintenance of towing track system	176.04		290.86
Maintenance of towing locomotives, lines, and hawsers	1,563.69	881.39	8,891.90
Maintenance of lighting and telephone systems	378.14	286.76	1,988.82
Maintenance of power control and lighting cables		2.61	878.74
Maintenance of structures	1,351.94	965.05	8,431.29
Maintenance of backfill			15,800.96
Miscellaneous supplies and expenses	180.60	281.45	1,735.33
Pedro Miguel Dam, maintenance			42.00
Miraflores Locks:			
Superintendence	1,180.34	1,022.75	15,878.16
Operation	8,793.62	7,548.03	94,123.30
Maintenance of operating machinery and equipment	1,724.80	966.90	16,048.23
Maintenance and care of emergency dams	226.98	467.45	7,039.63
Maintenance of gates	341.37	1,847.75	24,667.50
Maintenance of valves	353.60	693.20	10,467.22
Maintenance of towing track system			1,045.17
Maintenance of towing locomotives, lines, and hawsers	1,165.72	529.93	7,142.44
Maintenance of lighting and telephone systems	382.81	95.87	1,951.09
Maintenance of power control and lighting cables			135.48
Maintenance of structures	2,043.92	696.17	9,739.95
Maintenance of backfill			12,659.01
Miscellaneous supplies and expenses	438.34	344.84	3,235.71
Miraflores East Dam and Spillway:			
Operation			651.50
Maintenance of operating machinery and equipment	44.42	86.59	5,087.87
Maintenance of gates and caissons			3,118.43
Maintenance of structures	49.10		697.84
Miraflores West Dam, maintenance			377.17
Dredging:			
Atlantic entrance	1,104.11	5,444.66	124,198.10
Gaillard Cut	124,585.62	160,899.02	1,493,412.55
Miraflores Lake	2,253.44		2,253.44
Pacific entrance		3,649.99	8,624.79
Maintenance of Gatun Lake	1,139.82	1,721.36	13,400.01
Gatun-Mindi Laves, maintenance	3,317.32	100.10	25,932.38
Colon Breakwater, maintenance	51.91	82.63	134.54
Naos Island Breakwater, maintenance	2,236.70		2,693.63
Total, operation and maintenance	\$328,079.70	\$358,397.08	\$3,705,275.43
Tolls earned	547,054.60	442,415.49	3,833,074.93
Tolls earned in excess of expenses	\$218,974.90	\$84,108.41	\$177,799.50

VESSELS FROM WEST COAST.

Will Be Allowed to Enter Canal Docks at End of Six Days from Callao.

It has been decided to allow vessels trading between the west coast of South America and the Canal ports to come into dock at the Canal ports for the discharge of cargo after the expiration of six days from the time of their leaving Callao, a plague port, instead of seven days, as previously required. This concession has been made subject to strict regulations, which the Chief Quarantine Officer has set forth in a circular notice which is being sent to agents, masters of vessels, and others concerned.

The essential considerations leading to this change have been the fact that the vessels, on their northward voyages, do not dock in plague ports but lie out in the harbor and discharge and receive cargo by means of lighters; and that the Pacific carriers run on a schedule of close connections with Atlantic carriers, which makes it important for them to suffer as little delay as possible and will tend to assure their earnest compliance with the regulations, lest the concession be withdrawn.

The added restrictions deal principally with the control of the crews, pending the completion of the full seven days from Callao, and the registration of shore labor going aboard the vessels for the purpose of handling cargo. The danger of infection from plague-infected persons coming ashore is considered greater than that of the bringing ashore of plague by rats, in the face of the existing precautions against rats.

The following is the text of the notice sent out by the Chief Quarantine Officer:

Quarantine precautions and restrictions in force at the present time to be continued.

No shore leave for crew, with the exception of master and purser when necessary to transact business in Callao and way ports north. Crew to remain on board upon arrival at Zone ports to complete seven days from Callao. Shore labor necessary to go on board for discharge of cargo to be registered by name, metal check number, and address, and a list of such laborers to be furnished the quarantine officer at Balboa or Cristobal, as the case may be, not later than 24 hours from time of docking and commencement of discharge of cargo.

All precautions now in force with regard to fumigation, quarantine restrictions at ports of departure and way ports, breasting off, rat-guarding or mooring lines, gangways raised at night, etc., to be strictly enforced.

Vessels included in the above, transiting the Canal for Cristobal, may be permitted to pass through the Canal in quarantine during the fifth day.

The precautions to be observed at ports of departure and way ports to be properly certified to, and the measures to be carried out at Canal Zone ports are obligatory, upon the company concerned, for proper maintenance, and will be subject to inspection at any time by representative of the quarantine service.

Failure on the part of vessels to comply *strictly* with restrictions in force will result in such vessel being required to complete full time of *seven days* before being permitted to come alongside and discharge cargo.

The above arrangement will be allowed with the purpose of facilitating the handling of cargo from the west coast, and if the restrictions are carried out strictly and in good faith, can probably be maintained as a regular procedure. It must be understood, however, that this arrangement is subject to revision at any time should the quarantine authorities determine that it is impracticable or dangerous to Canal Zone ports.

Vessels from yellow fever infected or suspected ports are not included in the above.

Quarantine officers will see that the above requirements are strictly complied with.

Publications Received.

Receipt is acknowledged of pamphlets issued by the chambers of commerce of Baltimore, Seattle, and Manchester, England, describing the harbors, port facilities, and marine business of the cities.

PANAMA CANAL DIRECTORY.

Executive Department.

Headquarters, Balboa Heights.

GEO. W. GOETHALS, U.S.A., Governor.

M. B. Stevens, Secretary.

C. A. MCLVAINE, Executive Secretary.

W. P. Copeland, Chief Clerk.

John K. Baxter, Chief, Division of Civil Affairs, Balboa Heights.

Capt. Harry D. Mitchell, U. S. A., Chief, Division of Police and Fire, Balboa Heights.

A. R. Lang, Superintendent, Division of Schools, Balboa Heights.

FRANK FEUILLE, Special Attorney, Ancon.

CHARLES R. WILLIAMS, District Attorney, Ancon.

Department of Operation and Maintenance.

(Under immediate direction of the Governor as Head of the Department.)

Headquarters, Balboa Heights.

LIEUT.-COL. CHESTER HARDING, U. S. A., Engineer of Maintenance.

C. O. Carlson, Secretary.

C. J. EMBREE, Office Engineer.

CAPT. W. H. ROSE, U. S. A., Electrical Engineer, Electrical Division.

D. E. WRIGHT, Resident Engineer, Division of Municipal Engineering.

CAPT. T. H. DILLON, U. S. A., Superintendent Gatun Locks, Gatun.

F. C. CLARK, Superintendent Pacific Locks, Pedro Miguel.

F. D. WILLSON, Chief Hydrographer, Section of Meteorology and Hydrography.

O. E. MALSBURY, Assistant Engineer, Section of Surveys.

H. H. ROUSSEAU, Civil Engineer, U. S. N., Engineer of Terminal Construction.

R. R. Hand, Secretary.

F. H. COOKE, Civil Engineer, U. S. N., Designing Engineer.

T. B. MÖNNICHE, Engineer of Docks, Cristobal.

J. A. WALKER, General Superintendent, Balboa.

W. G. THOMPSON, Superintendent, Cristobal.

C. C. SNEDEKER, Supervisor, Coco Solo, Cristobal.

CAPT. HUGH RODMAN, U. S. N., Marine Superintendent, Marine Division, Balboa Heights.

LIEUT. P. P. BASSETT, U. S. N., Captain of the Port, Cristobal.

LIEUT. A. B. REED, U. S. N., Captain of the Port, Balboa.

Board of Local Inspectors—LIEUT. P. P. BASSETT, *Chairman*; J. MACFARLANE, LIEUT. A. B. REED, Headquarters, Balboa Heights.

F. M. Nixon, Recorder.

W. G. COMBER, Resident Engineer, Division of Dredging, Paraiso.

D. C. NUTTING, JR., Constructor, U. S. N., Superintendent, Mechanical Division, Balboa.

GEO. M. WELLS, Resident Engineer, Building Division, Balboa Heights.

FIRST-LIEUT. CRESWELL GARLINGTON, U. S. A., Assistant Engineer, Division of Fortifications, Balboa Heights.

Supply Department.

MAJ. W. R. GROVE, U. S. A., Chief Quartermaster, Balboa Heights.

CAPT. F. H. SMITH, Assistant Chief Quartermaster, Balboa Heights.

BENJ. L. JACOBSON, Depot Commissary, Cristobal.

C. H. MANN, Sales Agent, Cristobal.

R. K. MORRIS, Storekeeper, Balboa.

Accounting Department.

H. A. A. SMITH, Auditor, Balboa Heights.

JOHN H. MCLEAN, Paymaster, Balboa Heights.

T. L. CLEAR, Collector, Balboa Heights.

AD. FAURE, Chief Accountant, Balboa Heights.

ELWYN GREENE, Chief Examiner, Balboa Heights.

Health Department.

LIEUT.-COL. CHARLES F. MASON, U. S. A., Chief Health Officer, Balboa Heights.

LIEUT.-COL. G. D. DESHON, U. S. A., Superintendent, Ancon Hospital.

MAJ. ELBERT E. PERSONS, U. S. A., General Inspector, Balboa Heights.

DR. M. C. GUTHRIE, U. S. P. H. S., Chief Quarantine Officer, Balboa Heights.

CAPT. D. W. HARMON, U. S. A., Health Officer of Colon, Cristobal.

CAPT. H. P. CARTER, U. S. A., Health Officer of Panama, Ancon.

Washington Office.

MAJ. F. C. BOGGS, U.S.A., General Purchasing Officer and Chief of Office.

A. L. FLINT, Assistant Chief of Office.

Panama Railroad Company.

Office in the United States, 24 State Street, New York City.

C. H. MOTSETT, Superintendent, Balboa Heights.

SAMUEL W. HEALD, Master of Transportation, Balboa Heights.

FRANK FEUILLE, Attorney, Ancon.

WALTER F. VAN DAME, Assistant Attorney, Ancon.

Courts.

WILLIAM H. JACKSON, District Judge, Ancon.

E. M. Goolsby, Clerk, Ancon.

W. H. MAY, Marshal, Ancon.

S. E. BLACKBURN, Magistrate, Balboa.

JOHN W. THOMPSON, Magistrate, Cristobal.

Joint Land Commission.

FEDERICO BOYD, Panama City.

SAMUEL LEWIS, Panama City.

LEVI M. KAGY, Ancon.

NICHOLAS CORNET, Ancon.

William Taylor, Secretary, Ancon.

Sale of Ancon Hospital Buildings.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 10 a. m., July 24, 1915, and then opened, for the purchase of the following Ancon Hospital buildings: Ward 3, building No. 252; Ward 4, building No. 248; office between Wards 3 and 4, building No. 250; two intervening buildings between Wards 3 and 4 and building No. 250; cover connecting passageway between Wards 2 and 3. Specifications giving details as to conditions of sale and removal of buildings may be obtained upon application to the office of the Chief Quartermaster.

Proposals must be accompanied by certified check, cash, or post-office money order for \$500 as a guarantee that bidder will enter into contract if required by The Panama Canal.

The Panama Canal reserves the right to reject all bids.

Bids should be marked "Proposals for purchase of Ancon Hospital buildings" and addressed to the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z.

OFFICIAL CIRCULARS.

Charges for Electric Current.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., July 1, 1915.

CIRCULAR No. 676-5: (Superseding Circulars Nos. 676-3, and 676-4.)

For the information of all concerned the following schedule of charges for electric current supplied by The Panama Canal is published:

FOR METERED SERVICE.

1. To departments and divisions of The Panama Canal and to the Panama railroad the charge shall be the actual cost to the Electrical Division for the district concerned as determined from month to month by the Cost Accountant.

2. To other departments and bureaus of the United States Government the charge shall be the actual average cost to The Panama Canal for all districts, as determined from month to month by the Cost Accountant.

3. To religious institutions, and to social and fraternal organizations of employees in the Canal Zone, the charge shall be an arbitrary rate that shall be adjusted from time to time to approximate as closely as practicable to the actual cost to The Panama Canal as determined by the Cost Accountant. For the present this rate shall be two cents per kilowatt-hour.

4. To individuals (nonemployees) and companies in the Canal Zone and to employees of The Panama Canal and Panama railroad for commercial use, the charge shall be eight cents per kilowatt-hour, except when a different rate is established by special authority of the Governor.

FLAT RATES.

5. To departments and divisions of The Panama Canal and the Panama railroad, other departments and bureaus of the United States Government, religious and charitable institutions, and to social and fraternal organizations of employees in the Canal Zone, the charge for unmetered lighting service shall be \$1 plus six times the number of 16-candlepower equivalents, in cents per month, for six or more equivalents. For less than six equivalents the charge shall be 25 cents per month per equivalent, with a minimum charge of 50 cents per month. For electrical appliances, such as extra lights, stoves, irons, toasters, water heaters, etc., charges shall be fixed from time to time by the Electrical Engineer with the approval of the Governor, dependent upon the cost of production of power, and the current consumption and probable number of hours of use of the appliance.

6. To individuals (nonemployees) and companies in the Canal Zone, and to employees of The Panama Canal and the Panama railroad for commercial use, the charge for unmetered lighting service shall be 75 cents per month per 16-candlepower equivalent, and for electrical appliances other than lights, rates to be fixed from time to time by the Electrical Engineer, with the approval of the Governor, dependent upon the cost of production of power and the current consumption and probable number of hours of use of the appliance.

BILLS AND PENALTIES.

7. Charges for flat rate electric service are payable on or before the 15th of the month in which the current is supplied. The charges for metered service are payable on or before the 15th of the month following rendition of the service. A penalty of 25 per cent will be added if bills are not paid when due. Deposits to secure the payment of bills will be required in sums to be fixed by the Auditor from religious institutions, social and fraternal organizations of employees, from individuals and companies, and from employees for commercial use.

8. Circular 676-4 is hereby revoked.

GEO. W. GOETHALS,
Governor.

Appointment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., July 8, 1915.

CIRCULAR No. 661-18:

Effective this date, Lieut. P. P. Bassett, U. S. N., is appointed Captain of the Port, Cristobal, C. Z., to succeed Commander D. E. Dismukes, U. S. N., relieved from duty with The Panama Canal.

GEO. W. GOETHALS,
Governor.

Preparation of Specifications and Contracts.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., June 30, 1915.

CIRCULAR No. 636-1:

1. Hereafter contracts entered into by The Panama Canal or Panama Railroad Company on the Isthmus for the purchase of material or rendition of services or

both, will be prepared in the Accounting Department under the supervision of the Auditor.

2. When contracts are authorized to be entered into, the specifications will be drawn by the division interested and submitted to the Accounting Department for examination and the preparation of a form of contract, before any advertisement is placed in the local papers, or circulars calling for bids are distributed.

3. In the preparation of specifications the general conditions and the privileges to be granted to contractors will be kept entirely separate from the technical provisions. The general conditions and privileges which the division drawing the specifications desires to have inserted therein will be subject to revision by the Auditor in order to make such provisions uniform in all contracts.

4. The specifications for contracts to be entered into in the United States involving services to be rendered on the Isthmus will be referred to the Auditor and examined in his office, in order to unify the general conditions and privileges to be granted to contractors, before such specifications are forwarded to the Washington Office.

CHESTER HARDING,
Acting Governor.

Letterheads.

THE PANAMA CANAL,
SUPPLY DEPARTMENT.

BALBOA HEIGHTS, C. Z., July 2, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

In compliance with instructions from the Executive Office, the use of official letterheads, forms P. C. 292-a, -b, -c, and -d is to be discontinued.

A supply of letterheads for the following departments is now ready for distribution, and as form numbers do not appear on the face of these letterheads, employees authorized to sign foreman's orders or to make requisitions for material are requested to make use of the following table of form numbers:

Department.	Heavy.		Medium.		Light.		Memo.
	H	M	M	L	L	S	
Executive . . .	101-H	101-M	101-M	101-L	101-L	101-S	
Maintenance . .	102-H	102-M	102-M	102-L	102-L	102-S	
Health	103-H	103-M	103-M	103-L	103-L	103-S	
Supply	104-H	104-M	104-M	104-L	104-L	104-S	
Accounting . . .	105-H	105-M	105-M	105-L	105-L	105-S	

WM. R. GROVE,
Chief Quartermaster.

Returning Material to Balboa Store.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., July 6, 1915.

To all concerned—Referring to the last sentence in my circular of June 8, 1915, relative to closing the Balboa storehouse during time of taking the annual inventory:

This work is now in such condition that material returned to stock can be received without inconvenience.

WM. R. GROVE,
Chief Quartermaster.

Proposals for Manufacture of 10,000 Concrete Blocks for Atlantic Breakwaters.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 10 a. m., July 31, 1915, and then opened, for the manufacture of 10,000 concrete blocks for the Atlantic breakwaters.

Complete specifications, plan, form of contract, proposal, and bond may be obtained upon written application to the Chief Quartermaster, Balboa Heights, C. Z.

Bids must be accompanied by cash or certified check made payable to the Collector of The Panama Canal in the sum of \$2,500 as a guarantee that bidder will, if required by The Panama Canal, enter into a contract with satisfactory bond or certified check in the sum of \$5,000 as security for the faithful performance of the work covered by the contract. Deposits will be returned to unsuccessful bidders upon rejection of their bids.

The Panama Canal reserves the right to accept or reject any or all bids.

Bids should be marked "Proposal for manufacture of 10,000 concrete blocks for Atlantic breakwaters" and addressed to the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z.

Taboga Launch Service.

Leave Balboa dredge landing—Daily, except Thursday; at 5.30 p. m.: Monday, Thursday, Saturday, and Sunday, at 9.40 a. m.

Leave Taboga—Daily, except Friday, at 7 a. m. (On Mondays and days following holidays, one hour earlier), Monday, Thursday, and Saturday at 1.30 p. m.; Sunday at 7.15 p. m. The 9.40 a. m. trips from Balboa await the arrival of Panama railroad trains.

JOINT LAND COMMISSION.

Notice of Awards.

In the matter of the claim of William Keyes, for property located at Puerto Escondido, award No. 89, dockets Nos. 340 and 340-A, June 15, 1915—An award is hereby made against the United States, in favor of the person hereinafter named, in the sum of \$800, United States currency.

This award shall be paid to the person hereinafter named, in the amount specified, on or before the 15th day of July, 1915, and if payment or tender of payment of this award is not made on or before that date, such award shall thereafter bear interest at the rate of six per centum per annum until paid.

William Keyes, dockets Nos. 340 and 340-A—For all rights, claims, and other interests which the said William Keyes may possess or may have possessed in and to houses, crops, fruit trees, and any other improvements at or near Puerto Escondido, Canal Zone, the sum of \$800.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

In the matter of sundry claims, award No. 88, docket numbers as noted, June 14, 1915—An award is hereby made against the United States, in favor of the persons hereinafter named, in the sum of \$1,092.05, United States currency.

This award shall be paid to the persons hereinafter named, in the amounts specified, on or before the 14th day of July, 1915, and if payment or tender of payment of any of the items of this award is not made on or before that date, such item shall thereafter bear interest at the rate of six per centum per annum until paid.

Thomas Parker, docket No. 804—For all rights, claims, and other interests which the said Thomas Parker may possess or may have possessed in and to houses, crops, fruit trees, and other improvements on lands claimed by the Schuber family near Corozal, the sum of \$525.

Uriah Smith, docket No. 831—For all rights, claims, and other interests which the said Uriah Smith may possess or may have possessed in and to houses, crops, fruit trees, and other improvements on lands claimed by the Schuber family near Corozal, the sum of \$567.05. Total, \$1,092.05, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

In the matter of the claims of Gabriel Jolly, deceased, and Rafael Maestre, for the lands known as Mandingita and the improvements thereon, award No. 86, June 7, 1915, dockets Nos. 740 and 482—The claim of Gabriel Jolly, deceased, docket No. 740, came on for hearing on June 3, 1915. At that time counsel for the United States stated that this same property was claimed by Rafael Maestre in his claim, docket No. 482, which also includes other properties that have previously been disposed of by the Commission's award No. 6 of July 3, 1913, award No. 17 of August 9, 1913, rule of dismissal No. 77 of September 16, 1913, and rule No. 123 of December 5, 1913.

On Wednesday, April 28, 1915, the special testimony of Rafael Maestre was taken as a witness in the claim of Gabriel Jolly, docket No. 740, and at that time Maestre claimed a one-half undivided interest in the property. One of the witnesses for the claimant, Ricardo Marciacq, who has filed with the Commission letters of administration authorizing him to act for the estate of Gabriel Jolly, deceased, stated on direct examination at the hearing on June 3 that the claimant Jolly and Rafael Maestre were copartners in the ownership and operation of the estate of Mandingita, and admitted that Maestre had a one-half undivided interest therein.

An award is therefore made against the United States, in favor of the parties hereinafter named, in the amounts shown, for the sum of \$1,625, United States currency, for all right, title, interest, and claims which the said Gabriel Jolly, deceased, his heirs or assigns, and Rafael Maestre may have had or may now have in the lands of Mandingita and in growing crops, fruit trees, buildings, or improvements of any nature, located thereon and covered by the claim of Gabriel Jolly, deceased, docket No. 740, and by that part of the claim of Rafael Maestre, docket No. 482, not previously disposed of by the awards or rules of the Commission above referred to.

To Ricardo Marciacq, administrator of the estate of Gabriel Jolly, deceased, \$812.50
To Rafael Maestre \$812.50
Total (United States currency) \$1,625.00

This award shall be paid to the parties named, in the amounts specified, on or before the 7th day of July, 1915, and if payment or tender of payment of any of the items of this award is not made on or before that date, such items shall thereafter bear interest at the rate of six per centum per annum until paid.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

COMMISSARY DEPARTMENT.

Commissary Hours.

The commissary stores at Las Cascadas, Empire, and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

These prices are increased by 10 per cent for sales to commercial and foreign naval vessels, and by 20 per cent for sales to yachts.

The following is a list of retail prices of cold storage provisions which will be effective July 15, 1915:

FRESH MEATS.

	Price.
Mutton—Stewing, per pound.....	9
Shoulder, trimmed, per pound.....	12
Leg (8 to 10 pounds), per pound.....	19
Short cut, chops, per pound.....	23
Shoulder, chops, per pound.....	14
Lamb—Stewing, per pound.....	12
Shoulder, trimmed, per pound.....	15
Leg, (5 to 8 pounds), per pound.....	24
Chops, per pound.....	29
Chops, shoulder, per pound.....	18
Veal—Stewing, per pound.....	12
Shoulder, for roasting (not under 4 lbs.), per pound.....	15
Chops, shoulder, per pound.....	20
Chops, per pound.....	30
Loin, for roasting, per pound.....	30
Cutlets, per pound.....	36
Beef—Suet, special, per pound.....	34
Soup, special, per pound.....	7
Native, per pound.....	5
Soup, bones, special, per pound.....	24
Stews, special, per pound.....	11
native, per pound.....	8
Plate, special, per pound.....	11
native, per pound.....	8
Chuck roast, special (3 lbs. and over), per pound.....	12
Chuck roast, native (3 lbs. and over), per pound.....	8
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16
Rib roast, second cut (not under 3½ pounds), choice, per pound.....	24
Rib roas, second cut, native (3½ pounds and over), per pound.....	9
Rib roast, first cut (not under 3 pounds), special, per pound.....	19
Rib roast, first cut (not under 3 pounds), choice, per pound.....	27
Rib roast, first cut, native (3 pounds and over), per pound.....	11
Pot roast, special, per pound.....	20
choice, per pound.....	28
native, per pound.....	20
Rump roast, special, per pound.....	28
choice, per pound.....	12
native, per pound.....	22
Porterhouse roast, special, per pound.....	31
choice, per pound.....	16
native, per pound.....	13
Steak, chuck, special, per pound.....	9
native, per pound.....	13
Round, bottom, special, per pound.....	19
choice, per pound.....	9
native, per pound.....	15
Round, top, special, per pound.....	22
choice, per pound.....	10
native, per pound.....	20
Sirloin, special, per pound.....	28
Sirloin, choice, per pound.....	12
Sirloin, native, per pound.....	23
Sirloin, choice cut, choice, per pound.....	32
Sirloin, choice cut, native, per lb.....	16
Rump, special, per pound.....	20
choice, per pound.....	28
native, per pound.....	12
Porterhouse (not less than 1½ pounds), special, per pound.....	23
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse (1½ pounds and over), native, per pound.....	17
Porterhouse, short, Delmonico special, per pound.....	20
Porterhouse, short, Delmonico choice, per pound.....	28
Porterhouse, short, native, per lb.....	12
Tenderloin, Western, special, per pound.....	35
Tenderloin, Western, choice, per pound.....	46
NOTE.—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders placed with commissary storekeepers before 11 a. m., will be shipped for delivery on the following morning.	
Pork—Hams, fresh, per pound.....	\$23
Shoulders, fresh, per pound.....	\$19
Loin, chop, or roast, per pound.....	18
Spare ribs, per pound.....	11

	Price.
Pigs' feet, fresh, per pound.....	5
Pigs' head, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23
Ox tails, per pound.....	19
MISCELLANEOUS.	
Brains, calves', per pound.....	8
Calves' head, each.....	80
Kidneys, beef, per pound.....	12
Livers—Beef, per pound.....	10
Calf, per pound.....	24
Steak—Hamburger, packages.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	12
Frankfurter, per pound.....	13
Frankfurter, imported, tin.....	11
Lieberwurst, per pound.....	10
Pork, per pound.....	15
Sweetbread beef, per pound.....	17
Eggs, fresh, per dozen.....	127
per 1 dozen.....	14
Bloaters, fancy, each.....	5
Bluefish, per pound.....	10
Haddock, smoked, per pound.....	14
Salmon, fresh, per pound.....	*12
Whitefish, smoked, per pound.....	*24
Yeast, per pound.....	31
per cake.....	2
Pates de foies gras, per jar.....	58
CURED AND PICKLED MEATS.	
Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Native, per pound.....	12
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Minced, "Bologna style," per pound.....	13
Sugar cured, boneless, whole, per pound.....	25
Sugar cured, whole, per pound.....	21
Half, per pound.....	23
Sliced, per pound.....	17
Whole, boiled, per pound.....	27
Half, boiled, per pound.....	29
Sliced, boiled, per pound.....	35
Hocks, boiled, per pound.....	10
Shoulders, sugar cured, whole shoulder, per pound.....	17
Bacon—Breakfast, sliced, per pound.....	31
Whole piece, per pound.....	30
Strips, whole, per pound.....	*22
Sliced, jar.....	30
Sliced, tin.....	27
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	14
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	8
Tongues, per pound.....	22
POULTRY AND GAME.	
Chickens—Fancy roasting, milk fed, per pound.....	29
Chickens—Fancy, roasting, corn fed, per pound.....	26
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	23
Capons, per pound.....	31
Broilers, milk fed, per pound.....	34
Broilers, corn fed, per pound.....	30
Turkeys, per pound.....	126
Squabs, each.....	33
Geese, per pound.....	117
Grouse, each.....	1.00
Mallard ducks, 2 to 2½ pounds, each.....	2.35
Pheasants, each.....	1.35
DAIRY PRODUCTS.	
Butter—Creamery, special, per pound.....	40
Creamery, 60-62 lb. tub, whole tub, per pound.....	39
Sheffield Farms, extra fancy, per lb.....	58
Oleomargarine, per pound carton.....	29
Cheese—Philadelphia crame, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	23
Swiss, per pound.....	34
Edam, each.....	92
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	**15
Fermillac, bottle.....	**25
Ice cream, quart.....	125
½-gallon.....	150
Cream, 30 per cent, quart.....	**45
pint.....	**25
½-pint.....	**15
VEGETABLES.	
Beans, string, per pound.....	4
Beets, per pound.....	*23
Cabbage, per pound.....	*23
Carrots, per pound.....	3
Cucumbers, per pound.....	*13
Egg plant, per pound.....	*73
Lettuce, per pound.....	*6
Onions, per pound.....	2½
Peppers, green, per pound.....	*7
Plantains, per dozen.....	15
Potatoes, white, per pound.....	2
Sweet, per pound.....	2
Squash, per pound.....	*13
Tomatoes, per pound.....	5
Turnips, per pound.....	*12½
Yams, Lucea, per pound.....	3
FRUITS.	
Apples, per pound.....	10

	Price.
Grape fruit—Select, each.....	6
Tropical, each.....	*3½
Lemons, per dozen.....	9
Limes, per 100.....	130
Oranges—Select, each.....	3
Tropical, per dozen.....	*14
Coconuts, each.....	4
Bananas, per bunch.....	38
Bananas, each.....	½
Apples, evaporated, per pound.....	12
Abricots, evaporated, per pound.....	12
Peaches, evaporated, per pound.....	8
Pears, evaporated, per pound.....	23
Pineapples, each.....	10
Figs, dried, 12-oz. packages.....	14
Figs, dried, 5-oz. packages.....	5
Raisins, seedless, package.....	11
table, cluster, per pound.....	20
Currants, cleaned, package.....	12
Prunes, stewing, per pound.....	10
Cherries, per pound.....	*12
Cantaloups, each.....	.....
Watermelons, each.....	.....
Plums, per pound.....	19
Peaches, fresh, per pound.....	15

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

\$ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective July 12:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Sheets, 72" x 96", ea.....	80	.75
Sheets, 90" x 90", ea.....	74	.80
Blankets, ea.....	80	1.00
Pins, book.....	.05	.06
Pants, working, pr.....	.93	.81
Scissors, cuticle, ea.....	.61	.39
Bowls, 4-quart, ea.....	.25	.20
Trunks, ea.....	15.80	12.00
Tubs, wash, ea.....	.43	.68

Additions to Stock.

Shirts, blue chambray, ea.....	.80
Mecca cigarettes, box of 10.....	.04
India relish, 8-oz. bot.....	.13
Tomato ketchup, 8-oz. bot.....	.14

Misdirected Letters.

BALBOA HEIGHTS, C. Z., July 14, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressees:

Barnes, W. B.	Kimble, Gilbert
Bixel, William	Leffen, Hubert
Bobb, Jas.	Levis, Miss Frances
Buhr, H. de	Lichty, Mrs. Theo.
Cuneo, John	Nash, Joshua L.
*Dean, R. H.	Neurtheur, Chas.
Dickson, John	Nolan, Wm. H.
*Flinn, Maurice	Robb, M. L.
Fuller, A. C.	Roberts, Mrs. C. D.
Groth, B. H. A.	Roy, James
Hauck, Arnold M.	Smith, George
Hershey, A. D.	Wagner, Lt. E. H.
*Card	Houseknecht, Miles

Rainfall from July 1 to 10, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>			
Balboa.....	.80	1	2.12
Balboa Heights.....	1.02	1	2.44
Miraflores.....	1.53	1	2.01
Pedro Miguel.....	.72	1	1.18
Rio Grande.....	.33	1	.85
<i>Central Section—</i>			
Culebra.....	.76	8	1.44
*Camacho.....	.55	1	1.06
Empire.....	.42	8	1.24
Gamboa.....	.72	1	1.39
*Juan Mina.....	3.76	8	6.27
Alhajuela.....	5.33	8	8.84
*El Vigia.....	3.79	8	8.63
Frijoles.....	2.31	1	6.23
*Trinidad.....	1.40	1	3.87
*Monte Lirio.....	1.40	1	3.87
<i>Atlantic Section—</i>			
Gatun.....	3.82	1	5.15
*Brazos Brook.....	2.53	1	5.44
Colon.....	6.30	1	8.69
*Bocas del Toro.....			

*Standard rain gage—readings at 5 p. m. daily.

Automatic rain gage at unstarred stations—values midnight to midnight.

SHIPPING INFORMATION.

August Weather Probabilities.

During the month of August, 1915, the following weather conditions may be expected to prevail at the Canal entrances. Predictions are based on the records at Colon and Ancon for the past seven and eight years, respectively.

Winds.—Light and variable winds will continue over the Atlantic coast with an average hourly velocity of about eight miles and the maximum velocity recorded during local rain or thunder squalls is not likely to exceed 30 miles an hour.

On the Pacific coast and in the interior the prevailing direction of the wind will be from the northwest, with a velocity averaging about seven miles an hour. A maximum velocity as high as 35 miles an hour may occur during the passage of thunder squalls, but such a velocity is not likely to continue for more than a few minutes.

Rain.—Heavy showers are likely to occur over both coasts and over the interior. The average August rainfall at the Atlantic entrance to the Canal, for a period of 44 years, is 15.10 inches, while at the Pacific entrance 7.49 inches is the average fall, this average being for a period of 18 years. Twenty-five days with rain (one on which 0.01 inch or more of rain is measured) may be expected on the Atlantic Coast, and 21 rainy days are likely to be experienced on the Pacific side. The average number of days on which the rainfall equals or exceeds one inch is four and three, respectively.

Fogs.—No fogs are likely to occur on the Pacific coast, and few, if any, will be experienced on the Atlantic side. Night and early morning fogs will be numerous over the interior, but should not prove a hindrance to the navigation of the Canal under the present operating conditions, as all that occur may be expected to lift or become dissipated by 8.30 a. m. The average number of fogs over the Gaillard Cut section of the Canal during the month of August is 21, of which 50 per cent are dense. (In a dense fog objects can not be distinguished at a distance of 1,000 feet.)

Temperature.—The average shade air temperature over both coasts should be approximately 80 degrees Fahrenheit. A maximum temperature higher than 94° F., or a minimum temperature lower than 69° F., is not likely to occur at the Pacific entrance, while at the Atlantic entrance the temperature is not likely to exceed 89° F., or fall below 71° F. Owing to its location with regard to the prevailing winds, the range in temperature on the Pacific coast is much greater than on the Atlantic. The mean daily range in temperature will probably be about 15° and 8° F., respectively.

Barometric pressure.—The Canal Zone lies without the regions of violent and widespread atmospheric disturbances, and except for the well marked diurnal change, caused by the daily changes in temperature, barometric fluctuations are so slight as to have little value in forecasting weather conditions. The average sealevel pressure for the month of August should be about 29.84 inches over both coasts, and the highest pressure is not likely to be above 29.95 inches or the minimum lower than 29.70 inches.

Storms.—The extensive areas of high and low pressure that cross the continental areas of the United States at frequent intervals,

producing the cyclonic and anti-cyclonic storms that characterize the climate in the middle latitudes, do not extend southward beyond the tropic of Cancer. Most of the storms on the Isthmus during the rainy season are local wind, thunder, or rain squalls of more or less limited extent, and may be expected quite frequently during the month of August. The average number of days on which thunder storms occur on the Atlantic and Pacific coasts during the month is 17 and 23, respectively.

The season of the West Indian hurricanes is from July to October, and although the paths followed by them lie well to the northward of the Isthmus, a rough sea and heavy swell, accompanied by brisk northerly winds, may be experienced occasionally outside the breakwater in Limon Bay, following the passage of one of these storms across the Caribbean Sea.

Generally cloudy weather will continue to prevail over both coasts, and smooth to moderate seas may be expected at the Pacific entrance.

Tides.—No consideration need be given to tidal fluctuations at the Atlantic entrance to the Canal, as the maximum amplitude is only about two feet.

At the Pacific entrance to the Canal the average tidal range is approximately 13 feet, while a maximum range of 20 feet sometimes occurs during spring tides.

Panama (Balboa) tide predictions are given below:

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in this table:

JULY.				
DATE.	Time and height of high and low water.			
Wed., July 14.....	5:06	11:10	17:11	23:29
	14.2	1.9	14.3	0.6
Thurs., July 15.....	5:40	11:49	17:46	.....
	14.5	1.6	14.4	.....
Fri., July 16.....	0:05	6:14	12:28	18:24
	0.6	14.7	1.4	14.3
Sat., July 17.....	0:44	6:49	13:09	19:03
	0.8	14.8	1.4	14.1
Sun., July 18.....	1:24	7:27	13:54	19:45
	1.1	14.8	1.5	13.7
Mon., July 19.....	2:08	8:10	14:42	20:35
	1.6	14.5	1.7	13.2
Tues., July 20.....	2:58	9:00	15:36	21:32
	2.1	14.7	2.0	12.8
Wed., July 21.....	3:55	9:59	16:39	22:40
	2.6	13.9	2.1	12.5
Thurs., July 22.....	5:00	11:07	17:46	23:56
	2.9	13.7	2.0	12.6
Fri., July 23.....	6:08	12:20	18:52	.....
	2.8	13.8	1.6	.....
Sat., July 24.....	1:09	7:16	13:30	19:55
	13.1	2.4	14.3	0.9
Sun., July 25.....	2:15	8:20	14:33	20:52
	13.9	1.7	14.9	0.1
Mon., July 26.....	3:14	9:15	15:30	21:44
	14.8	1.0	15.5	-0.5
Tues., July 27.....	4:05	10:08	16:21	22:34
	15.6	0.4	15.8	-0.8
Wed., July 28.....	4:53	10:57	17:06	23:20
	16.0	0.1	15.8	-0.8
Thurs., July 29.....	5:37	11:44	17:53	.....
	16.1	0.1	15.5	.....
Fri., July 30.....	0:04	6:20	12:30	18:36
	-0.4	15.8	0.4	14.9
Sat., July 31.....	0:47	7:01	13:14	19:20
	0.3	15.2	1.0	14.0

AUGUST.

DATE.	Time and height of high and low water.			
Sun., Aug. 1.....	1:30	7:42	13:59	20:02
	1.3	14.3	1.8	13.1
Mon., Aug. 2.....	2:13	8:25	14:45	20:48
	2.4	13.3	2.7	12.1
Tues., Aug. 3.....	3:01	9:08	15:33	21:41
	3.5	12.4	3.5	11.2
Wed., Aug. 4.....	3:54	10:02	16:34	22:48
	4.4	11.6	4.1	10.6
Thurs., Aug. 5.....	4:54	11:08	17:37	.....
	5.0	11.2	4.3	.....
Fri., Aug. 6.....	0:05	5:58	12:20	18:40
	10.5	5.1	11.2	4.1
Sat., Aug. 7.....	1:16	7:03	13:23	19:37
	10.9	4.8	11.6	3.5

DATE.	Time and height of high and low water.			
Sun., Aug. 8.....	2:10	7:58	14:15	20:25
	11.6	4.2	12.3	2.7
Mon., Aug. 9.....	2:53	8:44	14:57	21:08
	12.4	3.4	13.1	1.9
Tues., Aug. 10.....	3:29	9:26	15:35	21:46
	13.3	2.5	13.8	1.1
Wed., Aug. 11.....	4:04	10:05	16:12	22:25
	14.2	1.6	14.4	0.5
Thurs., Aug. 12.....	4:37	10:45	16:47	22:57
	14.9	1.0	14.9	0.1
Fri., Aug. 13.....	5:10	11:22	17:23	23:39
	15.5	0.4	15.1	-0.1
Sat., Aug. 14.....	5:44	12:01	17:59	.....
	15.8	0.2	15.2	.....
Sun., Aug. 15.....	0:16	6:19	12:41	18:38
	0.1	15.9	0.2	14.9
Mon., Aug. 16.....	0:56	6:57	13:26	19:20
	0.4	15.7	0.5	14.4
Tues., Aug. 17.....	1:40	7:40	14:13	20:08
	1.1	15.2	1.0	13.7
Wed., Aug. 18.....	2:30	8:30	15:08	21:06
	1.9	14.4	1.7	12.9

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.*

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

NOTE.—The sailings on Monday, July 26, and August 23, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7.10 a. m., connects with the despatches for the two sailings mentioned above.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Panama;" in the United States, "Panacanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

Sailings of Vessels in Regular Service with the United States.

		Sails.		Arrives.	
NEW YORK TO CRISTOBAL-COLON.					
Santa Marta.....	U. F. C.	July 7.....	July 14.....		
Advance.....	P. R. R.	July 8.....	July 15.....		
Metapan.....	U. F. C.	July 10.....	July 19.....		
Almirante.....	U. F. C.	July 14.....	July 21.....		
Panama.....	P. R. R.	July 15.....	July 21.....		
Pastores.....	U. F. C.	July 17.....	July 25.....		
Zacapa.....	U. F. C.	July 21.....	July 28.....		
Allianca.....	P. R. R.	July 22.....	July 28.....		
Calamares.....	U. F. C.	July 24.....	Aug. 1.....		
Carrillo.....	U. F. C.	July 28.....	Aug. 4.....		
Colon.....	P. R. R.	July 29.....	Aug. 4.....		
CRISTOBAL-COLON TO NEW YORK.					
Carrillo.....	U. F. C.	July 15.....	July 22.....		
Colon.....	P. R. R.	July 17.....	July 23.....		
Tenadores.....	U. F. C.	July 19.....	July 26.....		
Santa Marta.....	U. F. C.	July 22.....	July 29.....		
Advance.....	P. R. R.	July 24.....	July 31.....		
Metapan.....	U. F. C.	July 26.....	Aug. 3.....		
Almirante.....	U. F. C.	July 29.....	Aug. 5.....		
Panama.....	P. R. R.	July 31.....	Aug. 6.....		
Pastores.....	U. F. C.	Aug. 2.....	Aug. 9.....		
Zacapa.....	U. F. C.	Aug. 5.....	Aug. 12.....		
Allianca.....	P. R. R.	Aug. 7.....	Aug. 13.....		

(Continued on page 414.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., July 11, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
July 5	George Hawley	American	Boston and Virginia Trans. Co.	New York	San Francisco	Steel	3,849	2,752	1,730
July 5	Saint Quentin	British	British & Foreign Co.	New York	Vladivostok	General	7,800	6,337	4,743
July 5	Carolyn	American	Luckenbach Line	New York	Los Angeles	General	3,749	3,425	2,322
July 6	Iowana	American	American-Hawaiian Line	New York	Los Angeles	General	6,522	6,819	4,663
July 6	Palena	Chilean	South American S. S. Co.	Cristobal	Valparaiso	General	1,468	3,639	2,537
July 6	Capac	British	N. Y. & Pacific S. S. Co.	New York	W. C. Sou. Amer	General	4,000	3,220	2,206
July 7	Baron Lorat	British	Howgarth Shipping Co.	New York	Dairen, China	Oil	8,500	6,271	4,578
July 8	Idomeneus	British	Ocean S. S. Co., Ltd.	Liverpool	San Francisco	General	700	6,654	4,633
July 8	Melania	British	Anglo-Saxon Petroleum Co.	New Orleans	Shanghai	Petroleum	7,945	6,093	4,330
July 8	Panama Transport	British	Empire Transport Co.	Norfolk	Valparaiso	Coke	4,959	5,233	3,821
July 8	Crown of Seville	British	Crown S. S. Co., Ltd.	London	San Francisco	General	2,300	7,684	5,450
July 9	Jamaica	British	Royal Mail Steam Packet Co.	Cristobal	Guayaquil	General	150	1,170	620
July 9	Selandia	Danish	East Asiatic Co.	Copenhagen	Callao	General	6,000	5,441	4,090
July 9	Nereus	American	U. S. Navy	Norfolk	Manila	Coal	10,000	11,143	6,749
July 9	Wakasa Maru	Japanese	Nippon Yusen Kaisha	New York	Chefu, China	Petroleum	6,300	6,265	4,236
July 10	Yokoku Maru	Japanese	Minami Manchu Kaishiki Kaisha	Port Arthur	Manila	Kerosine	4,600	3,421	2,403
July 11	Yeddo	British	Bank Line, Limited	Port Arthur	Brisbane	Merchandise	6,430	5,032	3,656
July 11	Isabel	American	N. Y. & Porto Rico S. S. Co.	Baltimore	Seattle	Coal	4,000	3,224	2,206
July 11	Dollar	American	Dollar S. S. Line	Newport News	San Francisco	Coal	1,955	1,840	933
July 11	Colon	American	Panama Railroad S. S. Line	New York	Balboa	General	1,180	5,866	4,222
July 11	Minnesota	American	American-Hawaiian Line	New York	Los Angeles	General	6,800	6,875	4,610

THROUGH THE CANAL—PACIFIC TO ATLANTIC

July 4	Kentuckian	American	American-Hawaiian Line	Honolulu	New York	Sugar and pines	9,003	6,913	4,756
July 5	Gryfevale	British	A. Crawford, Barr & Company	Bellingham	Portsmouth-Lon.	3,725,000 ft. lum.	6,700	4,775	3,502
July 5	Victoria	British	Pacific Steam Nav. Co.	Valparaiso	Liverpool	General	3,067	6,840	4,520
July 5	Margaret	Swedish	Johnson Line	Antofagasta	New Orleans	Nitrates	2,100	1,374	871
July 6	Jamaica	British	Pacific Steam Nav. Co.	Tumaco	Colon	General	525	1,170	620
July 6	Peter H. Crowell	American	Crowell & Thurlow	San Francisco	New York	General, lumber	4,500	3,345	2,360
July 6	Santa Catalina	American	W. R. Grace & Co.	Arica	Norfolk	Nitrate	8,550	6,657	4,409
July 8	Pachitea	Peruvian	Peruvian Steamship Line	Callao	Baltimore	Cotton, general	3,385	4,616	2,738
July 8	Allianca	American	Panama Railroad S. S. Line	Balboa	New York	General	4,120	2,670	
July 8	Oldfield Grange	British	Houlder Line	Cruz Grande	Philadelphia	Iron ore	7,600	5,788	3,861
July 8	Crown of Navarre	British	Prentice, Service & Henderson	Tocopilla	Newport News	Nitrates	3,550	3,148	2,339
July 9	Frankmere	British	Palace Shipping Company	Callita Buena	Newport News	Nitrate	7,700	5,899	4,206
July 9	Chincha	American	W. R. Grace & Co.	Valparaiso	Norfolk	Nitrates, wool	8,805	6,249	4,624
July 9	Peru	British	Pacific Steam Nav. Co.	Guayaquil	Cristobal	General	1,464	4,038	2,626
July 10	Wellington	British	Canadian Collier Co.	Genoa Bay	New York	1,210,000 ft. lum.	2,160	2,043	1,267
July 11	Aeon	British	Australian Steamship Co.	Port Pirie	Boston	Wool, concentrate	4,000	4,940	3,120
July 11	San Miguel	Honduran	H. Wood	Amapala	Punta Arenas	Ballast	290	37	22
July 11	Gen. M. Bonilla	Honduran	P. Crumela & Co.	Corinto	New York	Lumber, dye, wool	290	315	233
July 11	Aboukir	British	Glenn & Co.	Valparaiso	Norfolk	Nitrates	5,800	4,148	2,967
July 11	Navajo	American	Western Steam Nav. Co.	Mejillones	New York	Nitrates	3,000	2,704	1,779
July 11	Kavarra	British	Elder Dempster Co.	Callita Buena	Mootreal	Nitrates	7,500	5,664	3,366

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
July 11	Lewis K. Thurlow	Crowell & Thurlow	New York
July 11	Quilloto	Pacific Steam Nav. Co.	Liverpool
July 11	Curaco	N. Y. & Pacific S. S. Co.	Norfolk
July 11	Toyooka Maru	Nippon Yusen Kaisha	New York

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
July 11	Quilpu	Pacific Steam Nav. Co.	Valparaiso
July 14	San Francisco	F. G. Alegre	Gutenberg
July 15	Kim	P. Johannessen	Iquique
July 16	Presidente Sarmiento	Argentine Navy	

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date	Vessel	Line	From	Date	Vessel	Line	To
July 8	Siena	La Veloce S. S. Line	Genoa	July 6	Tordenskjold	Earn Line	Daiquiri.
July 10	Wegadesk	Earn Line	Norfolk	July 6	Ranger	Mass. School Ship	Havana, Cuba.
July 10	Antonio Lopez	Spanish S. S. Line	Barcelona	July 11	Siena	La Veloce S. S. Line	Genoa.
July 11	Chancellor	Harrison Line	Liverpool				

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
July 12	Conway	Royal Mail Steam Packet	Jamaica.
July 12	Puerto Rico	French Line	Bordeaux.

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
July 12	Antonio Lopez	Spanish S. S. Line	Barcelona.
July 14	Wegadesk	Earn Line	Cuba.
July 16	Puerto Rico	French Line	Bordeaux.
July 19	Conway	Royal Mail Steam Packet	London.
	Chancellor	Harrison Line	Unknown.

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.				*DEPARTURES.			
Date	Vessel	Line	From	Date	Vessel	Line	To
July 4	Aztec	Pacific Mail S. S. Co.	San Francisco.	July 5	Hualtaga	Peruvian Steamship Co.	Callao.
July 5	Seiyo Maru	Toyo Kisen Kaisha	Hongkong.	July 7	San Juan	Pacific Mail S. S. Co.	San Francisco.
July 9	Llundudno	E. Thomas Radcliffe Co.	Callao.	July 8	Seiyo Maru	Toyo Kisen Kaisha	Callao.
				July 10	Jamaica	Pacific Steam Nav. Co.	Tumaco.
				July 10	Llundudno	E. Thomas Radcliffe Co.	
*EXPECTED ARRIVALS.				*EXPECTED DEPARTURES.			
Date	Vessel	Line	From	Date	Vessel	Line	To
July 13	Edgar H. Vance	Union Oil Co.	San Francisco.	July 12	Aztec	Pacific Mail S. S. Co.	San Francisco.
July 14	Lyman Stewart	Peruvian S. S. Co.	San Luis.				
	Uyayali	Peruvian S. S. Co.	Callao.				
	City of Para.	Pacific Mail S. S. Co.	San Francisco.				

*Other than vessels passing through the Canal.

(Continued from page 413.)				Turrialba	U. F. C.	July 28	Aug. 4	Heredia	U. F. C.	July 22	July 27
NEW ORLEANS TO CRISTOBAL-COLON.				Heredia	U. F. C.	July 31	Aug. 5	Abangarez	U. F. C.	July 22	July 29
Turrialba	U. F. C.	July 7	July 14	Abangarez	U. F. C.	Aug. 4	Aug. 11	Parismina	U. F. C.	July 29	Aug. 3
Heredia	U. F. C.	July 10	July 15	Parismina	U. F. C.	Aug. 7	Aug. 12	Atenas	U. F. C.	July 29	Aug. 5
Abangarez	U. F. C.	July 14	July 21	CRISTOBAL-COLON TO NEW ORLEANS.				Cartago	U. F. C.	Aug. 5	Aug. 10
Parismina	U. F. C.	July 17	July 22	Cartago	U. F. C.	July 15	July 20	Turrialba	U. F. C.	Aug. 5	Aug. 12
Atenas	U. F. C.	July 21	July 28	Turrialba	U. F. C.	July 15	July 22	Heredia	U. F. C.	Aug. 12	Aug. 17
Cartago	U. F. C.	July 24	July 29					Abangarez	U. F. C.	Aug. 12	Aug. 19



The Canal Record

Official publication of The Panama Canal.

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All subscriptions expire on December 31. Domestic subscriptions are accordingly charged as beginning from the first of the quarter of the year in which received. Remittances should be made to pay only to December 31, on this basis: Sent between July 1 and October 1, 50 cents; between October 1 and January 1, 25 cents. For foreign subscriptions the year is divided into thirds; and remittances for the remainder of this year should be: Between May 1 and September 1, \$1; between September 1 and January 1, 50 cents.

Remittances for subscriptions may be forwarded to The Panama Canal, Washington, D. C., or to The Canal Record at the address given below.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Return of Lighthouse Expedition.

The main part of the expedition of the Marine Division which erected the new light at Cape Mala returned to Balboa on Friday, July 16; the 16 carpenters in the party returned on June 25, after completing the tank house and keeper's quarters. The expedition had left Balboa on June 3 and throughout the six weeks of work at Cape Mala the health of the party was good, the most serious illness being one case of fever. There were numerous prostrations from heat, and the pilot in charge of the expedition reports that between 10 o'clock in the morning and two in the afternoon the temperature averaged over 130° Fahrenheit.

As completed, the light is situated in latitude 7° 27' 15" North and longitude 79° 59' 20" West, by reference to data established at Cape Mala by the United States Coast and Geodetic Survey. The light has a 9-tip eluster burner, controlled by a sunvalve, flashes (light 5 seconds, eclipsed 15 seconds), and is of the first order, visible 18 miles. Daymarks were placed on two sides and painted white. With these the tower makes a good landmark, easily visible for 10 miles from a height of 20 feet above sealevel, and has been observed at 19 miles with glasses. The tower is 100 feet high, and the elevation of the light is 140 feet above sealevel.

From Below the Equator to the Arctic Ocean.

The Norwegian steamship *Torsdal*, W. Wilhelmsen, operator, cleared from Cristobal on July 21 after passing through the Canal on the way from the west coast of South America to Archangel, Russia. This is the second vessel to have passed through the Canal on

this route, the *Grangewood* having made the transit on May 11, from Iquique for Archangel. In making this voyage the vessels travel from about 20 degrees south of the equator to a point well above the Arctic Circle, having to round North Cape, at latitude 71° N. and pass through the Arctic Ocean to the White Sea. Archangel is situated in latitude 64° 33' North and longitude 40° 33' East, about 135 miles below the Arctic Circle and 740 miles northeast of Petrograd, and it is only from July to September that the harbor is free of ice.

Battleships Complete Canal Transit.

The United States battleships *Ohio*, *Missouri*, and *Wisconsin*, which arrived at Cristobal from Annapolis, by way of Guantanamo, on the practice cruise of the midshipmen on Wednesday and Thursday of last week, made the transit of the Canal on Friday, July 16, and cleared immediately for San Diego. On account of the delay in departure from Annapolis the squadron did not stay in Canal waters as long as originally intended; in fact, the passage was made almost without stopping, which led many of the officers aboard the ships to express admiration for the smoothness of the Canal operations. In the lockages at Pedro Miguel and Miraflores two of the vessels were handled simultaneously, in double-barrelled lockage, the third being handled directly behind, so that the vessels of the squadron were at all times in close touch and put to sea in fleet formation.

Motor Wagons to Replace Teams.

Two Ford motor delivery wagons were placed in the service of the Ancon commissary store last week, for making deliveries of goods to quarters, a third is about ready to go into commission, and five others are under order in the United States. Of the five to come, several will probably be assigned to the Cristobal commissary, but it is not likely that any will be used at this time in the smaller towns, where the element of speed in delivery is of less importance.

The Supply Department has ordered a 3-ton and a 1½-ton motor truck for heavy hauling, and several other departments are considering the replacement of teams with motor wagons. With the establishment of the gasoline storage tanks at the terminals of the Canal, in connection with the fuel oil handling plants, it will be possible for the Government to obtain gasoline at about 11 cents a gallon, alongside the wharf at either terminal.

The "Ancon" to Carry Passengers on Return Voyage.

The steamship *Ancon* of the Panama Railroad Steamship Line, which arrived at Cristobal on Sunday, July 18, will carry passengers on her return trip to New York. She is due to sail on or about Wednesday, July 28, and has accommodations for 74 cabin passengers.

NOTICE TO STEAMSHIP LINES.

Charges for Wharfage, Storage, Lighterage, Cranage, Stevedoring, and Transferring Cargo, and Shifting and Towing Vessels.

Effective July 18, 1915, the following charges will obtain at the Panama Canal for wharfage, storage, lighterage, cranage, stevedoring and transferring cargo, and shifting and towing vessels:

Wharfage.

1. Sailing vessels:

Not exceeding 100 feet in length over all	(per linear foot, per day)	\$0.05
When clearing from wharf within five (5) hours from time of berthing, shall pay two-thirds of the regular daily rate with a minimum charge of		1 00
Over 100 feet in length over all	(per linear foot per day) . . . . .	.10

2. Steam or power driven vessels:

On "overall" measurements taken from ship's certificate (per linear foot, per day)12½
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3. All auxiliary vessels will be considered as power driven, and charge for wharfage will be made in accordance with their length as specified above.

4. All sailing vessels over 100 feet in length over all, and all steam or power driven vessels clearing from wharves within 5 hours from time of berthing, $\frac{2}{3}$ of the regular daily rate.

5. When vessels occupy a wharf for more than 24 hours but not over 27 hours, consecutively, the charge shall be 1½ of the daily rate.

6. "Per day" to mean a period of 24 hours from the time of berthing.

7. No charge for wharfage shall be made against steam or power driven vessels occupying berths solely for the purpose of obtaining coal or other supplies from the Panama Railroad Company or any department of The Panama Canal.

Shifting Berth.

8. Whenever in the judgment of the receiving and forwarding agent, or Port Captain, it is deemed advisable to shift any vessel not fully engaged in receiving or discharging cargo, in order to accommodate other vessels—or for any other reason—shifting will be made, and the towing and other expenses thereby incurred will be charged against the vessel so shifted.

Storage.

9. No charge will be made for the storage of transfer cargo held in cars or on piers up to the departure of the first connecting steamer of the final carrier, provided that such connecting steamer receives such cargo within a period of not more than 35 days from the date same is ready for delivery.

10. On all cargo refused by the first connecting steamer because its entire capacity is filled with cargo that has been loaded at the Panama Railroad Company's wharves, storage will be charged per bill-of-lading ton per day at the rate of three cents from and including the day of departure of such first connecting steamer up to the time that delivery is accepted by the second connecting steamer of such final carrier.

11. On all cargo refused by the second con-

necting steamer, storage will be charged per bill-of-lading ton, per day at the rate of 10 cents instead of three cents (the minimum charge being for not less than one ton), from and including the day of departure of the second connecting steamer up to the time delivery is accepted by the final carrier.

12. On all cargo refused by the first connecting steamer because of space being occupied by or reserved for other cargo, or for any reason other than that above indicated, storage will be charged per bill-of-lading ton, per day at the rate of 10 cents from and including the day of departure of the first connecting steamer, up to the time delivery is accepted by the final carrier.

13. No storage will be charged on cargo for local delivery for a period of 72 hours from the time the ship has completed cargo, but on any cargo not accepted by consignees within that time, a storage charge of three cents per 100 pounds per day, or fraction thereof, will be made—the minimum charge to be 15 cents.

Craneage.

14. Vessels desirous of availing of the Panama Railroad Company's cranes at the Balboa piers will be charged 15 cents per bill-of-lading ton on cargo so handled.

15. Live stock will be transferred and handled by the cranes at the following rates:

Horses, mules, and donkeys	(per head)	\$2 00
Cattle	(per head)	1 50
Sheep, goats, and hogs	(per head)	1 00

Stevedoring and Transferring Cargo.

16. When the delivering and receiving steamship lines elect to do their own stevedoring, a charge of 60 cents per bill-of-lading ton will be made for transferring such cargo, including mail, baggage, and specie (with the exception of explosives), from the cleared slings of the delivering carrier to the slings of the receiving carrier.

17. For handling explosives a transfer charge of \$2 per bill-of-lading ton will be made.

18. In addition to the transfer charge of 60 cents per bill-of-lading ton for handling specie, an additional charge of $\frac{1}{2}$ of one per cent, based on the value shown on the bill of lading will be made—the additional charge made necessary for its safe-keeping.

19. When one of the two carriers arranges for the Panama Railroad Company to stevedore cargo in or out of its steamers, a charge of 90 cents per bill-of-lading ton will be made for the stevedoring from or into the steamer and transferring across dock or docks.

20. When both carriers desire the Panama Railroad Company to stevedore cargo out of and into their steamer, a charge of \$1.10 per bill-of-lading ton will be made for the stevedoring and transferring.

21. The Panama Railroad Company will exercise the option of transferring cargo either by rail, dock, or water.

22. The Panama Railroad Company will collect from the carrier delivering cargo to its wharves, its charges for transferring and also for stevedoring from the steamer of the delivering carrier and into the steamer of the receiving carrier; leaving these carriers to arrange for the division of the expense between them. In instances where the stevedoring is performed only for one carrier, the Panama Railroad Company will collect from such carriers its charges for stevedoring.

23. The Panama Railroad Company will require early notice from both initial and final carrier of the cargo they desire to have stevedored and transferred at the \$1.10 per ton rate, and in the absence of such notice the regular

rate of 30 cents per ton will be charged for each stevedoring in addition to the transfer charge of 60 cents per ton that is collected from the initial or delivering carrier.

24. When the receiving carrier desires cargo stevedored into its steamers in such a manner as to permit of its discharge at more than one port, thus requiring more labor in the stevedoring than would be necessary if cargo were loaded for delivery at one port only; or when extra labor is made necessary to shift cargo in the holds in order to secure proper working room, the cost of such extra labor for this special work will be charged against the receiving carrier—plus a surcharge of 15 per cent.

25. When the receiving carrier does not lift all cargo on hand in its entirety, and calls for certain cargo, necessitating extra labor in its segregation—the cost of such labor will be charged against the receiving carrier—plus a surcharge of 15 per cent.

26. Steamships must furnish power and labor for operating winches, as well as suitable gear and tackle and if, in the judgment of the railroad company the winchmen furnished by the steamers do not give satisfactory results, it will have the right to substitute competent winchmen at the expense of the steamer.

27. Cargo for local delivery at Colon and Cristobal will be handled once across the wharves at the rate of 30 cents per bill-of-lading ton, and switched at the rate of \$5 per car.

28. Cargo for local delivery at Panama will be charged \$1.25 per bill-of-lading ton, including craneage at Balboa.

29. The rates for stevedoring cover only general cargo, and charges for special commodities will be made as follows:

Boilers, locomotive parts, machinery, railroad cars, etc., scrap machinery and scrap boilers, etc., or other heavy weights over two tons.	(per bill-of-lading ton)	\$0 50
Structural iron over 35 feet long	(per bill-of-lading ton)	50
Loose brick, conduit, sewer pipe, terra cotta, and tiling	(per bill-of-lading ton)	50
Loose scrap iron of irregular shape, pieces not over two tons	(per bill-of-lading ton)	60
Lumber, switch and cross ties	(per M. ft. B. M.)	50
Rough timber and logs	(per ton)	40
Piling	(per linear foot)	60
Horses, mules, and donkeys	(per head)	1 00
Cattle	(per head)	75
Calves, goats, dogs, hogs, and sheep	(per head)	50
Live stock other than above indicated, when crated	(per ton)	1 00
Mail, baggage, and specie	(per ton)	1 00
Explosives	(per bill-of-lading ton)	1 60

30. The above-mentioned rates for stevedoring apply to only such cargo as can be handled by ship's gear. Any additional appliances, machinery, wrecking cranes, etc., to be supplied by the Isthmus will be paid for by the delivering carrier in the case of cargo discharged and by the receiving carrier in the case of cargo delivered.

Tugs.

31. For harbor work, shifting berth, work around piers or locks, and short tows in Gaillard Cut and elsewhere, per hour or fraction thereof. \$15.00

Fractions of an hour beyond the first hour to be charged for on basis of 15-minute periods.

Charge to begin when tug leaves permanent berth and to continue until her return to same.

32. For towage through the Canal:
Per net Panama Canal ton \$.10
Per displacement ton04
Minimum charge for towage through the Canal 150.00

Lighterage.

33. When no berth is available and call is made on the Panama railroad for lighters, and it is possible to furnish same, they will be furnished free, the usual charge for labor, stevedoring, and transferring cargo to apply; but when lighters are furnished to a ship in quarantine, or by a ship on berth solely to expedite the discharge and loading of a ship with no corresponding benefit to the Panama railroad, a rental of 50 cents per hour for their use will be made, in addition to the usual charge for stevedoring and transferring, all towage to be borne by the steamship company.

34. When a steamship lines furnishes its own lighters, labor, towage, etc., then the right of basin charge will be assessed at the rate of 40 cents per bill-of-lading ton.

35. These changes apply to the charges given on pages 37-41 of the revised edition of April, 1915, of the Sailing Directions and General Information, The Panama Canal.

GEO. W. GOETHALS,
Governor.

NOTICE TO STEAMSHIP LINES.

Concerning Handling of Balance of Deposits Made to Cover Expenses of Vessels.

1. Heretofore it has been the practice of owners, agents, and brokers to make deposits to cover tolls and other expenses at the Panama Canal for individual ships, and upon the transit of the ship through the Canal the unexpended balance is automatically remitted to the depositor.

2. In general this custom will still be followed, unless such depositors request that the unexpended balance be retained and applied to cover tolls on other vessels specified by name. If they so desire, steamship lines and firms, which send their vessels at frequent intervals through the Canal, may make a lump sum deposit, specifying by name the vessels to which such deposit is to apply, and keep an open account with The Panama Canal.

GEO. W. GOETHALS,
Governor.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Albright, Myron	1404	U. S. A.	Corozal	Mechanical Div.	July 8.
Allen, A., alias Jones, Wm	42457	Barbados	Gatun	O. & M.	July 10 (about)
Howell, Isaac	69046	Jamaica	Pedro Miguel	Electrical Div.	July 12

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

CANAL WORK IN JUNE.

Monthly Report of the Governor to the Secretary of War.

BALBOA HEIGHTS, C. Z., July 16, 1915.

The Honorable the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of operations on the Isthmus for the month of June, 1915:

Department of Operation and Maintenance.

Lock operation and maintenance—The last fender chain at Miraflores was placed, which completed the installation of all apparatus for this character at all locks. In addition to the usual maintenance and repair work at the locks, the work of grading the dams and backfill at Miraflores was completed, with the exception of the lower east side. The emergency dams at all of the locks were operated during the month. The following commercial lockages were made: Gatun—136 lockages, 145 vessels; Pedro Miguel—142 lockages, 145 vessels; Miraflores—141 lockages, 145 vessels.

Electrical Division—The net output of the power plants was as follows: Gatun hydro-electric station, 2,464,280 kilowatt-hours; Miraflores steam station, 1,740 kilowatt-hours; total, 2,466,020 kilowatt-hours.

The output of the Balboa air compressor plant was 151,915,500 cubic feet of free air compressed to 105 pounds. In addition to the usual operation, maintenance, and repair work, construction work was carried on in connection with the installation of the underground conduit and street lighting systems in Ancon-Balboa, Cristobal, Gatun, and Pedro Miguel districts. Electrical work was also in progress in connection with the construction of buildings for the Army and The Panama Canal, and in connection with the permanent telephone system for the Canal.

Municipal Engineering Division—In addition to the work incident to maintenance, operation, and repair, the following construction work was in progress: Installation of water and sewer lines, and roads, streets, and walks for the Army post at Fort Amador, and for the Army stables at Corozal; the construction of a concrete reservoir at Margarita; the installation of water and oil pipes for the fuel oil handling plants; widening and asphaltting the road from Ancon to the Administration Building; construction of Ancon post-office-Tivoli road; Ancon sewer outfall extension; and work on the roads and streets and on water and sewer lines in Balboa townsite.

Meteorology and Hydrography—The rainfall was above the station averages at five and deficient at 13 stations. The totals ranged from 2.37 inches at Balboa to 16.48 at Brazos Brook. The maximum precipitation recorded on any one day was 4.04 inches, at Brazos Brook on June 8. The estimated rainfall over the Chagres River basin was four per cent above the average, or 12.55 inches against a 15-year average of 12.11 inches. The Chagres River discharge at Alhajuela was 33 per cent above the 26-year June normal. The elevation of Gatun Lake varied from 85.35 on the 20th and 21st, to 86.96 on the 30th, averaging 85.44. Miraflores Lake varied in elevation from 53.55 on the 20th and 22d to 54.21 on the 30th, averaging 53.93. Three seismic disturbances were recorded at Balboa Heights, on the 6th, 17th, and 28th, respectively. Those of the 6th and 17th were but slight tremors, while that of the 28th was

of close origin and of sufficient intensity to be felt by a number of persons, registering 111 on the Rossi-Foré scale; the distance of the epicenter was 91 miles and the probable direction southeast. No damage was reported from any of the shocks.

Division of Terminal Construction.**PACIFIC TERMINALS.**

Shops—Various minor repairs were made in buildings Nos. 1, 4, 6, and 10. In building No. 10 the work of raising the columns to grade was completed and concrete bases repoured. The reinforcing of the curtain wall in building No. 9 with a steel frame was completed. The planing mill exhaust system was completed, with the exception of rewiring the motor in the west fan house. On June 15, 1915, the Balboa shops were formally turned over to the Mechanical Division. The work of erecting incomplete louver panels in buildings Nos. 1, 2, 4, 12, and 15 was completed by the Mechanical Division.

Dry dock—Fifteen girders for supporting the outer crane rail of the dry dock were erected along the south side. Four thousand seven hundred and eighty-three cubic yards of mass concrete and 2,805 cubic yards of reinforced concrete were poured, and a total of 141,485 pounds of reinforcing steel was placed. The erection of the miter dock gates was started June 12, and the last horizontal girder of both leaves was placed on June 23. Structural steel erected in the dry dock proper amounted to 91.43 tons in addition to 565.68 tons erected in the dock gates. A total of 55 stones was placed in the granite miter gate sill and hollow quoins posts.

Entrance pier—Work progressed satisfactorily on the pier supports for the superstructure of this pier, and 1,014 cubic yards of concrete were placed; 42,700 pounds of rail reinforcement were placed in the pier.

Coaling plant—The erection of the unloader towers by the contractor progressed satisfactorily and approximately 150 tons of steel were erected. Installation of the mechanical and electrical machinery was continued on the berm cranes. Steamshovel excavation for the west end of the unloader wharf was continued and 1,430 cubic yards of material were removed, completing this work. Excavation by hand on the buttresses was started and 1,546 cubic yards of material were removed. The curtain wall behind the unloader wharf was finished. On the reloader wharf the work of sinking 6-foot caissons continued and all but eight of the caissons have been put in place, but only 27 have been sunk to rock. This work was somewhat delayed due to the removal by the crane *Hercules* of three caissons that had collapsed during driving.

Excavation—The total excavation at the Pacific terminals for the month amounted to 34,612 cubic yards, 9,580 cubic yards of which were classified as earth. Of this total, 22,324 cubic yards were excavated from Sosa Hill.

Quarantine boat landing and oil crib—The oil crib was completed. Work on the quarantine boat landing progressed very slowly.

ATLANTIC TERMINALS.

East Breakwater—On the shore section the trestle was advanced from bent 198 to bent 288, a distance of 1,436 linear feet. On the outside section, upon the fill, the trestle was advanced from bent 380 to bent 464, a distance of 1,251 linear feet. Two thousand five hundred twenty-eight linear feet of single-track trestle and 52,585 linear feet of piling were

driven during the month, and 1,426 linear feet of 3-inch water main were laid on the shore section of the trestle; 74,445 cubic yards of dredged material were dumped on the center line of the shore trestle.

Coaling plant—The filling of caissons under the reloader wharf was completed on June 15, and for the unloader wharf on June 4. Concrete poured into caissons during the month totaled 2,321 cubic yards. The pouring of the floor at the south end of the unloader wharf was completed, 1,088 cubic yards of concrete having been poured into wharf floors and girder encasement during June. All caissons were ready for the reception of deck girders on June 15. The placing of caissons for end wharf began on June 7 and excavation was completed in eight out of the total of 31 caissons under this wharf. The erection and riveting of deck steel for the entire unloader wharf were completed, and for the reloader wharf about 90 per cent completed. Under Washington order No. 40,483 a small amount of work was done on bridges in connection with hoppers, etc., some erection and riveting were done on the viaduct system, and the painting of the viaduct continued. Work on the unloader towers under Washington order No. 40,587 progressed satisfactorily. The total excavation for the month at the Cristobal coaling plant was 595 cubic yards, of which 550 cubic yards were classified as earth.

Fuel oil plants—At the Mount Hope oil plant the manifold housing was erected, and, with the exception of some riveting and painting, was finished on June 30. Grading around the plant was commenced. Sliding doors for the plant were made and hung in place. At the Balboa oil plant the roof and ends of manifold housing were finished and the building painted. Fire hydrants were installed, and grading and leveling about the plant was about 50 per cent completed at the close of the month. Foundations for gasoline tanks were laid at both terminals. A roof and ladder were fabricated and placed on tank No. 48. Tank No. 36 was dismantled at Gold Hill and its reerection near U. S. tank No. 4 was about 90 per cent completed. At both the Pacific and Atlantic tank farms branch water pipes were laid for the purpose of testing the tanks of licensees.

Marine Division.

One hundred and forty-two oceangoing vessels passed through the Canal in June, 82 (not including one launch) southbound and 60 (not including three launches), northbound. Of this total 47 vessels were of American registry and 62 of British registry. Fourteen vessels were measured, and 114 vessels were inspected to see whether their certificates conformed to the rules.

Dredging Division.

The total excavation for the month, including earth, rock, and gravel was 1,120,029 cubic yards. Of this total 29,015 cubic yards were removed between the Pacific entrance and Miraflores Locks; 128,976 cubic yards from Balboa inner harbor; 720,975 cubic yards from Gaillard Cut; 3,890 cubic yards from Miraflores Lake, and 108,812 cubic yards from Gatun Locks to the Atlantic entrance. At the Cristobal coaling station, 58,858 cubic yards of material were excavated, and 37,393 cubic yards of coral and sand were removed at Coco Solo for the East Breakwater fill. The hydraulic grader was engaged in digging ditches for the Obispo Diversion drainage system, and in sluicing the slide north of

Gold Hill. The work of exterminating water hyacinths continued, and approximately 44,000 young plants were pulled up and destroyed.

Mechanical Division.

Shop orders authorized during the month numbered 922, an increase of 64 over the previous month, those left over from May numbering 487, those completed during the month 878, and those carried forward into July, 531. The output of the foundry was 163,592 pounds of iron, 43,800 pounds of steel, and 13,946.5 pounds of brass. Hostling was done on 4,273 pieces of equipment, and shop and field repairs were made on 6,573 cars. In addition 1,115 light and four extended repair jobs were done on equipment. The fuel oil handling plant at Balboa handled 166,829.57 barrels and the plant at Mount Hope 8,560.64 barrels of oil.

Building Division.

In addition to the usual operation, maintenance, and repair work, the following construction work was in progress for the Army at the places named: *Fort Amador*—Four barracks, three non-commissioned officers' quarters, two four-family quarters, three two-family quarters, and two field officers' quarters. The three non-commissioned officers' quarters were practically completed. *Balboa*—General Edwards' house was finished on June 29, with the exception of some minor incidentals. *Corozal*.—The work on the various stables and sheds proceeded satisfactorily, as did the work on three type-17 quarters and a double mess hall. The following Canal structures were in the course of construction, at the places named: *Ancon-Balboa district*—Thirty-two frame and 12 concrete family quarters, work on which has been somewhat delayed by lack of lumber. *Cristobal district*—New Colon Hospital, slaughter house, concrete water tank at Margarita Island, and one four-family quarters at Mount Hope.

Supply Department.

The force report for the half month ending June 23 showed a total of 26,522 employees of The Panama Canal, and Panama railroad, of whom 3,507 were white Americans and 23,015 were laborers. Of the latter, approximately 347 were Europeans and the remainder West Indian negroes. There was an increase of 652 laborers and an increase of 208 Americans, making a total increase of 860.

The occupants of Government quarters numbered 7,091 white Americans, of whom 3,726 were men, 1,583 women, and 1,782 children; 7,572 West Indians, of whom 4,619 were men, 1,279 women, and 1,674 children.

The value of material received during the month was \$872,394.77. It came forward in 31 steamers; the total weight of cargo, exclusive of lumber and piles, was approximately 27,408 tons. Some of the principal items were 1,234,963 feet, board measure, of lumber, for stock; 319,997 bags of Portland cement; and 31,554 feet of piling.

Health Department.

General—No case of yellow fever, smallpox, or plague originated on or was brought to the Isthmus during the month. Forty-one deaths occurred in the Canal Zone. The death rate for disease for the Canal Zone, based on a population of 34,657, was 13.15 per thousand, as compared with 10.41 for the preceding month and 9.22 for the corresponding month of last year.

Employees—The health of employees continued good. The number of names on the

pay rolls for the preceding month was 36,564. On this basis the admission to hospitals and quarters, 1,127, gave a rate of 369.87 per thousand, as compared with 307.28 for the preceding month and 381.09 for the corresponding month of last year. The admission rates to hospitals for all diseases were: Whites, 401.77; blacks, 152.38; Europeans, 1,275.26; and Americans, 281.68. The admission rates for malaria to hospitals and quarters were: Whites, 199.62; blacks, 67.14; Europeans, 878.05; and Americans, 106.35. The total number of deaths from all causes was 14. Of these, four died from disease, or 3.61 per thousand, as compared with 2.43 for the preceding month and 3.28 for the corresponding month of last year. One American was accidentally drowned.

Accounting Department.

The cash balance in Canal construction appropriations on June 30 was \$22,606,516.24, and in the fortification appropriations \$4,159,833.85. The payrolls for June, exclusive of Army quarters, storehouses, fortifications, etc., amounted to \$953,835.04, and the fortification roll amounted to \$76,464.46. Payments by the Disbursing Clerk in Washington amounted to \$797,936.57, and by the Paymaster on the Isthmus to \$1,587,266.36. Collections on the Isthmus amounted to \$1,220,353.12, of which \$446,618.56 was repaid to the appropriations, \$229,001.51 was commissary collections and other trust funds, and \$544,733.05 was miscellaneous receipts to be covered into the Treasury. Of the miscellaneous receipts, \$539,229.05 was collected on account of tolls, as compared with \$544,207.75 for May. Deposits in the amount of \$426,472.60 were made with the Assistant Treasurer to be applied in payment of tolls and other charges against vessels using the Canal. Canal Zone revenue collections and miscellaneous funds received amounted to \$190,002.83, and the disbursements under the same heading amounted to \$259,017.58.

Executive Department.

DIVISION OF CIVIL AFFAIRS.

One hundred and eighty-five licenses of all kinds were issued during the month. Fifteen estates were settled, having a total value of \$1,398.39. At the port of Balboa, 90 vessels entered and 86 cleared, and at the port of Cristobal 158 vessels entered and 155 cleared.

Postal service—Postmasters remitted on account of stamp sales, second-class mail collections, postage due collections, and box rent receipts, \$8,159.20. Money orders issued aggregated \$343,246.03. Of this total, \$143,150 represents the value of deposit money orders issued without fee, in lieu of postal savings certificates. Deposit money orders to the amount of \$93,310, and postal savings certificates to the amount of \$71,804 were paid. The balance of postal savings deposits on hand at the close of the month, represented by the unpaid certificates and deposit money orders, aggregated \$477,776, as compared with \$499,740 at the close of the previous month.

POLICE AND FIRE DIVISION.

Four hundred and three arrests were made. Of this total 372 were males and 31 females. Fifty-eight convicts were confined in the penitentiary at the close of the month. Nineteen persons were deported, five of whom were convicts who had completed their sentences in the penitentiary and 14 of whom were prisoners who had served terms in jail.

Three fires occurred and the damage to

The Panama Canal and Panama railroad property resulting therefrom amounted to \$50. Private property was damaged to the extent of \$275. The property of the United States Army suffered no loss.

COURTS.

In the District Court eight civil, 24 probate, and 22 criminal cases were settled; six civil, 18 probate, and 16 criminal cases were filed, and 89 cases of all kinds were pending at the close of the month. In the magistrates' courts 31 civil and 422 criminal cases were disposed of.

DIVISION OF SCHOOLS.

The total enrollment in Canal Zone schools was 1,777 for the white schools and 1,612 for the colored schools. In the white schools the net enrollment was 1,146, the average number belonging 869.8, and the average daily attendance 843.5. In the colored schools the net enrollment was 1,430, the average number belonging 765.3, and the average daily attendance 658.1. The schools closed for the regular vacation period on June 30.

Panama Railroad Company.

The cargo handled at the Colon and Balboa agencies aggregated 141,429 tons, of which 16,517 tons were handled through the Canal on steamers of the Panama Railroad Steamship Line, as follows:

	Tons.
From New York to Balboa.....	3,581
From Colon to Balboa.....	3,150
Total.....	6,731
From Balboa to New York.....	7,536
From Balboa to Colon.....	2,250
Total.....	9,786

Grand total..... 16,517

During the month the following coal was delivered and trimmed in bunkers: Colon agency, 20,021 tons; Balboa agency, 3,586 tons; total, 23,607 tons.

The work on the terminal docks at Cristobal continued satisfactory; 2,270 feet of steel cylinders were driven, making a total of 20,225 linear feet to date or 88 per cent of the total required. One thousand six hundred nineteen cubic yards of spoil were removed from and 2,669 cubic yards of concrete were placed in cylinders. Twenty-four caissons were completed during the month, making a total to date of 161, or 75 per cent of the total number required.

Respectfully,
GEO. W. GOETHALS,
Governor.

Whole Cargo of Steel in Coastwise Trade.

The steamship *George Hawley* of the Boston and Virginia Transportation Company passed through the Canal for the first time on July 5, carrying the first whole cargo of steel to be shipped through the Canal in the United States coastwise trade. The shipment amounted to 3,849 tons and was from New York to San Francisco and Portland. Previous shipments of steel in the coastwise routing have been parts of the entire cargo of the vessel carrying them.

Setting Boundary Monuments in the Lake Area.

A party consisting of three American engineers and 15 silver employees is engaged in monumenting the boundary between the Canal Zone and the Republic of Panama in the Gatun Lake area, according to the provisions of article 11 of the new boundary convention

which was proclaimed on February 18, 1915. The convention provides that there shall be included within the Canal Zone "the areas to be covered by the waters of Gatun Lake and all that part of the shores of the lake up to an elevation of 100 feet above mean sealevel, and the islands in said lake * * and the peninsulas bordering on said lake to which there is no access except over lands of the Canal Zone or from the waters of Gatun Lake." The work of the party now in the field is to place about 750 monuments at important points along the 100-foot contour line. The work will be checked by a representative of the Republic of Panama.

The American Legion.

Numbers of the Americans on the Isthmus have made application for enrollment in the American Legion, which is an organization formed to enroll the names of citizens who are qualified by military or technical training to be of immediate value to the defensive forces of the United States and are willing to "hold themselves in readiness to respond to the call to its colors."

The American Legion was incorporated under the laws of the State of New York on March 6, 1915. It is a voluntary organization, without official standing, formed to be of auxiliary service to the Government, which, the Legion states, has now no record of the present addresses and qualifications of its honorably discharged soldiers, sailors, and marines, or information concerning available men trained in the various occupations essential to the conduct of modern warfare. About 75 vocations have been listed. Such information is to be collected and arranged as completely as practicable, for assistance toward the intelligent and orderly mobilization of volunteer forces if ever the need of them should arise. The Legion is not to organize into military units or require drills or assemblies; its activities are confined to registration. It requires that service members pay yearly dues of 25 cents and keep the secretary advised of changes of address or of fitness for service.

The management of the Legion is, according to the prospectus of the society, vested in an advisory membership of 300 representative citizens, chosen from all sections of the country, and headed by a council composed of not more than nine members. The present council consists of Charles J. Bonaparte, Jacob M. Dickinson, George von L. Meyer, Truman H. Newberry, Theodore Roosevelt, Elihu Root, Henry L. Stimson, William H. Taft, and Luke E. Wright, all of whom were prominent officials in former administrations. Local centers of enrollment are the Canal Zone Post, No. 49, of the Veterans of Foreign Wars, whose commander, James D. Williamson, has his office in the Panama railroad station at Panama; and the Cristobal clubhouse, the secretary of which has given out numbers of applications.

Limit of Weight and Rates for Mail Matter of First, Third, and Fourth Classes.

The limit on the weight of packages of mail matter of the first class, formerly four pounds six ounces, has been removed, and that for matter of the third and fourth classes raised from 11 to 20 pounds. The following limits of weights and rates on domestic mail matter are effective in the Canal Zone at present:

There is no limit of weight on domestic mail

matter of the first class. The rate of postage for domestic mail matter of the first class is two cents for each ounce or fraction thereof.

Second-class matter consists of publications entered as matter of the second class at the despatching post-office. The rate of postage for domestic mail matter of the second class is one cent per pound.

The limit of weight for domestic mail matter of the third and fourth classes is 20 pounds, provided such parcels do not exceed 72 inches in length and girth combined.

The rate of postage for fourth-class mail matter is one cent for each ounce or fraction thereof, and that for third-class mail matter is one cent for each two ounces or fraction thereof.

"Domestic mail" in the Canal Zone postal service is that addressed to the Canal Zone, Panama, the United States and its possessions, and Canada, Cuba, and Mexico.

Bachelor Apartments in the Hotel Tivoli.

Fifty rooms on the second and third floors of the main building of the Hotel Tivoli are offered for rent as bachelor apartments for employes at the following rates per room per month:

	With private bath.	Bath serving two rooms.	Without private bath.
One in a room . . .	\$25.00	\$17.50	\$12.50
Two in a room . . .	35.00	25.00	20.00

Original assignments to these rooms will be made according to length of service. The rooms are open for inspection and applications should be filed at the hotel. The following rules will govern the rental of the rooms:

1. Bath and bed linen, soap, maid, elevator, and janitor service will be furnished by the hotel.
2. Telephone tolls will be charged at the regular hotel rates.
3. Any person renting one of these apartments and terminating occupancy in less than two months will be rendered a bill at the regular daily hotel rate for employes on the European plan.
4. The hotel provides no menial personal services.
5. Bills will be due on the last day of the calendar month and must be paid at once. If desired, they may be turned in for pay roll deductions.
6. These quarters will be open for rental to all male employes of The Panama Canal and Panama Railroad Company; to all male employes of the Federal Government resident on the Isthmus but not provided with free quarters or commutation of quarters by their department and to male employes of all companies to whom The Panama Canal or Panama Railroad Company guarantees, by contract, to furnish quarters under the same conditions as to Canal employes. They will not be rented at less than regular hotel rates to any person in Canal or Federal employ whose salary or wage includes a pecuniary allowance for expenses or for commutation of expenses.
7. The hotel reserves the right to terminate this rental of apartments whenever the traffic conditions demand it. It will not be terminated for transient or very temporary increases in traffic.
8. A list of the rooms for rental under these rules will be kept posted in the hotel office and transfers within the hotel will take precedence over new assignments.

Change in Rates at Hotel Tivoli.

Effective August 1, the rate for all meals by the month at the Hotel Tivoli will be changed from \$45 to \$48 for employes, and from \$48 to \$60 for nonemployes. The rates for single meals will remain unchanged, both for employes and non-employes.

Obituary.

Myron Albright, a car inspector in the Mechanical Division, formerly of Pennsylvania and living at Corozal, died at Ancon Hospital on July 8.

OFFICIAL CIRCULARS.

Appointments.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., July 9, 1915.

CIRCULAR No. 661-20;

1. Effective July 1, 1915, Frank Feuille is appointed Counsel for the Panama railroad on the Isthmus.
2. Effective the same date, Walter F. Van Dame is appointed Assistant to the Counsel for the Panama railroad on the Isthmus.
3. Mr. Van Dame shall also act as Assistant to the Special Attorney for The Panama Canal.

GEO. W. GOETHALS,
Governor.

Appointment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., July 8, 1915.

CIRCULAR No. 661-19;

Effective this date, Lieut. P. P. Bassett, U. S. N., is appointed Chairman of the Board of Local Inspectors, and member of the Board of Admeasurers, vice Com. D. E. Dismukes, U. S. N., relieved.

GEO. W. GOETHALS,
Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,

BALBOA HEIGHTS, C. Z., July 15, 1915.

CIRCULAR No. 97;

Effective at once, Mr. E. M. Reinhold is designated an accountable official of The Panama Canal, vice Mr. X. D. Holt, and as such will account for the Paraiso store stock. The nonexpended property in use at Paraiso store will be carried on the records of the district quartermaster at Paraiso.

H. A. A. SMITH,
Auditor, The Panama Canal.
Approved:
GEO. W. GOETHALS,
Governor.

Examination by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, July 28, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the Captain of the Port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the Captain of the Port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the Captain of the Port of Cristobal on Friday, July 30, 1915, beginning at 9 a. m. Applicants should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.
F. M. NIXON,
Recorder, Board of Local Inspectors.

Taboga Launch Service.

Leave Balboa dredgelanding—Daily, except Thursday, at 5.30 p. m.; Monday, Thursday, Saturday, and Sunday, at 9.40 a. m.

Leave Taboga—Daily, except Friday, at 7 a. m. (On Mondays and days following holidays, one hour earlier); Monday, Thursday, and Saturday at 1.30 p. m.; Sunday at 7.15 p. m. The 9.40 a. m. trips from Balboa await the arrival of Panama railroad trains.

JOINT LAND COMMISSION.

Notice of Awards.

In the matter of sundry claims, award No. 90, docket numbers as noted, June 10, 1915.—An award is hereby made against the United States, in favor of the persons hereinafter named, in the sum of \$627.25, United States currency.

This award shall be paid to the persons hereinafter named, in the amounts specified, on or before the 19th day of July, 1915, and if payment or tender of payment of any of the items of this award is not made on or before that date, such items shall thereafter bear interest at the rate of six per centum per annum until paid.

Santana Melendez, docket No. 436.—For all rights, claims, and other interests which the said Santana Melendez may possess or may have possessed in and to crops, fruit trees, and any other improvements on Bohio and Buena Vista lands, near Frijoles, Canal Zone, the sum of \$200.

Inocencio Vega, docket No. 526.—For all rights, claims, and other interests which the said Inocencio Vega may possess or may have possessed in and to crops, fruit trees, and any other improvements located at Mamey and Caimito, near Gorgona, Canal Zone, the sum of \$200.

William Douglas, docket No. 835.—For all rights, claims, and other interests which the said William Douglas may possess or may have possessed in and to houses, crops, fruit trees, and any other improvements on the lands claimed by the Schuber family near Corozal, the sum of \$217.25.

Total, \$617.25, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

In the matter of sundry claims, award No. 91, docket numbers as noted, June 21, 1915.—An award is hereby made against the United States, in favor of the persons hereinafter named, in the sum of \$751.50, United States currency.

This award shall be paid to the persons hereinafter named, in the amounts specified, on or before the 21st day of July, 1915, and if payment or tender of payment of any of the items of this award is not made on or before that date, such item shall thereafter bear interest at the rate of six per centum per annum until paid.

Charles Hinds, docket No. 820.—For all rights, claims, and other interests which the said Charles Hinds may possess or may have possessed in and to houses, crops, fruit trees, and any other improvements on lands claimed by the Schuber family near Corozal, the sum of \$382.50.

Frederick Lewis, docket No. 821.—For all rights, claims, and other interests which the said Frederick Lewis may possess or may have possessed in and to houses, crops, fruit trees, and any other improvements on lands claimed by the Schuber family near Corozal, the sum of \$369.

Total, \$751.50, United States currency.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Rules of Dismissal.

In the matter of sundry claims, rule of dismissal No. 184, docket numbers as shown, June 5, 1915.—In the following claims which were set down for public hearings on the dates shown, the United States on the day of hearing made plea of settlement. The Commission has investigated and considered these claims, and the evidence before the Commission is that settlements therefor have been made:

Claimant.	Docket No.	Date Set for Hearing.	Tax No.	Date of Payment.
S. P. Wilson and Henry Wilson...	751	5-3-15	602	5-12-15
C. Burke	805	5-6-15		5-10-15
Nicanor Chavez	809	5-10-15		5-11-15
John A. Giscombe	810	5-10-15		5-11-15
Eu. elio Munoz & Damiana Olivito	811	5-10-15		5-12-15
Henry Brooks	824	5-14-15		5-8-15
Ebenezer White	827	5-14-15		5-11-15
Isee Sing	828	5-20-15		5-11-15
Stephen L. Abbot	829	5-20-15		5-11-15
Uriah Scott	842	5-26-15		5-10-15

In view of the settlements above referred to, no further action is necessary by this Commission, and the foregoing claims are therefore dismissed.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

In the matter of the claim of J. Taylor Rose, for property on the Schuber lands near Corozal, rule of dismissal No. 185, docket No. 810, June 12, 1915.—The claim of J. Taylor Rose, docket No. 816, filed with the Commission May 9, 1913, and which came on for public hearing on June 2, 1915, is hereby dismissed for the reason that the evidence submitted to the Commission does not justify an award being made.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

COMMISSARY DEPARTMENT.

Supplying Gasoline in Bulk.

The Supply Department is ready to supply gasoline in bulk at the office of the district quartermaster of the Ancon-Balboa district to those entitled to commissary privileges. The price is 20 cents per gallon. Those desiring gasoline will make payment at the commissary store in Ancon or Balboa, receiving there an order to be presented to the district quartermaster.

The price of gasoline in cases is \$2.65 for a 10-gallon can. At the Supply Department garages at Ancon and Balboa, automobile owners may keep not more than 10 gallons of gasoline in each stall.

Bottles.

Bottles used for bay rum, vinegar, salad oil, and denatured alcohol will be accepted at all commissaries and reimbursement allowed at the rate of one cent each, to be paid for by means of refund notes or credit notes. All such bottles must be those used to contain products manufactured by the commissary branch of the Supply Department, or bottles which are similar in shape and size.

Commissary Hours.

The commissary stores at Las Cascadas, Empire, and Culebra are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

The commissary store at Balboa is open from 8 a. m. to 12.30 p. m., and 2.30 to 6 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 to 6.30 p. m.

The gold departments of the Cristobal store will open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Commissary Hours to Be Changed.

Effective August 1, 1915, the open hours will be changed as follows:

The commissary stores at Las Cascadas, Empire, Culebra and Toro Point to open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

All other commissary stores to open from 8 a. m. to 12.30 p. m., and 3 p. m. to 6 p. m.

The gold departments of the Cristobal commissary to open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Cold Storage Prices.

These prices are increased by 10 per cent for sales of commercial and foreign naval vessels, and by 20 per cent for sales to yachts.

The following is a list of retail prices of cold storage provisions which will be effective July 22, 1915:

FRESH MEATS.	Price.
Mutton—Stewing, per pound	9
Shoulder, trimmed, per pound	12
Leg (8 to 10 pounds), per pound	19
Short cut, chops, per pound	23
Shoulder, chops, per pound	14
Lamb—Stewing, per pound	12
Shoulder, trimmed, per pound	15
Leg, (5 to 8 pounds), per pound	24
Chops, per pound	29
Chops, shoulder, per pound	18
Veal—Stewing, per pound	12
Shoulder, for roasting (not under 4 lbs.), per pound	15
Chops, shoulder, per pound	20
Chops, per pound	30
Loins, for roasting, per pound	30
Cutlets, per pound	36
Beef—Suet, special, per pound	3
Soup, special, per pound	7
Native, per pound	5
Soup, bones, special, per pound	2
Stew, special, per pound	11
Native, per pound	8
Plate, special, per pound	12
Native, per pound	8
Chuck roast, special (3 lbs. and over), per pound	12
Chuck roast, native (3 lbs. and over), per pound	8
Rib roast, second cut (not under 3 pounds), special, per pound	16
Rib roast, second cut, native (3 pounds and over), per pound	9
Rib roast, first cut (not under 3 pounds), special, per pound	19
Rib roast, first cut, native (3 pounds and over), per pound	11
Pot roast, special, per pound	20
Native, per pound	12

	Price.
Rump roast, special, per pound	20
Native, per pound	12
Porterhouse roast, special, per pound	22
Choice, per pound	31
Native, per pound	16
Steak, chuck, special, per pound	13
Native, per pound	9
Round, bottom, special, per pound	13
Choice, per pound	19
Native, per pound	9
Round, top, special, per pound	15
Choice, per pound	22
Native, per pound	16
Sirloin, special, per pound	20
Native, per pound	12
Sirloin, choice cut, special, per pound	23
Sirloin, choice cut, native, per lb.	16
Rump, special, per pound	20
Native, per pound	1
Porterhouse (not less than 1 1/2 pounds), special, per pound	23
Porterhouse (not less than 1 1/2 pounds), choice, per pound	34
Porterhouse (1 1/2 pounds and over), native, per pound	17
Porterhouse, short, Delmonico special, per pound	20
Porterhouse, short, Delmonico choice, per pound	28
Porterhouse, short, native, per lb.	12
Tenderloin, Western, special, per pound	35
Tenderloin, Western, choice, per pound	46

NOTE—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders placed with commissary storekeepers before 11 a. m., will be shipped for delivery on the following morning.

Pork—Hams, fresh, per pound	\$23
Shoulders, fresh, per pound	\$19
Loins, chop, or roast, per pound	18
Spare ribs, per pound	11
Pigs' feet, fresh, per pound	5
Pigs' heads, fresh, whole	83
1/2 head	42
Sausage, home made, per pound	23
Ox tails, per pound	9
Beef tongue, native, whole, per pound	20

MISCELLANEOUS.

Brains, calves', per pound	8
Calves' heads, each	80
Kidneys, beef, per pound	12
Livers—Beef, per pound	10
Calf, per pound	24
Steak—Hamburger, packages	17
Hamburger, 20-pound containers, per pound	14
Sausage—Bologna, per pound	12
Frankfurter, per pound	13
Frankfurter, imported, tin	11
Lieberwurst, per pound	10
Pork, per pound	15
Sweetbread beef, per pound	17
Eggs, fresh, per dozen	12
per 1/2 dozen	113
Bloaters, fancy, each	5
Bluefish, per pound	10
Haddock, smoked, per pound	14
Halibut, fresh, per pound	8
Salmon, per pound	12
White fish, smoked, per pound	120
Yeast, per pound	31
per cake	2
Pate de foies gras, per jar	58

CURED AND PICKLED MEATS.

Beef—Corned, No. 1, per pound	18
No. 2, per pound	15
Native, per pound	12
Ham—Real York and Cumberland, per pound	43
Genuine Westphalia, per pound	50
Minced, "Bologna style," per pound	14
Shoulders, sugar cured, boneless, whole, per pound	17
Sugar cured, boneless, whole, per pound	17
Sugar cured, whole, per pound	21
Half, per pound	23
Sliced, per pound	27
Whole, boiled, per pound	27
Half, boiled, per pound	29
Sliced, boiled, per pound	35
Bacon—Breakfast, sliced, per pound	31
Whole piece, per pound	30
Strips, whole, per pound	22
Sliced, jar	30
Sliced, tins	27
Ham, lunch, per pound	40
Pork, salt, family, per pound	14
Ox tongues, whole, 3 to 5 lbs., per pound	24
Pigs' feet, per pound	8
Tongues, per pound	22

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound	29
Chickens—Fancy, roasting, corn fed, per pound	26
Fowls, per pound	24
Fowls, light, per pound	21
Ducks, Western, per pound	23
Capons, per pound	32
Broilers, milk fed, per pound	129
Broilers, corn fed, per pound	127
Turkeys, per pound	26
Squabs, each	33
Geese, per pound	17
Grouse, each	1 00
Mallard ducks, 2 to 2 1/2 pounds, each	2 35
Pheasants, each	1 35

SHIPPING INFORMATION.

Price

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	*41
Creamery, 69-62 lb. tub, whole tub, per pound.....	*40
Sheffield Farms, extra fancy, per lb.....	58
Oleomargarine, per pound, carton.....	29
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	23
Swiss, per pound.....	34
Edam, each.....	*1.15
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	**15
Fermilac, bottle.....	**25
Ice cream, quart.....	125
3-gallon.....	150
Cream, 30 per cent, quart.....	**45
pint.....	**25
1/2-pint.....	**15

VEGETABLES.

Beets, per pound.....	2 1/2
Cabbage, per pound.....	2 1/2
Cucumbers, per pound.....	1 1/2
Egg plant, per pound.....	1 1/2
Celery, per pound.....	1 1/2
Lettuce, per pound.....	2 1/2
Onions, per pound.....	2 1/2
Peppers, green, per pound.....	8
Plantains, per dozen.....	15
Potatoes, white, per pound.....	2
Potatoes, sweet, per pound.....	2
Rhubarb, per pound.....	3
Squash, per pound.....	3
Turnips, per pound.....	2 1/2
Tomatoes, per pound.....	5
Yams, Lucea, per pound.....	3

FRUITS.

Apples, per pound.....	10
Grape fruit—Select, each.....	6
Tropical, each.....	3 1/2
Lemons, per dozen.....	9
Limes, per 100.....	30
Oranges—Select, each.....	3
Tropical, per dozen.....	14
Coconuts, each.....	4
Bananas, per bunch.....	38
Bananas, each.....	1 1/2
Apples, evaporated, per pound.....	12
Apricots, evaporated, per pound.....	12
Pears, evaporated, per pound.....	23
Peaches, evaporated, per pound.....	10
Pineapples, each.....	10
Figs, dried, 12-oz. packages.....	14
Figs, dried, 5-oz. packages.....	5
Raisins, seedless, package.....	20
table, cluster, per pound.....	12
Currants, cleaned, package.....	10
Prunes, stewing, per pound.....	24
Cherries, per pound.....	6
Cantaloupes, each.....	9
Watermelons, each.....	9
Plums, per lb.....	6
Peaches, fresh, per lb.....	12
Blackberries, quart.....	12
Raspberries, pint.....	13

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than 1/2 ham or 1/2 shoulder of fresh pork will be sold.

Additions to Stock.

Voile, embroidered, yd.....	42
Voile, embroidered, yd.....	23
Voile, mercerized, yd.....	27
Buckles for belts, ea.....	08
Rugs, wool, steamer, ea.....	4 50
Cream caramels, ctn.....	03
Cream caramels, etn.....	06
Milk chocolate, Kubes, ctn.....	03
Milk chocolate, Kubes, ctn.....	06
Wafer milk chocolate, ctn.....	06
Egg powder, 1-lb. tin.....	15
Mustard, Dusseldorf, 8-oz. bot.....	07
Coffee, special No. 5, 1-lb ctn.....	14

Price Changes.

The following changes in prices of articles in stock at the commissary store became effective July 19:

ARTICLE.	PRICE CHANGE.	
	Old.	New.
Strops, razor, ea.....	\$1 15	\$1 30
Brushes, nail, ea.....	08	10
Towelling, crash, yd.....	15	19
Towels, embroidered, ea.....	33	41
Buckles, belt, ea.....	08	09
Bags, kit, ea.....	15 25	15 75
Chambers, ea.....	41	22
Pans, muffin, ea.....	30	36
Tubs, wash, ea.....	54	88
Cups and saucers, ea.....	55	65
Saucers, fibre, 9", ea.....	23	14
Bottles, vinegar, ea.....	1 10	2 10
Bottles, oil, ea.....	12	14
Glasses, sherbet, ea.....	07	14
Trunks, ea.....	16 70	13 50

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in this table:

JULY.				
DATE.	Time and height of high and low water.			
Thurs., July 22.....	5:00	11:07	17:46	23:56
	2.9	13.7	2.0	12.6
Fri., July 23.....	6:08	12:20	18:52	
	2.8	13.8	1.6	
Sat., July 24.....	1:09	7:16	13:30	19:55
	13.1	2.4	14.3	0.9
Sun., July 25.....	2:15	8:20	14:33	20:52
	13.9	1.7	14.9	0.1
Mon., July 26.....	3:14	9:15	15:30	21:44
	14.8	1.0	15.5	-0.5
Tues., July 27.....	4:05	10:08	16:21	22:34
	15.6	0.4	15.8	-0.8
Wed., July 28.....	4:53	10:57	17:06	23:20
	16.0	0.1	15.8	-0.8
Thurs., July 29.....	5:37	11:44	17:53	
	16.1	0.1	15.5	
Fri., July 30.....	0:04	6:20	12:30	18:36
	-0.4	15.8	0.4	14.9
Sat., July 31.....	0:47	7:01	13:14	19:20
	0.3	15.2	1.0	14.0

AUGUST.

DATE.	Time and height of high and low water.			
Sun., Aug. 1.....	1:30	7:42	13:59	20:02
	1.3	14.3	1.8	13.1
Mon., Aug. 2.....	2:13	8:25	14:45	20:48
	2.4	13.3	2.7	12.1
Tues., Aug. 3.....	3:01	9:08	15:33	21:41
	3.5	12.4	3.5	11.2
Wed., Aug. 4.....	3:54	10:02	16:34	22:48
	4.4	11.6	4.1	10.6
Thurs., Aug. 5.....	4:54	11:08	17:37	
	5.0	11.2	4.3	
Fri., Aug. 6.....	0:05	5:58	12:20	18:40
	10.5	5.1	11.2	4.1
Sat., Aug. 7.....	1:16	7:03	13:23	19:37
	10.9	4.8	11.6	3.5
Sun., Aug. 8.....	2:10	7:58	14:15	20:25
	11.6	4.2	12.3	2.7
Mon., Aug. 9.....	2:53	8:44	14:57	21:08
	12.4	3.4	13.1	1.9
Tues., Aug. 10.....	3:29	9:26	15:35	21:46
	13.3	2.5	13.8	1.1
Wed., Aug. 11.....	4:04	10:05	16:12	22:25
	14.2	1.6	14.4	0.5
Thurs., Aug. 12.....	4:37	10:45	16:47	22:57
	14.9	1.0	14.9	0.1
Fri., Aug. 13.....	5:10	11:22	17:23	23:39
	15.5	0.4	15.1	-0.1
Sat., Aug. 14.....	5:44	12:01	17:59	
	15.8	0.2	15.2	
Sun., Aug. 15.....	0:16	6:19	12:41	18:38
	0.1	15.9	0.2	14.9
Mon., Aug. 16.....	0:56	6:57	13:26	19:20
	0.4	15.7	0.5	14.4
Tues., Aug. 17.....	1:30	7:40	14:13	20:08
	1.1	15.2	1.0	13.7
Wed., Aug. 18.....	2:30	8:30	15:08	21:06
	1.9	14.4	1.7	12.9
Thurs., Aug. 19.....	3:29	9:31	16:12	22:17
	2.7	13.7	2.3	12.3
Fri., Aug. 20.....	4:37	10:46	17:24	23:41
	3.3	13.1	2.5	12.2
Sat., Aug. 21.....	5:54	12:09	18:38	
	3.3	13.1	2.1	
Sun., Aug. 22.....	1:02	7:07	13:26	19:42
	12.8	2.8	13.6	1.4
Mon., Aug. 23.....	2:09	8:11	14:29	20:38
	13.8	2.0	14.3	0.6
Tues., Aug. 24.....	3:05	9:05	15:22	21:30
	14.7	1.2	15.0	0.0
Wed., Aug. 25.....	3:52	9:55	16:08	22:15
	15.5	0.4	15.5	-0.4

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3.47 p. m.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Panama," in the United States, "Panacanal, Washington."

Shipping people addressing The Panama Canal by mail, should address "The Panama Canal, Balboa Heights, Canal Zone," for delivery on the Isthmus, and "The Panama Canal, Washington, D. C.," for delivery in the United States.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., July 21, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressees:

Alexander, Joseph	Kreig, Emil
*Beidaman, Herbert	Larry, Sgt. Frank
Carson, Arthur	Mallard, John
Crosson, Wm. B.	McKinney, Garfield L.
Delahanty, Mrs. Lillian	Murray, Janet E.
Deuten, Rainer	Powers, Frank E.
Eisenberg, Adolph	Schmscher, Charles
Farmer, Ellery	*Steicher, A. J.
*Froment, J. A. Vde	Stump, Fred G.
*Henry, Charlie	Swan, John
	*Hillman, Miss Ethel

*Card.

Rainfall from July 1 to 10, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>			
Balboa.....	Ins.	80	1
Balboa Heights.....	1.02	1	4.13
Miraflores.....	1.58	12	5.58
Pedro Miguel.....	1.15	12	4.27
Rio Grande.....	1.06	17	3.15
<i>Central Section—</i>			
*Culebra.....	1.84	17	3.96
*Camacho.....	1.58	17	3.46
Empire.....	1.10	17	3.46
Gamboa.....	.82	17	2.52
*Juan Mina.....	3.76	8	10.26
Alhajuela.....	5.33	8	13.07
*El Vigia.....	3.79	8	13.52
Frijoles.....	2.31	1	9.55
*Trinidad.....			
*Monte Lirio.....	1.40	1	6.14
<i>Atlantic Section—</i>			
Gatun.....	3.82	1	7.41
*Brazos Brook.....	2.53	1	10.59
Colon.....	6.30	1	11.90
*Bocas del Toro.....			

*Standard rain gage—readings at 5 p. m. daily.

Automatic rain gage at unstarred stations—values midnight to midnight.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the two weeks ending midnight, Saturday, July 17, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., July 4.....	128.70	94.29	86.57	86.55	54.10
Mon., July 5.....	130.20	93.78	86.58	86.55	54.20
Tues., July 6.....	130.40	95.48	86.68	86.58	54.02
Wed., July 7.....	131.59	96.16	86.62	86.58	54.00
Thurs., July 8.....	135.40	99.35	86.77	86.62	54.00
Fri., July 9.....	134.16	98.39	86.62	86.58	54.00
Sat., July 10.....	132.95	98.39	86.52	86.49	53.92
Sun., July 11.....	132.95	95.87	86.54	86.50	53.91
Mon., July 12.....	129.30	94.88	86.36	86.44	54.20
Tues., July 13.....	130.80	95.68	86.20	86.21	54.14
Wed., July 14.....	129.40	95.44	86.13	86.08	54.23
Thurs., July 15.....	127.70	93.90	86.10	86.07	54.25
Fri., July 16.....	131.35	96.30	86.13	86.10	54.20
Sat., July 17.....	129.50	95.55	86.07	86.05	54.25

Heights of low water to nearest foot.

125.0 91.0

Fuel.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 400 and 650 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa or Cristobal from plants of The Panama Canal, or from private corporations. The present price from the Canal is \$1.25 per barrel. Prices from the corporations may be obtained on application to them.

Sailings of Vessels in Regular Service with the United States.

		<i>Sails.</i>	<i>Arrives.</i>
NEW YORK TO CRISTOBAL-COLON.			
Almirante.....	U. F. C.	July 14....	July 21
Panama.....	P. R. R.	July 15....	July 21

(Continued on page 422.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., July 18, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
July 12...	Toyooka Maru...	Japanese	Nippon Yusen Kaisha	New York	Vladivostok	General	9,100	7,729	5,551
July 12...	Curaca	British	New York and Pacific S. S. Co.	Norfolk, Va.	Arica	Ballast		6,503	4,612
July 12...	Bellgrano	British	Bellgrano S. S. Co.	New York	Valparaiso	General	7,000	5,102	3,587
July 12...	Quillota	British	Pacific Steam Navigation Co.	Liverpool	Valparaiso	General	1,017	4,620	2,848
July 13...	City of Corinth	British	Ellerman Lines	New York	Brisbane	General	8,500	6,582	4,887
July 14...	Croan of Galicia	British	Crown S. S. Co., Ltd.	Barry	Santa Rosalia	Coke	5,000	5,693	4,086
July 14...	Indrakula	British	Indra Line	New York	Vladivostok	General	8,000	6,869	4,711
July 15...	Chalister	British	Chalister S. S. Co., Ltd.	New York	Wellington	General	8,000	6,921	5,351
July 15...	Telena	British	Anglo-Saxon Pet. Co.	New Orleans	Tien Tsin, China	Petroleum	6,173	5,162	3,851
July 15...	Chio	American	U. S. Navy	Guantanamo	San Diego	No cargo			+13,900
July 15...	Missouri	American	U. S. Navy	Guantanamo	San Diego	No cargo			+13,450
July 15...	Wisconsin	American	U. S. Navy	Guantanamo	San Diego	No cargo			+12,830
July 16...	Vergano	American	Willet Melville	New York	San Diego	Ballast		129	56
July 17...	Aresta	Swedish	Johnson Line	Göteborg	San Francisco	General	843	1,462	910
July 17...	Karma	British	Urison S. S. Co.	Kingston, Ja.	Pacific Ocean	Coal	4,965	4,133	3,067
July 17...	Kentra	American	Isthmian S. S. Co.	New York	Vancouver	General	1,650	5,597	4,253
July 17...	Kronland	American	Panama Pacific Line	New York	San Francisco	General	4,500	13,076	8,551
July 18...	Devian	British	Golden Cross S. S. Line	Baltimore	Coquimbo	Coke	4,500	4,960	3,367
July 18...	Georgian	American	American-Hawaiian Line	New York	San Francisco	General	5,875	6,921	4,908

† Displacement tonnage.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

July 12...	Inverclyde	British	Inver Steamship Co.	Shanghai	Boston	General, lumber	5,270	5,701	3,913
July 13...	Quilpué	British	Pacific Steam Navigation Co.	Talcahuano	Cristobal	Gen., copper, etc.	1,618	3,922	2,231
July 13...	Montanan	American	American-Hawaiian Line	Los Angeles	New York	Lumber, general	8,972	6,857	4,706
July 13...	Kim	Norwegian	P. Johannessen	Iquique	Colon (orders)	Nitrates	10,000	7,552	5,605
July 13...	Santa Clara	American	W. R. Grace & Co.	Seattle	New York	Lumber, general	7,481	6,748	4,492
July 14...	Pres. Sarmiento	Argentinian	Argentine Government	Acajutla	Havana	Passengers			2,335
July 14...	Texas	American	American-Hawaiian Line	Hilo	Philadelphia	Sugar, general	11,701	8,984	6,683
July 14...	Limari	Chilean	South American Steamship Co.	Talcahuano	Cristobal	General	1,474	3,631	2,421
July 14...	English Monarch	British	Monarch Shipping Co.	Bellingham	New Castle	Lumber	6,233	5,437	4,087
July 15...	Jullandia	Danish	East Asiatic Co.	San Francisco	Copenhagen	General	6,000	5,371	3,832
July 15...	Colon	American	Panama Railroad S. S. Line	Balboa	New York	General		5,866	4,322
July 16...	Beckenham	British	Watts, Watts & Co.	Cruz Grande	Philadelphia	Iron ore	6,900	4,943	2,875
July 16...	K. P. Margareta	Swedish	Johnson Line	San Francisco	Christiana	Coffee, general	5,200	5,289	4,006
July 16...	Finchley	British	Watts, Watts & Co.	Mejillones	Norfolk (orders)	Nitrates	6,700	4,785	2,578
July 17...	Magellan	French	A. Bordes & Sons	Antofagasta	San Miguel	Nitrates	7,176	6,421	4,343
July 17...	Student	British	Harrison Line	San Francisco	Liverpool	General	5,000	4,056	2,873
July 17...	Senju Maru	Japanese	Totsuima Shikai	Bellingham	England	Lumber	6,875	4,807	3,486
July 17...	Guernsey	Norwegian	W. Wilhelmsen	Mejillones	Philadelphia	Nitrates	6,800	4,418	3,279
July 18...	Torsdal	Norwegian	W. Wilhelmsen	Antofagasta	Archangel	Nitrates	5,500	3,861	2,726
July 18...	Pennsylvanian	American	American-Hawaiian Line	Calita Buena	Norfolk	Nitrates	8,500	6,819	4,663

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
July 16...	Advance	Panama Railroad S. S. Line	New York
July 17...	Valdura	Valdura S. S. Co., Ltd.	New York
July 18...	San Francisco	Johnson Line	Göteborg

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
July 19...	Hesperos		Antofagasta
July 19...	Mathilda		

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
July 12...	Chancellor	Harrison Line	Liverpool
July 12...	Conway	Royal Mail S. P. Co.	Jamaica
July 13...	Puerto Rico	French Line	Bordeaux
July 17...	Itasca	U. S. Navy	San Juan
July 17...	Camito		Port Limon

*DEPARTURES.

Date	Vessel	Line	To
July 12...	Antonio Lopez	Spanish Line	Barcelona
July 17...	Camito	Elders & Fyffes	Bristol
July 17...	Wegodesk	Earn Line	Felton
July 18...	Conway	Royal Mail S. P. Co.	St. Lucia
July 18...	Puerto Rico	French Line	Bordeaux
July 18...	Chancellor	Harrison Line	New Orleans

*EXPECTED ARRIVALS.

July 19...	Magdalena	Royal Mail S. P. Co.	London
July 19...	Orubian	Leyland Line	Cartagena
July 19...	Tabor	Earn Line	Norfolk

*EXPECTED DEPARTURES.

July 20...	Magdalena	Royal Mail S. P. Co.	London
July 20...	Itasca	U. S. Navy	Unknown
July 20...	Tabor	Earn Line	Cuba
July 20...	Orubian	Leyland Line	Unknown

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

July 12...	Geo. W. Fenwick	Geo. Fenwick S. S. Co.	San Francisco
July 13...	Florence Luckbach	Luckenbach Line	San Francisco
July 14...	Ucayali	Peruvian S. S. Co.	Callao
July 16...	Lyman Stewart	Union Oil Co.	Port Harford

*DEPARTURES.

July 12...	Aztec	Pacific Mail S. S. Co.	San Francisco
July 16...	Florence Luckbach	Luckenbach Line	Arica
July 17...	Lyman Stewart	Union Oil Co.	Port Harford
July 18...	Geo. W. Fenwick	Fenwick Steamship Co.	Arica

*EXPECTED ARRIVALS.

City of Para	Pacific Mail Steamship Co.	San Francisco
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*EXPECTED DEPARTURES.

*Other than vessels passing through the Canal.

(Continued from page 421.)

Pastores	U. F. C.	July 17	25	Almirante	U. F. C.	July 29	Aug. 5	Heredia	U. F. C.	July 31	Aug. 5
Zacapa	U. F. C.	July 21	28	Panama	P. R. R.	July 31	Aug. 6	Abangarez	U. F. C.	Aug. 4	Aug. 11
Allianca	P. R. R.	July 22	28	Pastores	U. F. C.	Aug. 2	Aug. 9	Parismina	U. F. C.	Aug. 7	Aug. 12
Calamares	U. F. C.	July 24	Aug. 1	Zacapa	U. F. C.	Aug. 5	Aug. 12	CRISTOBAL-COLON TO NEW ORLEANS.			
Carrillo	U. F. C.	July 28	Aug. 4	Allianca	P. R. R.	Aug. 7	Aug. 13	Heredia	U. F. C.	July 22	Aug. 27
Colon	P. R. R.	July 29	Aug. 4	Abangarez	U. F. C.	July 14	Aug. 21	Abangarez	U. F. C.	July 22	Aug. 29
CRISTOBAL-COLON TO NEW YORK.				Parismina	U. F. C.	July 17	Aug. 22	Parismina	U. F. C.	July 29	Aug. 3
Santa Marta	U. F. C.	July 22	Aug. 29	Atenas	U. F. C.	July 21	Aug. 28	Atenas	U. F. C.	July 29	Aug. 5
Advance	P. R. R.	July 24	Aug. 31	Cartago	U. F. C.	July 24	Aug. 29	Cartago	U. F. C.	Aug. 5	Aug. 10
Metapan	U. F. C.	July 26	Aug. 3	Turrialba	U. F. C.	July 28	Aug. 4	Turrialba	U. F. C.	Aug. 5	Aug. 12
								Heredia	U. F. C.	Aug. 12	Aug. 17
								Abangarez	U. F. C.	Aug. 12	Aug. 19

CANAL



RECORD

Volume VIII.

BALBOA, CANAL ZONE, WEDNESDAY, JULY 28, 1915.

No. 49.

The Canal Record

Official publication of The Panama Canal.

The Canal Record is published weekly. The subscription rate is \$1 per year in the United States and its possessions, and in Canada, Cuba, Mexico, and Panama (domestic postage), and \$1.50 in other countries (foreign postage). The paper is furnished free to United States Government departments, representatives of foreign governments, public libraries, and employees of The Panama Canal and the Panama Railroad Company whose names are on the gold roll.

All subscriptions expire on December 31. Domestic subscriptions are accordingly charged as beginning from the first of the quarter of the year in which received. Remittances should be made to pay only to December 31, on this basis: Sent between July 1 and October 1, 50 cents; between October 1 and January 1, 25 cents. For foreign subscriptions the year is divided into thirds, and remittances for the remainder of this year should be: Between May 1 and September 1, \$1; between September 1 and January 1, 50 cents.

Remittances for subscriptions may be forwarded to The Panama Canal, Washington, D. C., or to The Canal Record at the address given below.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Increasing Facilities for the Handling of Oil.

The grading of lot No. 26 on the oil tank farm of the Atlantic entrance oil handling plant was completed on Saturday, July 24, in preparation for the erection of the second tank for the Panama Canal Storage Corporation (formerly the Roxana Petroleum Company), which has one tank nearly completed at Mount Hope. Each tank is to have a capacity of 55,000 barrels. Two similar tanks are to be erected at the Pacific entrance plant, and the material for them is due at any time from the United States. The Balboa tanks will store both crude fuel oil and Diesel engine oil, from California, and the Mount Hope tanks will handle crude oil from Oklahoma, Mexico, or the Island of Trinidad.

Other companies engaged in the erection of tanks in connection with the oil handling plants are the Texas Oil Company, and the Huasteca Oil Company, each erecting two 55,000-barrel tanks at the Atlantic terminus. In addition, lots have been leased to the

Standard Oil Company, for four tanks at Balboa and four at Mount Hope; the West India Company, for two tanks at Mount Hope; and the West Coast Fuel Oil Company, for four tanks at Balboa.

Corporations already engaged in supplying oil are the Union Oil Company of California, with four 37,000-barrel tanks at Balboa, the Panama Agencies Company, with one 25,000-barrel tank at Balboa, and The Panama Canal, with two 42-000 barrel tanks at each terminus.

More Cattle for Commissary Branch.

The steamship *Ancon* of the Panama Railroad Steamship Line completed her second side trip to Port Limon for cattle for the commissary branch of the Supply Department on Tuesday, July 27, when she delivered at Cristobal 450 head of Costa Rican cattle. The cattle have been turned to pasture on a tract between Mount Hope and Gatun, and will be slaughtered at Cristobal as demanded. The modern slaughterhouse being erected at Cristobal is nearing completion, and the machinery for it is expected to arrive shortly.

The "Ancon" to Go Into Coal Service.

The steamship *Ancon* of the Panama Railroad Steamship Line, sailing this afternoon, Wednesday, July 28, for New York with passengers and cargo, will, upon completion of discharge at New York, proceed to Norfolk and go into service between that port and the Canal as a collier, auxiliary to the Canal, colliers *Achilles* and *Ulysses*. This move has resulted from the increased demand for coal to supply shipping at the Canal.

The *Cristobal* of the same line sailed from New York on July 24 with cargo and passengers and is due at Cristobal on July 31. She is due to return to New York about August 8 to 10 and will carry passengers. She has accommodations for 75 cabin passengers.

The United States Navy gunboat *Annapolis*, which arrived at Balboa on July 23 from Corinto, will clear for the same port in the morning of Thursday, July 29, after coaling at Balboa.

Submarines *C-1* and *C-4* of the Isthmian flotilla are being overhauled in the dry dock at Mount Hope.

CANAL TRAFFIC IN JUNE.

Number of Vessels Exceeds Previous Months.—
Analysis of Cargo Handled.

The number of oceangoing vessels passing through the Canal during the month of June, amounting to 143, was the highest number to have used the Canal in any month since its opening. The cargo handled through the Canal exceeded that for all previous months except March, 1915. A comparison of the traffic in June with the movements during the other months may be made by means of the table published at the bottom of this page. The table shows the numbers of vessels through the Canal each month in each direction, and their aggregate gross and net tonnage, Panama Canal measurement, and the quantities of cargo in each direction.

It is interesting to note that this statement covers practically all of the traffic during the fiscal year ending at the close of business on June 30, as the cargo handled through the Canal in barges from July 1 to August 14, 1914, inclusive, amounted to only 8,410 tons, which is about one-sixth of one per cent of that passing through the Canal during the remainder of the fiscal year.

The tolls earned during June amounted to \$511,181.55, and brought the total since June 30, 1914, a period of one year, to \$4,424,256.48. The earnings by months were:

July.....	\$7,598.40
August.....	88,401.80
September.....	266,513.28
October.....	375,787.44
November.....	351,533.28
December.....	410,043.60
January.....	419,037.12
February.....	383,904.96
March.....	560,784.96
April.....	442,415.49
May.....	547,054.60
June.....	541,181.55

Total..... 4,424,256.48

During June 320,619 tons of cargo were carried through the Canal from the Atlantic to the Pacific, and 282,561 tons from the Pacific to the Atlantic, a total of 603,180 tons. The cargo declarations made by the masters of the vessels listed 132 different commodities, of which 32 were carried through in both directions.

The principal commodities passing through the Canal during the month were coal, coke, copper, flour, general cargo, iron ore, lumber,

SUMMARY OF TRAFFIC THROUGH THE PANAMA CANAL SINCE ITS OPENING TO COMMERCIAL TRAFFIC.

Month.	Atlantic to Pacific.				Pacific to Atlantic.				Total.			
	Ves- sels	Canal tons		Cargo tons	Ves- sels	Canal tons		Cargo tons	Ves- sels	Canal tons		Cargo tons
		Gross	Net			Gross	Net			Gross	Net	
August.....	13	58,233	41,931	49,106	11	62,049	44,047	62,178	24	120,282	85,978	111,284
September.....	27	151,878	109,684	141,762	30	151,568	111,375	180,276	57	303,446	221,059	322,038
October.....	44	240,925	174,472	168,069	40	220,179	153,744	253,288	84	461,104	328,216	421,357
November.....	54	247,479	172,825	206,510	38	205,071	149,906	242,291	92	452,550	322,731	448,801
December.....	43	204,776	145,676	179,735	57	280,896	198,618	271,219	100	485,672	344,294	450,454
January.....	44	239,486	169,228	208,082	54	251,085	177,984	240,925	98	490,571	347,212	449,008
February.....	39	209,822	147,339	150,987	53	245,522	175,523	276,078	92	455,344	322,862	427,065
March.....	57	269,901	187,568	217,447	80	405,380	288,416	417,610	137	675,281	475,984	635,057
April.....	50	279,139	199,213	237,384	60	290,738	205,326	285,457	119	569,877	404,539	522,841
May.....	67	343,701	240,098	246,534	75	360,104	252,252	332,174	142	703,805	492,350	578,708
June.....	83	412,525	296,694	320,619	60	286,330	201,116	282,561	143	698,855	497,810	603,180
Totals.....	530	2,657,865	1,884,728	2,125,735	558	2,758,922	1,958,307	2,844,057	1,088	5,416,787	3,843,035	4,969,792

manufactured goods of iron and steel, machinery, railroad material, nitrates, refined petroleum, sugar, tin, wheat, and wines.

Coal, 56,312 tons, was all handled from the Atlantic to the Pacific; 22,812 tons were shipped from the Atlantic seaboard of the United States to South and Central America (the latter receiving 20 tons); 19,170 tons were handled from the east to the west coast of the United States; 930 tons went to the Far East; 10,700 tons from Cardiff went to unknown destinations in the Pacific Ocean; and 2,700 tons carried by the United States Navy collier *Brutus* went as far as Gatun Lake, returning later to the Atlantic Ocean.

Of 14,193 tons of coke, 2,350 tons were from Philadelphia to Noumea, 1,877 from England to San Francisco, and 9,966 tons from the Atlantic seaboard of the United States to South America.

Copper went through the Canal in both directions; 1,000 tons from New York to Vladivostok, and 387 tons from the former to Los Angeles and San Francisco; while of the 6,492 tons moving to the east, 898 tons were shipped from the west coast of the United States to New York, 3,862 tons from the same west coast to Swansea; and from the west coast of South America, from Chile, 1,233 tons were shipped to Europe, and 499 tons to the United States.

Of flour, 489 tons passed from the Atlantic to the Pacific; 369 tons from New York to Los Angeles and San Francisco; 16 tons from New Orleans to Central America; and 104 tons from New York to Chile. The eastward movement amounted to 3,083 tons, of which 315 tons were from Tacoma to London and 2,768 tons were in the United States coastwise trade, consigned to New York.

General cargo carried from Atlantic to Pacific amounted to 100,027 tons. Of this 42,929 tons were in the United States coastwise trade; 5,243 from Europe to South and Central America; 16,202 from the United States to South and Central America; 34,303 from the United States to the Far East; and 1,350 tons in a miscellaneous routing, from Marseilles to Noumea and Papeeti.

General cargo from the Pacific to the Atlantic amounted to 38,614 tons. Of this, 33,576 tons were in the United States coastwise trade, 278 tons from South and Central America to Europe, and 4,760 tons from the same area to the United States.

Iron ore from New York for Australia and New Zealand amounted to 2,000 tons; from Wilmington to Chile, to 200 tons; while 7,350 tons were shipped from Cruz Grande to Philadelphia.

Lumber shipments from the east amounted to 863 tons, from New York; 798 tons to Vladivostok and 65 tons to Antofagasta. The shipments from the west coast of North America amounted to 46,366 tons, of which 22,198 tons were in the United States coastwise trade, and 21,168 tons were consigned to Europe.

Manufactured goods of iron and steel, principally structural steel, passing through the Canal from east to west during June amounted to 21,422 tons, of which 430 tons were shipped from Liverpool to South America, and 20,992 tons were shipped from New York—11,351 tons to the Far East, 8,070 tons in the United States coastwise trade, and 1,591 tons from New York to South America. An eastward shipment of 700 tons went from San Francisco to New York.

Machinery shipments from the Atlantic to the Pacific amounted to 6,675 tons. Europe sent 347 tons to South America, and New York shipped 6,328 tons, of which 3,728 tons went to South America, 631 tons to San Francisco, and 1,969 tons to Kobe and Vladivostok. Twenty-five tons were shipped from San Francisco to New York, and 97 tons from Callao to New York.

Railroad material amounting to 7,151 tons came through the Canal from New York; 1,092 tons to Los Angeles and San Francisco, 3,610 tons to Shanghai, 300 tons to Kobe and Shanghai, and 2,149 tons to Vladivostok.

Of miscellaneous manufactured goods, Liverpool shipped 20 tons to south Pacific ports, to which Genoa sent 158 tons; while New York sent 1,000 tons to Chile and Peru and 2,930 tons to Los Angeles and San Francisco. San Francisco shipped 500 tons to New York, while Valparaiso sent 14 tons to Europe and 13 tons to the United States.

Of nitrates, with the exception of 15 tons from Liverpool for South Pacific ports, all of 100,075 tons were shipped from the west coast of South America; 41,251 tons to Europe and 58,824 tons to the United States.

Refined petroleum amounting to 58,166 tons was shipped from the Atlantic seaboard of the United States. Three thousand five hundred and twelve tons went to South and Central America; 1,450 tons to Australia and New Zealand; 9,870 tons to Japan; 32,307 tons to China; 2,363 tons to Vladivostok; and 1,049 tons distributed between Kobe and Shanghai,

while 7,615 tons were shipped from New Orleans to Los Angeles.

Of sugar, Liverpool shipped 7,100 tons to San Francisco, and New York shipped three tons to Callao, in the westward movement; the eastward movement amounted to 26,663 tons, of which Peru shipped 1,046 tons to the United States and Europe, 2,000 tons came from Manila to New York, 1,613 tons from the west coast of South America to New York, and 22,004 tons from Hilo to Philadelphia and New York.

Tin shipments from the Atlantic amounted to 3,051 tons, of which 11 tons were from Liverpool to Eten, and the remainder from New York; 2,180 tons to San Francisco, 775 tons to Shanghai, and 85 tons to Valparaiso. Shipments to the Atlantic ports amounted to 629 tons, 15 from Antofagasta to Liverpool, four from Callao to Baltimore, 60 from Antofagasta to New York, 100 tons from Kobe to New York, and 450 tons from San Francisco to New York.

Wheat shipments were all from the west coast of the United States, and amounted to 4,575 tons. Three thousand and fifty tons went to New York, 875 tons to Avonmouth, and 650 tons to Christiania.

Wines amounting to 56 tons were shipped from France to Central American ports, and one ton passed through the Canal consigned from New York to San Francisco. Los Angeles shipped 400 tons to Boston, and San Francisco shipped 4,379 tons to New York.

The traffic is summarized in this tabulation:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.	Remarks.
	Tons.	Tons.	Tons.	
Animal food.....	50	100	50	New York to San Francisco.
Antimony.....	20	779	100	Hongkong to New York.
Asphalt.....	486	1	799	New York to Peru, and San Francisco to New York.
Automobiles.....	1	51	486	New York to Vladivostok and Shanghai.
Balsam.....	51	2,349	1	Central America to New York.
Bark.....	529	240	51	Chile to Cristobal.
Barley.....	240	550	2,349	Portland and San Francisco to New York and Christiania.
Beans.....	550	6,020	529	San Francisco to New York.
Beans, lima.....	20	200	240	To New York and Charleston.
Beet dust.....	20	1,137	550	San Francisco to New York.
Benzine.....	200	26	6,020	Talara to London.
Bones.....	1,137	3,447	20	San Francisco to New York.
Borax.....	26	380	200	Antofagasta to Liverpool.
Bricks.....	10	380	1,137	England to San Francisco.
Burlap.....	80	300	26	San Francisco to New York.
Cacao.....	113	2,192	3,457	South Pacific ports to New York and Europe.
Canned goods:				
Miscellaneous.....	65	1,011	380	Liverpool to south Pacific ports; Astoria and Yokohama to New York.
Fish.....	60	390	2,305	835, San Francisco to New York; 1,155, Vancouver and Seattle to Europe.
Fruit.....	34	356	1,076	Liverpool, New York, west coast, and Hawaii.
Meat.....	104	6,135	60	San Francisco to New York.
Vegetables.....	104	2,056	390	New York, Los Angeles and San Francisco.
Castings.....	6,135	56,312	104	New York to Talcahuano.
Cement.....	1,897	11	6,135	New York and St. Thomas to west coast.
Chemicals.....	56,312	1,641	2,056	New York, Liverpool, and west coast.
Coal.....	74	1,567	56,312	See comment.
Cocoa leaves.....	14,193	9,645	11	Chile and Peru to New York and Cristobal.
Coffee.....	1,387	3,125	1,641	New York, Europe and west coast.
Coke.....	560	1,142	14,193	See comment.
Copper.....	20	194	9,645	See comment.
Copper ore.....	200	700	3,125	South Pacific ports to New York and Europe.
Corn.....	150	125	560	New York to Central America.
Cotton.....	125	132	1,142	South Pacific ports, New York, Baltimore and Liverpool.
Cream of tartar.....	44	188	194	Valparaiso to Cristobal.
Cresote.....	12	3,083	200	New York to Talcahuano.
Curios.....	489	1,969	700	Japan to New York.
Dyes.....	15	58	150	Gotenberg to Valparaiso.
Earthenware.....	30	45	125	Liverpool to south Pacific ports.
Explosives.....	75	7	132	New York and Norfolk to Callao.
Fertilizer.....	296	21	44	San Francisco to New York.
Fibre.....	75	7	12	San Francisco to New York.
Flint stones.....	100,027	38,614	188	Copenhagen to Valparaiso.
Flour.....	75	7	3,572	See comment.
Fruit, dried.....	296	21	1,984	San Francisco, Guatemala, New York, London, and Christiania.
Fruit, fresh.....	100,027	38,614	58	San Francisco to New York.
Furniture.....	75	7	30	Liverpool to south Pacific ports.
Gasoline.....	296	21	590	Philadelphia to Noumea; New York to south Pacific ports, Talara to London.
General cargo.....	100,027	38,614	138,641	See comment.
Glassware.....	75	7	75	New York to Shanghai and Talcahuano.
Gold.....	296	21	7	Aica and Valparaiso to New York and Cristobal.
Grease.....	296	21	296	New York to Orient.
Guano.....	21	21	21	San Francisco to New York.

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.	Remarks.
Gums and copal.....		57	57	Balboa and Valparaiso to New York.
Gypsum.....	2,950		2,950	Marseilles to Noumea.
Hair, cattle.....		8	8	San Francisco to New York.
Hemp.....		1,500	1,500	Manila to New York.
Hops.....		120	120	San Francisco to New York.
Horns and hoofs.....		34	34	San Francisco and Valparaiso to New York and Europe.
Iodine.....		46	46	South Pacific ports to United States and Europe.
Iron.....	1,432		1,432	England and New York to San Francisco and Chile.
Iron ore.....	2,200	7,350	9,550	See comment.
Ivory nuts.....		483	483	Ecuador and Colombia to Europe and New York.
Jute.....	40	100	140	Liverpool to Guayaquil; Shanghai to New York.
Kapok.....		157	157	Ecuador and San Francisco to Europe and New York.
Lard.....	44		44	New Orleans to Central America.
Lead.....	22	245	267	New York, Liverpool, west coast.
Leather.....		22	22	West coast to New York, Cuba, and Liverpool.
Liquors.....	494		494	New York and Liverpool to west coast.
Lumber.....	863	46,366	47,229	See comment.
Malt.....		100	100	San Francisco to New York.
Manganese.....		180	180	Kobe to New York.
Manufactured goods:				
Iron and steel.....	21,422	700	22,122	See comment.
Machinery.....	6,675	122	6,797	See comment.
Railroad material.....	7,151		7,151	See comment.
Textiles.....	1,328		1,328	New York, Spain and Italy to west coast.
Miscellaneous.....	4,108	527	4,635	See comment.
Marble.....	755		755	New York, Barcelona and Genoa to San Francisco, Guayaquil, and Valparaiso.
Milk, evaporated.....	30		30	New York to San Francisco and Peru.
Mineral waters.....	300		300	Liverpool to south Pacific ports.
Naptha.....	2,185		2,185	New York to China.
Nails, wire.....	638		638	New York to Shanghai and Antofagasta.
Nitrates.....	15	100,075	100,090	See comment.
Nuts.....		2	2	Valparaiso to Cristobal.
Oats.....		350	350	Valparaiso to Liverpool.
Oils, animal.....		7	7	Valparaiso to New York.
Oil, crude.....	2,096		2,096	Gotenberg and New York to south Pacific ports and Shanghai.
Oil, lubricating.....	1,887		1,887	New York to west coast and Orient.
Oils, vegetable.....	2,235	1,210	3,445	New York, Liverpool, west coast, China.
Paint.....	122		122	New York and Liverpool to west coast.
Panama hats.....		35	35	Ecuador and Peru to New York, Colon, and London.
Paper.....	1,514		1,514	New York and Christiania to west coast.
Pearl shells.....		50	50	Manila to New York.
Petroleum, refined.....	58,166		58,166	See comment.
Phosphates.....	250		250	Genoa to Valparaiso.
Plaster.....	300		300	New York to Vladivostok.
Preserves.....		2	2	Valparaiso to Cristobal.
Quillay.....		109	109	Valparaiso to New York and Barcelona.
Quina.....		3	3	Arica to Liverpool.
Resin.....	114		114	New York and New Orleans to west coast.
Rice.....	3	2,117	2,120	Hongkong, San Francisco and New York.
Rubber.....		81	81	West coast to Baltimore and New York.
Rubber, old.....		483	483	North Pacific ports to New York.
Salt.....	40		40	New York to San Francisco.
Scrap metal.....		251	251	West coast to New York and Liverpool.
Seed.....		242	242	Chile to New York and Europe.
Shooks, box.....		500	500	Vancouver and Seattle to Liverpool.
Silk.....		20	20	Japan to New York.
Silver.....		5	5	Chile and Peru to New York and Liverpool.
Silver ore.....		5	5	Valparaiso to New York.
Silver sulphides.....		213	213	Chile, Peru, San Francisco to New York.
Skins and hides.....		1,045	1,045	West coast and Shanghai to North Atlantic ports and Europe.
Slate.....	6		6	New York to San Francisco.
Soap.....	597		597	New York and Liverpool to west coast.
Starch.....	100		100	New York to San Francisco.
Sugar.....	7,103	26,663	33,736	See comment.
Syrup.....	22		22	New York to San Francisco.
Tallow.....		124	124	Portland and San Francisco to New York and Liverpool.
Tea.....	20	40	60	Liverpool to south Pacific ports; San Francisco to New York.
Textiles, miscellaneous.....	148		148	New York to Chile.
Tin.....	3,051	629	3,680	See comment.
Tin ore.....		1,892	1,892	Chile to New York and England.
Tin plates.....	3,003		3,003	New York to San Francisco and Far East.
Tobacco.....	707	25	732	New York, Liverpool, west coast, Far East.
Turpentine.....	108		108	New York to west coast.
Twine.....	13		13	Liverpool to south Pacific ports.
Wax.....	205	75	280	Between New York and Chile.
Wheat.....		4,575	4,575	See comment.
Wines.....	57	4,979	5,036	See comment.
Wire.....	62		62	Liverpool to south Pacific ports.
Wolfram.....		2	2	Valparaiso to Cristobal.
Wood, hard.....		121	121	Central America to Europe and United States.
Wool.....		1,185	1,185	Shanghai and west coast to north Atlantic ports and Liverpool.
Zinc.....	1,084	57	1,141	New York, west coast and Vladivostok.
Totals.....	320,619	282,561	603,180	

Delay of Trains at Pontoon Bridge.

Effective at once, when it is seen that train No. 37, due to leave Las Cascadas at 4.50 p. m., is going to be delayed by the pontoon bridge being open to the extent of not making connection with No. 8 for Colon, it will back up from the pontoon bridge at Las Cascadas and leave Las Cascadas as No. 39 on time, or at 6.05 p. m.

This will eliminate the necessity of passengers desiring to go to Panama on train No. 39, connecting with No. 7 at Pedro Miguel, from the Las Cascadas branch, waiting for

No. 41, due to leave Las Cascadas at 7.20 p. m., and not arriving at Panama until 8.10 p. m.

C. H. MOTSETT,
Superintendent.

Balboa Heights, C. Z.,
July 23, 1915.

Obituary.

James Francis Curran, a signal maintainer in the Electrical Division, living at Cristobal, died at Colon Hospital on July 13. His residence in the United States was in Providence, R. I.

COMPLETING THE RECORDS.

Data Covering Omissions from Weekly Reports of Traffic through the Canal.

The form of weekly report of shipping movements published on the last page of THE CANAL RECORD was worked out after the opening of the Canal to commercial traffic, and has been found to present the essential facts concerning the movements. The table was used in its present form for the first time for the week ending October 4. In order to make the records of Canal operation complete, there are published herewith tables showing the data for the vessels using the Canal in the months of August and September. These tables show the date each vessel entered the Canal; the vessel's name; nationality; line or operator; port of origin; port of destination; general nature of cargo; quantity of cargo; and gross and net Canal tonnage.

Inquiries have been received as to the advisability of presenting also the registered or national tonnage of the vessels. This is omitted for the reason that the determination of tonnage varies as between nations, and so the national tonnage does not indicate anything with such accuracy as the Canal net tonnage measurements, which show the actual cargo-carrying capacity, in tons of 100 cubic feet, for all vessels on the same basis, irrespective of variations in construction or registration; and further, the determination of national tonnage is something with which the Canal has nothing to do, and for the figures of which it would not be responsible. The only interest the Canal has in registered national tonnage lies in the fact that its basic charges on cargo-carrying capacity (net Canal tonnage) are modified by a ruling that the sum of the charges on any vessel shall not exceed the equivalent of \$1.25, or be less than 75 cents per ton, on the basis of measurement of net tonnage for United States registry. But as United States registry measurement is one of the many national systems, differing from one another, while the rules of measurement for the Panama Canal establish precisely the one important general fact of actual cargo-carrying capacity, universal in its application, and meaning the same thing everywhere, it has been decided to publish only the tonnage as determined by the Canal rules.

In connection with the publication of data for August and September, there are published in the paragraphs following, certain data covering omissions from the weekly reports since October 1, 1914. The figures for the traffic in the various months, presented in this issue in connection with the report for June, have been revised slightly in several instances, to take into account the changes made by the ascertainment of more accurate data. Omissions from the weekly reports since October 1 are covered herewith:

ATLANTIC TO PACIFIC.

October 12, *Honolulu*; gross and net Canal tonnage, 7,825 and 5,715, respectively.

October 12, *Masaru*; gross and net Canal tonnage, 5,594 and 4,175, respectively.

November 7, *Hector*; cargo amounted to 4,000 tons.

November 29, *Athens*; gross Canal tonnage, 75.

January 27, *Iowan*; cargo amounted to 7,650 tons.

January 29, *John A. Hooper*; cargo amounted to 2,918 tons.

February 13, *Allianza*; American; Panama Railroad Steamship Line; New York to Balboa; general cargo, 1,000 tons; gross and net Canal tonnage, 4,126 and 2,670, respectively.

March 11, *Queen Maud*; gross Canal tonnage, 4,784.

March 12, *Warrior*; American yacht, from Atlantic Ocean to Gatun Lake, without cargo; gross and net Canal tonnage, 1,221 and 455, respectively.

March 30, *Buenaventura*; cargo amounted to 6,000 tons.

April 27, *Limari*; cargo amounted to 1,750 tons.

May 2, *Kiev*; Russian; Russian Volunteer Fleet; New York to Vladivostok; general cargo, 3,719 tons; gross and net Canal tonnage, 5,318 and 3,799, respectively.

May 25, *Palena*; cargo (general) amounted to 1,270 tons.

June 9, *Bell*; cargo amounted to 4,070 tons.

June 19, *Rene*; cargo amounted to 2,363 tons.

June 21, *Advance*; cargo amounted to 1,809 tons.

June 27, *Hubert*; gross and net Canal tonnage, 4,896 and 3,559, respectively.

PACIFIC TO ATLANTIC.

October 1, *John A. Hooper*; cargo amounted to 3,759 tons; gross and net Canal tonnage, 2,462 and 1,536, respectively.

October 1, *Saxon Monarch*; cargo amounted to 8,224 tons; gross Canal tonnage to 6,408.

October 10, *Jupiter*; cargo amounted to 1,000 tons;

gross and net Canal tonnage, 11,361 and 6,142, respectively.

October 26, *Melderskin*; cargo amounted to 6,291 tons; gross and net Canal tonnage, 4,362 and 3,326, respectively.

December 9, *M. S. Dollar*; cargo amounted to 5,510 tons.

December 26, *John A. Hooper*; cargo amounted to 4,000 tons.

January 6, *Buford*, in ballast.

January 26, *Saint Leonards*; cargo amounted to 6,860 tons.

January 28, *Corozal*; cargo amounted to 3,540 tons.

February 14, *Quilpie*; gross and net Canal tonnage 3,922 and 2,231, respectively.

March 18, *Guatemala*; gross and net Canal tonnage 4,249 and 2,772, respectively.

April 8, *Panama*; cargo amounted to 1,400 tons.

April 8, *Cairnross*; cleared for Norfolk.

April 21, *Cristobal*; cargo amounted to 9,095 tons.

April 23, *Colon*; cargo amounted to 2,024 tons.

May 5, *Huasco*; Chilean.

May 27, *Advance*; cargo amounted to 1,788 tons.

June 5, *John C. Meyer*; cargo amounted to 5,418 tons.

June 7, *Chile*; gross and net Canal tonnage, 4,040 and 2,628, respectively.

June 7, *Lewis K. Thurlow*; cargo amounted 6,180 tons.

June 9, *Allianca*; cargo amounted to 1,004 tons.

June 13, *Chucunague*; launch, not to be counted with oceangoing vessels.

June 17, *Colon*, cargo amounted to 1,870 tons.

June 19, *John A.*; did not carry cargo.

June 24, *Advance*; cargo amounted to 1,865 tons.

July 1, *Panama*; cargo amounted to 3,382 tons.

July 8, *Allianca*; cargo amounted to 1,900 tons.

July 15, *Colon*; cargo amounted to 2,868 tons.

SOUTHBOUND SHIPS, AUGUST 15 TO OCTOBER 1, 1914.

Date.	Vessel.	Nationality.	Line.	From.	To.	CARGO.		P. C. TONNAGE	
						Kind.	Tons.	Gross.	Net.
Aug. 15	<i>Ancon</i>	American	Panama Railroad S. S. Line.	Cristobal	Balboa	General	2,787	9,698	7,256
Aug. 15	<i>Missourian</i>	American	American-Hawaiian Line.	New York	Los Angeles	General	8,508	10,100	7,393
Aug. 15	<i>Arizonan</i>	American	American-Hawaiian Line.	New York	Mare Island	General	11,183	9,899	6,576
Aug. 15	<i>Losata</i> (yacht)	American	Morgan Adams	New York	Los Angeles	Ballast		55	48
Aug. 16	<i>Isabela</i>	American	Luckenbach Line.	New York	San Francisco	General	4,475	3,224	2,198
Aug. 17	<i>Teniente Rodriguez</i>	Peruvian	Peruvian Navy	Curacao	Callao	Ballast		478	478
Aug. 18	<i>Admiral Dewey</i>	American	Luckenbach Line.	New York	San Francisco	General	850	2,370	1,652
Aug. 20	<i>Admiral Schley</i>	American	Luckenbach Line.	New York	San Francisco	General	1,100	2,370	1,652
Aug. 20	<i>Peter H. Crowell</i>	American	Sudden & Christenson	Baltimore	Seattle	General	2,423	3,345	2,362
Aug. 23	<i>California</i> (yacht)	American	Mrs. Clara Baldwin Stocker	Jacksonville	Los Angeles	Ballast		299	141
Aug. 23	<i>Mexican</i>	American	American-Hawaiian Line.	Philadelphia	San Francisco	General	8,000	8,713	6,249
Aug. 27	<i>Carolyn</i>	American	Luckenbach Line.	New York	San Francisco	General	3,000	3,425	2,317
Aug. 27	<i>Eburna</i>	American	Anglo-Saxon Petroleum Co.	New Orleans	Hongkong	Oil	6,780	5,167	3,591
Sept. 1	<i>St. Kentigern</i>	British	A. Mackay & Co.	New York	Paita	General	6,800	4,835	3,646
Sept. 3	<i>Virginian</i>	American	American-Hawaiian Line.	New York	San Francisco	General	9,893	9,836	7,398
Sept. 7	<i>Pennsylvania</i>	American	American-Hawaiian Line.	New York	San Francisco	General	7,460	6,817	4,654
Sept. 8	<i>J. L. Luckenbach</i>	American	Luckenbach Line.	New York	San Francisco	General	3,192	5,114	3,241
Sept. 10	<i>Santa Clara</i>	American	Atlantic & Pacific S. S. Co.	New York	San Francisco	General	5,450	6,748	4,475
Sept. 11	<i>Coya</i>	British	New York & Pacific S. S. Co.	New York	Valparaiso	General	5,000	3,040	2,216
Sept. 11	<i>Chalister</i>	British	Chalister S. S. Co.	New York	Mojito	Oil, general	9,000	6,921	5,354
Sept. 12	<i>Columbian</i>	American	American-Hawaiian Line.	New York	San Francisco	General	6,500	8,862	6,243
Sept. 16	<i>Pleiades</i>	American	Luckenbach Line.	New York	San Francisco	General	2,500	4,147	3,255
Sept. 16	<i>Oristano</i>	British	Gulf Line, Ltd.	Antwerp	Los Angeles	General	6,000	4,593	3,401
Sept. 18	<i>Atlantic</i>	American	Emery S. S. Co.	Boston	San Francisco	General	7,000	5,421	3,797
Sept. 19	<i>Montoso</i>	American	N. Y. & Porto Rico S. S. Co.	Norfolk	Seattle	Coal	4,000	3,224	2,198
Sept. 19	<i>Georgian</i>	American	American-Hawaiian Line.	New York	San Pedro	General	7,305	6,885	4,856
Sept. 24	<i>Montanan</i>	American	American-Hawaiian Line.	New York	San Francisco	General	7,000	6,857	4,769
Sept. 24	<i>J. B. Aug. Kessler</i>	Dutch	Petroleum Transport Co. (*)	Port Arthur	Tien Tsin	Petroleum	8,142	5,184	3,594
Sept. 24	<i>Farley</i>	British	Mitre Shipping Co., Ltd.	Philadelphia	San Francisco	Ballast		4,489	3,360
Sept. 25	<i>Jose de Larrinaga</i>	British	Miguel de Larrinaga S. S. Co., Ltd.	New York	San Francisco	Ballast		6,376	4,913
Sept. 25	<i>Polosi</i>	British	Pacific Steam Nav. Co.	Liverpool	Valparaiso	General	4,500	5,542	4,316
Sept. 27	<i>Lewis Luckenbach</i>	American	Luckenbach Line.	New York	San Francisco	General	4,000	4,599	3,492
Sept. 27	<i>Volga</i>	British	Volga S. S. Co.	Norfolk	Tacoma	Ballast		4,801	3,539
Sept. 27	<i>Vimeria</i>	British	Gow, Harrison & Co.	Norfolk	San Francisco	Coal	8,340	6,463	4,754
Sept. 28	<i>Santa Catalina</i>	American	Atlantic & Pacific S. S. Co.	New York	Los Angeles	General	6,000	6,748	4,475
Sept. 27	<i>Vienna</i>	British	Vienna S. S. Co.	Norfolk	Valparaiso	Coal	6,010	4,517	3,524
Sept. 29	<i>Nebraskan</i>	American	American-Hawaiian Line.	New York	San Francisco	General	4,800	4,513	3,143
Sept. 29	<i>Craigina</i>	British	Craigina S. S. Co.	Philadelphia	Itosaki	Oil	5,370	4,459	3,398
Sept. 30	<i>South Pacific</i>	British	Pacific Shipping Co., Ltd.	Newport News	Portland	Ballast		4,465	3,271
Sept. 30	<i>Shirley</i>	British	Mitre Shipping Co., Ltd.	New York	Yokohama	General	7,500	6,622	4,402

NORTHBOUND SHIPS, AUGUST 15 TO OCTOBER 1.

Date.	Vessel.	Nationality.	Line.	From.	To.	CARGO.		P. C. TONNAGE	
						Kind.	Tons.	Gross.	Net.
Aug. 16	<i>Pleiades</i>	American	Luckenbach Line.	San Francisco	New York	General	5,400	4,147	3,255
Aug. 16	<i>Pennsylvania</i>	American	American-Hawaiian Line.	Hilo	New York	General	7,178	6,819	4,663
Aug. 20	<i>Montanan</i>	American	American-Hawaiian Line.	Hilo	Del. Bkwr.	General	8,150	6,857	4,706
Aug. 20	<i>Santa Catalina</i>	American	W. R. Grace & Co.	Antofagasta	New York	Nitrates	7,500	6,657	4,409
Aug. 22	<i>Kentuckian</i>	American	American-Hawaiian Line.	Honolulu	Del. Bkwr.	General	8,136	6,913	4,756
Aug. 22	<i>Dalderich</i>	Danish	J. M. Campbell & Son	Tacoma	Las Palmas	Wheat	6,000	5,186	3,857
Aug. 23	<i>Ancon</i>	American	Panama Railroad S. S. Line.	Balboa	New York	General	3,120	9,698	7,256
Aug. 26	<i>Niagara</i> (yacht)	American	Private	Balboa	New York	Passengers		1,636	723
Aug. 28	<i>Nebraskan</i>	American	American-Hawaiian Line.	San Francisco	New York	General	5,000	4,687	3,457
Aug. 29	<i>Lewis Luckenbach</i>	American	Luckenbach Line.	San Francisco	New York	General	5,694	4,599	3,492
Aug. 31	<i>Transvaal</i>	Danish	East Asiatic Co.	San Francisco	Las Palmas	Grain	6,000	4,850	3,473
Sept. 5	<i>Texan</i>	American	American-Hawaiian Line.	Hilo	Del. Bkwr.	General	11,550	8,696	6,456
Sept. 6	<i>Honolulu</i>	American	American-Hawaiian Line.	San Francisco	Del. Bkwr.	General	8,100	7,661	5,805
Sept. 7	<i>Anglo Saxon</i>	British	Nitrate Producers S. S. Co.	Pisagua	Key West	Nitrates	6,794	5,267	3,753
Sept. 7	<i>Lord Londale</i>	British	Lord Kelvin S. S. Co.	San Francisco	St. Thomas	Grain	7,243	5,084	3,642
Sept. 9	<i>Buford</i>	American	U. S. A. transport	San Francisco	Galveston	Ballast		4,834	3,532
Sept. 9	<i>Damara</i>	American	Luckenbach Line.	San Francisco	New York	General	6,200	5,835	4,506
Sept. 11	<i>Anglo-Columbian</i>	British	Nitrate Producers S. S. Co.	Mejillones	Key West	Nitrates	7,800	6,320	4,375
Sept. 12	<i>Iowan</i>	American	American-Hawaiian Line.	Hilo	Del. Bkwr.	General	8,040	6,819	4,658
Sept. 13	<i>Foxton Hall</i>	British	N. Y. and S. A. Line.	Mejillones	New York	Nitrates	6,452	4,665	3,258
Sept. 16	<i>Santa Cecilia</i>	American	W. R. Grace & Co.	San Francisco	New York	General	6,000	6,748	4,612
Sept. 16	<i>Anglo-Californian</i>	British	Nitrate Producers S. S. Co.	San Francisco	Sewells Point	Nitrates	9,256	7,297	5,293
Sept. 18	<i>Dundutha</i>	British	Glenn & Co.	San Francisco	England	Grain	5,760	4,310	3,213
Sept. 21	<i>Lyra</i>	American	Luckenbach Line.	Los Angeles	New York	General	5,163	4,708	3,637
Sept. 22	<i>Angola</i>	British	Angola S. S. Co.	Iquique	Key West	Nitrates	7,100	5,555	4,223
Sept. 23	<i>Capella No. 1</i>	Norwegian	Capella Whaling Co.	San Diego	Sandefjord	Whale oil	3,400	4,273	3,158
Sept. 23	<i>Candidate</i>	British	Harrison Line.	San Francisco	Liverpool	Grain	6,450	5,907	4,292
Sept. 24	<i>Dakotan</i>	American	American-Hawaiian Line.	Hilo	Del. Bkwr.	General	8,900	6,892	4,807
Sept. 25	<i>Juarez</i>	Norwegian	Capella Whaling Co.	San Diego	Sandefjord	Ballast		160	42
Sept. 25	<i>Morelos</i>	Norwegian	Capella Whaling Co.	San Diego	Sandefjord	Ballast		148	39
Sept. 25	<i>Hidalgo</i>	Norwegian	Capella Whaling Co.	San Diego	Sandefjord	Ballast		160	42
Sept. 25	<i>Coila</i>	British	Kyle Transport Co.	San Francisco	Norfolk	General	6,311	3,222	3,604
Sept. 26	<i>Strathorne</i>	British	Strath Line.	Calita Buena	Wilmington, N. C.	Nitrates	6,390	4,794	3,610
Sept. 27	<i>Saint Quentin</i>	British	British & Foreign S. S. Co.	Talta	Key West	Nitrates	8,400	6,337	4,736
Sept. 27	<i>Strathgyle</i>	British	Strath Line.	Calita Buena	New Orleans	Nitrates	6,800	4,644	3,418
Sept. 28	<i>Nevadan</i>	American	American-Hawaiian Line.	Los Angeles	New Orleans	General	5,590	4,543	3,235
Sept. 28	<i>Celia</i>	British	N. Y. & Pacific S. S. Line.	Guayaquil	New York	General	5,000	5,852	4,375
Sept. 29	<i>Isabela</i>	American	Luckenbach Line.	Los Angeles	New York	General	4,000	3,224	2,198
Sept. 29	<i>Headley</i>	British	Nitrate Shipping Co.	San Francisco	Teneriffe	Barley	8,230	6,346	4,573
Sept. 30	<i>Copenhagen</i>	British	Glasgow Shipowners Association	Arica	Baltimore	Nitrates, general	7,450	5,039	3,762
Sept. 30	<i>Volumnia</i>	British	Volumnia S. S. Co.	San Francisco	Antwerp	Barley, lumber	7,973	6,207	4,521

(*) Kon. Nederl. Maatslot Exploitatie V. Petroleum Bronnen Inneel Indi.

Notice to Mariners.

Men-of-war visiting Panama Canal Zone waters are informed that national salutes will be returned as follows:

At the Atlantic entrance by Fort De Lesseps, Manzanillo Point.

At the Pacific entrance by a battery on Naos Island or one at Fort Grant barracks, dependent upon the position of the visiting ship when the salute is fired. Vessels which salute from the outer anchorage or before entering the Canal, will be answered by Naos Island; those which salute after having en-

tered the Canal, will in general be answered by Fort Grant.

GEO. W. GOETHALS,
Governor.

Balboa Heights, C. Z.
July 21, 1915.

RETAIL AND WHOLESALE PRICE LISTS.**Commissary Branch of Supply Department.**

For the benefit of shipping interests there are published below the current price lists of supplies as sold from the commissary branch of the Supply Department. Shipping people will be interested in these three price lists from the commissary department: The retail cold storage price list, subject to change weekly; the wholesale fresh meat price list, subject to change at irregular periods; and the retail grocery price list, which is changed quarterly. All of these lists are published in this issue of THE CANAL RECORD, and due publicity is to be given to future lists and to changes in the current lists. This will make the entire matter available to steamship people at all times.

The following is retail grocery list No. 2, in effect August 1, 1915. The prices will be increased by 10 per cent in cases of sales to foreign naval vessels and commercial ships; and by 20 per cent in cases of sales to yachts:

Article.	Size.	Unit.	Price.	Article.	Size.	Unit.	Price.
Alcohol, denatured, P. C.	Qt.	Bot.	\$0.25	Bread, pumpernickel		Loaf	\$0.10
Ammonia, household	Pt.	Bot.	.13	Bricks, bath		Each	.04
Ammonia, P. C.	Qt.	Bot.	.14	Butter, apple, Heinz	2s	Tin	.22
Anchovies in oil	$\frac{1}{2}$ s	Bot.	.40	Butter, Danish	1s	Tin	.41
Apples	3s	Bot.	.09*	Butter, peach	1s	Tin	.11
Apples	Gal.	Tin	.26*	Butter, peach	2s	Tin	.21
Apricots	2 $\frac{1}{2}$ s	Tin	.14*	Bu ter, peanut, Heinz	Small	Jar	.09
Asparagus	2 $\frac{1}{2}$ s	Tin	.18	Butter, peanut, Heinz	Med.	Jar	.13
Asparagus tips	1s	Tin	.19	Bu ter, peanut, Heinz	Large	Jar	.22
Barley, Pearl	2s	Tin	.13	Candies:			
Barley, Robinson's	1s	Tin	.21†	Almonds, shelled		Lb	.47*
Beans and tomato sauce, Heinz	Indiv.	Tin	.05	Almonds, sugared		Lb.	.23
Beans and tomato sauce, Heinz	Small	Tin	.09	Chocolate almonds, P. & T.	1s	Box	.12
Beans and tomato sauce, Heinz	Med.	Tin	.13	Chocolates, American Beauty	$\frac{1}{2}$ s	Tin	.21
Beans and tomato sauce, Heinz	Large	Tin	.18	Chocolates, assorted, Cadbury	$\frac{1}{2}$ s	Tin	.22*
Beans, lima	2s	Tin	.09*	Chocolates, assorted, Lowney's	$\frac{1}{2}$ s	Tin	.25
Beans, lima, Cresca	2s	Tin	.14	Chocolates, assorted, Lowney's	1s	Tin	.45
Beans, lima, dried		Lb.	.07	Chocolates, assorted, P. & T.	$\frac{1}{2}$ s	Box	.34
Beans, navy or pea		Lb.	.07*	Chocolates, assorted, P. & T.	1s	Box	.67
Beans, red kidney, Heinz	Small	Tin	.09	Chocolate bons bons, P. & T.	$\frac{1}{2}$ s	Box	.34
Beans, red kidney, dried		Lb.	.08	Chocolate bons bons, P. & T.	1s	Box	.67
Beans, string	2s	Tin	.08	Chocolate caramels, P. & T.		Box	.08
Beans, string	Gal.	Tin	.33†	Chocolate caramels, Lowney's	$\frac{1}{2}$ s	Tin	.19
Beef, chipped	$\frac{1}{2}$ s	Tin	.18†	Chocolate, Fry's caracas	$\frac{1}{2}$ s	Cake	.08
Beef, corned	1s	Tin	.21	Chocolate cordial fruits, P. & T.	1s	Tin	.89
Beef, corned	2s	Tin	.40†	Chocolate fondant cherries, P. & T.	Small	Box	.30
Beef, roast	1s	Tin	.23	Chocolate fondant cherries, P. & T.	Med.	Box	.45
Beef, roast	6s	Tin	1.20†	Chocolate fondant cherries, P. & T.	Large	Box	.58
Beefsteak and onions	$\frac{1}{2}$ s	Tin	.11*	Chocolate marshmallows, Cad-			
Beefsteak and onions	1s	Tin	.21*	bury's		Box	.10
Beets	2s	Tin	.11	Chocolate marshmallows, Powell's	$\frac{1}{2}$ s	Pkg.	.06
Beets	3s	Tin	.12†	Chocolate, milk, Kubes	Small	Ctn.	.03
Biscuits:				Chocolate, milk, Kubes	Large	Ctn	.06
Assorted, N. B. Co.	Small	Ctn.	.04	Chocolate, milk, Lowney's		Bar	.03
Assorted, N. B. Co.	Large	Ctn.	.08	Chocolate, milk, P. & T.		Cake	.04
Bent's wafers	1s	Tin	.27	Chocolate, milk, plain, Peters'	Small	Piece	.04
Cream crackers, J. & Co.		Tin	.29	Chocolate, milk, with toasted al-			
Gentilla	3 $\frac{1}{4}$ s	Tin	.82	monds, Peters'	Small	Piece	.04
Gentilla		Lb.	.24	Chocolate, milk, with toasted al-			
Pretzelets		Tin	.09	monds, Peters'	Large	Piece	.07
Royal lunch	2s	Tin	.32	Chocolate nougat, P. & T.		Box	.08
Saltines	1s	Tin	.22	Chocolate nut milk, Cadbury's		Cake	.19
Soda	5s	Tin	.54	Chocolate, nut milk, Cadbury's		Stick	.10
Sunshine	Small	Ctn.	.04	Chocolate, nut milk, Lowney's		Bar	.03
Sunshine	Large	Ctn.	.08	Chocolate peppermint creams	$\frac{1}{2}$ s	Tin	.17
Wheat, Shredded, whole		Pkg.	.15*	Chocolate, vanilla, Cadbury's	$\frac{1}{2}$ s	Cake	.08*
Blackberries	2s	Tin	.16*	Chocolate, wafer, milk		Ctn	.06
Bloaters, Yarmouth	1s	Tin	.11	Chu chu		Pkg.	.04
Blueberries	2s	Tin	.15	Caramels, cream	Small	Ctn.	.03
Blue, laundry	1s	Pkg.	.14	Caramels, cream	Large	Ctn.	.06
Borax, lump		Lb.	.07†	Dates, plain	1s	Jar	.21*
Borax, powdered	4-oz.	Pkg.	.04	Dates, stuffed	1s	Jar	.23
Borax, powdered	$\frac{1}{2}$ s	Tin	.07	Dates and figs, stuffed	1s	Jar	.31
Bread, brown	Indiv.	Tin	.07†	Figs in Maraschino	$\frac{1}{2}$ s	Bot.	.51
Bread, brown	3s	Tin	.12	Figs, plain	1s	Jar	.23
Bread, hard	8-oz.	Ctn.	.06	Figs, stuffed	1s	Jar	.28
Bread, pilot		Lb.	.08	Ginger, crystalized, P. & T.	$\frac{1}{2}$ s	Tin	.12

Article.	Size.	Unit	Price.	Article.	Size.	Unit.	Price.
<i>Candies—Continued.</i>				Dressing, salad.....	Small	Bot.	\$0.22
Ginger, crystalized, P. & T.....	$\frac{1}{2}$ s	Tin	\$0.23	Dressing, salad.....	Large	Bot.	.37
Gum, beechnut.....		Pkg.	.03	Exterminator, ant P. C.....		Bot.	.10
Gum, Spearmint.....		Pkg.	.03	Exterminator, bedbug.....	Small	Tin	.09
Lints, cream, P. & T.....		Tin	.08	Exterminator, bedbug.....	Large	Tin	.16
Mints, lime, P. & T.....		Tin	.08	Extract beef, Armour.....	16-oz.	Jar	3.15
Nuts, Filberts, Crespa.....	8-oz.	Bot.	.36	Extract beef, Rex.....	2-oz.	Jar	.35*
Nuts, mixed.....		Lb.	.17	Extract beef, Rex.....	4-oz.	Jar	.67*
Nuts, walnuts.....		Lb.	.18	Extract beef, Rex.....	16-oz.	Jar	3.15
Nuts, walnut meat.....	Small	Jar	.26	Extract, almond.....	4-oz.	Bot.	.21
Peanut bars.....		Bar	.04	Extract, almond.....	8-oz.	Bot.	.40
Peanuts, toasted.....	$\frac{1}{2}$ s	Jar	.10	Extract, lemon.....	4-oz.	Bot.	.19
Peppermint stick.....		Lb.	.24	Extract, lemon.....	8-oz.	Bot.	.27
Stick candy.....		Jar	.07†	Extract, orange.....	4-oz.	Bot.	.21
Sweets, Pascall's.....	1s	Jar	.21	Extract, orange.....	8-oz.	Bot.	.40
Tid bits.....	$\frac{1}{2}$ s	Jar	.10*	Extract, peach.....	4-oz.	Bot.	.22
Toffee, McIntosh.....	4-oz.	Tin	.12	Extract, pineapple.....	2-oz.	Bot.	.14
Candles.....		Set	.09	Extract, pineapple.....	4-oz.	Bot.	.22
Capers.....	6-oz.	Bot.	.10	Extract, pineapple.....	8-oz.	Bot.	.43
Capers.....	36-oz.	Bot.	.75	Extract, raspberry.....	2-oz.	Bot.	.14
Caviar.....	1 $\frac{1}{2}$ -oz.	Tin	.15†	Extract, raspberry.....	4-oz.	Bot.	.22
Caviar.....	3-oz.	Tin	.27†	Extract, strawberry.....	4-oz.	Bot.	.23
Caviar.....	6-oz.	Tin	.51	Extract, strawberry.....	8-oz.	Bot.	.40
Caviar.....	$\frac{1}{2}$ s	Tin	.76	Extract, vanilla.....	4-oz.	Bot.	.20
Cereal cream.....	28-oz.	Pkg.	.17	Extract, vanilla.....	8-oz.	Bot.	.33
Charcoal.....		Lb.	.00 $\frac{1}{2}$	Fish, tuna.....	$\frac{1}{2}$ s	Tin	.08
Cherries, Maraschino.....	Small	Bot.	.17†	Fish, tuna.....	$\frac{1}{2}$ s	Tin	.12
Cherries, Maraschino.....	Med.	Bot.	.28†	Flakes, corn.....		Ctn.	.08
Cherries, Maraschino.....	Large	Bot.	.46	Flavoring, kitchen bouquet.....	$\frac{1}{4}$ -pt.	Bot.	.22
Cherries.....	2 $\frac{1}{2}$ s	Tin	.23*	Flour.....		Lb.	.03 $\frac{1}{2}$ †
Chicken, deviled.....	$\frac{1}{4}$ s	Tin	.19	Flour.....	7s	Sack	.27†
Chicken, roast.....	2s	Tin	.32†	Flour, Gold Medal.....	25s	Tin	1.45
Chile con carne.....	1s	Tin	.08	Flour, buckwheat.....		Ctn.	.09
Chocolate, Caracas, family.....	6-oz.	Cake	.12	Flour, graham.....		Lb.	.03 $\frac{1}{2}$ †
Chocolate, Caracas, extra.....	7-oz.	Cake	.32	Flour, rye.....		Lb.	.04†
Chocolate, unsweetened, Baker's.....	$\frac{1}{4}$ s	Cake	.08	Food, ant.....	Small	Pkg.	.08
Chow chow, O. K.....	Pint	Bot.	.16	Food, Mellin's.....	Large	Jar	.48*
Chow chow, Long Island.....	Pint	Bot.	.09	Food, roach.....		Tin	.07
Chow chow, Heinz.....	18-oz.	Bot.	.26	Formaldehyde.....		Bot.	.44
Chow chow.....	5-gal.	Keg	2.00†	Garlic.....		Lb.	.10
Chowder, clam.....	1s	Tin	.08	Gasoline (from drums only).....		Gal.	.22
Chowder, clam.....	3s	Tin	.17*	Gasoline.....	10-gal.	Tin	2.65
Cinnamon, ground.....	2-oz.	Tin	.04	Gasoline, in steel drum.....		Drum	.20
Cinnamon, stick.....		Lb.	.40†	Gelatine.....	1-oz.	Pkg.	.09
Clams.....	1s	Tin	.13†	Gelatine, C. & B.....	2-oz.	Pkg.	.14*
Clams.....	2s	Tin	.25*	Gherkins, sour.....	18-oz.	Bot.	.20
Cleanser, Old Dutch.....		Pkg.	.07	Gherkins, sour, Heinz.....	18-oz.	Bot.	.26
Cloves, ground.....	2-oz.	Tin	.05	Gherkins, spiced.....	5-gal.	Keg.	2.00†
Cloves, whole.....	2-oz.	Tin	.05	Gherkins, sweet, Heinz.....	18-oz.	Bot.	.31
Cocoa, Caracas.....	$\frac{1}{2}$ -kilo	Tin	.42	Ginger, ground.....	2-oz.	Tin	.04
Cocoa, Lowney's.....	$\frac{1}{2}$ s	Tin	.16	Gold dust.....	1s	Pkg.	.04
Cocoa, Omphale.....	$\frac{1}{2}$ s	Tin	.21	Gold dust.....	4s	Pkg.	.17
Cocoa, Van Houten's.....	$\frac{1}{2}$ s	Tin	.35	Gooseberries.....	2s	Tin	.07†
Cocoa, Van Houten's.....	1s	Tin	.65†	Grapes.....	2 $\frac{1}{2}$ s	Tin	.13
Cocoa (all other brands).....	$\frac{1}{2}$ s	Tin	.12	Grape nuts.....	2s	Tin	.16
Cocoa (all other brands).....	1s	Tin	.23	Haddock, finden.....	1s	Tin	.18†
Cocoa (all other brands).....	5s	Tin	1.00*	Ham, deviled.....	$\frac{1}{4}$ s	Tin	.13
Cocoa (all other brands).....	Bulk	Lb.	.19*	Ham, deviled.....	$\frac{1}{2}$ s	Tin	.24
Coconut, desiccated.....	1s	Tin	.20	Hash, corned beef.....	1s	Tin	.15†
Coconut, shredded.....	1s	Pkg.	.21†	Hash, corned beef.....	2s	Tin	.30†
Codfish.....		Lb.	.10*	Herring, boneless.....		Jar	.08
Codfish, shredded.....	1s	Tin	.19	Herring, fresh.....	1s	Tin	.07
Coffee, commissary, No. 1.....	1s	Ctn.	.20	Herring, kippered.....	1s	Tin	.12
Coffee, Tivoli Special, No. 2.....	1s	Ctn.	.25	Herring in tomato sauce.....		Tin	.13
Coffee, Mocha and Java, No. 3.....	1s	Ctn.	.35	Hominy, granulated.....	2s	Tin	.11
Coffee and chicory, No. 4.....	1s	Ctn.	.13	Hominy, hulled corn.....	3s	Tin	.07
Coffee, Special, No. 5.....	1s	Ctn.	.14	Honey.....	Qt.	Tin	.43*
Corn, pop.....		Lb.	.06	Hors d'œuvres.....	$\frac{1}{2}$ s	Bot.	.39
Corn, sugar.....	2s	Tin	.10†	Horseradish.....	8-oz.	Bot.	.22
Corn, sugar.....	Gal.	Tin	.48*	Insecticide.....	$\frac{1}{4}$ -pt.	Tin	.22*
Corn on cob.....	Small	Tin	.25	Jams, American.....	1s	Jar	.13
Corn on cob.....	Large	Tin	.53	Jams, American.....	1s	Tin	.10
Crabs, deviled.....	1s	Tin	.22	Jam, blackberry.....	2s	Tin	.17
Crabs, deviled.....	2s	Tin	.32	Jams, Morton's.....	1s	Tin	.13*
Cubes, vegex.....	10s	Pkg.	.10	Jams, Morton's.....	2s	Jar	.30*

Article.	Size.	Unit.	Price.	Article.	Size.	Unit.	Price.
Jams, Morton's.....	7s	Tin	\$0.60*	Oil, olive.....	Pint	Tin	\$0.41
Jam, strawberry.....	1s	Tin	.10	Oil, olive, Alfonso.....	Qt.	Tin	.62†
Jelly, Heinz.....	9-oz.	Jar	.19*	Oil, olive, Alfonso.....	13-oz.	Bot.	.43
Jelly (all other brands).....	10-oz.	Jar	.12	Oil, olive, Alfonso.....	26-oz.	Bot.	.76
Jelly (all other brands).....	18-oz.	Jar	.22	Oil, olive, Cresca.....	Qt.	Bot.	.92
Jellycon.....	½s	Pkg.	.08*	Oil, olive, Francesconi.....	½-gal.	Tin	1.60
Jelly, guava.....	Small	Jar	.18	Oil, olive, Francesconi.....	Gal.	Tin	3.10
Juice, grape, Top Notch.....	Split	Bot.	.11	Oil, olive, Italian.....	5-gal.	Tin	6.65
Juice, grape, Welch's.....	Split	Bot.	.13*	Oil, olive, superfine.....	Pint	Bot.	.35†
Juice, grape, Welch's.....	Pint	Bot.	.19	Oil, pure salad.....	½-gal.	Tin	.47†
Juice, grape, R. S.....	Pint	Bot.	.14†	Oil, pure salad.....	Gal.	Tin	.82*
Juice, lime, cordial.....	Qt.	Bot.	.32*	Oil, salad, P. C.....	24-oz.	Bot.	.20
Juice, lime.....	Pint	Bot.	.15†	Okra.....	3s	Tin	.11
Ketchup, mustard, Heinz.....	Pint	Bot.	.08	Olcomargarine.....	5s	Tin	.45†
Ketchup, tomato.....	8-oz.	Bot.	.14	Olives, Manzanillo.....	10-oz.	Bot.	.14
Ketchup, tomato, Cresca.....	½-pt.	Bot.	.12	Olives, Manzanillo.....	6-oz.	Bot.	.09
Ketchup, tomato, Heinz.....	Pt.	Bot.	.21	Olives, Queen.....	6-oz.	Bot.	.09
Ketchup, tomato, Blue Label.....	Pint	Bot.	.18	Olives, Queen.....	10-oz.	Bot.	.18*
Ketchup, tomato, Blue Label.....	Quart.	Bot.	.28	Olives, Queen.....	18-oz.	Bot.	.29†
Ketchup, tomato, Snider's.....	Pint	Bot.	.18	Olives, Queen.....	28-oz.	Bot.	.47*
Ketchup, tomato, Snider's.....	Qt.	Bot.	.28	Olives, Queen.....	5-gal.	Keg	5.65
Ketchup, tomato (all other brands).....	Qt.	Bot.	.20	Olives, Spanish.....	Gal.		1.05*
Kraut and pork.....	1s	Tin	.13	Olives, Spanish.....	2-gal.	Keg	2.25†
Lard.....	Lb.		.09†	Olives, ripe.....	1s	Tin	.18†
Lard.....	1s	Tin	.16	Olives, ripe.....	12-oz.	Bot.	.21
Lard.....	2s	Tin	.30†	Olives, ripe.....	15-oz.	Bot.	.30
Lard, Crisco.....	2s	Tin	.22*	Olives, ripe.....	26-oz.	Bot.	.43
Lard.....	3s	Tin	.44*	Olives, stuffed.....	10-oz.	Bot.	.14†
Lard.....	5s	Tin	.69*	Onions, Pearl, Cresca.....	½s	Bot.	.20
Leaves, bay.....	½s	Tin	.10	Onions, Pearl.....	18-oz.	Bot.	.31†
Liver and bacon.....	1s	Tin	.20	Onions, pickled.....	5-gal.	Keg.	5.60
Loaf, chicken.....	½s	Tin	.20	Oysters.....	1s	Tin	.07
Loaf, ham.....	½s	Tin	.12	Paper, ant, Magic Hoodoo.....		Sheet	.11†
Loaf, veal.....	½s	Tin	.12*	Paper, fly, Tanglefoot.....		Sheet	.01½
Loaf, veal.....	1s	Tin	.23*	Paper, parafine, sandwich.....		Roll	.02
Lobster.....	½s	Tin	.32	Paper, toilet.....		Pkg.	.04
Lobster.....	1s	Tin	.41†	Paprika.....	2-oz.	Bot.	.07†
Macaroni.....	1s	Pkg.	.08*	Paste, Anchovy.....	½s	Jar	.14*
Mace, ground.....	2-oz.	Tin	.10	Paste, rat and roach.....		Tin	.16
Mace, whole.....	2-oz.	Tin	.12	Peaches.....	2½s	Tin	.13
Macedoine of vegetables.....	1s	Tin	.14	Peaches.....	Gal.	Tin	.45
Mackerel, soused.....	1s	Tin	.13	Pearline.....	1s	Pkg.	.08
Mackerel, soused, English.....	1s	Tin	.11*	Pears.....	2½s	Tin	.18
Mackerel, fancy.....	Lb.		.10	Pears.....	Gal.	Tin	.52
Mackerel, No. 2.....	Lb.		.08	Peas, sifted.....	2s	Tin	.08*
Malto brau.....	Pint	Bot.	.09	Peas, extra sifted.....	2s	Tin	.10
Marmalade, Dundee.....	Jar		.14	Peas.....	Gal.	Tin	.49
Matches.....	Pkg.		.04	Peas, dried, green.....		Lb.	.06
Meal, corn, white.....	4s	Tin	.19	Peas, Petit Pois.....	1s	Tin	.13
Meal, corn, yellow.....	4s	Tin	.19	Peas, split.....		Lb.	.07
Meal, corn, yellow.....	Lb.		.03	Peel, citron.....		Lb.	.18*
Meat, deviled, ham flavor.....	½s	Tin	.05	Peel, lemon.....		Lb.	.13
Meat, deviled, tongue flavor.....	½s	Tin	.12	Peel, orange.....		Lb.	.15
Milk, malted, Borden's.....	Small	Bot.	.29	Pepper, black, ground.....	2-oz.	Tin	.04
Milk, malted, Borden's.....	Large	Bot.	.49	Pepper, black, ground.....	1s	Tin	.25
Milk, malted, Borden's.....	Hosp.	Bot.	2.15	Pepper, black, whole.....	½s	Tin	.07
Milk, malted, Horlick's.....	Small	Bot.	.38	Pepper, white, ground.....	2-oz.	Tin	.06
Milk, malted, Horlick's.....	Large	Bot.	.75	Pepper, white, ground.....	1	Tin	.36
Milk, malted, Horlick's.....	Hosp.	Bot.	3.00	Pepper, Cayenne.....	2-oz.	Bot.	.09*
Milk, condensed, Nestle's.....	Tin		.10	Pettijohn's breakfast food.....		Ctn.	.13
Milk, evaporated, St. Charles'.....	Tin		.08	Pickles, dill, Heinz.....	Med.	Tin	.13
Mincemeat.....	2s	Tin	.19	Pickles, dill, Heinz.....	28-oz.	Bot.	.31
Mint, powdered.....	2-oz.	Tin	.06*	Pickles, dill, sliced.....	5-gal.	Keg.	3.45
Molasses, Duff's.....	Qt.	Tin	.16	Pickles, dill, whole.....	5-gal.	Keg.	2.05
Mushrooms.....	1s	Tin	.19	Pickles, mixed, Morton's.....	Pint	Bot.	.16*
Mustard, Coleman's.....	½s	Tin	.11	Pickles, mixed, spiced.....	5-gal.	Keg	1.95†
Mustard, Dusseldorf.....	8-oz.	Bot.	.07	Pickles, pin money.....		Jar	.19
Mustard, Heinz, Polygon.....	Small	Bot.	.09	Pickles, sour mixed, Heinz.....	18-oz.	Bot.	.26
Mustard, prepared.....	Gal.	Tub	.53†	Pickles, sweet mixed, Heinz.....	18-oz.	Bot.	.31
Mutton, roast.....	1s	Tin	.22*	Pimenton, Morrones.....	½s	Tin	.06
Nutmeg, whole.....	Lb.		.21	Pimenton, superior.....	1s	Tin	.11†
Oats, rolled.....	2s	Tin	.13	Pimenton, superior.....	5s	Tin	1.05
Oatmeal, coarse.....	2s	Tin	.14	Pineapple.....	2s	Tin	.11
Oil, cotton seed.....	5s	Tin	3.90	Plum pudding.....	Indiv.	Tin	.03†
Oil, kerosene.....	5s	Tin	.77	Plum pudding, Heinz.....	Med.	Tin	.26

Article	Size.	Unit.	Price	Article	Size.	Unit.	Price
Plum pudding, Heinz.....	Large	Tin	\$0.48	Soap, salt water.....	2½-lb.	Bar	\$0.19
Plum pudding.....	1s	Tin	.21	Soap, Sapolio.....		Cake	.06
Plum pudding.....	2s	Tin	.38†	Soap, Skat.....		Tin	.07*
Plums, egg.....	2½s	Tin	.15*	Soda, bicarbonate.....	4-oz.	Pkg.	.02
Plums, greengage.....	2½s	Tin	.18*	Soda, washing.....		Lb.	.01
Polish, stove.....		Cake	.06	Soup, Campbell's, assorted.....	1s	Tin	.09
Pork and beans.....	1s	Tin	.08	Soup, cream of celery.....		Tin	.16
Pork and beans.....	2s	Tin	.12	Soup, tomato, Heinz.....	Small	Tin	.09
Pork and beans.....	3s	Tin	.16*	Soup, tomato, Heinz.....	Med.	Tin	.13
Postum cereal.....	Small	Tin	.12	Soup, tomato, Heinz.....	Large	Tin	.22
Postum cereal.....	Large	Tin	.19	Soup, Van Camp's, assorted.....	1s	Tin	.08
Postum, instant.....	4-oz.	Tin	.24	Spaghetti, Heinz.....	Med.	Tin	.13
Postum, instant.....	8-oz.	Tin	.39	Spaghetti.....	Lb.	Pkg.	.08*
Potash or lye.....	1s	Tin	.05*	Spice, pudding.....	2-oz.	Tin	.04
Potatoes, sweet.....	3s	Tin	.10	Spinach.....	3s	Tin	.10*
Powder, baking, Reliable.....	½s	Tin	.05	Squash.....	3s	Tin	.10
Powder, baking, Reliable.....	1s	Tin	.08	Starch, corn.....	1s	Tin	.07
Powder, baking, Royal.....	½s	Tin	.22	Starch, laundry.....		Lb.	.03
Powder, baking, Royal.....	1s	Tin	.43	Starch, Tiger.....	1s	Pkg.	.05
Powder, Chili.....	12-oz.	Tin	.55†	Steak, hamburger.....	½s	Tin	.09†
Powder, Chili.....	24-oz.	Tin	1.10	Steak, hamburger.....	1s	Tin	.18†
Powder, curry.....	4-oz.	Bot.	.07*	Strawberries.....	2s	Tin	.24†
Powder, egg.....	½s	Tin	.15	Strawberries, Heinz.....	Med.	Jar	.22†
Powder, egg, desiccated.....	½s	Tin	.44	Succotash.....	2s	Tin	.08†
Powder, ice cream, Jello.....		Pkg.	.08	Sugar, granulated.....	5s	Sack	.29*
Powder, insect, Buhach.....		Tin	.83	Sugar, loaf.....	2s	Ctn.	.21*
Powder, jelly.....	3-oz.	Pkg.	.08	Sugar, powdered.....	2s	Tin	.21*
Preserves, cherry.....	1s	Jar	.19	Sugar, yellow.....		Lb.	.05
Preserves, peach.....	1s	Jar	.19	Syrup, cane, P. C.....	Qt.	Bot.	.15
Puffed rice.....		Ctn.	.13	Syrup, cane, P. C.....	½-gal.	Jar	.40†
Puffed wheat.....		Ctn.	.11	10 cents refunded on return of jar.			
Pumpkin.....	3s	Tin	.08	Syrup, Karo Corn.....	2s	Tin	.10
Relish, India.....	8-oz.	Bot.	.13	Syrup, Karo Corn.....	10s	Tin	.45
Relish, India, Heinz.....	18-oz.	Bot.	.23*	Syrup, maple.....	Qt.	Tin	.29*
Rice, first grade.....		Lb.	.07	Syrup, Mapleline, P. C.....	Pint	Bot.	.20
Rice, second grade.....		Lb.	.04†	Tamales, chicken.....	½s	Tin	.08
Roes, cod.....	1s	Tin	.19	Tamales, chicken.....	1s	Tin	.16*
Sage, powdered.....	2-oz.	Tin	.05	Tapioca.....	2s	Tin	.16*
Sago.....	2s	Tin	.16*	Tea, Ceylon.....	1s		.37*
Sal Hepatica.....		Bot.	.35	Tea, E. B.....	½s		.11*
Salmon, fresh, talls.....	1s	Tin	.14	Tea, E. B.....	½s		.21*
Salmon, steak, R. S.....	1s	Tin	.24	Tea, E. B.....	1s		.40*
Salt, celery.....	1½-oz.	Bot.	.07	Tea, E. B.....	2s		.79*
Salt, Cerebos.....	2s	Tin	.11	Tea, I. C. T.....	½s		.21
Salt, freezing.....		Lb.	.01	Tea, Omphale.....	½s		.10*
Salt, fruit, Enos.....		Bot.	.51	Tea, Omphale.....	½s		.20*
Salt, table.....	1s	Sack	.01½	Tea, Omphale.....	1s		.40*
Salt, table.....	4s	Jar	.09	Tea, Orange Pekoe.....	3-oz.		.19
Sardines, Colomb.....	½s	Tin	.13	Tea, Orange Pekoe.....	½s		.37
Sardines in oil.....	½s	Tin	.08	Tea, Temple Garden.....	1s		.11*
Sardines in tomato, Andre.....	½s	Tin	.11	Tea, Temple Garden.....	½s		.21*
Sauce, Chili, Heinz.....	13½-oz.	Bot.	.26	Tea, Temple Garden.....	1s		.40*
Sauce, cranberry.....	2s	Tin	.13	Tea, Young Hyson.....	½s		.09
Sauce, oyster cocktail.....	16-oz.	Bot.	.24	Tea, Young Hyson.....	½s		.18†
Sauce, Tabasco.....		Bot.	.23*	Tea, Young Hyson.....	2s		.63†
Sauce, Worcestershire.....	Small	Bot.	.24	All teas may be in either tins or			
Sauce, Worcestershire.....	Large	Bot.	.41*	packages.			
Sauerkraut.....	3s	Tin	.08*	Thyme, powdered.....	2-oz.	Tin	.04
Sauerkraut.....	5-gal.	Keg	1.40	Tomatoes.....	2s	Tin	.06.
Sausage, Vienna.....	½s	Tin	.08*	Tomatoes.....	3s	Tin	.09*
Sausage, Vienna.....	1s	Tin	.15*	Tomatoes.....	Gal.	Tin	.24
Seed, bird.....		Pkg.	.13*	Tongue, lunch.....	1s	Tin	.29
Shrimp.....	1s	Tin	.11	Tongue, lamb.....	1s	Tin	.24†
Shrimp.....	2s	Tin	.20	Triscuits.....	1s	Tin	.23*
Soap, Bon Ami.....		Cake	.08	Truffles.....	½s	Tin	.20
Soap, Fairy.....		Cake	.04	Truffles, Brosses.....	2-oz.	Tin	.40
Soap, Fels Naphtha.....		Cake	.04½*	Turnips.....	2s	Tin	.09
Soap, Grandpa s.....		Cake	.05	Vermicelli.....		Lb.	.08
Soap, Ivory.....		Cake	.04	Vinegar, cider.....		Gal.	.15
Soap, laundry.....		Cake	.05	Vinegar, malt, C. & B.....		Bot.	.15*
Soap, Lava.....		Cake	.04	Vinegar, malt, Heinz.....	Qt.	Bot.	.22
Soap, Lenox.....		Cake	.03	Vinegar, malt, P. C. (Heinz, mfr.).....	Qt.	Bot.	.13
Soap, Life Buoy.....	Small	Cake	.06	Vinegar, spiced salad, Heinz.....	Pt.	Bot.	.22
Soap, Life Buoy.....	Large	Cake	.07	Vinegar, Tarragon.....		Bot.	.21
Soap, salt water.....		Cake	.05				

Article.	Size.	Unit.	Price.	Article.	Size.	Unit.	Price.
Waters:				Waters—Continued.			
Apenta.....	Qt.	Bot.	.21	Lemon soda.....	Pt.	Bot.	.08
Apollinaris.....	Split	Bot.	.09	Perrier.....	Qt.	Bot.	.14
Apollinaris.....	Pt.	Bot.	.11	Poland.....	Qt.	Bot.	.16
Coca Cola.....	Split	Bot.	.08*	Poland.....	2-qt.	Bot.	.30
Cream soda.....	Pt.	Bot.	.08	Red Raven.....	Split	Bot.	.09
Deep rock.....	Split	Bot.	.05	Root beer.....	Pt.	Bot.	.08*
Deep rock.....	Pt.	Bot.	.08	Sarsaparilla.....	Pt.	Bot.	.08
Deep rock.....	Qt.	Bot.	.12	Schweppe's soda.....	Split	Bot.	.06
Ginger Ale, Clicquot Club.....	Pt.	Bot.	.09	Schweppe's soda.....	Pt.	Bot.	.09
Ginger ale, Cochran's.....	Pt.	Bot.	.09*	Soda, plain.....	Pt.	Bot.	.08
Ginger ale, dry.....	Split	Bot.	.07	Vichy.....	Qt.	Bot.	.18
Ginger ale, dry.....	Pt.	Bot.	.10	White Rock.....	Pt.	Bot.	.10
Ginger ale, Paraiso.....	Pt.	Bot.	.08	Water, rose, P. C.....	½-pt.	Bot.	.13
Hunyadi.....	Qt.	Bot.	.24	Wheat, cream of.....	2s	Tin	.19
Kola, Cochran's.....	Pt.	Bot.	.09*				

*Denotes increase from last list.

†Denotes reduction from last list.

COMMISSARY DEPARTMENT.

Cold Storage Prices.

These prices are increased by 10 per cent for sales of commercial and foreign naval vessels, and by 20 per cent for sales to yachts;

The following is a list of retail prices of cold storage provisions which will be effective July 29, 1915.

FRESH MEATS.

	Price.
Mutton—Stewing, per pound.....	9
Shoulder, trimmed, per pound.....	12
Leg (8 to 10 pounds), per pound.....	19
Short cut, chops, per pound.....	23
Shoulder, chops, per pound.....	14
Lamb—Stewing, per pound.....	12
Shoulder, trimmed, per pound.....	15
Leg, (5 to 8 pounds), per pound.....	24
Chops, per pound.....	29
Chops, shoulder, per pound.....	18
Veal—Stewing, per pound.....	12
Shoulder, for roasting (not under 4 lbs.), per pound.....	15
Chops, shoulder, per pound.....	20
Chops, per pound.....	30
Loin, for roasting, per pound.....	30
Cutlets, per pound.....	36
Beef—Suet, special, per pound.....	3½
Soup, special, per pound.....	7
Native, per pound.....	5
Soup, bones, special, per pound.....	2½
Stew, special, per pound.....	11
Native, per pound.....	8
Plate, special, per pound.....	12
Native, per pound.....	8
Chuck roast, special (3 lbs. and over), per pound.....	12
Chuck roast, native (3 lbs. and over), per pound.....	8
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16
Rib roast, second cut, native (3½ pounds and over), per pound.....	9
Rib roast, first cut (not under 3 pounds), special, per pound.....	19
Rib roast, first cut, native (3 pounds and over), per pound.....	11
Pot roast, special, per pound.....	20
Native, per pound.....	12
Rump roast, special, per pound.....	20
Native, per pound.....	12
Porterhouse roast, special, per pound.....	22
choice, per pound.....	31
native, per pound.....	16
Steak, chuck, special, per pound.....	13
native, per pound.....	9
Round, bottom, special, per pound.....	13
choice, per pound.....	19
native, per pound.....	9
Round, top, special, per pound.....	15
choice, per pound.....	22
native, per pound.....	10
Sirloin, special, per pound.....	20
native, per pound.....	12
Sirloin, choice cut, special, per pound.....	23
Sirloin, choice cut, native, per lb.....	16
Rump, special, per pound.....	20
native, per pound.....	20
Porterhouse (not less than 1½ pounds), special, per pound.....	23
Porterhouse (not less than 1½ pounds,) choice, per pound.....	34
Porterhouse (1½ pounds and over), native, per pound.....	17
Porterhouse, short, Delmonico special, per pound.....	20
Porterhouse, short, Delmonico choice, per pound.....	28
Porterhouse, short, native, per lb.....	12
Tenderloin, Western, special, per pound.....	35
Tenderloin, Western, choice, per pound.....	46

NOTE.—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders placed with commissary storekeepers before 11 a. m., will be shipped for delivery on the following morning.

	Price.
Pork—Hams, fresh, per pound.....	\$23
Shoulders, fresh, per pound.....	\$19
Loin, chop, or roast, per pound.....	18
Spare ribs, per pound.....	11
Pigs' feet, fresh, per pound.....	5
Pigs' heads, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23
Ox tails, per pound.....	*10
Beef tongue, native, whole, per pound.....	20
MISCELLANEOUS.	
Brains, calves', per pound.....	8
Calves' heads, each.....	80
Kidneys, beef, per pound.....	12
Livers—Beef, per pound.....	10
Calf, per pound.....	24
Steak—Hamburger, packages.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	12
Frankfurter, per pound.....	13
Frankfurter, imported, tin.....	11
Lieberwurst, per pound.....	10
Pork, per pound.....	15
Sweetbread, beef, per pound.....	*24
Eggs, fresh, per dozen.....	*27
per ½ dozen.....	*14
Bloaters, fancy, each.....	5
Bluefish, per pound.....	10
Haddock, smoked, per pound.....	14
Halibut, fresh, per pound.....	8
Salmon, per pound.....	*9
Whitefish, smoked, per pound.....	20
Yeast, per pound.....	31
per cake.....	2
Pates de foies gras, per jar.....	58
CURED AND PICKLED MEATS.	
Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Native, per pound.....	12
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Minced, "Bologna style," per pound.....	14
Shoulders, sugar cured, boneless, whole, per pound.....	17
Sugar cured, boneless, whole, per pound.....	17
Sugar cured, whole, per pound.....	21
Half, per pound.....	23
Sliced, per pound.....	27
Whole, boiled, per pound.....	27
Half, boiled, per pound.....	29
Sliced, boiled, per pound.....	35
Bacon—Breakfast, sliced, per pound.....	31
Whole piece, per pound.....	30
Strips, whole, per pound.....	22
Sliced, jar.....	30
Sliced, tins.....	27
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	†17
Pork bellies, per pound.....	8
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	8
Tongues, per pound.....	21
DAIRY PRODUCTS.	
Butter—Creamery, special, per pound.....	41
Creamery, 60-62 lb. tub, whole tub, per pound.....	40
Sheffield Farms, extra fancy, per lb.....	58
Oleomargarine, per pound, carton.....	29
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	23
Swiss, per pound.....	34
Edam, each.....	1.15
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	**15
Fermillac, bottle.....	**25

	Price.
Ice cream, quart.....	‡25
½-gallon.....	‡50
Cream, 30 per cent, quart.....	**45
pint.....	**25
½-pint.....	**15
POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound.....	29
Chickens—Fancy, roasting, corn fed, per pound.....	26
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	23
Capons, per pound.....	32
Broilers, milk fed, per pound.....	29
Broilers, corn fed, per pound.....	27
Turkeys, per pound.....	26
Squabs, each.....	33
Geese, per pound.....	17
Grouse, each.....	1.00
Mallard ducks, 2 to 2½ pounds, each.....	2.35
Pheasants, each.....	1.35
VEGETABLES.	
Beets, per pound.....	2½
Cabbage, per pound.....	†2
Celery, per head.....	4
Cucumbers, per pound.....	†2½
Egg plant, per pound.....	†4
Lettuce, per pound.....	5
Onions, per pound.....	2½
Peppers, green, per pound.....	†7
Plantains, per dozen.....	15
Potatoes, white, per pound.....	2
Potatoes, sweet, per pound.....	2
Rhubarb, per pound.....	*3½
Squash, per pound.....	†2½
Turnips, per pound.....	†2
Tomatoes, per pound.....	*6
Yams, Lucea, per pound.....	3
FRUITS.	
Apples, per pound.....	10
Grape fruit—Select, each.....	†5
Tropical, each.....	3½
Lemons, per dozen.....	*10
Limes, per 100.....	30
Oranges—Select, each.....	3
Tropical, per dozen.....	14
Coconuts, each.....	4
Bananas, per bunch.....	38
Bananas, each.....	½
Apples, evaporated, per pound.....	12
Apricots, evaporated, per pound.....	12
Pears, evaporated, per pound.....	23
Peaches, evaporated, per pound.....	8
Pineapples, each.....	10
Figs, dried, 12-oz. packages.....	14
Figs, dried, 5-oz. packages.....	5
Raisins, seedless, package.....	11
table, cluster, per pound.....	20
Currants, cleaned, package.....	12
Prunes, stewing, per pound.....	10
Cherries, per pound.....	10
Cantaloupes, each.....	*8
Watermelons, each.....	10
Plums, per pound.....	†6
Peaches, fresh, per pound.....	6

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Commissary Hours.

Effective August 1, 1915, the open hours of the various commissary stores will be as follows:

The commissary stores at Las Cascadas, Empire, Culebra and Toro Point to open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

All other commissary stores to open from 8 a. m. to 12.30 p. m., and 3 p. m. to 6 p. m.

The gold departments of the Cristobal commissary to open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

COMMISSARY DEPARTMENT.

Wholesale Prices of Fresh Meats.

The following is wholesale price list No. 206, effective June 24, 1915, and in force until further notice. This list will govern, whether meat is sold from commissaries or from cold storage. The following prices will be increased by 10 per cent in cases of sales to commercial ships and foreign naval vessels, and by 20 per cent in cases of sales to yachts:

1. Beef hinds, No. 1.....	per lb.	\$0 19½
2. Beef hinds, No. 2.....	per lb.	15
3. Beef hinds, native.....	per lb.	09½
4. Beef fores, No. 2.....	per lb.	12
5. Beef fores, native.....	per lb.	08½
6. Beef, whole round or leg, No. 1.....	per lb.	14½
7. Beef, whole round or leg, No. 2.....	per lb.	11
8. Beef, whole round or leg, native.....	per lb.	07
9. Beef ribs, No. 1.....	per lb.	24
10. Beef ribs, No. 2.....	per lb.	10
11. Beef ribs, native.....	per lb.	10
12. Beef, short loins, No. 1.....	per lb.	15
13. Beef, short loins, No. 2.....	per lb.	19
14. Beef, short loins, native.....	per lb.	15
15. Beef, rumps, No. 1.....	per lb.	20½
16. Beef, rumps, No. 2.....	per lb.	17
17. Beef, rumps, native.....	per lb.	12
18. Lamb carcasses.....	per lb.	18
19. Mutton carcasses.....	per lb.	14½
20. Pig carcasses.....	per lb.	15½
21. Pork, loin chops or roast.....	per lb.	16½
22. Veal carcasses.....	per lb.	18
23. Veal leg.....	per lb.	24

† Indicates reduction from last list.
Above prices do not include cost of special trimming required by U. S. Army or U. S. Navy.
The prices quoted in current retail cold storage list will govern for all other items not included in above.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective July 24:

ARTICLE.	PRICE CHANGE	
	Old.	New.
Creme, yd.....	\$.33	\$.25
Safety pins, doz.....	.04	.02
Belts, men's, ea.....	.37	.44
Shoes, youth's, pr.....	2.20	2.40
Shoes, men's, pr.....	4.95	5.35
Glasses, measuring, ea.....	.07	.09
Pitchers, 3-qt, ea.....	.50	.45
Wash tubs, ea.....	.50	.78
Padlocks, ea.....	.58	.68
Cigarettes, Arroz Hebra, pkg.....	.05	.01
Cigarettes, Pectoral Havana, pkg.....	.05	.01
Cigarettes, Excelsiores, pkg.....	.05	.01
Ribbon, yd.....	.16	.18
Ribbon, yd.....	.02	.03
Penknives, ea.....	.91	1.00
Openers, can, ea.....	.05	.06
Rubber tires, set.....	.66	
Each.....		.17
Rubber tires, set.....	.92	
Each.....		.23
Rubber tires, set.....	1.05	
Each.....		.26
Jugs, cream, ea.....	.48	.71

Additions to Stock.

Tobacco, Pride of Reidsville, pkg.....	10
Cloth, Supreme Cords, yd.....	18
Men's shoes, blu., oxford, pr.....	5.35
Men's shoes, black vici blu., oxford, pr.....	5.15
Laundry marking sets, set.....	.21
Caviar, tin.....	.51
Gum, Beechnut, pkg.....	.03
Peters milk chocolate with toasted almonds, pc.....	.04
Peters milk chocolate with toasted almonds, pc.....	.07
Peters milk chocolate, plain, pc.....	.04
Ketchup, tomato all other brands, bot.....	.20
Olives, Manzanillo, 6-oz. bot.....	.09
Olives, Manzanillo, 10-oz. bot.....	.14
Strops, Nevahone, safety olade, ea.....	1.30
Hose, children's, white, with pink tops, pr.....	.20
Hose, children's, white, with blue tops, pr.....	.20
Men's hats, "Bangkok," ea.....	4.20
Pots, watering, 10-qt., ea.....	.52
Peanut bars, bar.....	.04

Misdirected Letters.

BALBOA HEIGHTS, C. Z., July 28, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of addressees:

Banker, Earl J. (2)	Jordan, Dennis
Berry, John C.	Kinsey, Wm.
Borch, A. E.	*Leary, Frank
Browning, R. S.	Levy, Mrs. Beckie
Chillibre Land & Timber Co.	Matchell, Mrs. Alva
Conklin, Chas. T.	Matlowsky, A.
Davis, George (2)	McCord, J. E.
Dolan, G. F.	Millan, Frank
Durham, Willie J.	Moshington, Louis
Estes, Dr. W. B.	Overby, Jackson
Green, Mrs. E.	Norfleet, Dr. R. G.
Griffin, Harry C.	Rose, Otto
Hamilton, Leon	Scott, Walter
Johnson, Prof. Harry B.	Snipes, Elvie
Jones, Ivor V.	Stumm, Charles A.
	Tournier, Tom.

*Card

SHIPPING INFORMATION.

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in this table:

JULY.				
DATE.	Time and height of high and low water.			
Wed., July 28.....	4:53	10:57	17:06	23:20
	16.0	0.1	15.8	-0.8
Thurs., July 29.....	5:37	11:44	17:53	
	16.1	0.1	15.5	
Fri., July 30.....	6:04	12:30	18:36	
	-0.4	15.8	0.4	14.9
Sat., July 31.....	6:47	13:14	19:20	
	0.3	15.2	1.0	14.0

AUGUST.

DATE.	Time and height of high and low water.			
Sun., Aug. 1.....	1:30	7:42	13:59	20:02
	1.3	14.3	1.8	13.1
Mon., Aug. 2.....	2:13	8:25	14:45	20:48
	2.4	13.3	2.7	12.1
Tues., Aug. 3.....	3:01	9:08	15:33	21:41
	3.5	12.4	3.5	11.2
Wed., Aug. 4.....	3:54	10:02	16:34	22:48
	4.4	11.6	4.1	10.6
Thurs., Aug. 5.....	4:54	11:08	17:37	
	5.0	11.2	4.3	
Fri., Aug. 6.....	5:05	12:20	18:40	
	10.5	5.1	11.2	4.1
Sat., Aug. 7.....	1:16	7:03	13:23	19:37
	10.9	4.8	11.6	3.5
Sun., Aug. 8.....	2:10	7:58	14:15	20:25
	11.6	4.2	12.3	2.7
Mon., Aug. 9.....	2:53	8:44	14:57	21:08
	12.4	3.4	13.1	1.9
Tues., Aug. 10.....	3:29	9:26	15:35	21:46
	13.3	2.5	13.8	1.1
Wed., Aug. 11.....	4:04	10:05	16:12	22:22
	14.2	1.6	14.4	0.5
Thurs., Aug. 12.....	4:37	10:45	16:47	22:57
	14.9	1.0	14.9	0.1
Fri., Aug. 13.....	5:10	11:22	17:23	23:39
	15.5	0.4	15.1	-0.1
Sat., Aug. 14.....	5:44	12:01	17:59	
	15.8	0.2	15.2	
Sun., Aug. 15.....	0:16	6:19	12:41	18:38
	0.1	15.9	0.2	14.9
Mon., Aug. 16.....	0:56	6:57	13:26	19:20
	0.4	15.7	0.5	14.4
Tues., Aug. 17.....	1:40	7:40	14:13	20:08
	1.1	15.2	1.0	13.7
Wed., Aug. 18.....	2:30	8:30	15:08	21:06
	1.9	14.4	1.7	12.9
Thurs., Aug. 19.....	3:29	9:31	16:12	22:17
	2.7	13.7	2.3	12.3
Fri., Aug. 20.....	4:37	10:46	17:24	23:41
	3.3	13.1	2.5	12.2
Sat., Aug. 21.....	5:54	12:09	18:38	
	3.3	13.1	2.1	
Sun., Aug. 22.....	1:02	7:07	13:26	19:42
	12.8	2.8	13.6	1.4
Mon., Aug. 23.....	2:09	8:11	14:29	20:38
	13.8	2.0	14.3	0.6
Tues., Aug. 24.....	3:05	9:05	15:22	21:30
	14.7	1.2	15.0	0.0
Wed., Aug. 25.....	3:52	9:55	16:08	22:15
	15.5	0.4	15.5	-0.4
Thurs., Aug. 26.....	4:35	10:39	16:51	22:57
	16.0	-0.1	15.6	-0.4
Fri., Aug. 27.....	5:13	11:21	17:31	23:38
	16.0	-0.1	15.4	0.0
Sat., Aug. 28.....	5:51	12:01	18:09	
	15.7	0.2	14.9	
Sun., Aug. 29.....	0:17	6:27	12:41	18:47
	0.6	15.0	0.8	14.1
Mon., Aug. 30.....	0:57	7:02	13:21	19:24
	1.5	14.2	1.6	13.2
Tues., Aug. 31.....	1:37	7:38	14:04	20:02
	2.6	13.3	2.6	12.2

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3.47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans for all States.
Due at New Orleans on the following Tuesday.
Every Saturday to New York, for all States. Due

at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.*

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

NOTE.—The sailings on Monday, August 23, and September 20, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7.10 a. m., connects with the despatches for the two sailings mentioned above.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, July 24, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., July 18.....	128.60	94.48	86.10	86.07	54.16
Mon., July 19.....	127.40	93.65	86.09	86.07	54.12
Tues., July 20.....	127.50	93.55	86.09	86.03	54.14
Wed., July 21.....	133.45	97.65	86.17	86.10	54.33
Thurs., July 22.....	129.55	95.00	86.14	86.06	54.23
Fri., July 23.....	128.40	94.41	86.13	86.10	54.10
Sat., July 24.....	129.15	94.88	86.13	86.09	54.25
Heights of low water to nearest foot.....					
	125.0	91.0			

Rainfall from July 1 to 24, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>			
Balboa.....	1.21	20	6.19
Balboa Heights.....	1.13	20	6.28
Miraflores.....	1.58	12	7.74
Pedro Miguel.....	1.58	18	7.38
Rio Grande.....	2.27	19	7.20
<i>Central Section—</i>			
*Culebra.....	1.84	17	8.55
*Camacho.....	1.58	17	6.92
Empire.....	1.90	20	8.02
Gamboa.....	1.49	29	5.46
*Juan Mina.....	3.76	8	12.12
Alhajuela.....	5.33	8	14.76
*El Vigia.....	3.79	8	16.07
Frijoles.....	2.95	21	17.54
*Trinidad.....			
*Monte Lirio.....	1.40	1	10.64
<i>Atlantic Section—</i>			
Gatun.....	3.82	1	9.73
*Brazos Brook.....	2.53	1	14.48
Colon.....	6.30	1	14.38
*Bocas del Toro.....			

*Standard rain gage—readings at 5 p. m. daily.

Automatic rain gage at unstarred stations—values midnight to midnight.

Fuel.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 400 and 650 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Fuel oil may be obtained at Balboa or Cristobal from plants of The Panama Canal, or from private corporations. The present price from the Canal is \$1.25 per barrel. Prices from the corporations may be obtained on application to them.

Diesel engine oil is for sale by several companies at approximately 45 shillings per ton of seven barrels.

Subsistence supplies, including a large stock of fresh meats, vegetables, canned groceries, fruits, bakery products, etc., are available for quick delivery at either terminal. Prices are generally lower than the retail prices in the United States, and compare favorably with prices in any port of the world.

Application for supplies, or for services, should be made to the Captain of the Port, Cristobal or Balboa.

(Continued on page 434.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., July 25, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
July 19.	Lewis K. Thurlow.	American.	Crowell & Thurlow	New York.	San Francisco.	General.	2,100	3,441	2,444
July 19.	Valdura.	British.	Valdura S. S. Co., Ltd.	New York.	Kiukiang.	Oil.	8,300	6,141	4,358
July 19.	Advance.	American.	Panama Railroad S. S. Line.	New York.	Balboa.	General.	1,644	2,965	2,161
July 19.	San Francisco.	Swedish.	Johnson S. S. Line.	Gotenburg.	San Francisco.	General.	742	5,298	4,001
July 19.	Peru.	British.	Pacific Steam Nav. Co.	Cristobal.	Guayaquil.	General.	1,800	4,083	2,626
July 19.	Limari.	Chilean.	South American S. S. Co.	Cristobal.	Valparaiso.	General.	580	3,631	2,421
July 21.	Fred'k Luckenbach.	American.	Luckenbach Line.	New York.	San Francisco.	General.	3,200	3,006	2,042
July 21.	Cauco.	British.	Pacific Steam Nav. Co.	Liverpool.	Guayaquil.	Ballast.	1,557	993	
July 22.	Takata Maru.	Japanese.	Nippon Yusen Kaisha.	New York.	Vladivostok.	General.	8,902	7,366	5,252
July 22.	City of Hankow.	British.	Ellerman Lines.	New York.	Vladivostok.	General.	9,061	6,843	
July 23.	Bintang.	Danish.	East Asiatic Co.	St. Thomas.	Acapulco.	General.	3,000	2,928	2,109
July 23.	Quilpue.	British.	Pacific Steam Nav. Co.	Cristobal.	Guayaquil.	General.	2,200	3,922	2,231
July 23.	Stella.	Dutch.	Royal Dutch West India Mail.	Norfolk.	Callao.	Coal.	3,480	2,884	1,917
July 24.	Natal.	Danish.	East Asiatic Co.	Mobile.	Pisagua.	Ballast.	4,613	3,308	
July 24.	Queen Elizabeth.	British.	Merito Shipping Co., Ltd.	Newport News.	Pisagua.	Ballast.	4,631	3,381	
July 24.	Volnay.	British.	Volnay S. S. Co., Ltd.	New York.	Suva.	Oil.	6,375	5,101	3,684
July 24.	Jamaica.	British.	Royal Mail S. S. Co.	Cristobal.	Guayaquil.	General.	550	1,170	630
July 25.	P. Christopheren.	Swedish.	Johnson S. S. Line.	Gotenburg.	Talcahuano.	General.	1,138	5,136	3,874
July 25.	Panama.	American.	Panama Railroad S. S. Line.	New York.	Balboa.	General.	1,110	5,866	4,222
July 25.	Kongosan Maru.	Japanese.	Ryoto Kisen Kaisha.	Philadelphia.	Nagasaki.	Petroleum.	6,800	5,634	4,193

† Displacement tonnage.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

July 19.	Jamaica.	British.	Pacific Steam Navigation Co.	Tumaco.	Cristobal.	General.	556	1,170	620
July 19.	Terrier.	Norwegian.	W. Wilhelmsen.	Tocopilla.	Colon (orders).	Nitrates.	8,100	5,495	4,032
July 19.	Olson & Mahonby.	American.	Olson & Mahoney.	Junin.	New Orleans.	Nitrates.	1,845	1,564	782
July 20.	Tasmanic.	Swedish.	Transatlantic Co.	Port Pirie.	Mobile.	Ore.	6,001	5,050	3,618
July 20.	Hesperos.	Swedish.	Brustgaard Kiosterud.	Antofagasta.	Colon (orders).	Nitrates.	8,125	5,678	4,214
July 21.	Durby Chime.	British.	Alum Chine S. S. Co.	Vancouver.	Halifax.	Lumber.	1,970	2,166	1,430
July 21.	Finland.	American.	Panama Pacific S. S. Line.	San Francisco.	New York.	General.	5,945	13,122	8,485
July 21.	Kanawoh.	American.	United States Navy.	San Diego.	Melville, R. I.	Fuel oil.	8,500	8,057	5,388
July 22.	Cape Corso.	British.	Lyle Shipping Co.	Taltal.	St. Nazaire.	Nitrates.	6,307	4,825	3,597
July 22.	Strathairly.	British.	Strath Line.	Iquique.	Colon (orders).	Nitrates.	6,800	4,680	3,363
July 22.	Advance.	American.	Panama Railroad S. S. Line.	Balboa.	New York.	General.	2,965	2,161	
July 23.	Hattie Luckenbach.	American.	Luckenbach Line.	San Francisco.	New York.	General.	6,261	4,708	3,637
July 24.	Middleham Castle.	British.	Jas. Chambers & Co.	Yokohama.	New York.	General.	8,000	4,981	3,786
July 25.	Mexican.	American.	American-Hawaiian Line.	Hilo.	Del. Bkwt.	Sugar, general.	11,737	8,993	6,715
July 25.	John A. Hooper.	American.	Sudden & Christenson.	Antofagasta.	Baltimore.	Nitrates.	2,950	2,462	1,536
July 25.	Acajulla.	British.	Salvador Railway Co.	Salina Cruz.	Cristobal.	Coffee, hides, gen.	653	1,219	627
July 25.	Mapari.	British.	Pacific Steam Navigation Co.	Guayaquil.	Colon.	General.	571	1,205	745
July 25.	Baron Minto.	British.	H. Howgarth & Sons.	Paggoumene.	Dunkirk.	Ore.	6,000		

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From	Date	Vessel	Line	From
July 25.	Sultana (yacht).	Harriman Estate.	New York.	July 28.	Hellenic.		
July 25.	Fiorgyn (yacht).	T. Torkildsen.	New York.	July 30.	Merchant.	Harrison Direct Line.	San Francisco.
					Huasco.	South American S. S. Co.	Valparaiso.

PORT OF CRISTOBAL.

*ARRIVALS.

*DEPARTURES.

Date	Vessel	Line	From	Date	Vessel	Line	To
July 19.	Strathdene.	Strath Line.	New York.	July 19.	Strathdene.	Strath Line.	Fort de France.
July 19.	Tabar.	Earn Line.	Norfolk.	July 22.	Itasca.	U. S. Government.	Santiago de Cuba
July 19.	Orubian.	Leyland Line.	Liverpool.	July 22.	Orubian.	Leyland Line.	Mobile.
July 21.	Megdalena.	Royal Mail S. P. Co.	London.	July 22.	Tator.	Earn Line.	Nima Nima, Cuba.
July 21.	Colonia.	Cable Company.	New York.	July 22.	Magdoleno.	Royal Mail S. P. Co.	London, via int. pts.
July 21.	Leonidas.	U. S. Navy.	San Blas.	July 22.	Ocland.	Earn Line.	Cuban ports.
July 25.	Junio.	Akties Junio.	New Orleans.		Berlin.	Unknown.	Unknown.

*EXPECTED ARRIVALS.

*EXPECTED DEPARTURES.

July 28.	Haiti.	French Line.	St. Nazaire.	July 26.	Leonidas.	U. S. Government.	San Blas coast.
July 28.	Eerlin.	Unknown.	St. Marys.	July 27.	Colonia.	Cable Company.	Montevideo.
July 29.	Ocland.	Earn Line.	Norfolk.	July 27.	Junio.	Akties Junio.	Port Limon.
July 31.	Coronado.	Elders & Fyffes.	Port Limon.	July 31.	Coronado.	Elders & Fyffes.	Bristol, via int. pts.
					Haiti.	French Line.	St. Nazaire.

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

*DEPARTURES.

July 19.	Edgar H. Vance.	Nehalem S. S. Co.	San Francisco.	July 19.	Ucayali.	Peruvian S. S. Line.	Callao.
July 19.	Peru.	Pacific Steam Nav. Co.	Cristobal.	July 20.	Peru.	Pacific Steam Nav. Co.	Valparaiso.
July 21.	Limari.	South American S. S. Co.	Cristobal.	July 21.	Limari.	South American S. S. Co.	Valparaiso.
July 21.	Cauca.	Pacific Steam Nav. Co.	Liverpool.	July 22.	Edgar H. Vance.	Nehalem S. S. Co.	Valparaiso.
July 23.	Annapolis.	U. S. Navy.	Corinto.				

*EXPECTED ARRIVALS.

*EXPECTED DEPARTURES.

	City of Para.	Pacific Mail S. S. Co.	San Francisco.	July 28.	Annapolis.	U. S. Navy.	Corinto.
	Huallaga.	Peruvian S. S. Co.					

*Other than vessels passing through the Canal.

(Continued from page 433.)				Atenas.	U. F. C.	Aug. 11.	Aug. 18.	Turriabla.	U. F. C.	Aug. 5.	Aug. 12.
NEW ORLEANS TO CRISTOBAL-COLON.				Cartago.	U. F. C.	Aug. 14.	Aug. 19.	Heredia.	U. F. C.	Aug. 12.	Aug. 17.
Atenas.				Turrialba.	U. F. C.	Aug. 18.	Aug. 25.	Abangarez.	U. F. C.	Aug. 12.	Aug. 19.
Cartago.				Heredia.	U. F. C.	Aug. 21.	Aug. 26.	Parismina.	U. F. C.	Aug. 19.	Aug. 24.
Turrialba.				CRISTOBAL-COLON TO NEW ORLEANS.				Atenas.	U. F. C.	Aug. 19.	Aug. 26.
Heredia.				Parismina.	U. F. C.	July 29.	Aug. 3.	Cartago.	U. F. C.	Aug. 26.	Aug. 31.
Abangarez.				Atenas.	U. F. C.	July 29.	Aug. 5.	Turrialba.	U. F. C.	Aug. 26.	Sept. 2.
Parismina.				Cartago.	U. F. C.	Aug. 5.	Aug. 10.				



The Canal Record

Official publication of the Panama Canal.

The Canal Record is published weekly. The subscription rate is \$1 per year in the United States and its possessions, and in Canada, Cuba, Mexico, and Panama (domestic postage), and \$1.50 in other countries (foreign postage). The paper is furnished free to United States Government departments, representatives of foreign governments, public libraries, and employees of The Panama Canal and the Panama Railroad Company whose names are on the gold roll.

All subscriptions expire on December 31. Domestic subscriptions are accordingly charged as beginning from the first of the quarter of the year in which received. Remittances should be made to pay only to December 31, on this basis: Sent between July 1 and October 1, 50 cents; between October 1 and January 1, 25 cents. For foreign subscriptions the year is divided into thirds; and remittances for the remainder of this year should be: Between May 1 and September 1, \$1; between September 1 and January 1, 50 cents.

Remittances for subscriptions may be forwarded to The Panama Canal, Washington, D. C., or to The Canal Record at the address given below.

Address all Communications,
THE CANAL RECORD,
Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

More Coal Conveyors to be Placed in Bunkering Service.

For the further extension of the coaling facilities at the Canal, four more motor-driven conveyors, similar to the four now in service, are on the way to the Isthmus from the United States, and a project has been approved by which several berths at the commercial piers at each terminus will be fitted with booms for using the conveyors in unloading cars into ships' bunkers. The four conveyors now in service are used on barges, and bunker vessels at dock from the offshore side, and the new equipment will make it practicable to bunker vessels from both sides while they are discharging cargo. It is proposed to install two conveyors on both sides of Pier 8 at Cristobal, two on the front of wharf No. 9, and two on each side of Pier 7 when constructed. They will unload from a special type of car, consisting of a Lidgerwood flat car built up with 5-foot sides and ends, forming a compartment 38 feet long which will hold from 45 to 50 tons of coal.

Lock Gates to be Coated with Bitumastic Enamel.

The American Bitumastic Enamels Company, whose forces are now working on the guard and operating gates of the lower chamber of the west flight of Gatun Locks, has entered into contract with The Panama Canal to coat with bitumastic solution and enamel all of the leaves of the lock gates at Gatun and Pedro Miguel, for a lump sum of \$58,110. This is equivalent to approximately \$.113 per square foot of surface. The contractor is to prepare the surfaces and do all the work of applying the coating up to a line about one foot above the low water mark. The enamel is to be

applied only to the outside of the leaves, the interiors having been treated with the compound at the time of erection. The company guarantees the enamel to afford anticorrosive protection for a period of at least five years. The leaves at Miraflores have recently been coated with red lead, anticorrosive, and anti-fouling paints.

Work on Bona and Taboguilla Island Lights.

Following the completion of the Cape Mala light, the lighthouse forces of the Marine Division completed on August 2 the erection of the light at Bona Island, on which they had been working for the preceding week. The Bona Island light is now in service and the forces are proceeding with the erection of the light on Taboguilla Island, the last of the three new aids to navigation authorized for establishment in the Gulf of Panama.

Bona Island is on the western side of the Gulf, about 20 miles from the entrance to the Canal, and about 70 miles from Cape Mala, and is the most southern of the Otoque group. It is a small round island, about half a mile in diameter, and has a single peak rising to a height of 685 feet above sealevel. Taboguilla Island is about five miles to the southward of the entrance to the Canal and is an important landmark. It is about a mile long by half a mile wide, and rises to a peak at a height of 610 feet. The light will be located on a small haystack-shaped island off the center of the eastern side of the main island, and its principal use will be to note the turning point for vessels in rounding Taboguilla Island in approaching or leaving the Canal.

More Yachts Make Canal Trip.

Three pleasure yachts passed through the Canal last week, the *Sultana*, the *Gulma*, and the *Fiorgyn*. The *Sultana*, which is on the way from New York to San Francisco, is a steam yacht 161 feet in length by 28 feet in the beam, and carries a crew of 33. She belongs to the estate of the late E. H. Harriman. The *Gulma* is an auxiliary yacht, 86 by 18 feet, and carries a crew of eight. She belongs to Robert H. Ellis and is on the way from New York to Portland. The *Fiorgyn* is an auxiliary yacht, owned by T. Torkildsen, and is on the way from New York to Acapulco and Los Angeles. She is 117 feet long by 27 feet in the beam and carries a crew of 16.

New Edition of the Official Handbook.

A new edition of the Official Handbook of The Panama Canal has been published, and as long as the supply holds out a copy will be furnished free to any gold employee or member of his family or to any officer or enlisted man of the United States Army who may apply for it at the nearest post-office.

JOHN K. BAXTER,

Chief, Division of Civil Affairs.

BALBOA HEIGHTS, C. Z., July 30, 1915.

TRAFFIC FOR FISCAL YEAR.

Nearly Five Million Tons of Cargo through the Canal.—Over \$4,424,000 in Tolls—Analysis of Traffic.

At the close of business on June 30, 1915, was completed the fiscal year which included all of the period during which the Canal has been opened to commercial traffic of ocean-going ships. This period, from August 14 to July 1, was 10½ months, or seven-eighths of a calendar year.

During the period the Canal was used by 1,088 vessels, having aggregate gross and net tonnage of 5,416,787 and 3,843,035 tons, respectively, Panama Canal measurement, and carrying a total of 4,969,792 tons of cargo.

The movement of 4,969,792 tons of cargo in the period or 10½ months is at the rate of 5,679.762 tons in a full calendar year; or 473,313.5 tons per month; or 15,530.6 tons per day.

A summary of the numbers of vessels passing through the Canal in each direction, and the tons of cargo handled, by months, since the opening of the Canal to commercial traffic (not including the barge traffic prior to August 15) is given in this table:

Month	Eastbound.		Westbound.		Total	
	Ves-sels	Cargo tons	Ves-sels	Cargo tons	Ves-sels	Cargo tons
August...	13	49,106	11	62,178	24	111,284
Sept....	27	141,762	30	180,276	57	322,038
Oct.....	44	168,069	40	253,288	84	421,357
Nov.....	54	206,510	38	242,291	92	448,801
Dec.....	43	179,235	57	271,219	100	450,454
Jan.....	44	208,082	54	240,925	98	449,007
Feb.....	39	150,987	53	276,078	92	427,065
March...	57	217,447	80	417,610	137	635,057
April....	59	237,384	60	285,457	119	522,841
May.....	67	246,534	75	332,174	142	578,708
June....	83	320,619	60	282,561	143	603,180
Total...	1,530	2,125,735	1,558	2,844,057	1,088	4,969,792

More elaborate classifications, showing the number of vessels, their gross and net Canal tonnage, and the cargo carried by them through the Canal each month in each direction, are appended to this article.

TRAFFIC ROUTES.

Vessels without cargo passing through the Canal in the period numbered 105.

Of the 983 vessels which were laden, all but 27 were plying over the five following great trade routes: The coastwise route of United States trade; a route between Europe and the west coast of the United States and Canada; a route between Europe and South and Central America; one between the Atlantic coast of the United States and the Pacific coast of South and Central America; and one between the United States and Australia, New Zealand, and the Far East. These routes were used by nearly 97 per cent of the vessels carrying cargo. The monthly traffic over each of them is presented in tabulation. The three per cent of loaded vessels which were not plying over these routes consisted principally of naval auxiliaries carrying coal to undetermined destinations, fishing vessels, and several ves-

sels carrying lumber and sugar over unusual routings.

The United States coastwise route was used by 335 vessels, with total net tonnage of 1,305,291, carrying 1,846,658 tons of cargo. With reference to the total traffic, both laden and ballast vessels, this was 30.7 per cent of all vessels using the Canal, 36.5 per cent of the net tonnage, and 37.1 per cent of the cargo.

The route between Europe and the west coast or the United States and Canada was used by 142 vessels (13.05 per cent of all), with net tonnage of 528,079 tons (13.7 per cent of all), carrying 834,899 tons of cargo (16.8 per cent of all).

Traffic between Europe and South and Central America, including those vessels plying between the Atlantic terminus of the Canal and west coast ports, which carried cargo moving between Europe and South and Central America, engaged 155 vessels (14.2 per cent), with net tonnage of 428,224 (11.14 per cent), carrying 503,672 tons of cargo (10.13 per cent).

Traffic between South and Central America, including likewise the vessels terminating their voyages at one of the Canal ports but moving their cargo over this route, engaged 206 vessels (18.93 per cent), with net tonnage of 707,463 (18.4 per cent), carrying cargo amounting to 947,871 tons (19.07 per cent).

The route between the Atlantic seaboard of the United States and the Far East, including Australia and New Zealand, engaged 118 vessels (10.84 per cent), with net tonnage of 488,517 (12.7 per cent), carrying 725,712 tons of cargo (14.8 per cent).

The vessels without cargo, or in ballast, numbering 105, had an aggregate net tonnage of 306,086. This was 9.65 per cent of all vessels, and 7.96 per cent of the entire net tonnage.

The average cargo of the laden vessels was 5,055.7 tons. The average of cargo among all the 1,088 vessels, laden and in ballast, was 4,567.8 tons.

BARGE TRAFFIC

The first handling of cargo through the Canal was begun on May 18, 1914, with the towing of barges loaded with sugar; and this traffic was continued intermittently until August 15, when the regular commercial traffic of through ships began.

The barge traffic between June 30, 1914, and August 15 may be summarized as follows:

	Atlantic to Pacific		Pacific to Atlantic		Total	
	No. barges	Cargo carried	No. barges	Cargo carried	No. barges	Cargo carried
July.....	15	4,410	9	1,400	24	5,810
August.....	5	1,600	4	1,600	9	2,600
Total....	20	6,010	13	2,400	33	8,410

The tolls levied in July, 1914, amounted to \$7,598.40, all on barges. The tolls on barges in August were included with those on the oceangoing ships, the aggregate being \$88,401.80.

The tolls on the barge traffic are carried as part of the receipts during the fiscal year, but in the consideration to be given the traffic through the Canal the cargo handled in barges

will not be considered. Including the barge traffic the total tonnage of cargo handled through the Canal during the fiscal year was 4,977,882 tons; without the barge traffic, that is, since August 14, 1914, it was 4,969,472 tons. From this it is seen that the barge traffic is less than one-fifth of one per cent of the total traffic since the discontinuance of barge service. And as the conditions of operation were so different, consideration of the barge traffic would be out of place in arriving at averages in the consideration of the regular commercial traffic.

COMMODITIES.

The principal commodities passing through the Canal, with the quantities moving in each direction, from August 14 to July 1, were as follows:

	Atlantic to Pacific	Pacific to Atlantic	Total
Nitrates.....	411	651,537	651,948
Sugar.....	21,038	277,776	298,864
Coal.....	270,964	7,500	286,564
Petroleum, refined.....	220,229	32,199	252,428
Wheat.....	7,533	222,689	230,222
Barley.....		204,751	204,751
Manufactured goods of iron and steel.....	196,234	5,968	202,202
Lumber.....	2,325	179,341	181,666
Iron ore.....	2,200	83,904	86,104
Railroad material.....	56,106		56,106
Flour.....	3,811	50,283	54,094
Copper.....	2,810	46,989	49,799
Cotton, raw.....	44,781	4,065	48,846
Canned goods.....	6,655	40,043	46,998
Machinery.....	32,788	954	33,742
Oils, crude.....	3,731	26,863	30,594
Tin.....	24,280	6,304	30,584
Coffee.....	2,718	27,168	29,886
Manufactured goods, miscellaneous.....	21,990	2,011	27,001
Cacao.....	203	26,725	26,928
Wool.....	5	24,531	24,536
Cement.....	22,637		22,637
Iron.....	21,198		21,198
Copper ore.....		20,740	20,740
Coke.....	20,144		20,144
Vegetable oils.....	5,221	13,396	18,617
Textiles.....	15,647	1,075	16,722
Wines.....	656	12,534	13,223
Cresote.....	12,851		12,851
Chemicals.....	10,302	1,509	12,211
Skins and hides.....	3	11,360	11,363
Rice.....	1,037	8,643	9,680
Wire fencing.....	8,536		8,536
Seed.....	23	7,160	7,183
Beans.....	237	6,877	7,114

The total of the foregoing is 3,056,382 tons, which is 61½ per cent of the total cargo, 4,969,792 tons, passing through the Canal to July 1. The cargo listed as "general cargo" and the foregoing together constituted over seven-eighths of the total traffic. The remaining eighth was made up to about 100 various commodities.

NATIONALITIES.

Vessels of 15 nations passed through the Canal in the period under consideration. According to nationality, the American vessels led in number, being 481, only seven more than the 464 British. Vessels of other nations using the Canal were, in the order of their numbers: Norwegian, 41; Chilean, 35; Danish, 24; Swedish, 18; Dutch, seven; Japanese

NUMBER OF VESSELS OF VARIOUS NATIONALITIES PASSING THROUGH THE PANAMA CANAL.

ATLANTIC TO PACIFIC.

Month	American	British	Chilean	Danish	Dutch	French	Honduran	Italian	Japanese	Nicaraguan	Norwegian	Panamanian	Peruvian	Russian	Swedish	Total
August.....	12												1			13
September.....	13	13			1											27
October.....	15	27								1						44
November.....	25	26		1									1			54
December.....	20	18	2		1				1							43
January.....	26	10	2	2	1					1				1		44
February.....	18	15	2	2										1		39
March.....	25	24	3	1			1	1						1		57
April.....	25	25	2				1							1	2	59
May.....	29	25	3	3	1					1				1		67
June.....	25	42	3	1		2			3		7					83
Total.....	233	225	16	11	5	2	2	1	4	1	16		2	5	7	530

PACIFIC TO ATLANTIC.

Month	American	British	Chilean	Danish	Dutch	French	Honduran	Italian	Japanese	Nicaraguan	Norwegian	Panamanian	Peruvian	Russian	Swedish	Total
August.....	9			2												11
September.....	10	16									4					30
October.....	22	17													1	40
November.....	19	16		1						1						38
December.....	23	31	3													57
January.....	20	23	2	2	1						4	1			1	54
February.....	21	25	3	2							2					53
March.....	33	29	4	4		1					5				3	80
April.....	22	27	2						1		4	1	1			60
May.....	31	31	2	2				1			5			1	3	75
June.....	28	24	3		1		1		1				1			60
Total.....	238	239	19	13	2	1	1	1	2	1	25	2	2	1	11	558

Grand total.....	471	464	35	24	7	3	3	2	6	2	41	2	4	6	18	1,088
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SUMMARY OF TRAFFIC THROUGH THE PANAMA CANAL SINCE ITS OPENING TO COMMERCIAL TRAFFIC.

Month.	Ves- sels	Atlantic to Pacific.			Ves- sels	Pacific to Atlantic.			Ves- sels	Total.		
		Canal tons		Cargo tons		Canal tons		Cargo tons		Canal tons		Cargo tons
		Gross	Net			Gross	Net			Gross	Net	
August.....	13	58,233	41,931	49,106	11	62,049	44,047	62,178	24	120,282	85,978	111,284
September.....	27	1,187,878	109,684	141,762	30	151,568	111,375	180,276	57	303,446	221,059	322,038
October.....	44	240,925	174,472	168,069	40	220,179	153,744	253,288	84	461,104	328,216	421,357
November.....	54	247,479	172,825	206,510	38	205,071	149,906	242,291	92	452,550	322,731	448,801
December.....	43	204,776	145,676	179,735	57	280,896	198,618	271,219	100	485,672	344,294	470,454
January.....	44	239,486	169,228	208,082	54	251,085	177,984	240,925	98	490,571	347,212	449,007
February.....	39	209,822	147,339	150,987	53	245,522	175,523	276,078	92	455,344	322,862	427,065
March.....	57	269,901	187,568	217,447	80	405,380	288,416	417,610	137	675,281	475,984	635,057
April.....	59	279,139	199,213	237,384	60	290,738	205,326	285,457	119	569,877	404,539	522,841
May.....	67	343,701	240,098	246,534	75	360,104	252,252	332,174	142	703,805	492,350	578,708
June.....	83	412,525	296,694	320,619	60	286,330	201,116	282,861	143	698,855	497,810	603,180
Totals.....	530	2,657,865	1,884,728	2,125,735	558	2,758,922	1,958,307	2,844,057	1,088	5,416,787	3,843,035	4,969,792

CANAL ZONE REVENUES.

Are Hereafter to Be Turned into the Treasury and Not Expended Locally.

The sundry civil appropriation Act, governing appropriations and expenditures for The Panama Canal during the fiscal year begun July 1, 1915, which was published in THE CANAL RECORD of July 7, eliminated the separate appropriation of Canal Zone revenues for local expenditure, and such revenues will accordingly be turned into the Treasury of the United States as miscellaneous receipts. These funds have heretofore formed a considerable item in meeting the expenses for public works, schools, post-offices, and other necessities of civil government, the expenditures for which during the present fiscal year are included in a budget in the general appropriation. Between May 1, 1904, and June 30, 1915, inclusive, the total receipts in Canal Zone funds amounted to \$2,871,752.70. Of this amount, \$1,840,020.10 was revenues from various licenses, taxes, fines, water charges, etc.; \$83,660.36 was municipal funds collected prior to the fiscal year 1907; and \$948,072.24 was postal receipts.

The system of taxes and licenses has been a heritage from the civil government existing in the Canal Zone prior to the American occupation. At the time of the occupation there were five municipalities in the Zone, namely Cristobal, Buena Vista, Gorgona, Emperador, and Ancon. On April 15, 1907, the municipalities were abolished, and the four administrative districts of Cristobal, Gorgona, Empire, and Ancon established in their places. During the period of the municipalities, the revenues collected in each of them (not including postal receipts) were expended in the municipality from which collected. Under the system of administrative districts, the revenues were funded together in the hands of the Department of Civil Administration, and expended under the direction of the Governor, according to the resolutions of the Isthmian Canal Commission, Congress having appropriated them to civil government uses by successive acts, covering the time from March 4, 1907, to July 1, 1915. The omission of this appropriating clause in the Act for this year harmonizes the disposition of these revenues with that of the tolls; these revenues are to be turned into the central depository, the Treasury of the United States, and all funds for meeting the expenses of the Canal are to be drawn from it.

The Auditor has issued the following circular letter concerning the disposition of Canal Zone revenues under the present Act:

"The sundry civil appropriation Act approved March 4, 1915, eliminated the separate appropriation of Canal Zone revenues for the maintenance of the schools, post-offices, magistrates' courts, and public works in the Canal Zone. The revenues collected on and after July 1, 1915, therefore, become public moneys of the United States and are to be deposited in the Treasury of the United States as miscellaneous receipts. No deduction or disbursement can be made from the revenues so collected, but the entire amount must be deposited with the Collector, Panama Canal. All disbursements must be made directly from appropriations made by Congress for the support of the civil government of the Canal Zone.

"Any balance of revenues in the hands of collecting agents of the Canal Zone on June 30, 1915, such as postal funds, taxes, fines, and licenses, including money order fees, must be immediately remitted to the Collector as a separate item.

"At the end of July all officers or agents collecting money heretofore classified as Canal Zone revenues will render a cash abstract, form 78-A or 78-Rev., in duplicate (both copies signed), taking up on the debit side all amounts received during the month other than trust funds and on the credit side remittances to the Collector (showing collector's receipt number), and balance on hand at the close of the month. After July this cash abstract will be rendered monthly and the balance on hand at the close of the preceding month brought forward to the debit side of the account.

"In the case of postmasters the rendition of this cash abstract will be in addition to the reports now required.

"Clerks of courts, constables, and others handling both revenues and trust funds will render a cash abstract showing the details of the revenues received by them and accompanied by the duplicate of the receipts issued. Their account for trust funds will be rendered as in the past."

Levelman and Transitman Examination.

An examination for promotion to the positions of levelman and transitman will be held in the board room of the Administration Building on Sunday morning, August 15, 1915, at 9 o'clock.

The examination will be divided into three parts consisting of (1) a written test from 9 a. m. to 11.30 a. m., (2) an oral examination from 11.30 a. m. to 12 m., and (3) a statement of the competitor's experience qualifying him for promotion. All competitors will be re-

quired to complete the examination before 12.30 p. m.

Applications for entrance should be forwarded to the Office Engineer, Balboa Heights, through the head of applicant's division, before Thursday, August 12, 1915.

Applicants are to bring no books with them to the board room, as all the necessary material will be on hand.

C. J. EMBREE, O. E. MALSBURY, A. WILSON, *Board of Examiners.*

Typewriter and Stenographer and Typewriter Examinations.

The regular fall examination for typewriter and for stenographer and typewriter will be held at the Administration Building, Balboa Heights, C. Z. probably on October 3, 1915 (date to be omitted from applications); those desiring to take this examination should apply at once for form No. 1312; applications should be submitted before September 10, 1915.

All applicants should furnish typewriters and tables and should bring with them pencils, pens, ink, and erasers.

It is probable that this examination will not be held again before April, 1916.

W. P. CORELAND,
Secretary, Board of Civil Service Examiners.

Sailing Date of the "Cristobal."

The sailing date of the steamship *Cristobal* of the Panama Railroad Steamship Line from Cristobal for New York has been set for Sunday, August 8, at 3 p. m.

Growing Fruits and Vegetable on the Isthmus.

Those interested in the movement of the Supply Department to encourage the growing of fruits and garden produce on the Isthmus, through assuring a steady market and cooperating with the producers in the handling of their goods, as set forth in THE CANAL RECORD of July 7, are advised to consult the local buyer for the department. He is in direct charge of the buying of fruits and vegetables and will have charge of the warehouse to be erected near the Playa, in Panama harbor, and his experience and intimate knowledge of the business may be found of service. The office of the local buyer is in the Panama railroad passenger station at Panama, his telephone number is Balboa 491, and his postal address is Ancon, C. Z.

Loss at East Breakwater Due to Northers.

The loss due to the effect of the northers of February 8-10 and April 3-5 on the East Breakwater in Limon Bay has been estimated, after careful surveys, at approximately \$361,000. Of this amount, \$307,000 was entailed in the destruction of trestle and loss of timber and other material, and of plant, and \$54,000 represents the loss, as far as availability in the breakwater is concerned, of 54,000 cubic yards of fill, either from the northers or by settlement, which can be replaced at approximately \$1 per yard. The loss, by reason of thorough salvaging and the adoption of economical methods in the work, is considerably less than was anticipated after the first rough estimates of damage.

The original estimated cost of the breakwater was \$3,415,000 for a 7,200-foot breakwater proper. The plans were afterwards changed to a 5,400-foot breakwater, and it is anticipated that a satisfactory breakwater can be completed within the original estimate.

Deceased Employees.

Name.	Check No.	Native of	Isthmian Residence	Employed by	Date of death
Reid, Ennis.....	96338	Jamaica.....	Folks River.....	P. R. R.....	July 18, 1915.
Espinosa, Juan.....	62452	Colombia.....	Colon.....	Fortifications.....	July 17, 1915.
Griffin, Albert.....	62891	Barbados.....	Colon.....	Mun. Eng.....	July 13, 1915.
Heywood, John.....	87383	Barbados.....	Colon.....	Docks.....	July 10, 1915.
Waihe, Wm.....	50558	Barbados.....	Colon.....	Term. Const.....	July 18, 1915.
Seymour, David.....	43825	St. Vincent.....	Panama.....	Hotel Tivoli.....	June 29, 1915.
Paul, Phillip.....	38946	St. Lucia.....	Panama.....	Balboa storeh'se.....	June 24, 1915.
Taitt, James.....	88799	Jamaica.....	Camp Bied.....	P. R. R.....	July 24, 1915.

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

OFFICIAL CIRCULARS.

Acting Governor.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., July 31, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective August 2, and during my absence from the Isthmus, Lieut. Col. Chester Harding will act as Governor of The Panama Canal.

GEO. W. GOETHALS,

Governor.

Excusing from Duty Employees Drawn for Jury Service.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., July 28, 1915.

CIRCULAR No. 701:

My attention has been called to the practice of heads of departments and divisions requesting that employees drawn for jury service be excused by the Court, notwithstanding such employees were chosen from the lists furnished of those available for duty as jurors. In the future, all requests of this nature will be submitted first to this office, with a statement of the reasons why the employee can not be spared, and, if approved by the Governor, the same will be transmitted to the Judge of the District Court of the Canal Zone for action.

GEO. W. GOETHALS,

Governor.

List of Gold Employees.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., July 23, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

1. It is necessary for this office to have, at the earliest possible date, a complete list of gold roll employees in the new organization.

2. Please make up lists immediately on sheets eight by 14 inches, showing at the top of each sheet the name of department and division and, in a table following, the name of each employee, designation, and rate of pay, thus:

THE PANAMA CANAL.

Department	Division	Name	Designation	Rate of pay
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3. Grades and designations to be grouped as far as practicable.

GEO. W. GOETHALS,

Governor.

Car Stakes.

THE PANAMA CANAL,

SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., July 24, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

There are at present four steamers en route to the Isthmus loaded with lumber and piling and a large number of car stakes will be required to handle these cargoes. As a large number of car stakes have recently been made and sent out by this department, very few of which have been returned, it is believed that there are large numbers not in use, and it is requested that departments and divisions collect as many as possible and ship same at the earliest practicable date to Mr. R. B. Groves, inspector, Dock 11, Cristobal, sending invoices to the storekeeper, Balboa, C. Z.

WM. R. GROVE,

Chief Quartermaster.

Flat Cars Needed for Discharging Lumber Cargoes.

THE PANAMA CANAL,

EXECUTIVE DEPARTMENT,

BALBOA HEIGHTS, C. Z., July 30, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

There are now in port at Cristobal and Balboa over 2,000,000 feet of lumber and in order that the several cargoes may be discharged with as little delay as possible it will be necessary to use every flat car which can be made available. Please give this matter your immediate attention.

GEO. W. GOETHALS,

Governor.

Billing of Panama Canal and Panama Railroad Shipments.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., July 23, 1915.

CIRCULAR No. 632-1:

1. All shipments between departments and divisions of The Panama Canal will be billed on Panama Canal billing.

2. Shipments from The Panama Canal to the Panama Railroad will be billed on Panama Railroad Company billing.

3. Shipments from the Panama Railroad to The Panama Canal will be billed on Panama Railroad Company billing.

4. Shipments to or from The Panama Canal, including stationery, etc., for the laundries at Ancon or Cristobal or any branch or the commissary department will be on commissary billing.

5. Shipments of laundry, when returned to owners, will be made on commissary billing consigned to the commissary at delivery point; billing to show owner's name.

6. All shipping orders will show consignors and consignees by departments and divisions.

7. Shipments for the various branches of the U. S. Army and Navy from The Panama Canal, also for the post exchanges and individual officers or enlisted men, will be on commercial billing at Government rates. These shipments are to be made at actual weights, and shipments will be consolidated as much as possible for each consignee and billed as one consignment in any one day, so that extensions may be figured at total weights covered by the same rate instead of on each individual item, at the minimum charge for L. C. L. or C. L. shipment. These shipments should be forwarded by freight, unless otherwise ordered, and then shipping orders should be endorsed "Express service requested." If the freight is for the U. S. Government the shipping orders will so indicate, and in such cases a Government bill of lading will be required upon delivery to consignee, which the agent will take up properly accomplished.

8. Shipments of material and supplies purchased from The Panama Canal by individuals and companies shall be made on commercial billing at tariff rates unless otherwise provided at special rates.

9. No exceptions will be made to these rules unless properly authorized in writing, and storekeepers of The Panama Canal and agents of the Panama Railroad Company will be responsible for the strict observance of these rules.

GEO. W. GOETHALS,

Governor, The Panama Canal,

President, the Panama Railroad Company.

In Charge of Obsolete Store and Printing Plant.

THE PANAMA CANAL,

SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., July 24, 1915.

To all concerned—Effective today, the position of Sales Agent will be abolished. Mr. E. O. Bratt will be placed in charge of the obsolete stock at Mount Hope and will be designated as "Storekeeper, Obsolete Store, Mount Hope."

Mr. A. P. E. Doyle, Foreman Printer, will be in charge of the Mount Hope printing plant.

WM. R. GROVE,

Chief Quartermaster.

Appointment.

THE PANAMA CANAL,

EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., July 13, 1915.

CIRCULAR No. 661-21:

Effective July 8, 1915, Captain Earl J. Atkisson, U. S. A., is appointed assistant superintendent of Gatun Locks.

GEO. W. GOETHALS,

Governor.

Motor-driven Inspection Cars.

THE PANAMA CANAL,

ACCOUNTING DEPARTMENT,

BALBOA HEIGHTS, C. Z., July 20, 1914.

CIRCULAR No. 98:

Accountable officials will report to this office by not later than August 1, the number of motor-driven inspection cars in their custody, in order that numbers may be assigned and these items thereafter accounted for by those numbers.

H. A. A. SMITH,

Auditor, The Panama Canal.

Approved:

GEO. W. GOETHALS,

Governor.

Commissary Managers.

THE PANAMA CANAL,

SUPPLY DEPARTMENT,

CRISTOBAL, C. Z., July 24, 1915.

BULLETIN No. 246:

To all concerned—Under the new organization, effective July 1, 1915, the title "Commissary Storekeeper" has been eliminated and the employee in charge of each store will hereafter be known as "Manager, Commissary," and should be so addressed in official communications, etc.

BENJ. L. JACOBSON,

Depot Commissary.

COMMISSARY DEPARTMENT.

Sale of Gasoline.

THE PANAMA CANAL,

SUPPLY DEPARTMENT

CRISTOBAL, C. Z., August 2, 1915.

BULLETIN No. 256:

To Commissary Managers—Confirming telephone instructions from this office, effective at once, the Chief Quartermaster directs that the sale of gasoline through commissaries be discontinued, and in future it will be sold direct to consumers by district quartermasters and quartermaster's storehouses.

Please be governed accordingly.

BENJ. L. JACOBSON,

Depot Commissary.

Cold Storage Prices.

These prices are increased by 10 per cent for sales of commercial and foreign naval vessels, and by 20 per cent for sales to yachts.

The following is a list of retail prices of cold storage provisions which will be effective August 5, 1915:

FRESH MEATS.

	Price.
Mutton—Stewing, per pound.....	9
Shoulder, trimmed, per pound.....	12
Leg (8 to 10 pounds), per pound.....	19
Short cut, chops, per pound.....	23
Shoulder, chops, per pound.....	14
Lamb—Stewing, per pound.....	12
Shoulder, trimmed, per pound.....	15
Leg, (5 to 8 pounds), per pound.....	24
Chops, per pound.....	29
Chops, shoulder, per pound.....	18
Veal—Stewing, per pound.....	12
Shoulder, for roasting (not under 4 lbs.), per pound.....	15
Chops, shoulder, per pound.....	20
Chops, per pound.....	30
Loin, for roasting, per pound.....	30
Cutlets, per pound.....	36
Beef—Suet, special, per pound.....	3½
Soup, special, per pound.....	7
native, per pound.....	5
Soup, bones, special, per pound.....	2½
Stew, special, per pound.....	11
native, per pound.....	8
Plate, special, per pound.....	12
native, per pound.....	8
Chuck roast, special (3 lbs. and over), per pound.....	12
Chuck roast, native (3 lbs. and over), per pound.....	8
Rib roast, second cut (not under 3½ pounds), special, per pound.....	16
Rib roast, second cut, native (3½ pounds and over), per pound.....	9
Rib roast, first cut (not under 3 pounds), special, per pound.....	19
Rib roast, first cut, native (3 pounds and over), per pound.....	11
Pot roast, special, per pound.....	20
native, per pound.....	12
Rump roast, special, per pound.....	20
native, per pound.....	12
Porterhouse roast, special, per pound.....	22
choice, per pound.....	31
native, per pound.....	16
Steak, chuck, special, per pound.....	13
native, per pound.....	13
Round, bottom, special, per pound.....	19
choice, per pound.....	9
native, per pound.....	15
Round, top, special, per pound.....	22
choice, per pound.....	10
native, per pound.....	20
Sirloin, special, per pound.....	12
native, per pound.....	12
Sirloin, choice cut, special, per pound.....	23
Sirloin, choice cut, native, per lb.....	16
Rump, special, per pound.....	20
native, per pound.....	11½
Porterhouse (not less than 1½ pounds), special, per pound.....	23
Porterhouse (not less than 1½ pounds), choice, per pound.....	34
Porterhouse (1½ pounds and over), native, per pound.....	17
Porterhouse, short, Delmonico special, per pound.....	20
Porterhouse, short, Delmonico choice, per pound.....	28
Porterhouse, short, native, per lb.....	12
Tenderloin, Western, special, per pound.....	35
Tenderloin, Western, choice, per pound.....	46

NOTE.—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders placed with commissary storekeepers before 11 a. m., will be shipped for delivery on the following morning.

Pork—Hams, fresh, per pound.....	\$23
Shoulders, fresh, per pound.....	\$19
Loin, chop, or roast, per pound.....	18
Spare ribs, per pound.....	11
Pigs' feet, fresh, per pound.....	5
Pigs' heads, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23
Ox tails, per pound.....	19
Beef tongue, native, whole, per pound.....	20

MISCELLANEOUS.

	Price.
Brains, calves', per pound.....	8
Calves' heads, each.....	80
Kidneys, beef, per pound.....	†11
Livers—Beef, per pound.....	†9
Calf, per pound.....	24
Steak—Hamburger, packages.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	12
Frankfurter, per pound.....	†12
Frankfurter, imported, tin.....	11
Lieberwurst, per pound.....	10
Pork, per pound.....	†14
Sweetbread, beef, per pound.....	†17
Eggs, fresh, per dozen.....	*29
per ½ dozen.....	*15
Bloaters, fancy, each.....	5
Bluefish, per pound.....	*15
Haddock, smoked, per pound.....	†12
Halibut, fresh, per pound.....	12
Salmon, per pound.....	*11
Whitefish, smoked, per pound.....	20
Yeast, per pound.....	31
per cake.....	2
Pates de foies gras, per jar.....	58
CURED AND PICKLED MEATS.	
Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Native, per pound.....	12
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Minced, "Bologna style," per pound.....	14
Shoulders, sugar cured, boneless, whole, per pound.....	17
Sugar cured, boneless, whole, per pound.....	17
Sugar cured, whole, per pound.....	21
Half, per pound.....	23
Sliced, per pound.....	27
Whole, boiled, per pound.....	27
Half, boiled, per pound.....	29
Sliced, boiled, per pound.....	35
Bacon—Breakfast, sliced, per pound.....	31
Whole piece, per pound.....	30
Strips, whole, per pound.....	22
Sliced, jar.....	30
Sliced, tins.....	27
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	13
Pork bellies, per pound.....	17
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	17
Tongues, per pound.....	22

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	†38
Creamery, 60-62 lb. tub, whole tub, per pound.....	†37
Sheffield Farms, extra fancy, per lb.....	58
Oleomargarine, per pound, carton.....	29
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	23
Swiss, per pound.....	34
Edam, each.....	1.15
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	*115
Fermylac, bottle.....	*25
Ice cream, quart.....	†25
½-gallon.....	†50
Cream, 30 per cent, quart.....	*45
pint.....	*25
½-pint.....	*15

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound.....	29
Chickens—Fancy, roasting, corn fed, per pound.....	26
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	23
Capons, per pound.....	32
Broilers, milk fed, per pound.....	*32
Broilers, corn fed, per pound.....	*23
Turkeys, per pound.....	26
Squabs, each.....	33
Geese, per pound.....	17
Grouse, each.....	1.00
Mallard ducks, 2 to 2½ pounds, each.....	2.35
Pheasants, each.....	1.35

VEGETABLES.

Beets, per pound.....	†2
Cabbage, per pound.....	2
Carrots, per pound.....	†2
Celery, per head.....	4
Cucumbers, per pound.....	2½
Egg plant, per pound.....	*6
Lettuce, per pound.....	*6
Onions, per pound.....	2½
Peppers, green, per pound.....	7
Plantains, per dozen.....	15
Potatoes, white, per pound.....	2
Potatoes, sweet, per pound.....	2
Squash, per pound.....	2½
Turnips, per pound.....	2
Tomatoes, per pound.....	6
Yams, Lucea, per pound.....	3

FRUITS.

Apples, per pound.....	10
Grape fruit—Select, each.....	5
Tropical, each.....	3½
Lemons, per dozen.....	*13
Limes, per 100.....	30
Oranges—Select, each.....	3
Tropical, per dozen.....	14

Coconuts, each.....	Price.
Bananas, per bunch.....	38
Bananas, each.....	1
Apples, evaporated, per pound.....	12
Apricots, evaporated, per pound.....	12
Pears, evaporated, per pound.....	23
Peaches, evaporated, per pound.....	8
Pineapples, each.....	10
Figs, dried, 12-oz. packages.....	14
Figs, dried, 5-oz. packages.....	5
Raisins, seedless, package.....	11
table, cluster, per pound.....	20
Currants, cleaned, package.....	12
Prunes, stewing, per pound.....	10
Cantaloupes, each.....	8
Watermelons, each.....	*27
Plums, per pound.....	6
Peaches, fresh, per pound.....	6
Pears, fresh, per pound.....	6

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham or ½ shoulder of fresh pork will be sold.

Commissary Hours.

Effective August 1, 1915, the open hours of the various commissary stores are as follows:

The commissary stores at Las Cascadas, Empire, Culebra, and Toro Point are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 p. m. to 6 p. m.

The gold departments of the Cristobal commissary are open at 2 p. m. on Saturdays and other sailing days of Panama railroad vessels.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, July 31, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela.	Gatun.	Gatun Lake.	Miraflores Lake.
Sun., July 25.....	129.05	94.87	86.12	86.03	54.29
Mon., July 26.....	127.55	93.65	86.06	86.06	54.15
Tues., July 27.....	127.25	93.42	86.10	86.06	54.10
Wed., July 28.....	132.65	97.35	86.15	86.07	54.10
Thurs., July 29.....	128.15	94.19	86.11	86.06	54.11
Fri., July 30.....	134.40	98.62	86.09	86.04	54.20
Sat., July 31.....	128.70	94.96	86.10	86.04	54.30
Heights of low water to nearest foot.....	125.0	91.0			

Examination by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, August 11, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the Captain of the Port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the Captain of the Port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the Captain of the Port of Cristobal on Friday, August 13, 1915, beginning at 9 a. m. Applicant should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.

F. M. NIXON,
Recorder, Board of Local Inspectors.

SHIPPING INFORMATION.

Concise Statement on Points of Primary Interest to Users of the Canal.

In order to spread as widely as possible this information of primary importance to users of the Panama Canal, there are published below concise statements on points of most immediate concern to them. More extensive information than may be published here may be obtained from the "Sailing Directions and General Information" issued by The Panama Canal. This is a booklet of 115 pages, thoroughly explicit and carefully indexed, in which are covered all matters involved in handling vessels through the Canal. Copies of this booklet are in the hands of United States consular officers all over the world, and in the offices of the collectors of customs at United States ports, or at United States branch hydrographic offices, and have been furnished to the principal governmental and commercial maritime agencies over the world. Copies may be obtained on application to The Panama Canal, Washington, D. C., or Balboa Heights, C. Z.

PAYMENT OF TOLLS AND OTHER CHARGES.

It is necessary to place funds on deposit to cover the tolls of a vessel before she will be allowed to enter the Canal. This deposit may be placed with any Assistant Treasurer of the United States (one of whom is situated at any of the larger United States ports); or with the Assistant Auditor of The Panama Canal in Washington, D. C.; or with the Collector of The Panama Canal, Balboa Heights. The Assistant Treasurer method seems to be the most convenient for operators, as it is the one most generally used.

In case deposit is made in the United States it is advisable to request at the time of making deposit that cable advice of same be sent to the Canal, in order that there may be no delay to a vessel when she presents herself for passage.

Foreign operators may handle such depositing with equal simplicity, by directing their bankers or shipping agents to have the deposit placed with the Assistant Treasurer in New York or San Francisco, for instance.

The Canal organization has been developed to handle the passage of vessels complete and to attend to their needs in the way of tolls, coal, supplies, cables, mail, etc., without delay or "red tape" and there is no need for operators to employ local agents for vessels which come to the Canal for the sole purpose of passing through it, without taking on or discharging freight or passengers in Canal waters. In fact the interposition of a third party in the arrangements for a vessel which is simply passing through the Canal is liable to result in confusion and delay. In other words, a local agent may be needed for commercial purposes, in looking after cargo and passengers if vessels handle either at the terminal ports; but he is not needed to look after the requirements of the ship herself as far as going through the Canal, communicating, taking on supplies, coal, etc., are concerned.

REFUNDING BALANCE.

As soon as a vessel has cleared from the Canal a statement of her expenses is forwarded to her operator, with a check on the Treasurer of the United States for the balance of the deposit. In the case of lines having frequent passages through the Canal it is permissible to allow such balance to apply on account, but

the statement of each vessel's expenses for each passage is sent in all cases.

CHARGES FOR TOLLS.

Tolls on loaded commercial vessels are charged at \$1.20 per net vessel ton—each 100 cubic feet of actual earning capacity—the net tonnage being determined by the rules for the measurement of vessels for the Panama Canal. Deck load is charged for in addition, at \$1.20 per 100 cubic feet of space occupied by deck load.

On vessels in ballast the toll charge is 72 cents per net vessel ton, Panama Canal rules of measurement.

These basic charges have been modified, however, by the ruling that loaded vessels shall not pay more than the equivalent of \$1.25 per net ton as determined by the rules of measurement for United States registry; and ballast vessels shall not pay less than 75 cents per net ton, United States registry measurement.

Hence, vessels coming to the Canal for passage should have certificates of measurement according to the Panama Canal rules and also according to the rules of United States registry. These certificates can be issued at the ports of entry to the Canal but this might cause several days' delay to a vessel.

CHARGES FOR SERVICES.

There is no charge for pilotage on vessels passing through the Canal which do not stop at either terminal port to discharge or take on passengers or cargo. Also there is no charge when they stop at terminal ports for the purpose of taking on coal, supplies, etc. Pilotage charges when levied are port charges and not a part of the expenses of passing through the Canal.

The only additional expenses to which a vessel may be put for Canal transit proper would be for services rendered necessary by the condition of the ship. Such are charges for furnishing extra men on deck to handle the lines in passing through the locks, when the ship's crew is not sufficient; and tug service for sailing vessels or steamships in condition requiring assistance. Under such conditions the tug charge is \$15 per hour; or for complete transit of the Canal, 10 cents per net Canal ton or four cents per displacement ton, with a minimum charge of \$150.

PANAMA RAILROAD COMPANY.

On account of the close relationship of the Panama Railroad Company (operating the Panama Railroad Steamship Line) to The Panama Canal the former can very advantageously act as agent for other steamship lines if desired. Upon regular request it will advance funds for payment of tolls, fuel, supplies, and attend to stevedoring, etc. The services of the company may be engaged by addressing its home office, 24 State Street, New York City, or the Superintendent, Balboa Heights, Canal Zone.

FUEL.

Coal is supplied to vessels at both terminal ports, at the rate of between 400 and 700 tons a day. The facilities are being improved. The present prices for delivery from lighters, trimmed in bunkers, are \$5.40 per ton, when handled by ship's gear, at Cristobal; and at Balboa, \$6.40. These prices will advance to \$6 and \$7, respectively, on September 1, 1915. The coal is Pocahontas standard.

Fuel oil may be obtained at either terminal

from plants of The Panama Canal or from private corporations, at the rate of about 1,600 barrels an hour. The price from The Panama Canal is \$1.25 per barrel of 42 gallons, sold as dry oil at the local temperature, with subtraction of the amount of water contained, as shown by analysis. Prices from the corporations may be obtained on application to them.

Diesel engine oil is for sale by several corporations, one of which quotes a general price of 45 shillings per ton of seven barrels.

SUPPLIES.

Supplies in unlimited quantities, including meats, cold storage products, groceries, fruits, vegetables, etc., as well as ships' supplies—lubricants, cordage, ships' chandlery, standard articles for ships' use—can be purchased from The Panama Canal in either of the terminal ports and delivery can be made on short notice. By Governmental regulation these goods are sold at fixed prices very slightly above cost.

Ice is furnished for 33 cents per 100 pounds at both Cristobal and Balboa. It is available in any quantity.

Laundry is handled quickly and no advance notice is required.

Repairs to vessels may be made to any extent, except where the use of a large dry dock is required or the turning of the largest crank shafts or longest line shafts.

Ships are boarded by a boarding officer immediately on arrival. He furnishes price lists and takes orders for all kinds of supplies or fuel. Any supplementary orders or requests for any kind of services may be sent to the Captain of the Port, communication with whom is always easy.

The Captain of the Port of entry is the local executive with whom, or his authorized immediate representatives, the master of a vessel coming into the Canal will have dealings. His office is the clearing house for all business with the ships, and is the local marine headquarters. It gives out chronometer comparisons, nautical information as to charts, sailing directions, etc., delivers and receives mail, and has supervision over the delivery of coal, supplies, etc., to vessels.

COMMUNICATIONS.

While by no means necessary it is advantageous if vessels can advise in advance when they will arrive, by mail, cable, or radio. Mail is received five times a week from the United States, and approximately a week after posting. The Canal is equipped with three radio stations, two for areas within 1,000 miles of the terminal ports and one which has a sending radius of approximately 3,000 miles.

Communications should be addressed to The Panama Canal, Balboa Heights, Canal Zone. The cable address of the Canal on the Isthmus is Pancanal, Panama; of the Washington office, Pancanal, Washington. Codes used are A. B. C. Telegraphic, 5th edition; Lieber's; Scott's Shipowners' Telegraphic (1906); Western Union Telegraphic (Universal Edition), etc.

Shipping people are invited to remember that the fundamental purpose of the Canal is to pass ships between the two oceans quickly. They are invited, accordingly, to make any suggestions by which this purpose may be even more completely realized, and to make inquiries for additional information.

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in this table:

AUGUST.				
DATE.	Time and height of high and low water.			
Wed., Aug. 4.....	3:54	10:02	16:34	22:48
	4.4	11.6	4.1	10.6
Thurs., Aug. 5.....	4:54	11:08	17:37	.....
	5.0	11.2	4.3	.....
Fri., Aug. 6.....	0:05	5:58	12:20	18:40
	10.5	5.1	11.2	4.1
Sat., Aug. 7.....	1:16	7:03	13:23	19:37
	10.9	4.8	11.6	3.5
Sun., Aug. 8.....	2:10	7:58	14:15	20:25
	11.6	4.2	12.3	2.7
Mon., Aug. 9.....	2:53	8:44	14:57	21:08
	12.4	3.4	13.1	1.9
Tues., Aug. 10.....	3:29	9:26	15:35	21:46
	13.3	2.5	13.8	1.1
Wed., Aug. 11.....	4:04	10:05	16:12	22:25
	14.2	1.6	14.4	0.5
Thurs., Aug. 12....	4:37	10:45	16:47	22:57
	14.9	1.0	14.9	0.1
Fri., Aug. 13.....	5:10	11:22	17:23	23:39
	15.5	0.4	15.1	-0.1
Sat., Aug. 14.....	5:44	12:01	17:59	.....
	15.8	0.2	15.2	.....
Sun., Aug. 15.....	0:16	6:19	12:41	18:38
	0.1	15.9	0.2	14.9
Mon., Aug. 16.....	0:56	6:57	13:26	19:20
	0.4	15.7	0.5	14.4
Tues., Aug. 17.....	1:40	7:40	14:13	20:08
	1.1	15.2	1.0	13.7
Wed., Aug. 18.....	2:30	8:30	15:08	21:06
	1.9	14.4	1.7	12.9
Thurs., Aug. 19....	3:29	9:31	16:12	22:17
	2.7	13.7	2.3	12.3
Fri., Aug. 20.....	4:37	10:46	17:24	23:41
	3.3	13.1	2.5	12.2
Sat., Aug. 21.....	5:54	12:09	18:38	.....
	3.3	13.1	2.1	.....
Sun., Aug. 22.....	1:02	7:07	13:26	19:42
	12.8	2.8	13.6	1.4
Mon., Aug. 23.....	2:09	8:11	14:29	20:38
	13.8	2.0	14.3	0.6
Tues., Aug. 24.....	3:05	9:05	15:22	21:30
	14.7	1.2	15.0	0.0
Wed., Aug. 25.....	3:52	9:55	16:08	22:15
	15.5	0.4	15.5	-0.4
Thurs., Aug. 26.....	4:35	10:39	16:51	22:57
	16.0	-0.1	15.6	-0.4
Fri., Aug. 27.....	5:13	11:21	17:31	23:38
	16.0	-0.1	15.4	0.0
Sat., Aug. 28.....	5:51	12:01	18:09	.....
	15.7	0.2	14.9	.....
Sun., Aug. 29.....	0:17	6:27	12:41	18:47
	0.6	15.0	0.8	14.1
Mon., Aug. 30.....	0:57	7:02	13:21	19:24
	1.5	14.2	1.6	13.2
Tues., Aug. 31.....	1:37	7:38	14:04	20:00
	2.6	13.3	2.6	12.2

SEPTEMBER.

DATE.	Time and height of high and low water.			
Wed., Sept. 1.....	2:21	8:17	14:51	20:52
	3.6	12.3	3.5	11.2
Thurs., Sept. 2....	3:12	9:06	15:49	21:55
	4.6	11.4	4.3	10.5
Fri., Sept. 3.....	4:13	10:15	16:55	23:21
	5.3	10.9	4.6	10.3
Sat., Sept. 4.....	5:24	11:40	18:05	.....
	5.4	10.8	4.4	.....
Sun., Sept. 5.....	0:39	6:30	12:53	19:06
	10.7	5.0	11.2	3.8
Mon., Sept. 6.....	1:37	7:30	13:48	19:54
	11.5	4.2	12.1	2.9
Tues., Sept. 7.....	2:20	8:17	14:30	20:38
	12.6	3.1	13.0	1.9
Wed., Sept. 8.....	2:56	8:58	15:08	21:16
	13.7	2.0	14.0	1.0

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 p. m.) All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3.47 p. m.

Sailings of Vessels in Regular Service with the United States.

		<i>Sails.</i>		<i>Arrives.</i>	
NEW YORK TO CRISTOBAL-COLON.					
Carrillo.....	U. F. C.	July 28.....	Aug. 4		
Colon.....	P. R. R.	July 29.....	Aug. 4		
Tenadores.....	U. F. C.	July 31.....	Aug. 8		
Santa Marta.....	U. F. C.	Aug. 4.....	Aug. 11		
Advance.....	P. R. R.	Aug. 5.....	Aug. 12		
Metapan.....	U. F. C.	Aug. 7.....	Aug. 16		
Almirante.....	U. F. C.	Aug. 11.....	Aug. 18		
Panama.....	P. R. R.	Aug. 12.....	Aug. 18		

(Continued on page 442.)

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p.m., August 1, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
July 26	American	American	American-Hawaiian Line	New York	Los Angeles	General	4,828	5,975	4,153
July 26	Mantaro	Peruvian	Peruvian S. S. Co.	Baltimore	Callao	General	2,729	4,605	2,638
July 26	Elaena	British	Anglo-Saxon Petroleum Co.	New Orleans	China	Petroleum	6,881	5,167	3,542
July 27	Oswald	British	Booth S. S. Co., Ltd.	Liverpool	Iquique	Ballast		5,427	3,750
July 27	Lewis Luckenbach	American	Luckenbach Line	New York	San Francisco	General	3,765	4,499	3,492
July 27	Santa Catalina	American	W. R. Grace & Co.	Norfolk	Arica	Ballast		6,657	4,409
July 28	Santa Cruz	American	W. R. Grace & Co.	New York	Los Angeles	General	3,000	5,477	3,751
July 28	Hackensack	British	Brown Jenkin & Sons	Newport News	Tiouron	Coal	5,029	4,203	2,780
July 29	Sultano (yacht)	American	Harriman estate	New York	San Francisco	Ballast		411	214
July 29	Urubamba	Peruvian	Peruvian S. S. Line	Baltimore	South America	General	2,750	4,957	3,118
July 29	Falcon	American	Charles Nelson Company	Baltimore	San Francisco	Coal	2,075	1,826	1,052
July 29	Charles Nelson	American	Charles Nelson Company	Baltimore	San Francisco	Coal	903	716	609
July 29	Gulma (yacht)	American	Robert H. Ellis	New York	Portland	Ballast		51	35
July 29	Lothar Castle	British	Lancashire Shipping Co.	New York	Vladivostok	General	6,850	5,768	4,367
July 30	Colulu	British	British Government	Liverpool	San Francisco	Ballast		5,638	4,135
July 30	Torgyn (yacht)	American	T. Torkildsen	New York	Los Angeles	Ballast		184	116
July 30	Mitra	British	Anglo-Saxon Petroleum Co.	Port Arthur	Honolulu	Petroleum	6,781	5,970	4,294
July 30	Ormiston	British	Orm S. S. Company, Ltd.	Norfolk	San Francisco	Ballast		5,663	4,102
July 31	Kentuckion	American	American-Hawaiian Line	New York	San Francisco	General	5,370	6,913	4,726
July 31	Acajutla	British	Salvador R. R. Co.	Cristobal	Salina Cruz	General	830	1,219	627
July 31	Manavi	British	Pacific Steam Navigation Co.	Cristobal	Guayaquil	General	629	1,205	745
July 31	Crafter Hall	American	Ellermann Lines	New York	Payta	General	5,966	4,882	3,552
July 31	Nevadan	American	American-Hawaiian Line	New York	Los Angeles	General	3,800	4,513	3,103
July 31	Thode Fagelund	Norwegian	Wilhelmsens Dampsk Akties	Norfolk	Iquique	Ballast		4,758	3,586
Aug. 1	Discoverer	British	Harrison Line	Liverpool	Los Angeles	General	1,800	6,200	4,320
Aug. 1	Allianca	American	Panama Railroad S. S. Line	New York	Balboa	General	1,022	4,120	2,670
Aug. 1	Mars (collier)	American	United States Navy	Norfolk	San Francisco	Coal	7,217	5,804	5,197
Aug. 1	Batsford	British	Century Shipping Co., Ltd.	New York	Auckland	General	6,800	6,062	4,514
Aug. 1	Norman Monarch	British	Monarch S. S. Co.	New York	Auckland	General	10,420	5,568	4,155

† Displacement tonnage.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

July 23	Hattie Luckenbach	American	Luckenbach Line	San Francisco	New York	General	6,261	4,708	3,637
July 24	Middleham Castle	British	Jos. Chambers & Co.	Yokohama	New York	General	8,000	4,981	3,786
July 25	Mexicon	American	American-Hawaiian Line	Hilo	Del. Breakwater	Sugar and general	11,737	8,993	6,715
July 25	John A. Hooper	American	Sudden & Christenson	Antofagasta	Baltimore	Nitrates	2,950	2,462	1,536
July 25	Acajutla	British	Salvador Railway Co.	Salina Cruz	Cristobal	Coffee, hides, gen.	653	1,219	627
July 25	Manavi	British	Pacific Steam Navigation Co.	Guayquil	Colon	General	571	1,205	745
July 25	Baron Minto	British	H. Howgarth & Sons	Pagoumene	Dunkirk	Ore	6,060	4,991	3,763
July 26	Queen Amelie	British	Dunlop S. S. Co.	Iquique	Sidney	Nitrates	6,722	4,656	3,382
July 27	Trevice	British	E. Hain & Son	Vancouver	England	LT. mber	4,251	4,335	3,131
July 28	Nordstjerman	Swedish	Johnson Line	Antofagasta	New Orleans	Nitrates and gen.	1,545	1,305	682
July 28	Hubert	British	Booth S. S. Co.	Iquique	Cristobal	Nitrates	5,250	4,922	2,559
July 28	Huasco	Chilean	South American S. S. Co.	Talcahuano	Cristobal	General	1,505	4,563	3,121
July 28	Panama	American	Panama Railroad S. S. Line	Balboa	New York	General	1,313	5,866	4,222
July 29	Harry Luckenbach	American	Luckenbach Line	San Francisco	New York	General	2,622	3,001	2,047
July 30	Trofalgar	British	Glen & Company	Mejillones	Norfolk (foreign)	Nitrates	7,000	5,089	3,816
July 30	Mathilda	Norwegian	J. Christensen	Callita Buena	Philadelphia	Nitrates	6,005	4,372	3,307
July 31	Frimley	British	Strath Middleton	Callita Buena	Colon (orders)	Nitrates	6,750	4,639	3,382
July 31	Strathfillon	British	Strath Line	Iquique	Colon (orders)	Nitrates	6,575	4,823	3,592
July 31	Merchant	British	J. & T. Harrison	San Francisco	London (orders)	Nitrates	5,100	4,001	2,871
Aug. 1	Fin	Norwegian	J. Christensen	Antofagasta	Colon (orders)	Nitrates, copper	6,265	4,163	3,044
Aug. 1	Dakota	American	American-Hawaiian Line	Hilo	Del. Breakwater	Sugar, general	9,000	6,891	4,751

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From	Date	Vessel	Line	From
August 15	La Habra	Union Oil Co.	London		Potomac	Anglo-American Oil Co., Ltd.	
					Inertay	Law, Leslie & Co.	
					Rosedale	Rosedale Company, Ltd.	
					Mexico	Pacific Steam Nav. Co.	Valparaiso

PORT OF CRISTOBAL.

*ARRIVALS.

*DEPARTURES.

Date	Vessel	Line	From	Date	Vessel	Line	To
July 27	Berlin	Dampsk Mercur	St. Marys	July 26	Leonidas	United States Navy	San Blas coast.
July 30	Ocland	Earn Line	Norfolk	July 27	Colonia	Cable Company	Montevideo
July 31	Coronado	Elders & Fyffes	Port Limon	July 30	Juno	Akties Juno	Cunas de Zaga
				July 31	Coronado	Elders & Fyffes	Bristol

*EXPECTED ARRIVALS.

*EXPECTED DEPARTURES.

Aug. 2	Hatti	French Line	St. Nazaire	Aug. 2	Ocland	Earn Line	Daiquiri, Cuba
				Aug. 8	Hatti	French Line	St. Nazaire
					Berlin	Dampsk Mercur	

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

*DEPARTURES.

July 23	Annapolis	United States Navy	Corinto	July 25	Cauca	Pacific Steam Nav. Co.	Valparaiso
July 25	Tricolor	W. Wilhelmsen	Tacoma	July 28	Annapolis	United States Navy	Corinto
July 28	Hualaga	Peruvian S. S. Co.	Mollendo	July 29	Tricolor	W. Wilhelmsen	Valparaiso
July 31	Monarch	Pacific Steam Nav. Co.	Cristobal				
Aug. 1	City of Para	Pacific Mail S. S. Co.	San Francisco				
Aug. 1	Siskiyon	E. K. Wood Lumber Co.	Tacoma				

*Other than vessels passing through the Canal.

(Continued from page 441.)

CRISTOBAL-COLON TO NEW YORK.

NEW ORLEANS TO CRISTOBAL-COLON.

CRISTOBAL-COLON TO NEW ORLEANS.

Zacapa	U. F. C.	Aug. 5	Aug. 12	Turrialba	U. F. C.	July 28	Aug. 4	Cartago	U. F. C.	Aug. 5	Aug. 10
Allianca	P. R. R.	Aug. 7	Aug. 13	Heredia	U. F. C.	July 31	Aug. 5	Turrialba	U. F. C.	Aug. 5	Aug. 12
Calamares	U. F. C.	Aug. 9	Aug. 16	Abangarez	U. F. C.	Aug. 4	Aug. 11	Heredia	U. F. C.	Aug. 12	Aug. 17
Carillo	U. F. C.	Aug. 12	Aug. 19	Parismina	U. F. C.	Aug. 7	Aug. 12	Abangarez	U. F. C.	Aug. 12	Aug. 19
Colon	P. R. R.	Aug. 14	Aug. 20	Atenas	U. F. C.	Aug. 11	Aug. 18	Parismina	U. F. C.	Aug. 19	Aug. 24
Tenadores	U. F. C.	Aug. 16	Aug. 23	Cartago	U. F. C.	Aug. 14	Aug. 19	Atenas	U. F. C.	Aug. 19	Aug. 26
Santa Marta	U. F. C.	Aug. 19	Aug. 26	Turrialba	U. F. C.	Aug. 18	Aug. 25	Cartago	U. F. C.	Aug. 26	Aug. 31
Advance	P. R. R.	Aug. 21	Aug. 28	Heredia	U. F. C.	Aug. 21	Aug. 26	Turrialba	U. F. C.	Aug. 26	Sept. 2



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Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Foundation Work for Pier 7 Nearly Completed.

The last of the steel cylinders for the new Pier 7 of the Atlantic entrance terminals are being driven, and about 90 per cent of them have been filled with concrete and reinforcement, in readiness for the erection of the superstructure. All of the 5,500 tons of steel for the superstructure, exclusive of the shed, have arrived from the United States, coming in two shiploads, and about 175 tons have been placed since the beginning of erection, in July.

Considering Construction of Additional Docks at Cristobal.

The Engineer of Docks has been directed to prepare estimates of the cost of constructing an additional 1,000-foot pier at Cristobal, tentatively designated as No. 6, on the site to the northward of Pier 7, toward the sea end of the mole from which Piers 7 and 8 extend. Such a pier would be an addition in the series now comprising Nos. 9, 8, and 7, in order, and would harmonize with them in layout and construction. In connection with this work, the Engineer of Docks is also to prepare estimates of the cost of replacing the timber Pier 11 and its extension, adjoining the east end of Pier 10, with reinforced concrete construction of the type used in the new piers. These investigations, looking toward extension of the docking facilities at the Atlantic entrance, have been undertaken as a result of the present congestion of transfer cargo on the piers of the terminal, and the prospects of increasing traffic.

Canal Blocked by Slide.

Movements of the slide on the west bank of the Canal at Culebra caused a suspension

of traffic from Saturday, August 7, to the afternoon of Wednesday, August 11. This was not a new or unexpected slide, but an accelerated movement of a part of the bank which has been in intermittent motion for some time. Dredges have been working at its base, keeping the channel clear, but the movement of last week brought material in the Canal more rapidly than it could be excavated. The present indications are that this slide, though active for short periods, is not as large as slides on the east bank.

Another Motorship Makes Maiden Voyage to the Canal.

The motorship *San Francisco* of the Johnson Line, which passed through the Canal on July 19 on the way to San Francisco from Gotenburg, was on her maiden voyage, having been launched at Copenhagen in June, completing her trials early in July. She is the sixth motorship of this line to go into service, and is a sister ship of the *Suecia*, of the same line, which has also made use of the Canal. The *San Francisco* is 362 feet in length by 51 feet beam, has a deadweight carrying capacity of 6,500 tons, and net Canal tonnage of 4,001. Her two 1,000-horsepower internal combustion engines, driving twin screws, make a speed of 10½ knots at sea. It has been estimated by shipping people that, as oil for fuel may be obtained at low prices at ports on the west coast, the *San Francisco* will operate at a fuel cost of approximately half the cost for a steamship of her size running over the same route.

Tickets for the Trip through the Canal.

Tickets for passage through the Canal on vessels of the Panama Railroad Steamship Line have recently been placed on sale at the Balboa Heights station. Tickets are now on sale at the Colon passenger station and Pier 11, Cristobal, for passage from the Atlantic to the Pacific, and at the Panama passenger station, the Balboa Heights station, and the docks at Balboa, for passage from the Pacific to the Atlantic. The fare one way for the general public is \$3 for adults and \$2 for children under 12 years of age; for Government employees and their families, the fare is \$2 for adults and \$1 for children under 12 years of age. Passengers are entitled to luncheon aboard the vessel and to a berth, in the event of delay over night, without additional charge.

Sale of Obsolete Stamps.

The remaining stock of the postage due stamps used in the Canal Zone from March, 1914, to March, 1915, and now obsolete will be placed on sale in the Canal Zone post-offices on August 23. These stamps can not be used for the payment of postage and are worthless except to collectors. They will be sold at their face value and cancelled as sold. Not more than one hundred sets will be sold to any one purchaser. The stock to be disposed of consists of 80,514 one's, 71,818 two's, and 9,603 ten's.

TERMINAL RADIO STATIONS.

With Increasing Business They Facilitate the Handling of Ships at the Canal.

The Naval stations at Colon and Balboa erected especially for communication with vessels coming to the Canal or its terminal ports, are performing increasingly effective service in facilitating Canal operations, and will be of even greater value when the masters of vessels shall have learned to make more use of them. Over half of the vessels coming to the Canal or its terminals are equipped with radio apparatus but only about a fourth of those so equipped have advised the authorities of their approach. It is distinctly desirable that vessels do so, as it is of considerable assistance to the Canal transportation forces, through acquainting them with the traffic problems to be met, and will greatly expedite the handling of vessels, both in the transit of the Canal, and in furnishing supplies. No charge is made against vessels for the handling of messages sent by the master relating to any of the subjects mentioned in paragraph 40 of Executive Order No. 1990, quoted below.

The Colon station is now handling approximately 2,300 messages per month, the Balboa station about 400, practically all in communication with vessels. Of these, about one-sixth are handled as a part of the Canal work, on which no charges are made. Their radii of communication have extended as far as 1,500 miles under favorable conditions, and in actual work the limit is usually the communicating radius of the vessel. The better equipped vessels will communicate with ease at a distance of 500 miles while a vessel of relatively small sending power may be unable to communicate from a point more than 100 or 150 miles from the station. Only in exceptional cases, however, would a vessel be unable to advise of her approach when 24 hours out from port.

The canal terminal stations use the Lowenstein 500-cycle spark sending system, and the international code. The high power station at Darien, which handles Government work exclusively and has no direct communications with commercial vessels, uses the Poulsen system.

The Colon station sends broadcast daily at 3.30 p. m. a news bulletin, made up of items taken from the press dispatches or any matters which might be of especial interest to vessels. Just after noon, daily, this station broadcasts on 1,400-meter wavelength a weather forecast received from Key West, covering the Caribbean and south Atlantic and Gulf regions. Also, as soon as received and at 8 o'clock a. m., noon, 4 p. m., and 8 p. m. is broadcasted any hydrographic information covering dangers to navigation, such as wrecks, derelicts, etc., or changes in local navigation aids, and other important information.

It has recently been arranged, as a further convenience to commerce, that operators who

wish business messages delivered to their vessels may file them with the radio stations, for delivery as soon as the vessel comes into communication. As these messages are of private commercial nature they are charged for, at the regular commercial rate, which charge may be included with the other items for the vessel's expenses at the Canal and collected from the deposit made to cover the ship's expenses.

For the benefit of masters who may desire to avail themselves of the advantages afforded by the Canal radio facilities, there are published below the sections governing radio operations, from the Executive Order No. 1990, establishing rules and regulations for the operation and navigation of the Panama Canal and the approaches thereto:

RADIO COMMUNICATION AND REPORT.

40. As soon as radio communication can be established with the Canal, vessels should report their names, nationality, length, draft, tonnage, whether or not they desire to pass through the Canal, require coal, provisions, supplies, repairs, to go alongside of a wharf, the use of tugs, probable time of arrival, length of stay in port, or any other matters of importance or interest. If this information has been previously communicated, through agents or otherwise, to the captain of the port, it will not be necessary to report by radio, but the probable time of arrival should always be sent.

41. Control of radio communication is entirely in the hands of the radio shore stations. No vessel will be allowed to interfere in the slightest degree with the Canal radio stations; upon an order being received by a vessel at any time while within the waters under the control of the Canal, to discontinue using radio, even if in the midst of transmission of a message, she shall immediately comply.

42. Upon a ship's arriving within the 15-mile limit, and until leaving the 15-mile limit of the Canal Zone, she shall transmit only with low power, not exceeding $\frac{1}{2}$ -kilowatt.

43. Messages to stations will be sent only to Colon station (NAX) when in Gatun Locks and to northward thereof, and only to Balboa station (NPJ) when in Miraflores Locks and to southward thereof; between these two points, ships may work to either station, preferably to the nearer one; the high power station (Darien), at Darien, will not handle commercial work and will not be called for Canal business, except in case of emergency.

44. All messages between ships in the Canal Zone and ships at sea must be forwarded through the nearer shore station.

45. Messages from ships in the Caribbean Sea for ships in the Pacific waters, or *vice versa*, shall be routed through the Canal Zone shore stations.

46. All vessels fitted with radio, after leaving the terminal harbor to pass through the Canal, shall keep an operator on watch until the further terminal harbor has been reached; this applies to the time when they are anchored in Gatun Lake, while passing through the locks, or moored to the lock walls, or to any of the wharves in the Canal proper, as well as when they are under way. Messages relating to the ship's movements and the Canal business shall take precedence over all commercial messages.

47. Pilots on vessels passing through the Canal shall have the right to use a vessel's radio freely for the transaction of the Canal business.

48. Under the direction of the pilots, ves-

sels will, from time to time, report their progress through the Canal; accidents to machinery, propellers, steering gear, equipment, or anything else that may delay them or require assistance; any sickness or casualties that require medical attendance from Canal officials; or any other matters of importance that may arise.

49. No charges will be imposed against the Canal by vessels receiving or sending messages in relation to Canal business.

50. No vessel will be allowed to communicate with any lock or signal station while in transit through the Canal, except through the pilot; all messages of any kind must be sent through him. This does not apply to vessels moored at the terminals at Cristobal or Balboa, before entering, or after having passed through the Canal, which may wish to communicate through the terminal stations.

51. Vessels in transit through the Canal can communicate with the locks and signal stations, through the pilots, both by the international code and special signals; information on this subject may be obtained from the Governor of The Panama Canal.

Building in the Burnt Area of Colon.

Extensive rebuilding is in progress in the city of Colon, in the area devastated by fire on April 30. New buildings are being erected on nearly all the lots along Front Street, between the Panama Railroad station and the

Cristobal commissary store, and many of the blocks in the adjacent parts of Bolivar Street and Bottle Alley are also being occupied. Between 25 and 30 buildings, all of noninflammable material, are being erected, and up to Monday, August 9, the permits issued for construction in the burnt area numbered 40. The first permit was issued on June 10. None of the new houses have been completed. Ten will be one story in height and the remainder two stories. On the basis of a cost of construction approximating 15 cents per cubic foot, close to \$400,000 worth of building is now in progress, in charge of seven or eight contractors.

Four of the houses will be of metal lath and concrete, nine of reinforced concrete construction, and the remainder of plain concrete, in blocks or poured into forms. Some of the buildings will cover two, three, or even four lots (one instance) and the entire 40 will occupy an aggregate of 62 lots. Two individual owners have permits for five houses each, two are to build three each, and 24 are to build one each. The builders are Panamanians, Americans, British subjects, and Chinese.

The fire destroyed 430 buildings on 215 lots, in an area of 22 blocks covering 19½ acres, about a third of the built-up part of the city.

The Taboguilla Island light is to be completed and placed in service in the evening of Wednesday, August 11.

WEATHER CONDITIONS, CANAL ZONE, JULY, 1915.

The rainfall for the month exceeded the station averages at all stations except Balboa, Balboa Heights, and Gamboa. Over the Pacific section considered as a whole, the rainfall was slightly below normal; over the central section about four inches in excess of the normal, while over the Atlantic section the excess was over five inches. This July has been the rainiest July since 1910 in both the Atlantic and central sections. The totals at Juan Mina, Vigia, and Frijoles exceed anything on record at these stations, and the rainfall at Frijoles was almost double the average amount. On July 23rd, .54 inch of rain was recorded at Frijoles in five minutes, breaking the record at this station, the previous maximum fall in five minutes being .53 inch, on August 12, 1914. On July 8, during a heavy rain at Alhajuela, the maximum record for one hour at this place was also broken, 4.19 inches being recorded, while the previous record of maximum fall in one hour was 3.40 inches, on December 28, 1909. Rainfall totals for the month ranged from 6.66 inches at Balboa to 21.24 inches at Brazos Brook. The maximum amount of precipitation recorded on any one day was 6.30 inches, at Colon on July 1. This rainfall, and the 5.33 inches at Alhajuela on July 8, were the only daily rains in excess of four inches. The rainfall was evenly distributed throughout the month and heavy showers occurred generally throughout the Zone on the 1st, 8th, 12th, and 17th of the month.

The estimated rainfall over the Chagres River basin was 30 per cent above the average, or 16.42 inches against a 15-year mean of 12.59 inches.

The average air temperature was slightly below normal on the Pacific coast and over the interior, and slightly above normal on the Atlantic coast. The atmospheric pressure was approximately normal. The relative humidity, daytime cloudiness, and temperature of the sea water were above normal, while the wind movement and evaporation were below the average at both coast stations.

One fog was observed on the Pacific coast on July 6, but none were observed on the Atlantic coast. Several night and early morning fogs occurred at interior stations, 72 per cent of which were dissipated by 6.30 a. m., 94 per cent by 7.30 a. m., and all fogs lifted or were dissipated by 8.30 a. m.

The elevations of Gatun Lake, in feet above mean sealevel, were as follows: Mean for the month, 86.19; maximum, on the 8th, 86.62; minimum, on the 1st, 85.96. Evaporation from the lake surface during the month was 4.107 inches.

The climatological conditions prevailing during the month at the Atlantic and Pacific coast stations are summarized in this table:

STATIONS.	Pressure (reduced to mean of 24 hours.)	Temperature.					Precipitation.			Wind.			
		Mean.	Maximum.	Date.	Minimum.	Date.	Mean relative humidity.	Total inches.	Station average.	Days of .01 inch or more.	Total movement (miles.)	Prevailing direction.	Max. velocity in miles.
Colon.....	29.829	80.2	89	July 20	72	July 1	92	20.72	16.32	29	5,590	W.	26
*Balboa Heights...	29.836	79.8	90	July 29	70	July 17	92	6.93	7.72	22	4,375	N. W.	33
												N. W.	W.
													July 28

*Formerly Ancón.

Children Playing about Balboa Heights Station.

The attention of parents and others concerned is called to the dangerous practice of various young children in playing about the Balboa Heights station. On account of the numbers of trains, locomotives, and motor cars passing on the tracks of the railroad, on the one side, and the frequent passing of motor busses and automobiles along the rear of the station, this is an especially unsafe place for children, and it is expected that after the attention of parents is drawn to the situation they will not allow small children to go to the station unattended by responsible guardians.

Civil Service Examinations.

Examinations for the following positions are scheduled to be held, probably on October 17, 1915 (date to be left blank in applications): Agricultural Inspector, Philippine service; Aid, Bureau of Standards; Aid, Lighthouse service; Assistant Observer, Weather Bureau; Cadet Engineer and Cadet Officer, Lighthouse service; Civil Engineer and Draftsman, Departmental service; Draftsman, mechanical and draftsman, topographic, Panama Canal service; Draftsman, ship, Navy Department; Engineer, Indian service; Junior Engineer, civil and Junior Engineer, mechanical or electrical, Engineer Department at Large; Junior Engineer, mining, Bureau of Mines; Scientific Assistant, Department of Agriculture; Teacher, Indian service; and Trained Nurse, all services.

Applications should be obtained from and filed with the office of the Civil Service Examiners, Balboa Heights, C. Z. Applications should be filed before September 10, 1915. A card of admission will be sent to each applicant as soon as the questions arrive in this office.

In answer to questions as to residence, applicants must show residence in a State and county thereof of the United States up to the time of taking the examination, or at least to the time of executing the form, a ruling having been made that employes of The Panama Canal can claim residence in the State in which they last resided while temporarily employed on the Isthmus.

W. P. COPELAND,

Secretary, Board of Civil Service Examiners.

Levelman and Transitman Examination.

An examination for promotion to the positions of levelman and transitman will be held in the board room of the Administration Building on Sunday morning, August 15, 1915, at 9 o'clock.

The examination will be divided into three parts consisting of (1) a written test from 9 a. m. to 11.30 a. m., (2) an oral examination from 11.30 a. m. to 12 m., and (3) a statement of the competitor's experience qualifying him for promotion. All competitors will be required to complete the examination before 12.30 p. m.

Applications for entrance should be forwarded to the Office Engineer, Balboa Heights, through the head of applicant's division, before Thursday, August 12, 1915.

Applicants are to bring no books with them to the board room, as all the necessary material will be on hand.

C. J. EMBREE, O. E. MALSURY, A. WILSON, Board of Examiners.

THE CANAL RECORD acknowledges receipt of a booklet, "The Netherlands Colony of Curaçao," containing descriptions of the ports and of the business of the colony.

LABOR FORCE AND QUARTERS IN JULY.

The force report of July 21, 1915, shows the actual working force of The Panama Canal on that date to have been 21,190; of the Panama Railroad, 5,349; and of contractors, 366, a total effective working force of 26,905. This is an increase of eight from the force on June 23, which was 26,897; is 471 more than the force on May 26, which was 26,434; and is 2,090 more than the force on April 21, which was 24,815. As compared with the June report, the report for July 21 shows an increase of 28 gold employes, though the gold force of contractors decreased by one. The silver force decreased by 20, including seven in the forces of contractors.

The gold force on the Isthmus, composed almost exclusively of white Americans, was 3,621, an increase of 28 from the preceding month; an increase of six over the 3,615 employed on May 26; and an increase of 260 from the gold force of 3,361 employed on April 21. The gold force on July 21, amounting to 3,621, was distributed as follows: The Panama Canal, 3,208; the Panama Railroad, 328; contractors, 85. Detailed figures of the employment of the Canal force on the Isthmus follow:

DEPARTMENT OR DIVISION.	SILVER EMPLOYES*											Total silver.	Total gold.	Grand total.	
	Artisan.						Laborers.								
	Monthly.	Special.	22 cents.	18 cents.	15 cents.	12 cents.	Special.	Euro- pean 16 cents.	13 cents.	10 cents.	7 cents.	5 cents.			
Operation and Main- tenance; office & locks	428	....	2	29	51	11	26	16	....	111	....	2	675	165	840
Terminal Construct'n	404	....	74	258	761	206	47	66	291	59	2	22	2,721	272	2,993
Building Division	86	6	312	546	640	21	....	....	350	235	1	11	2,208	198	2,406
Electrical	89	3	29	50	91	41	....	1	2	....	....	....	308	165	473
Municipal Eng.	299	....	44	159	224	167	106	23	88	947	8	41	2,166	93	2,199
Dredging	1,681	1	8	30	73	15	....	1	184	64	....	2	2,059	288	2,347
Mechanical	158	8	99	123	698	623	....	13	50	176	8	6	1,872	876	2,748
Marine Division	134	....	....	....	....	....	12	....	....	....	....	....	145	52	198
Fortifications	66	....	45	72	224	22	1	....	90	198	....	2	720	97	817
General Construct'n	5	....	....	....	1	1	....	1	10	57	1	1	77	2	79
Total	3,350	18	613	1,267	2,672	1,107	192	121	1,065	2,380	20	87	12,892	2,208	15,100
Supply; main office	....	....	....	....	....	....	....	....	....	....	....	....	14	....	14
Commissary	774	....	4	7	13	16	249	1	123	18	....	....	1,205	148	1,353
Subsistence	497	....	3	1	1	2	....	....	....	....	....	....	504	25	529
Quartermaster	782	58	69	68	80	....	28	24	424	857	....	8	2,398	73	2,471
Accounting	23	....	....	....	....	....	....	....	....	....	....	....	23	213	236
Health	397	....	2	4	15	....	11	....	24	354	9	20	836	165	1,001
Executive	119	2	1	2	....	....	....	....	....	....	....	....	124	362	486
Panama Railroad	326	154	69	199	344	991	1,603	72	799	444	5	19	5,021	328	5,349
Contractors	73	1	4	25	29	....	128	....	21	4	....	5	281	85	366
Grand total	6,341	233	765	1,564	3,145	2,116	2,216	218	2,456	4,057	34	139	23,284	3,621	26,905
Month previous	6,343	248	751	1,515	3,233	1,936	2,336	347	1,943	4,461	53	138	23,304	3,593	26,897
Changes	-2	-15	+14	+49	-88	+180	-120	-129	+513	-404	-19	+1	-20	+28	+8

*The wages are stated in United States currency.

QUARTERS.

A summary of the occupation of Government quarters on July 31, 1915, is given below:

PLACE.	Gold.			Europeans.			West Indians.		
	Men	Women	Children	Men	Women	Children	Men	Women	Children
Balboa ¹	861	215	185	122 ²	7	12	1,580 ³	488	633
Ancon	936	408	332	...	...	...	253	18	...
Corozal	209	165	165	13	1	2	295	39	56
Pedro Miguel	204	107	132	10	...	...	228 ⁵	39	46
Paraiso	273	79	95	113	6	23	412	108	110
Culebra ⁶	23	11	21	1	1	7	400 ⁷	261	324
Gambua	20	3	5	...	...	...	105	19	30
Gatun	217	172	214	24	3	6	229	103	105
Cristobal ⁸	963	346	435	76	...	...	1,276 ⁹	184	388
Total	3,706	1,506	1,584	359	18	50	4,778	1,259	1,692

(1) Includes Taboga Island, Naos Island, and Palo Saco. (2) Includes 15 Asiatics. (3) Includes 12 American negroes, 70 Colombians and Panamanians, and two Panamanians on the gold roll. (4) Includes Miraflores. (5) Includes 31 Panamanians. (6) Includes Empire, Las Cascadas, and Bas Obispo. (7) Includes 12 Panamanians. (8) Includes Colon Beach and Colon Hospital. (9) Includes 25 East Indians, 14 colored American citizens, and 95 Panamanians.

Deceased Employes.

Name	Check No.	Native of	Isthmian Residence.	Employed by	Date of death
Davis, Richard	96120	Panama	Panama	P. R. R.	July 30, 1915.
Fletcher, James	90759	Jamaica	Camp Bierd.	P. R. R.	July 30, 1915.
Gayle, James	90502	Jamaica	Colon	P. R. R.	July 31, 1915.
Maloney, Hubert	34479	Barbados	Gatun	Lighthouse Div.	Aug. 2, 1915.

The estates of the abovenamed deceased employes of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

POLICE CENSUS OF THE ZONE.

Shows Decrease of Civil Population, Increase of Military.

A house-to-house canvass of the inhabitants of the Canal Zone, which was made by forces of the Police and Fire Division as of July 10, shows a total population of 29,926. This does not include employees of The Panama Canal or the Panama Railroad Company living in the Republic of Panama, but is strictly an enumeration of the people living in the Canal Zone.

A similar count made between June 16 and 30, 1914, or approximately a year before, enumerated 37,706; the decrease during the period amounted to 7,780, which is slightly over 20 per cent of the population a year ago, or slightly less than 26 per cent of the present population.

As compared with a count made between December 22, 1914, and January 1, 1915, approximately six months before the count of July 10, the recent enumeration shows a decrease of 1,234 from the 31,160 inhabiting the Canal Zone at the first of the year. This is 3.96 per cent of the population at the first of the year, or 4.1 per cent of the present population. During the past six months, however, the people connected with military forces on the Isthmus have increased from 3,793 to 6,443, a gain of 2,650; while the decrease of other inhabitants of the Canal Zone, exclusive of prisoners, has been from 27,215 to 23,371, a loss of 3,844.

In the January count were included 784 inhabitants of the rural Sabanas district and of Pueblo Nuevo, many of whom are now, under the recent boundary convention, within the Republic of Panama; but this is largely offset by the fact that under the realignment of boundary the part of Pueblo Nuevo taken into the Canal Zone has, as of July 10, a population of 655.

The canvass was made by the two police districts—Balboa, from the Pacific to the south bank of the Chagres at Gamboa, and Cristobal, from the limit of the Balboa district to the Atlantic—and by enumerating the military organizations and the prisoners separately.

The Balboa district was found to contain 15,498 persons, a decrease of 3,204, or 17 per cent since the first of the year. The Cristobal district was found to have 7,873 persons, a decrease of 640, or 7½ per cent since the first of the year. Together they had a decrease of 3,844, or 14.12 per cent.

The number of American women in the Canal Zone, in the two districts (in which are not counted those connected with the military forces) was 1,563, an increase of 85 or 5.7 per cent since the first of the year. The American children similarly situated increased from 1,499 to 1,667, a gain of 168 or 11.2 per cent. The women and children connected with the military organizations increased from 96 to 238, or 142, and from 74 to 178, or 104, respectively; increases of 147.8 per cent and 140.5 per cent, respectively. There was one woman prisoner, compared with none six months before.

A detailed summary of the enumeration is given herewith. The total population counted, 29,926, shows a decrease of 31,353 from the maximum population of the Canal Zone, amounting to 61,279, enumerated in the census of 1912. The present population is seen to be less than half that of the Canal Zone approximately three years ago. The tabulation made by the Police and Fire Division follows:

BALBOA DISTRICT.									
Location.	Americans.		All others.		Americans.		All others.		Total.
	Men.	Em- ployes.	Men.	Em- ployes.	Women.	Child- ren.	Women.	Child- ren.	
ANCON.....	842	842	274	269	434	457	77	.....	2,084
Ancon Hospital.....									
Doctors.....	21	21							21
Nurses.....					61				61
Patients.....	46	41	344	265	20	10	42	16	478
Attendants.....			67	67					67
Labor Camps.....			126	126					126
Hotel Tivoli (included in Ancon).....									
PUEBLO NUEVO.....			216	186			218	221	655
NAOS ISLAND.....	7	7	156	156					163
CULEBRA ISLAND.....									
PALO SECO.....	2	1	70	38	1		19	13	105
BALBOA, BALBOA HEIGHTS, AND LA BOCA.....	893	893	1,658	1,658	230	250	504	639	4,174
Quarantine station.....	3	3	13	13	3		3		22
Balboa road.....			17	17			9	8	34
Balboa harbor.....	19	19	77	77					96
Petrolio.....	3		2	2	1	2	4	6	18
Rural district.....			9				2		11
Chorrillo.....			1				1	2	4
COROZAL.....	235	235			200	196	16		641
Asylum.....	2	2	52	52	4	2			60
Doctors.....	2	2							2
Nurses.....	4	4			3				7
Patients.....	8		136				106		250
Attendants.....			22	22			16		38
Labor camps.....			187	187			28	52	267
Rural district.....			82	31			49	52	183
PEDRO MIGUEL.....	181	181	39	39	112	140	21	26	519
Labor camps.....			178	178					178
Rural district, east and west of Canal prism.....	25	24	38	36			17	16	96
PARAISO.....	278	278	246	230	75	88	167	241	1,093
Jamaica Town.....			286	254			172	156	614
Spanish Town.....			225	190			101	75	401
Floating equipment.....	15	15	321	321					336
Labor camps.....			359	359					359
Rural, from Paraíso to Gamboa.....	5	5	79	75		1	17	13	116
CULEBRA.....	6	6	3		2	3	4	2	20
Rio Grande.....			256	198			158	162	576
Enterprise.....			87	87			12	7	106
West Culebra.....	1		20	3	1		7	6	35
Golden Green.....	1		116	29			103	86	306
EMPIRE.....	8	7	127	30	2	2	92	96	327
Lirio camp.....			74	63			71	105	250
Cerro camp.....			87	72			71	84	242
Cunette.....			2				2	2	6
Martimque camp.....	2	2	74	19	2	3	73	75	229
LAS CASCADAS.....	2	2			1				3
BAS OBISPO.....			44	44			23	16	83
GAMBOA.....									
Penitentiary, officers and guards.....	7	7	11	11			6	7	31
Total.....	2,168	2,597	6,161	5,410	1,153	1,148	2,211	2,187	15,498

CRISTOBAL DISTRICT.									
Location.	Americans.		All others.		Americans.		All others.		
	Men.	Em- ployes.	Men.	Em- ployes.	Women.	Child- ren.	Women.	Child- ren.	
GAMBOA.....	19	19	65	65	2	4	15	19	124
Floating equipment.....	4	4	54	54					58
DARIEN.....	12	12	7	7	3	1	3		26
FRIJOLE.....	3	3	44	38	1	4	30	40	122
MONTE LIRIO.....	2	2	104	83	4	7	51	58	226
GATUN.....	204	204			177	215			596
Labor camps.....			249	249			106	128	483
NEW GATUN.....			820	673			530	478	1,828
BOCA MINEL.....			53	53			33	23	109
PUERTO ESCONDIDO.....			24	1			7	6	37
MARAJUAL.....			27	26			5	7	39
MOUNT HOPE.....	5	4	227	123	5	7	123	93	460
CRISTOBAL.....	653	653	45	45	206	274	12		1,190
Folks River.....	19	13	455	402	12	7	276	401	1,170
Camp Bierd.....	13	13	984	984			75	175	1,247
BRACHO.....			13				7	3	23
TORO POINT.....			1	1			3		4
Rural, between Cristobal-Balboa police line and Caribbean Sea.....			116	1			8	7	131
Total.....	934	927	3,288	2,895	410	519	1,284	1,438	7,873

Location.	MILITARY ORGANIZATIONS.					Total.
	Officers.	Soldiers.	Women.	Children.	.....
ANCON—	.....	.....	.....	.....	.....	.....
Headquarters.....	8	19	3	4	.....	34
FORT GRANT.....	18	632	28	9	.....	687
COROZAL.....	4	164	2	1	.....	171
CULEBRA.....	42	1,044	70	51	.....	1,207
EMPIRE.....	45	1,748	72	59	.....	1,924
LAS CASCADAS.....	40	1,675	34	31	.....	1,780
GATUN.....	6	220	7	.....	.....	233
CRISTOBAL.....	5	108	9	10	.....	132
FORT SHERMAN.....	8	230	13	13	.....	264
MARGARITA POINT.....	.....	11	.....	.....	.....	11
Total.....	176	5,851	238	178	.....	6,443

PRISONERS.									
Location.	Americans.		All others.		Americans.		All others.		Total.
	Men.	Em- ployes.	Men.	Em- ployes.	Women.	Child- ren.	Women.	Child- ren.	
BALBOA.....	.....	.....	13	.....	.....	.....	1	.....	14
PEDRO MIGUEL.....	2	.....	19	.....	.....	.....	.....	.....	21
GAMBOA.....	.....	.....	1	.....	.....	.....	.....	.....	1
Penitentiary.....	1	.....	57	.....	.....	.....	.....	.....	58
GATUN.....	.....	.....	2	.....	.....	.....	.....	.....	2
CRISTOBAL.....	.....	.....	16	.....	.....	.....	.....	.....	16
Total.....	3	.....	108	.....	.....	.....	1	.....	112

RECAPITULATION.

Location.	Americans.		All others.		Americans.		All others.	
	Men.	Em- ployees.	Men.	Em- ployees.	Women.	Child- ren.	Women.	Child- ren.
BALBOA DISTRICT.....	2,618	2,597	6,181	5,410	1,153	1,148	2,211	2,187
CRISTOBAL DISTRICT.....	934	927	3,288	2,803	410	519	1,284	1,438
	<i>Officers.</i>		<i>Soldiers.</i>		<i>Women.</i>		<i>Children.</i>	
MILITARY ORGANIZATIONS.....	176		5,851		238		178	
PRISONERS.....	3		108				1	
Total.....	3,555	3,524	9,577	8,213	1,563	1,667	3,496	3,625
								29,926

NOTE.—The figures shown above for military organizations include all officers and soldiers in the Canal Zone, whether on duty at military posts or in hospital.

OFFICIAL CIRCULARS.

Estimates for Fiscal Year Ending June 30, 1917.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., August 3, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

1. Detailed estimates for all departments and divisions for the fiscal year ending June 30, 1917, for submission to Congress, will be forwarded in sextuplicate, direct to the Auditor on or before September 15, 1914.

2. The estimates must be prepared and submitted in accordance with Section 6 of the sundry civil appropriation Act for the fiscal year 1915, approved August 1, 1914, reading as follows:

"Sec. 6. That for the fiscal year nineteen hundred and sixteen and annually thereafter the estimates of appropriations for the Panama Canal shall be submitted in detail showing the amounts required for personal services and the amounts required for material, including all supplies, under the heads of construction, maintenance, operation, sanitation, and civil government, and following each there shall be submitted notes giving in parallel columns information which will show the number, by grade and classes, of officers, employees, and skilled and unskilled laborers proposed to be paid under each of said appropriations for the ensuing fiscal year and those paid at the close of the fiscal year next preceding the period when said estimates are prepared and submitted; also, in connection with each item for material and miscellaneous purposes other than salaries or pay for personal services, the amounts actually expended or obligated, quantities purchased, and prices paid for material or supplies during the entire fiscal year preceding the preparation and submission of said estimates.

"There shall also be submitted in connection with the foregoing information, statements of actual unit cost of all construction work done, and of estimated unit cost of work proposed to be done, for the fiscal years included in the notes so required to be submitted with the annual estimates."

3. The estimates must be submitted under each of four heads—"Construction," "Maintenance and Operation," "Sanitation," and "Civil Government." Operation and maintenance divisions that will do construction work must specify the items of construction work that they will perform, the amount that will be charged for such work, and the proportion of labor, material, and indirect charges to be charged by them to construction.

4. The estimates for salaries and wages of officers and employees and skilled and unskilled labor will be prepared on form P. C. 279-Rev; the estimates for material, supplies, plant, equipment, and miscellaneous items will be prepared on form P. C. 280-Rev.

5. The estimates for salaries and wages will be arranged in the order in which they were included in the estimates for 1916. The form of the estimates for 1916 should be followed exactly.

6. Under "Organization paid June 30, 1915" the exact organization should be shown as it existed at that time.

7. If an increase in any item is submitted, either in number of employees or rates of pay, concise reasons for the increase must be given on a separate statement.

8. Each sheet should be totaled separately both as to number of men and amount. Where more than one is used for the estimate, the total of each sheet will be carried to a summary statement on a separate sheet.

9. Overtime will be estimated for separately as a lump sum item.

10. In addition to the items of material and supplies estimated for on form P. C. 280, there will be submitted an estimate for the following items:

(a) Purchase, maintenance, repair, and operation of motor-propelled or horse-drawn passenger carrying vehicles, with an explanation of the amount required, the public purposes for which the vehicles are intended, and the officials or employees by whom the same are to be used.

(b) Equipment, item by item.

(c) Freight transportation furnished by the Panama Railroad.

(d) Telephone service.

(e) Traveling expenses.

(f) Work to be performed by other departments and divisions, specifying each department or division separately and the character of the work to be done.

11. In addition the estimates will be accompanied by a statement of the work to be performed for other departments and divisions. This statement, as well as the statement of work to be performed by other departments and divisions, should only be submitted after an agreement is reached as to the character of the work to be done and the amount to be charged therefor.

12. The estimates for construction work will be accompanied by a statement showing the estimated cost of the proposed work to be done, compared in parallel columns with the actual cost of similar construction work during the fiscal year 1915.

13. Under Section 3 of the sundry civil appropriation Act approved June 23, 1913, the Auditor has been designated to supervise the compilation and classification of all estimates for the Panama Canal, and he should be consulted if these instructions are not understood. Before the estimates are typewritten the Auditor should be consulted as to the form so as to make it unnecessary to rewrite them in his office.

CHESTER HARDING,
Acting Governor.

Leave Regulations—Deferred Annual Leave.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., July 30, 1915.

CIRCULAR NO. 602-14:

In the case of those employees whose cumulative leave plus annual leave has been deferred for the good of the service beyond the four months period within which the regulations require such leave to be taken, the deferred annual leave may not be carried longer than nine months after the close of the employee's service year, and heads of departments and divisions should make every effort, if the employee desires to go on leave within that time, to permit him to do so. The employee should in such cases, for his own protection, have a definite written understanding with the head of his department or division in regard to his leave. If, however, the deferred cumulative and annual leave is not taken within the nine months, the annual leave will be forfeited.

GEO. W. GOETHALS,
Governor.

Acting Officials of Panama Railroad.

THE PANAMA CANAL,
EXECUTIVE OFFICE

BALBOA HEIGHTS, C. Z., August 4, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective July 31, 1915, and during the absence of Mr. Charles H. Motsett on leave, Mr. Samuel W. Heald will act as Superintendent of the Panama Railroad Company.

During the absence of Mr. Motsett the duties now performed by Mr. Heald as Master of Transportation will be assumed by Mr. William F. Foster, and the duties now performed by Mr. Foster as terminal trainmaster will be assumed by Mr. Charles W. Penman.

GEO. W. GOETHALS,
President.

Assistant Engineer in Charge of Pacific Terminal Construction.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,

BALBOA HEIGHTS, C. Z., July 31, 1915.

To all concerned—Effective August 3, Mr. H. D. Hinman is appointed Assistant Engineer in charge of construction, field engineering, and inspection, Pacific terminals subdivision, Division of Terminal Construction, vice General Superintendent J. A. Walker, resigned.

H. H. ROUSSEAU,
Approved: Engineer of Terminal Construction.
GEO. W. GOETHALS,
Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 3, 1915.

CIRCULAR NO. 100:

Effective this date, Mr. H. D. Hinman is designated an accountable official of The Panama Canal, vice Mr. J. A. Walker, and as such will account for all non-expendable property in the service of the Division of Terminal Construction at the Pacific terminals.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:

CHESTER HARDING,
Acting Governor.

In Charge of Obsolete Store and Supply Department Operations at Atlantic Docks.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,

BALBOA HEIGHTS, C. Z., August 5, 1915.

To all concerned—Effective today Mr. R. B. Groves will be in charge of the obsolete store at Mount Hope, vice Mr. E. O. Bratt, transferred.

Mr. A. W. Degenaar will be in charge of the Supply Department operations on Cristobal-Colon docks as inspector, vice Mr. R. B. Groves.

WM. R. GROVE,
Chief Quartermaster.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 5, 1915.

CIRCULAR NO. 101:

Effective at once, Mr. R. B. Groves is designated an accountable official of The Panama Canal, vice Mr. E. O. Bratt, and as such will account for all material, equipment, and supplies carried in stock at the obsolete storehouse. Nonexpendable property in use at the obsolete storehouse and in the scrap yards will be carried on the property records of the district quartermaster, Cristobal.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:

CHESTER HARDING,
Acting Governor.

Acting General Foreman of Machine Department of Balboa Shops.

THE PANAMA CANAL,
MECHANICAL DIVISION,

BALBOA HEIGHTS, C. Z., August 5, 1915.

To all concerned—Effective August 5, and during the absence of Mr. S. G. Shearer, general foreman, machine department, Balboa shops, on leave, Mr. C. S. Perry will act a general foreman of this department.

J. J. EASON,
Assistant Superintendent, Mechanical Division.

Approved:

D. C. NUTTING,
Superintendent.

Typewriters and Numbering Machines.

THE PANAMA CANAL,
SUPPLY DEPARTMENT

BALBOA HEIGHTS, C. Z., August 2, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

The storekeeper at Balboa advises that he has requisitions for three typewriters which he is unable to fill on account of none being available in the storehouse. There are also no numbering machines available for issue.

It is believed that there are a number of typewriters and numbering machines on the Isthmus that are not in use and it is requested that the heads of departments and divisions turn any extra machines they may have over to the Mechanical Division to be overhauled and returned to stock at Balboa storehouse in order to avoid, if possible, the purchase of additional typewriters and numbering machines.

WM. R. GROVE,
Chief Quartermaster.

To Act as Land Agent.

THE PANAMA CANAL,
EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., August 4, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS:

During the absence on leave of Mr. R. S. Carlson, Mr. Walter F. Van Dams is designated to act as Land Agent, effective August 5, 1915.

By direction of the Governor.

C. A. McILVAINE,
Executive Secretary.

COMMISSARY DEPARTMENT.

Cold Storage Prices.

For the benefit of shipping interests as well as of the local patrons of the commissary branch of the Supply Department, there is published below the retail cold storage price list, effective August 12 and subject to change each week. This list and the wholesale price list for fresh meats indicate the costs of all cold storage goods. The price list for groceries at retail which is now in effect was published in THE CANAL RECORD of July 28, 1915, covering four pages. Copies of this list may be obtained on application, by mail or from the boarding officers who visit incoming ships. These lists are published in order that the shipping interests may be kept informed of the facilities afforded by The Panama Canal for meeting the needs of vessels in the way of supplies.

The prices are increased by 10 per cent for sales of commercial and foreign naval vessels, and by 20 per cent for sales to yachts:

The following is a list of retail prices of cold storage provisions which will be effective August 12, 1915:

FRESH MEATS.

	Price.
Mutton—Stewing, per pound.....	9
Shoulder, trimmed, (not less than 5 pounds) per pound.....	12
Leg (8 to 10 pounds), per pound.....	19
Short cut, chops, per pound.....	23
Shoulder, chops, per pound.....	14
Lamb—Stewing, per pound.....	12
Shoulder, trimmed, per pound.....	15
Leg (5 to 8 pounds), per pound.....	24
Chops, per pound.....	29
Chops, shoulder, per pound.....	18
Veal—Stewing, per pound.....	12
Shoulder, for roasting (not under 5 lbs.), per pound.....	15
Chops, shoulder, per pound.....	20
Chops, per pound.....	30
Loin, for roasting, per pound.....	30
Cutlets, per pound.....	36
Beef—Suet, special, per pound.....	3
Soup, special, per pound.....	7
native, per pound.....	5
Soup, bones, special, per pound.....	2 1/2
Stew, special, per pound.....	11
native, per pound.....	8
Pate, special, per pound.....	12
native, per pound.....	8
Chuck roast, special (3 lbs. and over), per pound.....	12
Chuck roast, native (3 lbs. and over), per pound.....	8
Rib roast, second cut (not under 3 1/2 pounds), special, per pound.....	16
Rib roast, second cut, native (3 1/2 pounds and over), per pound.....	9
Rib roast, first cut (not under 3 pounds), special, per pound.....	19
Rib roast, first cut, native (3 pounds and over), per pound.....	11
Pot roast, special, per pound.....	20
native, per pound.....	12
Rump roast, special, per pound.....	20
native, per pound.....	12
Porterhouse roast, special, per pound.....	22
choice, per pound.....	31
native, per pound.....	16
Steak, chuck, special, per pound.....	13
native, per pound.....	9
Round, bottom, special, per lb.....	13
native, per lb.....	9
Round, top, special, per pound.....	15
native, per pound.....	10
Sirloin, special, per pound.....	20
native, per pound.....	12
Sirloin, choice cut, special, per pound.....	23
Sirloin, choice cut, native, per lb.....	16
Rump, special, per pound.....	20
native, per pound.....	12
Porterhouse (not less than 1 1/2 pounds), special, per pound.....	23
Porterhouse (not less than 1 1/2 pounds), choice, per pound.....	34
Porterhouse (1 1/2 pounds and over), native, per pound.....	17
Porterhouse, short, Delmonico special, per pound.....	20
Porterhouse, short, Delmonico choice, per pound.....	28
Porterhouse, short, native, per lb.....	12
Tenderloin, Western, special, per pound.....	35
NOTE.—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders packed with commissary storekeepers before 11 a. m. will be shipped for delivery on the following morning.	
Pork—Hams, fresh, per pound.....	\$23
Shoulders, fresh, per pound.....	\$19
Loin, chop, or roast, per pound.....	18

Spare ribs, per pound.....	Price. 10
Pigs' feet, fresh, per pound.....	5
Pigs' heads, fresh, whole, 1/2 head.....	83
Sausage, home made, per pound.....	42
Ox tails, per pound.....	23
Beef tongue, native, whole, per pound.....	9
	20

MISCELLANEOUS.

Brains, calves, per pound.....	8
Calves' heads, each.....	80
Kidneys, beef, per pound.....	11
Livers—Beef, per pound.....	9
Calf, per pound.....	24
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	12
Frankfurter, per pound.....	12
Frankfurter, imported, tin.....	11
Lieberwurst, per pound.....	10
Pork, per pound.....	14
Sweetbread, beef, per pound.....	17
Eggs, fresh, per dozen.....	29
per 1/2 dozen.....	15
Bloaters, fancy, each.....	5
Bluefish, per pound.....	14
Haddock, smoked, per pound.....	12
Halibut, fresh, per pound.....	12
Salmon, per pound.....	11
Whitefish, smoked, per pound.....	20
Yeast, per pound.....	31
per cake.....	2
Pates de foies gras, per jar.....	58

CURED AND PICKLED MEATS.

Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Native, per pound.....	12
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Minced, "Bologna style," per pound.....	14
Shoulders, sugar cured, boneless, whole, per pound.....	17
Sugar cured, boneless, whole, per pound.....	21
Half, per pound.....	23
Sliced, per pound.....	27
Whole, boiled, per pound.....	27
Half, boiled, per pound.....	29
Sliced, boiled, per pound.....	35
Bacon—Breakfast, sliced, per pound.....	29
Whole, piece, per pound.....	28
Strips, whole, per pound.....	22
Sliced, jar.....	30
Sliced, tins.....	27
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	13
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, per pound.....	7
Tongues, per pound.....	22

DAIRY PRODUCTS.

Butter—Creamery, special, per pound.....	38
Creamery, 60-62 lb tub, whole tub, per pound.....	37
Sheffield Farms, extra fancy, per lb.....	58
Oleomargarine, per pound, carton.....	29
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	23
Swiss, per pound.....	34
Edam, each.....	1.15
Edam, tin.....	38
Parmesan, per pound.....	26
Gouda, per pound.....	9
Snappy, per cake.....	**15
Milk, Sheffield Farms, per quart.....	**25
Fermilac, bottle.....	**25
Ice cream, quart.....	**25
1/2-gallon.....	**50
Cream, 30 per cent, quart.....	**45
pint.....	**25
3-pint.....	**15

POULTRY AND GAME.

Chickens—Fancy, roasting, milk fed, per pound.....	29
Chickens—Fancy, roasting, corn fed, per pound.....	26
Fowls, per pound.....	24
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	23
Capons, per pound.....	32
Broilers, milk fed, per pound.....	29
Broilers, corn fed, per pound.....	27
Turkeys, per pound.....	26
Squabs, each.....	33
Geese, per pound.....	17
Grouse, each.....	1.00
Mallard ducks, 2 to 2 1/2 pounds, each.....	2.35
Pheasants, each.....	1.35

VEGETABLES.

Beets, per pound.....	2
Cabbage, per pound.....	1 1/2
Carrots, per pound.....	2
Celery, per head.....	*5
Cucumbers, per pound.....	2 1/2
Egg plant, per pound.....	1 1/2
Lettuce, per pound.....	6
Onions, per pound.....	2 1/2
Peppers, green, per pound.....	1 1/2
Plantains, per dozen.....	15
Potatoes, white, per pound.....	2
Potatoes, sweet, per pound.....	2 1/2
Squash, per pound.....	2
Turnips, per pound.....	2
Tomatoes, per pound.....	6
Yams, Lucca, per pound.....	3

FRUITS.

	Price.
Grape fruit, tropical, each.....	3 1/2
Lemons, per dozen.....	13
Limes, per 100.....	*32
Oranges—Select, each.....	*4
Tropical, per dozen.....	*16
Coconuts, each.....	4
Bananas, per bunch.....	38
Bananas, each.....	1/2
Apples, evaporated, per pound.....	12
Apricots, evaporated, per pound.....	12
Pears, evaporated, per pound.....	23
Peaches, evaporated, per pound.....	16
Pineapples, each.....	10
Figs, dried, 12-oz. packages.....	14
Figs, dried, 5-oz. packages.....	5
Raisins, seedless, package.....	11
table, cluster, per pound.....	20
Currants, cleaned, package.....	12
Prunes, stewing, per pound.....	10
Watermelons, each.....	*38
Plums, per pound.....	*7
Peaches, fresh, per pound.....	6
Pears, fresh, per pound.....	6

* Indicates advance from preceding list.

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

‡ Sold only from commissaries, no orders taken for delivery.

§ Not less than 1/2 ham or 1/2 shoulder of fresh pork will be sold.

Commissary Hours.

The open hours of the various commissary stores are as follows:

The commissary stores at Las Cascadas, Empire, Culebra, and Toro Point are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 p. m. to 6 p. m.

The gold departments of the Cristobal commissary store open at 2 p. m. on Saturdays and other sailing days of Panama Railroad vessels.

Wholesale Prices of Fresh Meats.

The following is the wholesale price list No. 206, effective June 24, 1915, and in force until further notice. This list will govern, whether meat is sold from commissaries or from cold storage. The following prices will be increased by 10 per cent in cases of sales to commercial ships and foreign naval vessels, and by 20 per cent in cases of sales to yachts:

1. Beef hinds, No. 1.....	per lb. \$0.19 1/2
2. Beef hinds, No. 2.....	per lb. .15
3. Beef hinds, native.....	per lb. .09 1/2
4. Beef fores, No. 2.....	per lb. .12
5. Beef fores, native.....	per lb. .08 1/2
6. Beef, whole round or leg, No. 1.....	per lb. .14 1/2
7. Beef, whole round or leg, No. 2.....	per lb. .11
8. Beef, whole round or leg, native.....	per lb. .07
9. Beef ribs, No. 1.....	per lb. .24
10. Beef ribs, No. 2.....	per lb. .16
11. Beef ribs, native.....	per lb. .10
12. Beef, short loins, No. 1.....	per lb. .25
13. Beef, short loins, No. 2.....	per lb. .19
14. Beef, short loins, native.....	per lb. .15
15. Beef, rumps, No. 1.....	per lb. .20 1/2
16. Beef, rumps, No. 2.....	per lb. .17
17. Beef, rumps, native.....	per lb. .12
18. Lamb carcasses.....	per lb. .18
19. Mutton carcasses.....	per lb. .14 1/2
20. Pig carcasses.....	per lb. .15 1/2
21. Pork, loin chops or roast.....	per lb. .16 1/2
22. Veal carcasses.....	per lb. .18
23. Veal leg.....	per lb. .24

† Indicates reduction from last list.

Above prices do not include cost of special trimming required by U. S. Army or U. S. Navy.

The prices quoted in current retail cold storage list will govern for all other items not included in above.

Powder, Curry, 4-oz. Bottle.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,

CRISTOBAL, C. Z., August 4, 1915.

BULLETIN No 262:

To all concerned—This item was quoted in retail grocery price list No. 1 at five cents, whereas the correct price was eight cents up to and including July 31, 1915.

Price change No. 654, effective August 1, changes price from five cents to seven cents.

Please correct this to read eight cents to seven cents, Commissary managers will take credit adjustment accordingly.

BENJ. L. JACOBSON,
Depot Commissary.

Taboga Launch Service.

Leave Balboa dredge landing—Daily, except Thursday; at 5.30 p. m.: Monday, Thursday, Saturday, and Sunday, at 9.40 a. m.

Leave Taboga—Daily, except Friday, at 7 a. m. (On Mondays and days following holidays, one hour earlier); Monday, Thursday, and Saturday at 1.30 p. m.; Sunday at 7.15 p. m. The 9.40 a. m. trips from Balboa await the arrival of Panama Railroad trains.

Proposals for Excavating and Loading 500,000 Cubic Yards of Rock in Sosa Hill for East Breakwater.

Sealed proposals will be received at the office of the Chief Quartermaster, Balboa Heights, C. Z., until 10 a. m., August 28, 1915, and then opened, for the excavation of 500,000 cubic yards, more or less, of rock for the East Breakwater. Specifications and forms of contract, proposal, and bond, may be obtained upon written application to the Chief Quartermaster, Balboa Heights.

Bids must be accompanied by cash or certified check made payable to the Collector of The Panama Canal in the sum of \$5,000 as a guarantee that the bidder will, if required by The Panama Canal, enter into a contract with satisfactory bond, certified check, or cash in the sum of \$10,000 as security for the faithful performance of the work covered by the contract. If the bidder to whom award is made fails or refuses to enter into contract with satisfactory security as required the amount deposited will become payable to The Panama Canal as liquidated damages. Deposits will be returned to unsuccessful bidders upon rejection of their bids. The Panama Canal reserves the right to accept any bid, and to reject any or all bids.

Bids should be marked "Proposal for excavation of 500,000 cubic yards of rock for the East Breakwater," and addressed to the Chief Quartermaster, Panama Canal, Balboa Heights, C. Z.

Rainfall from July 1 to 31, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.
<i>Pacific Section—</i>	<i>Ins.</i>		<i>Ins.</i>
Balboa	1.21	20	6.66
Balboa Heights	1.13	20	6.93
Miraflores	1.58	12	8.14
Pedro Miguel	1.58	18	8.59
Rio Grande	2.27	19	10.24
<i>Central Section—</i>			
*Culebra	2.40	31	12.99
*Camacho	2.54	31	12.06
Empire	2.35	31	12.17
Gamboa	1.49	20	8.03
*Juan Mina	3.76	8	13.50
Alhajuela	5.33	8	15.71
*El Vigia	3.79	8	17.74
Frijoles	2.95	21	20.10
*Trinidad	1.80	21	13.61
*Monte Lirio	2.25	29	15.73
<i>Atlantic Section—</i>			
Gatun	3.82	1	18.21
*Brazos Brook	2.53	1	21.24
Colon	6.30	1	20.72
*Bocas del Toro	1.01	21	7.59

Rainfall from August 1 to 7, 1915, Inclusive.

STATIONS.	Ins.	Date.	Ins.
<i>Pacific Section—</i>			
Balboa .....	.49	3	.51
Balboa Heights .....	.99	3	1.03
Miraflores .....	.85	3	1.69
Pedro Miguel	1.07	6	2.04
Rio Grande	1.17	6	1.88
<i>Central Section—</i>			
Culebra .....	.74	1	1.90
*Camacho .....	.64	6	1.57
Empire .....	.70	6	1.66
Gamboa .....	.38	3	1.04
*Juan Mina .....	.65	6	2.06
Alhajuela .....	.92	6	2.84
*El Vigia	1.30	4	3.32
Frijoles .....	.30	2	.84
*Trinidad			
*Monte Lirio .....	.95	3	2.25
<i>Atlantic Section—</i>			
Gatun	1.25	4	2.61
*Brazos Brook .....	.82	7	2.31
Colon	1.00	6	2.16

*Standard rain gage—readings at 5 p. m. daily.
Automatic rain gage at unstarred stations—values midnight to midnight.

Misdirected Letters.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressees:

Andrews, Wm. Whitney	Meirdek, E. J. (2)
Arnold, Walter	Morris, Miss Esther
Barnes, W. C.	Orcutt, Raymond R.
Broadhurst, J. F.	O'Rourke, Miss M.
Burger, Edgar	Pentz, A. W.
De Lills, Tony	Powers, J. H.
Forsberg, Carl	Sneeegrass, Hugo
Holmelin, Charles	Scott, Harry
Jones, Whalen	Singh, S. Diwan
Keeler, W. H.	Stewart, James A.
King, J. F.	Upshur, Captain Alfred P.
Lord, George E.	Ware, Wm.
Manase, J.	

LETTERS OF WEEK ENDING AUGUST 4.

*Beck, W. J.	Irwin, Gordon
Cannon, John	Joseph, Dr. Morris
Carlozzi, Charles	Miller, A. C.
Chapman, Mrs. F. H.	Morgan, William
Colgan, James	Morris, Thomas C.
Dreghorn, Matthew	Otis, Clay
Fletcher, Capt. Harry	†Peters, Bert
Gales, Harry	Raphael, Edward
†Harvey, Mrs. F. J.	Vincent, Peter

* Special delivery. † Card.

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in this table:

AUGUST.				
DATE.	Time and height of high and low water.			
Wed., Aug. 11.....	4:04	10:05	16:12	22:25
	14.2	1.6	14.4	0.5
Thurs., Aug. 12....	4:37	10:45	16:47	22:57
	14.9	1.0	14.9	0.1
Fri., Aug. 13.....	5:10	11:22	17:23	23:39
	15.5	0.4	15.1	-0.1
Sat., Aug. 14.....	5:44	12:01	17:59	.....
	15.8	0.2	15.2	.....
Sun., Aug. 15.....	0:16	6:19	12:41	18:38
	0.1	15.9	0.2	14.9
Mon., Aug. 16.....	0:56	6:57	13:26	19:20
	0.4	15.7	0.5	14.4
Tues., Aug. 17.....	1:40	7:40	14:13	20:08
	1.1	15.2	1.0	13.7
Wed., Aug. 18.....	2:30	8:30	15:08	21:06
	1.9	14.4	1.7	12.9
Thurs., Aug. 19....	3:29	9:31	16:12	22:17
	2.7	13.7	2.3	12.3
Fri., Aug. 20.....	4:37	10:46	17:24	23:41
	3.3	13.1	2.5	12.2
Sat., Aug. 21.....	5:54	12:09	18:38	.....
	3.3	13.1	2.1	.....
Sun., Aug. 22.....	1:02	7:07	13:26	19:42
	12.8	2.8	13.6	1.4
Mon., Aug. 23.....	2:09	8:11	14:29	20:38
	13.8	2.0	14.3	0.6
Tues., Aug. 24.....	3:05	9:05	15:22	21:30
	14.7	1.2	15.0	0.0
Wed., Aug. 25.....	3:52	9:55	16:08	22:15
	15.5	0.4	15.5	-0.4
Thurs., Aug. 26.....	4:35	10:39	16:51	22:57
	16.0	-0.1	15.6	-0.4
Fri., Aug. 27.....	5:13	11:21	17:31	23:38
	16.0	-0.1	15.4	0.0
Sat., Aug. 28.....	5:51	12:01	18:09	.....
	15.7	0.2	14.9	.....
Sun., Aug. 29.....	0:17	6:27	12:41	18:47
	0.6	15.0	0.8	14.1
Mon., Aug. 30.....	0:57	7:02	13:21	19:24
	1.5	14.2	1.6	13.2
Tues., Aug. 31.....	1:37	7:38	14:04	20:00
	2.6	13.3	2.6	12.2

SEPTEMBER:

DATE.	Time and height of high and low water.			
Wed., Sept. 1.....	2:21	8:47	14:51	20:52
	3.6	12.3	3.5	11.2
Thurs., Sept. 2....	3:12	9:06	15:49	21:55
	4.6	11.4	4.3	10.5
Fri., Sept. 3.....	4:13	10:15	16:55	23:21
	5.3	10.9	4.6	10.3
Sat., Sept. 4.....	5:24	11:40	18:05	.....
	5.4	10.8	4.4	.....
Sun., Sept. 5.....	0:39	6:30	12:53	19:06
	10.7	5.0	11.2	3.8
Mon., Sept. 6.....	1:37	7:30	13:48	19:54
	11.5	4.2	12.1	2.9
Tues., Sept. 7.....	2:20	8:17	14:30	20:38
	12.6	3.1	13.0	1.9
Wed., Sept. 8.....	2:56	8:58	15:08	21:16
	13.7	2.0	14.0	1.0
Thurs., Sept. 9....	3:31	9:38	15:45	21:54
	14.7	0.9	14.8	0.2
Fri., Sept. 10.....	4:04	10:16	16:21	22:31
	15.6	0.0	15.5	-0.3
Sat., Sept. 11.....	4:34	10:54	16:58	23:10
	16.3	-0.6	15.8	-0.5
Sun., Sept. 12.....	5:12	11:35	17:36	23:48
	16.6	-0.9	15.9	-0.4
Mon., Sept. 13.....	5:51	12:16	18:15	.....
	16.6	-0.8	15.6	.....
Tues., Sept. 14....	0:32	6:31	13:00	19:00
	0.1	16.2	-0.2	14.9
Wed., Sept. 15....	1:18	7:16	13:49	19:49
	0.9	15.4	0.6	14.0

The tides are placed in order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic Charts for this region, and which is 8.0 feet below mean tide level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered

consecutively from 0h (midnight) to 23h (11 p. m.). All hours greater than 12 are in the afternoon (p. m.), and when diminished by 12 give the usual reckoning. For instance, 15:47 is 3:47 p. m.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, August 7, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gamboa.	Gatun Lake.	Miraflores Lake.
Sun., Aug. 1.....	127.10	93.36	86.10	86.06	54.30
Mon., Aug. 2.....	127.65	93.75	86.06	86.05	54.30
Tues., Aug. 3.....	129.15	94.80	86.21	86.06	54.44
Wed., Aug. 4.....	128.80	94.62	86.10	86.06	54.34
Thurs., Aug. 5.....	127.05	93.50	86.14	86.05	54.20
Fri., Aug. 6.....	132.25	97.10	86.16	86.08	54.39
Sat., Aug. 7.....	130.30	96.30	86.08	86.04	54.39
Heights of low water to nearest foot.....	125.0	91.0			

July Rainfall for Three Years.

STATIONS.	1913	1914	1915	Station Av.	Years of record	Rainy days '15
<i>Pacific Section—</i>	<i>Ins.</i>	<i>Ins.</i>	<i>Ins.</i>	<i>Ins.</i>		
Balboa	4.22	5.00	6.66	8.11	19	20
Balboa Heights	4.85	4.32	6.93	7.72	19	22
Miraflores	5.41	4.81	8.14	7.88	7	24
Pedro Miguel	6.80	7.15	8.59	8.51	8	25
Rio Grande	5.74	5.80	10.24	10.01	11	28
<i>Central Section—</i>						
Culebra	5.52	5.28	12.99	9.33	24	28
Camacho	4.01	4.94	12.66	9.58	9	25
Empire	4.87	5.02	12.17	8.78	11	30
Gamboa	8.06	3.91	8.03	10.12	35	28
Juan Mina	6.99	9.72	13.50	9.73	5	31
Alhajuela	6.99	7.21	15.71	12.65	17	29
El Vigia	6.32	8.23	17.74	12.04	7	30
Frijoles	6.52	4.06	20.16	10.14	4	28
Trinidad	8.36	2.42	13.61	9.00	8	27
Monte Lirio	8.70	3.54	15.73	12.33	8	25
<i>Atlantic Section—</i>						
Gatun	9.73	4.28	18.21	11.98	11	28
Brazos Brook	11.51	10.30	21.24	16.12	10	31
Colon	15.13	10.74	20.72	16.32	45	29

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans, for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.*

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

NOTE.—The sailings on Monday, August 23, and September 20, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7:10 a. m., connects with the despatches for the two sailings mentioned above.

Coal is supplied to vessels at both Cristobal and Balboa, at the rate of between 400 and 650 tons per day. Present prices are: At Cristobal, from lighters, trimmed in bunkers, or from cars alongside wharf, handled by ship's gear, per ton, \$5.40; use of steam hoist and crane per hour, \$1; at Balboa, the price is \$1 more per ton, either form of delivery.

Sailings of Vessels in Regular Service with the United States.

	Sails.	Arrives.
NEW YORK TO CRISTOBAL-COLON.		
Santa Marta.....	U. F. C. Aug. 4.....	Aug. 11
Advance.....	P. R. R. Aug. 5.....	Aug. 12
Metapan.....	U. F. C. Aug. 7.....	Aug. 16

(Continued on page 450.)



The Canal Record

Official publication of The Panama Canal.

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All subscriptions expire on December 31. Domestic subscriptions are accordingly charged as beginning from the first of the quarter of the year in which received. Remittances should be made to pay only to December 31, on this basis: Sent between July 1 and October 1, 50 cents; between October 1 and January 1, 25 cents. For foreign subscriptions the year is divided into thirds; and remittances for the remainder of this year should be: Between May 1 and September 1, \$1; between September 1 and January 1, 50 cents.

Remittances for subscriptions may be forwarded to The Panama Canal, Washington, D. C., or to The Canal Record at the address given below.

Address all Communications,

THE CANAL RECORD,

Balboa Heights, Canal Zone,
Isthmus of Panama.

NOTES OF PROGRESS.

Peruvian Line Establishing New Service.

With the transit of the steamship *Ucayali* through the Canal on Wednesday, August 11, on the way from Mollendo to Cristobal, the Peruvian Line (Compañia Peruana de Vapores y Dique del Callao) is establishing a service between the Atlantic terminus of the Canal and the west coast of Ecuador and Peru. The line will carry both passengers and cargo and will have a sailing each way every 14 days. Sailings from Colon will be on Mondays, from Balboa on Tuesdays.

The establishment of a regular service between Baltimore and Peruvian ports by this line is in abeyance. Three vessels of the company have made the voyage from Baltimore to Peru, laden principally with coke, but that the service will be continued has not been determined.

Hamburg-American Building Nearly Finished.

The office building of the Hamburg-American Line on the water front at Cristobal, which was begun in June, 1914, but upon which work was suspended after the outbreak of the European war, is nearing completion, and the offices of the line in Colon will probably be moved into it by the end of this month.

The building is a two-story structure of substantial proportions, built in a strict Roman Tuscan style of architecture. The most striking feature is the massive Tuscan columns, 24 in all, supporting the roof and the wide second story balcony which surrounds the building on all sides. Each column consists of a 15-foot shaft, two and one-half feet in diameter, resting on a pedestal five feet 10 inches high, and approximately three and

one-half feet on the sides. The building is 105 feet long by 71 feet wide in outside plan measurements, while the interior length and width are 67 feet 10 inches and 33 feet six inches, respectively.

The ground floor will be used for office purposes, the second floor for employees' quarters. To the right and left as one enters from the front are the freight and passenger departments, respectively; in the rear are the manager's office and record rooms. Near the center is a fire-proof vault, on the front of which is an indented panel, intended to frame a painting to be sent from Germany. The counters, partitions, doors, and other woodwork are of solid mahogany. The ceiling is of asbestos board, set in rectangular squares between exposed beams and rafters. The floor is paved with mosaic tile. Access to the second floor is given at each end of the building by an interior spiral stairway, built of concrete.

The exterior of the building is finished in a light buff stucco. On the street and sea sides of the building, in the triangular space below the roof, are the words "Hamburg-Amerika Linie" in raised block letters, surmounted by the shield with the letters "H. A. P. A. G." which is the emblem of the line.

The "La Habra's" Narrow Escape from Destruction.

The oil tank steamship *La Habra* of the fleet of the Union Oil Company of California passed through the Canal on August 12, in returning from England after an experience unusual for a vessel of her class. On the outward voyage the *La Habra* was loaded with 8,597 tons of naphtha and benzine, from Talara for London, with which she passed through the Canal on January 18. Fire broke out, presumably from a short circuit in the pump room, while the vessel was in the north Atlantic, wallowing through a heavy sea. The contents of several of the compartments caught fire, and the crew began to take to the boats, believing the vessel doomed. But as the tanks exploded the heavy seas breaking over the vessel washed in through the tank cover apertures, and the water floated the oil out and thus extinguished the fire. The *La Habra*, considerably damaged, made her way to port and went into dry dock. Five of the crew who had taken to a boat were lost through the breaking of a cable; but of those who had remained on the ship, clinging to the rails while waiting for the end, none were lost.

The *La Habra* is one of the largest of the 25 oil carriers of the company, having a capacity of 72,000 barrels, equalled in the company's fleet only by the *Pectan* and the *San Joaquin*. Her length is 425 feet, beam 57 feet, and loaded draft 26 feet, and net Canal tonnage is 5,267. On her latest passage of the Canal she was carrying 10,600 tons of oil in bulk.

FIRST YEAR OF OPERATION.

Vessels Numbering 1,317 Have Net Tonnage of 4,596,444.—Tolls, \$5,216,149.26.

The first year of regular commercial operation of the Canal was completed at the close of business on Saturday, August 14, 1915. Commercial operations began in the morning of August 15, 1914, with the start of the *Ancon* through the Canal on the opening voyage.

During the year a total of 1,317 oceangoing vessels, in commercial or naval service and including yachts, passed through the Canal. Their aggregate net tonnage, Panama Canal measurement, was 4,596,644 tons, and their aggregate gross tonnage, Panama Canal measurement, was 6,494,673 tons. The average net tonnage of the vessels was 3,490. The average gross tonnage was 4,931.

As divided between eastbound and westbound movements, 661 vessels passing from the Pacific to the Atlantic had aggregate gross and net Canal tonnages of 3,227,757 and 2,286,144, respectively; while 656 vessels in transit from the Atlantic to the Pacific had gross and net tonnages of 3,266,916 and 2,310,500, respectively.

The tolls earned during the year, including \$114,085.89 levied on United States Government vessels, but not collected, amounted to \$5,216,149.26. The earnings by months were as follows:

	Gross earnings.	Net collections.
August 15-31, 1914	88,401.80	88,401.80
September	266,513.28	265,600.80
October	375,787.44	366,786.48
November	381,533.28	369,161.28
December	410,043.60	407,914.80
January, 1915	419,037.12	398,601.12
February	383,904.96	383,904.96
March	560,784.96	551,092.56
April	442,415.49	442,415.49
May	547,954.60	522,676.95
June	541,181.55	539,229.05
July	606,578.77	573,365.67
August 1-14	192,912.41	192,912.41
Total	5,216,149.26	5,102,063.37

In this connection it is interesting to note the figures for traffic through the Suez Canal during the calendar year 1914, as reported in the *Journal of Commerce* of Liverpool and London, of June 17, 1915, on the basis of the company's annual report. "During 1914," it is stated, "4,802 ships, representing a net tonnage of 19,409,495, went through the Canal. In comparison with 1913, this is a fall of 283 ships and 624,389 tons. Commercial traffic shows a fall of 784 ships and 2,842,576 tons. Warships and government transports show an increase of 501 ships and 2,218,187 tons. * * * From the 1st of August to the 31st December, 1914, the commercial traffic of the canal fell nearly 40 per cent; an important compensation for this, however, was the exceptional activity of military transports. The loss which the company sustained during the first five months of the war was about six and a half million francs. The total receipts for 1914 were 125,121,237.54 francs, representing a fall of 4,804,711 francs on the total for

1913. Expenses totalled 32,940,674.77 francs. These were 1,159,890 francs less than in 1913. The balance of income over expenditure was 80,359,898.44 francs. * * *. The average tonnage of ships passing through the canal in 1913 was 3,940, and in 1914, 4,042."

If Suez and Panama Canal reckoning of net tonnage be taken to be practically the same in the aggregate, it is seen that about four and one-half times as much tonnage went through the Suez Canal in the year 1914 as went through the Panama Canal during the first year of its operation. The number of ships using the Suez Canal was about three and two-fifths as many as used the Panama Canal. The total receipts at Suez (125,121,237.54 francs being equivalent, at 19.3 cents per franc, to \$24,148,398.85) were four and five-eighths times the amount of tolls earned by the Panama Canal during its first year of operation.

Vessels with Large Cargoes.

The average loading of the 983 laden vessels which passed through the Canal during the fiscal year ending June 30, 1915, was 5,055.7 tons, and the average for all vessels, laden and in ballast, in that time was 4,567.8 tons. From this it is seen that a cargo of 10,000 tons or over is practically double the average size.

During the fiscal year the number of vessels which passed through the Canal carrying 10,000 or more tons of cargo was 41. The largest cargo was 12,040 tons, consisting of sugar and general produce, carried by the *Alaskan* through the Canal on June 25, on the way from Hilo to Delaware Breakwater. Of the 41 vessels, 28 ships, or 68 per cent, were in the service of the American-Hawaiian Steamship Company, operating in the United States coastwise trade. The vessels with cargoes of 10,000 tons or over, with their ports of origin and destination, are shown below.

The vessels listed below, constituting 4.17 per cent of all the laden vessels making use of the Canal in the period, carried a total of 454,130 tons of cargo, or slightly over nine per cent of the total cargo, which amounted to 4,969,792 tons.

Date.	Vessel	Tons of Cargo	From	To
August 17	Arizonan	11,183	New York	San Francisco.
September 5	Texas	11,550	Honolulu	New York.
October 19	Missourian	11,217	Hawaii	New York.
October 30	Arizonan	11,780	Seattle	New York.
November 7	Columbian	12,030	San Pedro	Charleston.
November 12	Milwaukee	11,000	San Francisco	London.
November 13	Historian	12,000	San Francisco	London.
November 17	Virginian	10,500	San Francisco	Philadelphia.
December 30	Mexican	10,338	Honolulu	New York.
January 1	Virginian	10,168	New York	San Diego.
January 4	Prolexis	10,577	Norfolk	Honolulu.
January 15	Alaskan	11,300	New York	San Diego.
January 22	Nereus	10,370	Norfolk	Honolulu.
February 1	Texas	11,125	New York	Los Angeles.
February 6	Arizonan	11,347	Honolulu	Delaware Breakwater.
February 13	Mexican	10,602	New York	San Diego.
February 16	Columbian	11,637	Hilo	Philadelphia.
March 6	Cristobal	10,000	Balboa	New York.
March 8	Arizonan	11,400	New York	San Francisco.
March 9	City of Newcastle	11,118	New York	Vladivostok.
March 12	Virginian	11,262	Honolulu	Delaware Breakwater.
March 13	Indra	11,000	Manila	Baltimore.
March 20	Alaskan	11,740	Hilo	Philadelphia.
March 22	Columbian	11,700	New York	Los Angeles.
March 28	California	11,485	Mejillones	Charleston.
April 5	City of Bristol	10,000	New York	Vladivostok.
April 5	Texas	11,600	Honolulu	Philadelphia.
April 12	Kansas	10,399	New York	Los Angeles.
April 19	Mexican	11,645	Hilo	Philadelphia.
April 21	Virginian	10,713	New York	Los Angeles.
April 25	Indragiri	11,500	Hongkong	New York.
April 28	Berwick Law	10,270	New York	Lyttleton.
April 30	Alaskan	10,058	New York	Los Angeles.
May 16	Arizonan	11,844	Hilo	Delaware Breakwater.
May 21	Protesilaus	10,050	Los Angeles	Liverpool.
May 22	Columbian	11,537	Hilo	Delaware Breakwater.
May 23	Mexican	10,781	New York	Los Angeles.
June 5	Kansas	11,004	Hilo	Delaware Breakwater.
June 15	Virginian	11,400	Hilo	Delaware Breakwater.
June 25	Alaskan	12,040	Hilo	Delaware Breakwater.
June 26	Tokushima Maru	10,830	New York	Wusung.

Curtailment of Panama Railroad Steamship Line Service through the Canal.

In view of the establishment of the service through the Canal by the Peruvian Line the Panama Railroad Steamship Line will diminish its service through the Canal to the extent of withdrawing from it the *Colon* and the *Panama*, which will make Cristobal their southern terminus, and operating through the Canal only the *Advance* and the *Alliance*. This is in line with the company's previously announced policy of withdrawing as much from being a cocarrier as is feasible. Of the quantities of transfer cargo which are delivered at the terminals, much would have been greatly delayed in transit if the company's vessels had been withdrawn earlier.

Refund of Rent.

In THE CANAL RECORD of June 23, 1915, on page 384, was published a circular letter from the Auditor, giving directions as to making claim for refunds of rent, specifying that each claimant should give the correct name, if different from that shown on the receipt, metal check number, department and division where employed and present post-office address. A large number of receipts have been received in this office without this information. Employees who forwarded their rent receipts prior to August 1 and have not received a pay receipt as a refund for the amount due, should immediately forward this information to the Auditor. No refund will be made until this information is furnished.

H. A. A. SMITH,

Auditor, The Panama Canal.

BALBOA HEIGHTS, C. Z., August 17, 1915.

Sales of Plants from Nursery at Ancon.

The Canal horticulturist reports that at the Ancon nursery, which is now open for the sale of decorative plants, about 30 varieties of popular ornamental plants are being propagated and will be put on sale about October. He desires advance orders, payable on delivery of plants. Persons going to the nursery should bear in mind that sales are not made for cash and that the nursery will be open for sales from 8 to 11 a. m. and 3 to 5 p. m. only.

TIME SAVED BY CANAL.

Record of the "Pennsylvanian" is Instance of Economy.—Savings for Vessels of Different Speeds.

The fundamental purpose of the Canal is to save time. The prevailing high prices for charters make this of especial importance at present.

In addition to the economies effected by saving time, and reducing overhead expenses due to the shorter time of travel, the shorter route can greatly increase the effectiveness of the fleets. Between the Atlantic and Pacific coasts of the United States, one vessel can now haul practically what two would have been needed for over the route around South America. The record of the *Pennsylvanian* may be cited as an instance.

When the *Pennsylvanian* of the American-Hawaiian Line set a new record for time of transit from Philadelphia to San Francisco, by making the voyage in 14 days, 17 hours, and 25 minutes, her average speed over the course of 5,130 nautical miles was about 14½ knots, or 348 miles a day.

If the *Pennsylvanian* had made the voyage from Philadelphia to San Francisco by way of the Strait of Magellan, a distance of 13,003 miles, at the same speed, the voyage would have required approximately 37 days and eight hours. This is a little over 2½ times as long as the trip by way of the Canal required.

The 3,997 barrels of fuel oil which the *Pennsylvanian* burned on the trip by way of the Canal would have been increased for the longer voyage to 9,942½ barrels. The use of the Canal saved accordingly about 5,965 barrels of oil. At 80 cents a barrel this amounts to \$4,772. The Canal tolls on the *Pennsylvanian*, levied at \$1.25 per ton on 4,064 net tons, United States registry, amount to \$5,070. In other words, the saving on fuel alone in this case, by the use of the Canal, comes to within \$300 or paying the tolls on the ship. The saving of all the other per diem expenses of operation, possibly \$200 a day, for 22 days, represents almost clear saving to the operator.

A summary of the savings for vessels of nine, 10, 12, 14, and 16 knots, on voyages between principal Atlantic and Pacific ports is given on the opposite page.

First Dance at Hotel Aspinwall.

A dance will be held in the enlarged dance hall at the Hotel Aspinwall on Taboga Island, on Saturday night, August 21. The launch *Aspinwall* will make not only the regular trip from Balboa dredge landing at 5.30 p. m., but is also scheduled to leave for Taboga Island at 8 o'clock for the benefit of those who come from the east side of the Canal by the 5 o'clock train. The capacity of the launch is 35 persons. As it makes the trip in an hour, passengers coming on last launch can reach the island in time to enjoy three hours of dance that night.

The hotel porches and garden will be decorated with Japanese lanterns. Dance music will be furnished by professional cabaret musicians. Coffee and cakes, ice cream, and lemonade will be served, a charge of 25 cents per person being made to cover all expenses; tickets will be on sale at the hotel office.

Numerous rooms at the hotel are available without previous reservation. Launches will leave for Balboa on Sunday at 8 a. m., 3.30 p. m., and 7.15 p. m.

This dance is in the nature of an experiment and will be repeated if successful.

Number of days saved, for vessels of different speeds, by the Panama Canal route between the Atlantic Gulf ports of the United States and Pacific ports, American and foreign.

To—	From—																									To—
	New York, for vessels					Charleston, for vessels					Port Tampa, for ves-					New Orleans, for ves-					Galveston, for vessels					
	of—					of—					sels of—					sels of—					of—					
	9 knots,	10 knots	12 knots,	14 knots.	16 knots.	9 knots.	10 knots	12 knots.	14 knots.	16 knots.	9 knots.	10 knots.	12 knots.	14 knots.	16 knots.	9 knots.	10 knots.	12 knots.	14 knots	16 knots.	9 knots.	10 knots.	12 knots.	14 knots.	16 knots.	
Sitka.....	35.9	32.3	26.8	22.9	20.0	37.6	33.8	28.1	24.0	20.9	40.0	35.9	29.8	25.5	22.2	40.5	36.4	30.2	25.9	22.6	40.8	36.7	30.5	26.1	22.7	.....Sitka
Port Townsend....	35.9	32.3	26.8	22.9	20.0	37.6	33.8	28.1	24.0	20.9	40.0	35.9	29.8	25.5	22.2	50.5	36.4	30.2	25.9	22.6	40.8	36.7	30.5	26.1	22.7	....Port Townsend
Portland, Oreg.....	35.9	32.3	26.8	22.9	20.0	37.6	33.8	28.1	24.0	20.9	40.0	35.9	29.8	25.5	22.2	40.5	36.4	30.2	25.9	22.6	40.8	36.7	30.5	26.1	22.7	....Portland, Oreg.
San Francisco.....	35.9	32.3	26.8	22.9	20.0	37.6	33.8	28.1	24.0	20.9	40.0	35.9	29.8	25.5	22.2	40.5	36.4	30.2	25.9	22.6	40.8	36.7	30.5	26.1	22.7	.....San Francisco
San Diego.....	36.0	32.3	26.8	22.9	20.0	37.6	33.8	28.1	24.0	20.9	40.0	35.9	29.9	25.5	22.3	40.6	36.4	30.3	25.9	22.6	40.9	36.8	30.5	26.1	22.8	.....San Diego
Acapulco.....	36.9	33.2	27.5	23.5	20.5	38.5	34.6	28.8	24.6	21.5	40.9	36.8	30.5	26.1	22.8	41.5	37.3	31.0	26.5	23.1	41.8	37.6	31.2	26.7	23.3	.....Acapulco
San Jose de Guate..	38.0	31.2	28.4	24.3	21.2	40.2	35.7	29.7	25.4	22.1	42.1	37.9	31.5	26.9	23.5	42.6	38.4	31.9	27.3	23.8	43.0	38.7	32.1	27.5	24.0	San Jose de Guate.
Honolulu.....	30.1	27.0	22.4	19.1	16.7	31.7	28.5	23.7	20.2	17.7	34.1	30.7	25.5	21.8	19.0	34.7	31.2	25.9	22.1	19.3	35.0	31.5	26.2	22.4	19.5	.....Honolulu
Guayaquil.....	33.7	30.3	25.2	21.5	18.7	35.4	31.8	26.5	22.6	19.7	37.8	34.0	28.3	24.1	21.1	38.4	34.5	28.7	24.5	21.4	38.7	34.8	28.9	24.7	21.6	.....Guayaquil
Callao.....	28.4	25.5	21.2	18.1	15.7	30.1	27.0	22.4	19.2	16.7	32.5	29.2	24.2	20.7	18.1	33.0	29.7	24.7	21.1	18.4	33.4	30.0	24.9	21.3	18.5	.....Callao
Iquique.....	23.3	20.9	17.3	14.8	12.9	25.0	22.4	18.6	15.8	13.8	27.3	24.5	20.4	17.4	15.2	27.9	25.0	20.8	17.7	15.4	28.3	25.3	21.0	17.9	15.6	.....Iquique
Valparaiso.....	16.8	15.1	12.5	10.6	9.2	18.5	16.6	13.7	11.7	10.2	20.9	18.7	15.5	13.2	11.5	21.4	19.2	16.0	13.6	11.8	21.8	19.5	16.2	13.8	12.0	.....Valparaiso
Coronel.....	14.7	13.2	10.9	9.3	8.1	16.4	14.7	12.2	10.4	9.0	18.8	16.9	14.0	11.9	10.4	19.4	17.4	14.4	12.3	10.7	20.5	17.7	14.6	12.5	10.9	.....Coronel
Yokohama.....	16.9	15.2	12.6	10.7	9.3	20.7	18.5	15.4	13.1	11.4	25.3	22.8	18.9	16.1	14.0	25.9	23.3	19.3	16.5	14.4	26.2	23.6	19.5	16.7	14.5	.....Yokohama
Shanghai.....	8.1	7.3	6.0	5.1	4.4	11.9	10.7	8.8	7.5	6.5	16.6	14.8	12.3	10.4	9.1	17.1	15.4	12.7	10.8	9.4	17.4	15.7	13.0	11.1	9.6	.....Shanghai
Hongkong.....						3.1	2.8	2.2	1.9	1.5	7.8	7.0	5.7	4.8	4.2	8.4	7.5	6.2	5.2	4.5	8.7	7.8	6.4	5.4	4.7	.....Hongkong
Manila.....						3.4	3.0	2.4	2.0	1.7	8.1	7.2	5.9	5.0	4.3	8.6	7.7	6.4	5.4	4.7	9.0	8.0	6.6	5.6	4.8	.....Manila
Adelaide.....	7.5	6.7	5.6	4.6	4.0	10.4	9.3	7.7	6.5	5.6	14.0	12.5	10.4	8.8	7.7	14.6	13.1	10.8	9.2	8.0	14.9	13.3	11.0	9.4	8.1	.....Adelaide
Melbourne.....	12.3	11.0	9.1	7.7	6.7	15.1	13.5	11.2	9.5	8.3	18.7	16.8	14.0	11.9	10.3	19.3	17.3	14.3	12.2	10.7	19.6	17.6	14.6	12.4	10.8	.....Melbourne
Sydney.....	17.7	15.8	13.1	11.2	9.7	20.5	18.4	15.3	13.0	11.3	24.1	21.7	18.0	15.3	13.4	24.6	22.2	18.4	15.7	13.7	25.0	22.4	18.6	15.9	13.8	.....Sydney
Wellington.....	11.0	9.9	8.1	6.9	6.0	12.7	11.4	9.4	8.0	6.9	15.1	13.5	11.2	9.5	8.3	15.6	14.0	11.6	9.9	8.6	15.9	14.3	11.8	10.5	8.7	.....Wellington

Number of days saved, for vessels of different speeds, by the Panama Canal route between European ports and ports of Pacific America and of New Zealand.

To—	From—																									To—
	Liverpool, for vessels					Hamburg, for vessels					Antwerp, for vessels					Bordeaux, for vessels					Gibraltar, for vessels					
	of—					of—					of—					of—					of—					
	9 knots.	10 knots.	12 knots.	14 knots.	16 knots.	9 knots.	10 knots.	12 knots.	14 knots.	16 knots.	9 knots.	10 knots.	12 knots.	14 knots.	16 knots.	9 knots.	10 knots.	12 knots.	14 knots.	16 knots.	9 knots.	10 knots.	12 knots.	14 knots.	16 knots.	
Sitka.....	25.7	23.1	19.1	16.3	14.2	25.1	22.5	18.7	15.9	13.9	25.1	22.5	18.7	15.9	13.9	24.4	21.9	18.1	15.5	13.5	22.4	20.1	16.7	14.2	12.3	..... Sitka
Port Townsend.....	25.7	23.1	19.1	16.3	14.2	25.1	22.5	18.7	15.9	13.9	25.1	22.5	18.7	15.9	13.9	24.4	21.9	18.1	15.5	13.5	22.4	20.1	16.7	14.2	12.3	... Port Townsend
Portland, Oreg.....	25.7	23.1	19.1	16.3	14.2	25.1	22.5	18.7	15.9	13.9	25.1	22.5	18.7	15.9	13.9	24.4	21.9	18.1	15.5	13.5	22.4	20.1	16.7	14.2	12.3	... Portland, Oreg.
San Francisco.....	25.7	23.1	19.1	16.3	14.2	25.1	22.5	18.7	15.9	13.9	25.1	22.5	18.7	15.9	13.9	24.4	21.9	18.1	15.5	13.5	22.4	20.1	16.7	14.2	12.3	.... San Francisco
San Diego.....	25.7	23.1	19.2	16.4	14.3	25.1	22.5	18.7	15.9	13.9	25.1	22.5	18.7	15.9	13.9	24.5	21.9	18.2	15.5	13.5	22.4	20.1	16.7	14.2	12.4	..... San Diego
Acapulco.....	26.7	23.9	19.9	17.0	14.8	26.0	23.4	19.4	16.6	14.4	26.0	23.4	19.4	16.6	14.4	25.3	22.8	18.9	16.1	14.1	23.4	21.0	17.4	14.8	12.9	..... Acapulco
San Jose de Guate..	27.8	25.0	20.8	17.7	15.4	27.2	24.4	20.3	17.3	15.1	27.2	24.4	20.3	17.3	15.1	26.5	23.8	19.8	16.8	14.7	24.5	22.0	18.3	15.6	13.6	San Jose de Guate.
Honolulu.....	19.8	17.8	14.8	12.6	10.9	19.2	17.2	14.3	12.2	10.6	19.2	17.2	14.3	12.2	10.6	18.5	16.6	13.7	11.7	10.2	16.5	14.8	12.3	10.4	9.1	..... Honolulu
Guayaquil.....	23.5	21.1	17.5	14.9	13.0	22.9	20.6	17.1	14.6	12.7	22.9	20.6	17.1	14.6	12.7	22.2	19.9	16.5	14.1	12.2	20.2	18.2	15.0	12.8	11.1	..... Guayaquil
Callao.....	18.2	16.3	13.5	11.5	10.0	17.6	15.8	13.1	11.5	9.7	17.6	15.8	13.1	11.5	9.7	16.8	15.1	12.5	10.6	9.2	14.9	13.3	11.0	9.4	8.1	..... Callao
Iquique.....	13.1	11.7	9.7	8.2	7.1	12.4	11.1	9.2	7.8	6.8	12.4	11.1	9.2	7.8	6.8	11.7	10.5	8.7	7.3	6.3	9.7	8.7	7.2	6.1	5.2	..... Iquique
Valparaiso.....	6.6	5.9	4.8	4.1	3.5	6.0	5.3	4.3	3.5	3.1	6.0	5.3	4.3	3.5	3.1	5.3	4.7	3.8	3.2	2.7	3.3	2.9	2.3	1.9	1.6	..... Valparaiso
Coronel.....	4.5	4.0	3.3	2.7	2.3	3.9	3.4	2.8	2.3	1.9	3.9	3.4	2.8	2.3	1.9	3.1	2.8	2.2	1.8	1.5	1.2	1.0	0.8	0.6	0.5	..... Coronel
Wellington.....	6.7	6.0	4.9	4.2	3.5	6.0	5.3	4.4	3.7	3.2	6.0	5.3	4.4	3.7	3.2	5.3	4.7	3.8	3.2	2.7	1.7	1.5	1.2	0.6	0.5	..... Wellington

QUARANTINE ACTIVITIES.

Have Increased by one-third since January—
Summary of July Movements.

Emigration from the Isthmus to foreign ports during the month of July exceeded immigration from foreign ports by 600 persons. This brings the net emigration since July 1, 1913, a period of 25 months, to 26,831 persons. This is at the rate of 1,073.2 per month. During the same time the Canal force decreased from 42,262, reported as at work on June 25, 1913, to 26,905, reported on July 21, 1915. This is a decrease of 15,357, which is at the rate of 614.3 per month.

The activities of the quarantine forces at the two ends of the Canal in July exceeded considerably the work in preceding months. The number of vessels entering, 246, exceeded all other months of this year, the nearest approach having been 213 vessels in March. The number of persons examined, 19,110, exceeded those for previous months, which have been: January, 14,119; February, 13,632; March, 18,168; April, 14,637; May, 17,163; and June, 17,725. In these examinations, during the seven months considered, the members of crews have been, on an average, two and one-half times as numerous as passengers. The rise of the total number of examinations is in step with the increase of Canal traffic though affected considerably by variations in passenger travel.

A summary of the quarantine activities on the Isthmus during July is given in this consolidated report for the ports of Balboa-Panama and Cristobal-Colon during the month:

Number of vessels inspected and passed	237
Number of vessels held in quarantine	9
Total	246
Supplementary inspections of vessels detained	4
Number of vessels fumigated on arrival	7
Number of vessels fumigated on departure	1
Total	8
Number of crew passed on medical officers' certificates	1,828
Number of crew examined	14,136
Number of passengers examined (including 131 U. S. troops)	4,974
Total	19,110
Number of supplementary inspections	518
Number of persons vaccinated at ports of arrival because of compulsory vaccination law	811
Number of persons vaccinated at ports of departure or en route because of compulsory vaccination law	776
Total	1,587
Number of persons held in quarantine at the detention houses to complete period of incubation of yellow fever and plague	255

Number of persons held in quarantine on board vessels to complete period of incubation of yellow fever and plague	1,268
Total	1,523
Number of persons landed from foreign ports:	
Cabin	1,835
Steerage	1,216
Total	3,051
Number of persons embarked for foreign ports:	
Cabin	2,395
Steerage	1,256
Total	3,651
Number of persons arriving from coast towns on small launches and sailing craft	2,271
Number of persons sailing for coast towns on small launches and sailing craft	1,574
Apparent increase for month from coast towns	697
Apparent decrease for month from foreign ports:	
Cabin	560
Steerage	40
Total	600
Number of immigrants recommended for deportation	18
Number of bills of health issued or revised	175
Number of inspections of docks	116
Number of inspections of vessels at docks	52
Total number of persons landed	5,232
Less number for Pacific ports	220
Total number of persons sailing	5,102
Total apparent decrease for month	123

Family Quarters.

Following is a list of the applications for married quarters on file on July 31, 1915:

STATIONS.	Number of applications.
Ancon	423 (219)
Ancon Hospital	7 (3)
Corozal	38
Paraiso	157 (31)
Gatun	79 (16)
Cristobal	136 (24)
Total	849 (293)

NOTE—The figures in parentheses show the number of applicants already occupying regular or nonhouse-keeping family quarters at stations other than those at which applications are filed.

Obituary.

George H. Doyle, a marine engineer employed by the Dredging Division at Paraiso, died at Ancon Hospital on August 2. His residence in the United States had been at 2629 Wilder Street, Philadelphia.

Fred F. Farrell, a resident of Houston, Texas, employed as a mill hand at Balboa shops, died at Ancon Hospital on August 6.

Deceased Employees.

Name	Check No.	Native of	Isthmian Residence.	Employed by	Date of death
Gerald Bishop	41949	Barbados	La Boca	Term, Con.	Aug. 11, 1915.
Ramón Caisado (Caisado, Cay-sado)	99109	Panama	Monte Lirio	P. R. R.	Aug. 9, 1915.
George H. Doyle	5319	U. S. A.	Paraiso	Dredging Div.	Aug. 2, 1915.
O. Edmunds	30501	Dominica	Cristobal	Oper. and Main.	Aug. 8, 1915.
James Ephraim	80740	Antigua	Panama	P. R. R.	Aug. 4, 1915.
Fred F. Farrell	1165	U. S. A.	Balboa	Mechanical Div.	Aug. 6, 1915.
Christopher Hinds	46678	Barbados	Panama	Dredging Div.	Aug. 6, 1915.
Joseph (James) Martin	52420	St. Thomas	Paraiso	Mun. Eng. Div.	Aug. 5, 1915.
Ramón Rodriguez	54617	Panama	Panama	Fortifications	Aug. 11 1915.

The estates of the abovenamed deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against the estates or any information which might lead to the finding of heirs or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other money due them, should be presented at once to the Administrator of Estates, Room 320, Administration Building, Balboa Heights, C. Z. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once.

JOHN K. BAXTER,
Administrator of Estates.

OFFICIAL CIRCULARS.

Notice to Divers.

THE PANAMA CANAL,
EXECUTIVE OFFICE.
BALBOA HEIGHTS, C. Z., August 10, 1915.
CIRCULAR No. 702:

When diving work is necessary in channels where currents are created by the drawing or discharging of water by the locks, divers must, prior to entering the water, make arrangements with the control house operator of the locks involved. When a diver's work is finished, he shall give definite advice to the control house operator and shall, during the progress of his work, keep the operator advised as to his entering and leaving the water. His work shall be so arranged as not to impede traffic.

CHESTER HARDING,
Acting Gover. nor.

Returning Oil Drums.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 13, 1915.
HEADS OF DEPARTMENTS AND DIVISIONS:
The general storekeeper, Balboa, advises that oil drums from the construction departments under the annual contract, expiring June 30, 1916, requisition 2308-C, are coming in very slowly. As under the terms of this contract if the drums are not returned in six months The Panama Canal is required to pay for them, it is requested that every effort be made to return the drums received under this contract to the general storekeeper, Supply Department, Balboa, at the earliest practicable date.

WM. R. GROVE,
Chief Quartermaster.

Electrical Appliances or Changes in Wiring in Quarters.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 4, 1915.
CIRCULAR No. 676-6:
1. Occupants of buildings belonging to The Panama Canal and Panama Railroad Company are hereby forbidden to make any addition or change whatsoever in the electrical wiring in their apartments, or to use electrical appliances of any kind whatsoever, without first obtaining the necessary authority from the office of the Electrical Engineer.
2. Applications for the use of electrical appliances or requests for additions or alterations of any kind to electrical systems should be made direct to the Electrical Engineer and not the district quartermasters.
CHESTER HARDING,
Acting Governor.

Rock and Clay from Division of Terminal Construction.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., July 31, 1915.
To all concerned—Departments and divisions desiring to be furnished with rock or clay loaded by steamshovels operated by the Division of Terminal Construction, are requested to kindly place all such orders on a standard work request, form No. 159-b. This work request should state the yardage, class of material, date when required, the kind of cars in which delivery is requested, whether Panama Railroad transportation is desired to destination, and also what department or division will dump or dispose of the material, and the place where the same is required. In addition to forwarding the usual number of copies of work request to this division, it is requested that two extra copies of same be made for the information of the Panama Railroad and forwarded directly to the Superintendent of Transportation, who will in turn send one copy to the yardmaster at Balboa. On account of confusion which invariably results from attempting to meet the requirements of other departments and divisions for this material, it will be impossible hereafter to handle such requests as these if made orally or by telephone.

H. H. ROUSSEAU,
Engineer of Terminal Construction.

Shipments on Passenger Trains.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 12, 1915.
HEADS OF DEPARTMENTS AND DIVISIONS:
At the request of the Superintendent, Panama Railroad Company, this office forwarded a circular letter to the various employees of the Supply Department on August 7 directing that passenger train shipments be reduced to a minimum. The following letter has been received from the storekeeper at Balboa in reply and

the same is quoted for your information and any action you may desire to take in this connection:

"Referring to your circular letter of August 7 in regard to passenger train shipments.

"Very few passenger train shipments are originated by the Supply Department. Practically all such shipments are occasioned by departments ordering material telephoning request that passenger shipment be made, in which case we have no recourse other than to make passenger shipment, unless we can judge from the nature of the material that it is manifestly unnecessary to make passenger shipment.

"Under the present system of handling supplies out of Balboa store, passenger shipments certainly ought to be reduced to a minimum. We load out a local each day for all main line points and a local car three days a week for branch line. Straight cars are also loaded each day for Paraiso store and one for dry dock store. These cars are moved from the storehouse at 5 o'clock each afternoon and go out on the locals at 4 o'clock the following morning. Any requisitions which we receive for shipment in the evening that are important enough can be loaded in these cars any time before 4 o'clock and the material should be in the hands of the party desiring same not later than noon of the next day."

WM. R. GROVE,
Chief Quartermaster.

Supplement No. 5 to List of Nonexpendable Property Published with Circular No. 656-1.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 29, 1915.

HEADS OF DEPARTMENTS AND DIVISIONS AND ACCOUNTABLE OFFICIALS:

The following changes and additions to the list of nonexpendable property, and instructions are published for guidance of all concerned:

CHANGES.

- Page 1. Ammeters, portable; add E
- Page 4. Boards, drating; add E
- Page 5. Brushes, horse; eliminate
- Page 6. Buttons, pilots; eliminate
- Page 9. Cloths, billiard table; eliminate
- Page 9. Cloths, pool table; eliminate
- Page 9. Combs, curry; eliminate
- Page 11. Curtains, stage, drop; add E
- Page 11. E Curtains, window; eliminate
- Page 13. E Dusters, neck, barbers'; eliminate E
- Page 29. Receivers, bead, telephone instrument; eliminate
- Page 29. Receivers, air; add E
- Page 29. E Reels, cable; eliminate
- Page 30. Scissors; add "except kindergarten"
- Page 35. E Telephone, desk and wall; eliminate
- Page 35. Thermographs; add E
- Page 37. Yardsticks; add "except kindergarten"

ADDITIONS.

- Beakers, except glass
- E Coolers, water, bubbling fountain
- Covers, pool and billiard table
- E Cutters, bar
- E Fillers, ice can, automatic
- Machine, meat slicing
- Pajamas, coats
- Pajamas, pants
- Rollers, bandage
- Sifter, sand
- Suits, sleeping, combination childrens'
- Troughs, proving

ITEMS TO BE CONSIDERED EXPENDABLE.

- Boilers, hot water
- Buttons, Murphy
- Gloves, canvas
- Holders, Scott tissue towel
- Meters, water
- Sockets, rope, for star well drill
- Ties, cow
- Wrenches, tool, for star well drill

INSTRUCTION TO ACCOUNTABLE OFFICIALS.

Cable reels and other containers, which may hereafter be designated as expendable items, will be invoiced as separate items when they have a returnable value. When Washington orders covering such items are received, the Chief Quartermaster will decide if they have a returnable value, and will inform the storekeeper, the division ordering the material, the Auditor, and others concerned. When it is decided that they shall be returned, the value of the containers will be deducted from the contract price of the material and shown as a separate item. When containers are not considered to have a returnable value, no change will be made in the price of the article.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved: GEO. W. GOETHALS,
Governor.

Entrance Rates for Silver Employees.

THE PANAMA CANAL,
EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 12, 1915.
HEADS OF DEPARTMENTS AND DIVISIONS:

There is considerable laxity on the part of certain foremen, field clerks, and field timekeepers with respect to compliance with circular No. 666-Revised. Entrance rates for silver employees as therein authorized are not being properly observed and it will be necessary to place this work in more competent hands. The Chief Timekeeper will report to you the failures which come to his notice and those who are plainly careless should be discharged.

CHESTER HARDING,
Acting Governor.

Form for Request for Leave of Absence in Excess of Five Days.

THE PANAMA CANAL,
EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 13, 1915.
HEADS OF DEPARTMENTS AND DIVISIONS:

Form 194-4, request for leave of absence in excess of five days, has been revised with the following notice appearing on the bottom of the form:

"Request for Time Voucher must be forwarded to the Chief Timekeeper, Balboa Heights, in all cases, where payment is desired prior to the employee entering on leave of absence and upon termination of service."

Please destroy your stock of this form and make requisition on Mount Hope for a supply of the revised form at once.

By direction of the Acting Governor.

C. A. MCLVAINE,
Executive Secretary.

Examination by Board of Local Inspectors.

The Board of Local Inspectors will conduct examinations at the Administration Building, Balboa Heights, room No. 303, on Wednesday, August 25, 1915, beginning promptly at 9 a. m., for persons desiring the following classes of licenses: Pilots, masters, mates, marine engineers, chauffeurs, and navigators of motor boats. All applicants for license must procure from the office of the board, Balboa Heights, forms of application and information respecting the filling out of the same, not later than the day previous to the examination. In addition, all persons desiring chauffeurs' licenses must provide themselves with automobiles with which to demonstrate their ability properly to operate the same.

The demonstration test for applicants for chauffeurs' licenses will be given on Tuesday, the day preceding the written examination, at 2 p. m., at the Administration Building, Balboa Heights; on Wednesday, the day of the regular examination, for out-of-town applicants, at 2 p. m., at the Administration Building, Balboa Heights.

Applicants for licenses as navigators of motor boats will be required to give a demonstration of their ability to operate such boats, and will be obliged to provide themselves with boats for this purpose. This test will be given on Thursday, the day following the written examination, as follows: At Cristobal, upon arrangement with the Captain of the Port; at Gamboa, at 8 a. m., and at Balboa at 2 p. m. Applicants for the test at Cristobal or Balboa should present themselves at the office of the Captain of the Port; at Gamboa, the deputy inspector will be present at the signal station at the hour mentioned above.

For the benefit of applicants residing in Gatun and Cristobal or Colon, examinations for licenses as navigators of motor boats, and as chauffeurs, will be held at the office of the Captain of the Port of Cristobal on Friday, August 27, 1915, beginning at 9 a. m. Applicants should be provided with motor boats or automobiles for the demonstration test.

By direction of the chairman of the board.

F. M. NIXON,
Recorder, Board of Local Inspectors.

Specifications for Excavation and Loading Rock from Sosa Hill Quarry for East Breakwater.

Amendment No. 1, August 11, 1915.

Any employee who may resign in order to become eligible for award of the contract will be permitted to retain the quarters he was holding as an employee, or the equivalent thereof, during the time he is engaged on this work regardless of whether he is living in family or bachelor quarters. The same rule will apply to any employee who may resign to accept employment with the contractor.

Proposals for Cement Sweepings.

Sealed proposals will be received at the office of the Chief Quartermaster, Panama Canal, Balboa Heights, C. Z., until 3 p. m., August 18, 1915, and then opened, for the purchase of any or all of a lot of cement sweepings, approximately 1,100 sacks. These sweepings may

be examined and full information obtained upon application to the storekeeper, Balboa, C. Z. The Panama Canal reserves the right to reject any or all bids. Proposals should be marked "Proposal for purchase of cement sweepings" and addressed to the Chief Quartermaster, Balboa Heights, C. Z.

Mail for Offices at Balboa.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 10, 1915.
HEADS OF DEPARTMENTS AND DIVISIONS:
A considerable amount of mail for the Mechanical Division, the Captain of the Port, the Receiving and Forwarding Agent of the Panama Railroad, Mr. R. K. Morris, storekeeper, Supply Department, and the commissary at Balboa is delayed because of the fact that it is improperly addressed to Balboa Heights.

Please be advised that mail for delivery to the addressees given above should be addressed to Balboa post-office and not to Balboa Heights.

C. A. MCLVAINE,
Executive Secretary.

Quarters for Employees in Fiscal Year 1917.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 11, 1915.
HEADS OF DEPARTMENTS AND DIVISIONS:

To assist the Supply Department in determining matters connected with quarters for employees, will you please submit a statement at your earliest convenience showing the estimated total number of gold employees in your organization for the fiscal year ending June 30, 1917, so divided as to show the number to be employed in each town. For convenience in tabulation it is requested that a form be used, showing the numbers of employees in each district, in geographical order, from Ancon-Balboa to Cristobal-Colon.

WM. R. GROVE,
Chief Quartermaster.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., August 16, 1915.

The following insufficiently addressed letters, originating in the United States and its possessions, have been received at the office of the Director of Posts and may be procured upon request of the addressees:

Allen, Thos. A.	Kidd, Bradley
Brown, Henry J.	Laing, H. A.
Core, H. C.	Muro, Fred (5 papers)
Gilbaugh, J. W.	Oglesby, R. J.
Grube, Claud	Oliver, Amos
Hastings, Ed.	Riley, Charlie
Hennessey, Thomas	Riley, Robert E.
Hensley, Robert (2)	Shay, Miss Helen
Herbert, John	Ward, Jno. C.
Jordan, Hastings A.	Whelen, Mrs. Townsend
Kenyon, Ralph	

JOINT LAND COMMISSION.

Joint Land Commission Notice.

The Commission will resume public hearings on Monday, August 16, and the following is a calendar of claims set for hearing for the week ending August 21:

Monday, August 16—Docket 852, Manuela G. de Iglesias.

Tuesday (p. m.) August 17—Docket 854, Claris McMakin; docket 855, Antolino Garcia.

Wednesday, August 18—Docket 866, Gumercinda Iglesias; docket 867, Abraham Johnson; docket 873, Joseph Osborne; docket 877, Mrs. Ann Williams.

Thursday, August 19—Docket 879, Loice Loebel; dockets 880 and 1595, Juan Apercio; docket 885, Jose Guerrero.

Friday, August 20—Docket 1662, Juana Miranda.
J. A. LANGSTON, Acting Secretary.

Rules of Dismissal.

In the matter of sundry claims for property at Peñas Blancas, rule of dismissal No. 186, June 19, 1915, dockets Nos. 1371 and 1490—The claim of Santana Melendez, docket No. 1371, and that of Santana Melendez, Teresa Barrio, and Ramona Melendez, docket No. 1490, which came on for hearing before the Commission on April 9, 1915, are hereby dismissed for the reason that the evidence submitted to the Commission does not justify an award being made in these claims.

FEDERICO BOYD, NICHOLAS CORNET, LEVI MONROE KAGY, S. LEWIS, Commissioners.

Taboga Launch Service.

Leave Balboa dredge landing—Daily, except Thursday; at 5.30 p. m.; Monday, Thursday, Saturday, and Sunday, at 9.40 a. m.

Leave Taboga—Daily, except Friday, at 7 a. m. (On Mondays and days following holidays, one hour earlier); Monday, Thursday, and Saturday at 1.30 p. m.; Sunday at 7.15 p. m. The 9.40 a. m. trips from Balboa await the arrival of Panama Railroad trains.

COMMISSARY DEPARTMENT.

Cold Storage Prices.

For the benefit of shipping interests as well as of the local patrons of the commissary branch of the Supply Department, there is published below the retail cold storage price list, effective August 19 and subject to change each week. This list and the wholesale price list for fresh meats indicate the costs of all cold storage goods. The price list for groceries at retail which is now in effect was published in THE CANAL RECORD of July 28, 1915, covering four pages. Copies of this list may be obtained on application, by mail or from the boarding officers who visit incoming ships. These lists are published in order that the shipping interests may be kept informed of the facilities afforded by The Panama Canal for meeting the needs of vessels in the way of supplies.

The prices are increased by 10 per cent for sales to commercial and foreign naval vessels, and by 20 per cent for sales to yachts.

The following is a list of retail prices of cold storage provisions which will be effective August 19, 1915:

FRESH MEATS.		Price.
Mutton—Stewing, per pound.....		9
Shoulder, trimmed, (not less than 5 pounds) per pound.....		12
Leg (8 to 10 pounds), per pound.....		19
Short cut, chops, per pound.....		23
Shoulder, chops, per pound.....		*17
Lamb—Stewing, per pound.....		12
Shoulder, trimmed, per pound.....		45
Leg (5 to 8 pounds), per pound.....		24
Chops, per pound.....		29
Chops, shoulder, per pound.....		*20
Veal—Stewing, per pound.....		12
Shoulder, for roasting (not under 5 lbs.), per pound.....		15
Chops, shoulder, per pound.....		20
Chops, per pound.....		30
Loin, for roasting, per pound.....		30
Cutlets, per pound.....		36
Beef—Suet, special, per pound.....		3½
Soup, special, per pound.....		7
native, per pound.....		5
Soup, bones, special, per pound.....		2½
Stew, special, per pound.....		11
native, per pound.....		8
Plate, special, per pound.....		12
native, per pound.....		8
Chuck roast, special (3 lbs. and over), per pound.....		12
Chuck roast, native (3 lbs. and over), per pound.....		8
Rib roast, second cut (not under 3½ pounds), special, per pound.....		16
Rib roast, second cut, native (3½ pounds and over), per pound.....		9
Rib roast, first cut (not under 3 pounds), special, per pound.....		19
Rib roast, first cut, native (3 pounds and over), per pound.....		11
Pot roast, special, per pound.....		20
native, per pound.....		12
Rump roast, special, per pound.....		20
native, per pound.....		12
Porterhouse roast, special, per pound.....		22
choice, per pound.....		31
native, per pound.....		16
Steak, chuck, special, per pound.....		13
native, per pound.....		9
Round, bottom, special, per lb.....		13
native, per lb.....		9
Round, top, special, per pound.....		15
native, per pound.....		10
Sirloin, special, per pound.....		20
native, per pound.....		12
Sirloin, choice cut, special, per pound.....		23
Sirloin, choice cut, native, per lb.....		16
Rump, special, per pound.....		20
native, per pound.....		12
Porterhouse (not less than 1½ pounds), special, per pound.....		23
Porterhouse (not less than 1½ pounds) choice, per pound.....		34
Porterhouse (1½ pounds and over), native, per pound.....		17
Porterhouse, short, special, per pound.....		20
Porterhouse, short, choice, per pound.....		28
Porterhouse, short, native, per lb.....		12
Tenderloin, Western, special, per pound.....		35
NOTE.—"Choice beef" is kept on hand in the cold storage plant at Cristobal. Orders placed with commissary storekeepers before 11 a. m., will be shipped for delivery on the following morning.		
Pork—Hams, fresh, per pound.....		\$23
Shoulders, fresh, per pound.....		\$19
Loin, chop, or roast, per pound.....		18
Spare ribs, per pound.....		*11
Pigs' feet, fresh, per pound.....		5

Pigs' heads, fresh, whole.....	83
½ head.....	42
Sausage, home made, per pound.....	23
Ox tails, per pound.....	9
Beef tongue, native, whole, per pound.....	20
MISCELLANEOUS.	
Brains, calves', per pound.....	8
Calves' heads, each.....	80
Kidneys, beef, per pound.....	11
Livers—Beef, per pound.....	9
Calf, per pound.....	24
Steak—Hamburger, package.....	17
Hamburger, 20-pound containers, per pound.....	14
Sausage—Bologna, per pound.....	12
Frankfurter, per pound.....	12
Frankfurter, imported, tin.....	11
Lieberwurst, per pound.....	10
Pork, per pound.....	14
Sweetbread, beef, per pound.....	17
Eggs, fresh, per dozen.....	†28
per ½ dozen.....	†14
Bloaters, fancy, each.....	5
Bluefish, per pound.....	14
Haddock, smoked, per pound.....	12
Halibut, fresh, per pound.....	†11
Salmon, per pound.....	11
Whitefish, smoked, per pound.....	20
Yeast, per pound.....	31
per cake.....	2
Pates de foies gras, per jar.....	58
CURED AND PICKLED MEATS.	
Beef—Corned, No. 1, per pound.....	18
No. 2, per pound.....	15
Native, per pound.....	12
Ham—Real York and Cumberland, per pound.....	43
Genuine Westphalia, per pound.....	50
Mined, "Bologna style," per pound.....	14
Shoulders, sugar cured, boneless, whole, per pound.....	17
Sugar cured, boneless, whole, per pound.....	21
Half, per pound.....	23
Sliced, per pound.....	27
Whole, boiled, per pound.....	27
Half, boiled, per pound.....	29
Sliced, boiled, per pound.....	35
Bacon—Breakfast, sliced, per pound.....	29
Whole, piece, per pound.....	28
Strips, whole, per pound.....	22
Sliced, jar.....	30
Sliced, tins.....	27
Ham, lunch, per pound.....	40
Pork, salt, family, per pound.....	13
Ox tongues, whole, 3 to 5 lbs., per pound.....	24
Pigs' feet, pickled, per pound.....	7
Pigs' feet, corned, per pound.....	7
Tongues, per pound.....	22
DAIRY PRODUCTS.	
Butter—Creamery, special, per pound.....	38
Creamery, 60-62 lb. tub, whole tub, per pound.....	37
Sheffield Farms' extra fancy, per lb.....	58
Oleomargarine, per pound, carton.....	29
Cheese—Philadelphia cream, cake.....	9
Roquefort, per pound.....	41
Young America, per pound.....	23
Swiss, per pound.....	34
Edam, each.....	1.15
Edam, tin.....	29
Parmesan, per pound.....	38
Gouda, per pound.....	26
Snappy, per cake.....	9
Milk, Sheffield Farms, per quart.....	**15
Fermillac, bottle.....	**25
Ice cream, quart.....	†25
½-gallon.....	†50
Cream, 30 per cent, quart.....	**45
pint.....	**25
½-pint.....	**15
POULTRY AND GAME.	
Chickens—Fancy, roasting, milk fed, per pound.....	30
Chickens—Fancy, roasting, corn fed, per pound.....	28
Fowls, per pound.....	22
Fowls, light, per pound.....	21
Ducks, Western, per pound.....	*24
Capons, per pound.....	32
Broilers, milk fed, per pound.....	†30
Broilers, corn fed, per pound.....	28
Turkeys, per pound.....	*28
Squabs, each.....	33
Geese, per pound.....	17
Grouse, each.....	1.00
Mallard ducks, 2 to 2½ pounds, each.....	2.35
Pheasants, each.....	1.35
VEGETABLES.	
Beets, per pound.....	2
Cabbage, per pound.....	1½
Carrots, per pound.....	2
Celery, per head.....	14
Cucumbers, per pound.....	*3
Egg plant, per pound.....	†4
Lettuce, per pound.....	6
Onions, per pound.....	†2
Peppers, green, per pound.....	†2
Plantains, per dozen.....	†12
Potatoes, white, per pound.....	†1½
Potatoes, sweet, per pound.....	2
Squash, per pound.....	2½
Turnips, per pound.....	†1½
Tomatoes, per pound.....	6
Yams, Lucua, per pound.....	3
FRUITS.	
Grape fruit, tropical, each.....	3½
Grape fruit, select, each.....	*8
Lemons, per dozen.....	13

Limes, per 100.....	Price.	32
Oranges—Select, each.....		4
Tropical, per dozen.....		16
Coconuts, each.....		4
Bananas, per bunch.....		38
Bananas, each.....		3
Apples, evaporated, per pound.....		12
Apricots, evaporated, per pound.....		12
Pears, evaporated, per pound.....		23
Peaches, evaporated, per pound.....		*7
Pineapples, each.....		10
Figs, dried, 12-oz. packages.....		14
Figs, dried, 5-oz. packages.....		5
Raisins, seedless, package.....		11
table, cluster, per pound.....		†18
Currants, cleaned, package.....		12
Prunes, stewing, per pound.....		10
Watermelons, each.....		†34
Plums, per pound.....		7
Peaches, fresh, per pound.....		†4
Pears, fresh, per pound.....		6
Cantaloupes, each.....		8

* Indicates advance from preceding list

**Indicates five cents allowed for return of bottle.

† Indicates reduction from preceding list.

† Sold only from commissaries, no orders taken for delivery.

§ Not less than ½ ham of ½ shoulder of fresh pork will be sold.

Commissary Hours.

The open hours of the various commissary stores are as follows:

The commissary stores at Las Cascadas, Empire, Culebra, and Toro Point are open from 7.30 to 11.30 a. m., and 1.30 to 5.30 p. m.

All other commissary stores are open from 8 a. m. to 12.30 p. m., and 3 p. m. to 6 p. m.

The gold departments of the Cristobal commissary store open at 2 p. m. on Saturdays and other sailing days of Panama Railroad vessels.

Price Changes.

The following changes in prices of articles in stock at the commissary stores became effective August 4:

ARTICLE.	PRICE CHANGE	
	Old.	New.
Bedspreads, ea.....	1.15	1.20
Serge, gray, yd.....	1.85	2.00
Vests, ladies'.....	.33	.28
Bath robes, ea.....	3.00	2.70
Men's shoes, pr.....	4.60	3.75
Pipes, meerscham, ea.....	3.30	3.40
Pipes, meerscham, ea.....	3.90	4.00
Varnish brushes, 1", ea.....	.36	.29
Brushes, counter, ea.....	.45	.26
Boilers, rice, ea.....	.62	.66
Buckets, ea.....	.48	.45
Filters, Gate City, ea.....	3.15	4.05
Saws, carpenter, ea.....	.85	1.05
Trunks, high, ea.....	7.60	7.20
Lobster, tin.....	.32	.21
EFFECTIVE AUGUST 9, 1915		
Nets, hair, ea.....	\$.09	\$.15
Crepe, Baruhy, yd.....	.17	.14
Crepe, L. S. P., yd.....	.21	.16
Crepe, Madura, yd.....	.19	.15
Ink wells, double, ea.....	.18	.21
Ties, club, ea.....	.23	.18
Shirts, negligee, ea.....	1.33	1.10
Undershirts, ea.....	.21	.18
Men's shoes, pr.....	4.55	4.70
Men's shoes, pr.....	4.20	4.50
Boys' tennis shoes, pr.....	1.50	1.40
Knives, pocket, ea.....	.34	.39
Scissors, nail, pr.....	.61	.59
Stoves, N. P., ea.....	5.15	4.90
Measures, ea.....	.26	.29
Button molds, doz.....	.01	.02
Rug straps, ea.....	.40	.45
Pitchers, water, ea.....	.55	.51
Bulbs, electric light, ea.....	.32	.29
Cups, sanitary, doz.....	.02	.01
Soap holders, ea.....	.46	.40
Pots, azalea, 6", ea.....	.04	.05
Shakers, salt and pepper, ea.....	.07	.05

Additions to Stock.

Cuffs, Arrow, pr.....	.21
Cuffs, Arrow, pr.....	.21
Ties, batwing, ea.....	.17
Sleeping suits, suit.....	.90
Women's shoes, pumps, 2" heel, pr.....	3.45
Pipes, meerscham, ea.....	5.00
Biscuits, National Biscuit Co:	
Cameo, tin.....	.21
Fig newtons, tin.....	.21
Vanilla wafers, tin.....	.21
Chocolate wafers, tin.....	.21
Cheese, tid bits, tin.....	.21
Zwiebach, tin.....	.21
Royal lunch, tin.....	.19
Nabisco wafers, tin.....	.23
5 o'clock tea, tin.....	.21
Tobacco, Climax, plug, tin.....	.05
Perfume, Eclat, No. 15, bot.....	.47
Bandages, gauze, 2-inch, roll.....	.03
Bandages, gauze, 2½-inch, roll.....	.04
Bandages, gauze, 3-inch, roll.....	.05
Bandages, gauze, 3½-inch, roll.....	.06

SHIPPING INFORMATION.

September Weather Probabilities.

The following weather conditions may be expected to prevail at the Canal entrances during the month of September, 1915. The predictions are based on the records at Ancon and Colon for the past seven and eight years, respectively.

Winds—Light southeast winds will prevail over the Atlantic coast, with an average hourly velocity of about seven miles, although a maximum velocity as high as 35 miles an hour may occur during the passage of local rain or thunder showers.

Over the Pacific coast and the interior, light northwest winds will continue to prevail with an average hourly velocity of about six miles. A maximum velocity of 25 or 30 miles an hour may be expected during local rain or thunder storms, but such velocities seldom last more than a few minutes.

Rain—The average September rainfall on the Atlantic coast for a period of 44 years is 12.52 inches, while the average amount at the Pacific entrance for a period of 18 years is 7.80 inches. Heavy showers may be expected over both coasts, and 19 to 24 days on which 0.01 inch or more of rain occurs. The average number of days on which the rainfall equals or exceeds one inch is four on the Atlantic coast, and two on the Pacific side.

Fogs—Few, if any, fogs are likely to occur on either coast, though night and early morning fogs will be numerous over the interior. Under the present operating conditions they should not prove a hindrance to the navigation of the Canal, as all that occur may be expected to lift or become dissipated by 8.30 a. m. The average number of fogs over the Gaillard Cut section of the Canal, during the month of September, is 25, of which 57 per cent are dense. (In a dense fog objects can not be distinguished at a distance of 1,000 feet).

Temperature—An average air temperature of approximately 80 degrees Fahrenheit may be expected over both coasts. The maximum temperature for the month is not likely to exceed 94°, or the minimum fall below 68°, at the Pacific entrance to the Canal, while at the Atlantic entrance a temperature higher than 90° or lower than 71° degrees, is not likely to occur. The mean daily range in temperature will probably be about 14 degrees Fahrenheit on the Pacific coast, and nine degrees on the Atlantic coast.

Barometric pressure—Except for the well marked diurnal change, caused by the daily changes in temperature, variations in atmospheric pressure on the Isthmus are so slight as to have little value as indicators of future weather conditions. The mean atmospheric pressure for the month will be about 29.84 inches over both coasts. The highest pressure is not likely to be above 29.95 inches, or the minimum lower than 29.70 inches.

Storms—Local wind, thunder, or rain squalls of more or less limited extent may be expected quite frequently over the Isthmus during the month of September. No severe general storms may be expected, as the Canal Zone lies without the regions of violent and widespread atmospheric disturbances. The West Indian hurricane season is from July to October, but the normal path followed by these storms during the month of September lies well to the northward of the Isthmus. However, a rough sea, accompanied by brisk northerly winds, may be experienced occa-

sionally outside the breakwater, following the passage of one of these storms. The average number of days on which thunder storms occur on the Atlantic and Pacific coasts is 29 and 18, respectively.

Generally cloudy weather will continue over both coasts, and smooth to moderate seas may be expected at the Pacific entrance to the Canal.

Tides—The maximum amplitude of tidal range at Colon is only about two feet, and no consideration need be given to tidal fluctuation in navigating the Atlantic entrance to the Canal.

The average tidal range at the Pacific entrance is approximately 13 feet, although a range of 20 feet sometimes occurs during spring tides.

Panama (Balboa) tide predictions are given below:

Tide Predictions.

Panama (Balboa) tide predictions for the next five weeks are given in this table:

AUGUST.				
DATE.	Time and height of high and low water.			
Wed., Aug. 18.....	2:30 1.9	8:30 14.4	15:08 1.7	21:06 12.9
Thurs., Aug. 19....	3:29 2.7	9:31 13.7	16:12 2.3	22:17 12.3
Fri., Aug. 20.....	4:37 3.3	10:46 13.1	17:24 2.5	23:41 12.2
Sat., Aug. 21.....	5:54 3.3	12:09 13.1	18:38 2.1	.....
Sun., Aug. 22.....	1:02 12.8	7:07 2.8	13:26 13.6	19:42 1.4
Mon., Aug. 23.....	2:09 13.8	8:11 2.0	14:29 14.3	20:38 0.6
Tues., Aug. 24.....	3:05 14.7	9:05 1.2	15:22 15.0	21:30 0.0
Wed., Aug. 25.....	3:52 15.5	9:55 0.4	16:08 15.5	22:15 -0.4
Thurs., Aug. 26....	4:35 16.0	10:39 -0.1	16:51 15.6	22:57 -0.4
Fri., Aug. 27.....	5:13 16.0	11:21 -0.1	17:31 15.4	23:38 0.0
Sat., Aug. 28.....	5:51 15.7	12:01 0.2	18:09 14.9	.....
Sun., Aug. 29.....	0:17 0.6	6:27 15.0	12:41 0.8	18:47 14.1
Mon., Aug. 30.....	0:57 1.5	7:02 14.2	13:21 1.6	19:24 13.2
Tues., Aug. 31.....	1:37 2.6	7:38 13.3	14:04 2.6	20:02 12.2

SEPTEMBER:

DATE.	Time and height of high and low water.			
Wed., Sept. 1.....	2:21 3.6	8:17 12.3	14:51 3.5	20:52 11.2
Thurs., Sept. 2....	3:12 4.6	9:06 11.4	15:49 4.3	21:55 10.5
Fri., Sept. 3.....	4:13 5.3	10:15 10.9	16:55 4.6	23:21 10.3
Sat., Sept. 4.....	5:24 5.4	11:40 10.8	18:05 4.4	.....
Sun., Sept. 5.....	0:39 10.7	6:30 5.0	12:53 11.2	19:06 3.8
Mon., Sept. 6.....	1:37 11.5	7:30 4.2	13:48 12.1	19:54 2.9
Tues., Sept. 7.....	2:20 12.6	8:17 3.1	14:30 13.0	20:38 1.9
Wed., Sept. 8.....	2:56 13.7	8:58 2.0	15:08 14.0	21:16 1.0
Thurs., Sept. 9....	3:31 14.7	9:38 0.9	15:45 14.8	21:54 0.2
Fri., Sept. 10.....	4:04 15.6	10:16 0.0	16:21 15.5	22:31 -0.3
Sat., Sept. 11.....	4:34 16.3	10:54 -0.6	16:58 15.8	23:10 -0.5
Sun., Sept. 12.....	5:12 16.6	11:35 -0.9	17:36 15.9	23:48 -0.4
Mon., Sept. 13.....	5:51 16.6	12:16 -0.8	18:15 15.6	.....
Tues., Sept. 14.....	0:32 0.1	6:31 16.2	13:00 -0.2	19:00 14.9
Wed., Sept. 15.....	1:18 0.9	7:16 15.4	13:49 0.6	19:49 14.0
Thurs., Sept. 16....	2:09 1.9	8:09 14.3	14:46 1.6	20:48 13.0
Fri., Sept. 17.....	3:12 2.9	9:13 13.3	15:53 2.4	22:04 12.3
Sat., Sept. 18.....	4:26 3.6	10:36 12.5	17:09 2.8	23:25 12.2
Sun., Sept. 19.....	5:46 3.6	12:00 12.5	18:24 2.5	.....
Mon., Sept. 20.....	0:55 12.8	6:58 2.9	13:22 13.1	19:29 1.9
Tues., Sept. 21....	1:59 13.8	8:00 2.0	14:21 13.9	20:23 1.2
Wed., Sept. 22.....	2:48 14.7	8:50 1.1	15:09 14.6	21:10 0.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second

line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is the datum of soundings on the Coast and Geodetic survey charts for this region, and which is 8.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (-) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, for the meridian 75° W. The hours of the day are numbered consecutively from 01 (mid night) to 23h (11:00 p. m.). All hours greater than 12 are in the afternoon (p. m.) and when diminished by 12 give the usual reckoning; for instance: 15:47 is 3:47 p. m.

Mail Despatches.

Following is the schedule of the despatches of mail made to the United States each week by the Cristobal post-office:

Every Thursday to New Orleans, for all States. Due at New Orleans on the following Tuesday.

Every Saturday to New York, for all States. Due at New York the following Friday, with the exception of the *Advance*, which is due there on Saturday.

Every Monday to New York, for all States except Louisiana, Mississippi, Arkansas, and Texas. Due at New York the following Monday.*

Train No. 6, leaving Panama at 11 a. m., connects with the above despatches.

NOTE.—The sailings on Monday, August 23, and September 20, will not land mail in New York until Tuesday of the following week; hence, despatches on those dates will be only for the following States: New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, North Carolina, South Carolina, Ohio, Indiana, Illinois, Michigan, Wisconsin, North Dakota, South Dakota, Iowa, Minnesota, Montana, Wyoming, Idaho, Washington, Oregon, and northern California. Despatches to States not listed above will be made on the Thursday boat to New Orleans. Train No. 4, leaving Panama at 7:10 a. m., connects with the despatches for the two sailings mentioned above.

Stages of the Chagres River, Gatun Lake, and Miraflores Lake.

Maximum heights of the Chagres River, Gatun and Miraflores Lakes for the week ending midnight, Saturday, August 14, 1915:

DAY AND DATE.	STATIONS.				
	Vigia.	Alhajuela	Gatun Lake.	Miraflores Lake.	
Sun., Aug. 8.....	127.35	93.48	86.15	86.10	54.10
Mon., Aug. 9.....	129.50	94.60	86.03	86.06	54.12
Tues., Aug. 10.....	129.45	94.88	86.10	86.09	54.14
Wed., Aug. 11.....	127.25	93.35	86.06	86.01	54.20
Thurs., Aug. 12.....	127.70	93.60	86.10	86.02	54.00
Fri., Aug. 13.....	127.04	93.42	86.16	86.05	54.03
Sat., Aug. 14.....	126.80	93.88	86.10	86.02	54.01
Heights of low water to nearest foot.....	125.0	91.0			

Rainfall from August 1 to 14, 1915, Inclusive.

STATIONS.	Maximum in one day.	Date.	Total for period.	
<i>Pacific Section—</i>	<i>Ins.</i>			<i>Ins.</i>
Balboa.....	.49	3		0.63
Balboa Heights.....	.09	3		1.33
Miraflores.....	.85	3		1.76
Pedro Miguel.....	1.07	6		2.12
Ric Grande.....	1.17	6		2.32
<i>Central Section—</i>				
*Culebra.....	.74	1		2.53
*Camacho.....	.64	6		2.68
Empire.....	.70	6		2.68
Gatun.....	.38	3		1.41
*Juan Mina.....	.65	6		2.68
*Alhajuela.....	.92	6		3.52
*El Vigia.....	1.30	4		5.12
Frijoles.....	.80	10		1.99
*Trinidad.....				
*Monte Lirio.....	1.10	10		3.35
<i>Atlantic Section—</i>				
Gatun.....	1.25	4		4.20
*Brazos Brook.....	.82	7		3.29
Colon.....	1.00	6		3.45
*Bocas del Toro.....				

*Standard rain gage—readings at 5 p. m. daily.

Automatic rain gage at unstarred stations—values midnight to midnight.

MOVEMENTS OF OCEAN VESSELS.

(Week ending at 6 p. m., August 15, 1915.)

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Date Entered	Vessel	Nationality	Line	From	For	CARGO		CANAL TONNAGE	
						Nature	Tons	Gross	Net
Aug. 9	Aboukir	British	Clydesdale Shipowners Co., Ltd.	Norfolk	Antofagasta	Coal	5,400	4,148	2,667
Aug. 9	Bolton Castle	British	J. Chambers & Company	New York	Vladivostok	General	8,200	6,437	4,863
Aug. 10	Edison Light	American	Boston-Virginia Transp'n. Co.	Philadelphia	Los Angeles	General	3,900	2,656	1,792
Aug. 11	Pachitea	Peruvian	Peruvian Line	Baltimore	Callao	General	2,936	4,616	2,738
Aug. 12	Lo Hobra	Norwegian	Akties, Tankfart	Tampico	Balboa	Oil	10,600	7,235	5,267
Aug. 13	Beckenham	British	Watts, Watts & Co.	Philadelphia	Puget Sound	Ballast		4,943	3,508
Aug. 13	Alaskan	American	American-Hawaiian Line	New York	San Diego	General	6,643	8,868	6,500
Aug. 14	L'wijk Von Nassou	Dutch	Royal Dutch West India Line	Amsterdam	Antofagasta	Ballast		3,623	2,376
Aug. 14	Guernsey	Norwegian	Dampsk Akties, Guernsey	Philadelphia	Antofagasta	Ballast		4,418	3,273
Aug. 14	Netherpark	British	Netherton Shipping Co., Ltd.	New York	Valparaiso	General	7,000	4,915	3,516
Aug. 14	Edith	American	Luckenbach Line	New York	Los Angeles	General	4,000	3,717	2,642
Aug. 15	Polymnia	British	Cunard Line	Norfolk	San Francisco	Ballast		2,564	1,630

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Aug. 10	Victor & Ethan	American	Edw. Cunningham	Seattle	Boston	Ballast		95	50
Aug. 10	Cuaco	British	Pacific Steam Navigation Co.	Guayaquil	Cristobal	Coco, hides, gen.	961	1,557	993
Aug. 11	Ucoyali	Peruvian	Peruvian Line	Mollendo	Cristobal	General	1,800	4,278	2,206
Aug. 11	Paleno	Chilean	Chilean Line	Valparaiso	Cristobal	General	1,633	3,639	2,537
Aug. 11	Isthmian	American	American-Hawaiian Line	Tocopilla	Philadelphia	Nitrates	6,950	5,677	3,975
Aug. 12	Rochdale	British	Rochdale S. S. Co.	Mejillones	Colon (orders)	Nitrates	6,020	3,987	2,790
Aug. 12	Cedar Branch	British	Nautilus Steam Shipping Co.	Antofagasta	Colon (orders)	Nitr'te, ore, gen.	5,390	4,912	3,651
Aug. 12	Quillota	British	Pacific Steam Navigation Co.	Valparaiso	Liverpool	General	1,621	4,620	2,848
Aug. 13	Salvador	British	Salvador Railway Co.	Salina Cruz	Cristobal	General	316	1,190	692
Aug. 13	Honolulu	American	American-Hawaiian Line	San Pedro	N. Y.-Boston	General	8,193	7,825	5,715
Aug. 13	Copenhagen	British	Glasgow Shipowners Co.	Iquique	Colon (orders)	Nitrates, copper	7,079	5,029	3,735
Aug. 14	Kronland	American	Panama Pacific Line	San Francisco	New York	General	6,100	13,076	8,551
Aug. 14	Kronborg	Danish	Dampskibs Selsk.	Cruz Grande	Philadelphia	Iron ore	5,300	3,716	2,665
Aug. 14	Greystoke Castle	British	Greystoke Castle S. S. Co.	Manila	New York	Sugar, hemp	5,500	4,488	3,440
Aug. 15	Carolyn	American	A. H. Bull S. S. Co.	San Francisco	New York	Lumber	3,400	3,425	2,322
Aug. 15	Chile	British	Pacific Steam Navigation Co.	Valparaiso	Cristobal	General	1,552	4,040	2,628
Aug. 15	Jamaico	British	Pacific Steam Navigation Co.	Tumaco	Cristobal	General	276	1,170	620

*ARRIVALS AND EXPECTED ARRIVALS FROM ATLANTIC.

Date	Vessel	Line	From
Aug. 13	Advance	Panama Railroad S. S. Line	New York
Aug. 14	Amista	Soc. Aron. Lloyd del Pacifico	Gerca.

*ARRIVALS AND EXPECTED ARRIVALS FROM PACIFIC.

Date	Vessel	Line	From
Aug. 20	Potosi	Pacific Steam Nav. Co.	Valparaiso
Aug. 25	Seijo Main	Toyo Kisen Kaisha	Hongkong.

PORT OF CRISTOBAL.

*ARRIVALS.

Date	Vessel	Line	From
Aug. 9	Tyne	Royal Mail S. P. Co.	London
Aug. 10	Frances Hyde	Copley Cement Mfg. Co.	New Orleans
Aug. 11	Legaspi	Spanish Line	Barcelona
Aug. 14	Skogstad	Earn Line	Norfolk
Aug. 14	Tabor	Earn Line	Norfolk
Aug. 15	Danube	Royal Mail S. P. Co.	London

*DEPARTURES.

Date	Vessel	Line	To
Aug. 10	Savoia	Italian Line	Genoa
Aug. 12	Wegadesk	Earn Line	Felton
Aug. 13	Legaspi	Spanish Line	Barcelona
Aug. 13	Niagara	French Line	Bordeaux
Aug. 13	Oranion	Leyland Line	Galveston

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
Aug.	Frances Hyde	Copley Cement Mfg. Co.	Unknown
Aug.	Tyne	Royal Mail S. P. Co.	St. Lucia
Aug.	Danube	Royal Mail S. P. Co.	London
Aug.	Tabor	Earn Line	Cuba
Aug.	Skogstad	Earn Line	Cuba

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
Aug.	Frances Hyde	Copley Cement Mfg. Co.	Unknown
Aug.	Tyne	Royal Mail S. P. Co.	St. Lucia
Aug.	Danube	Royal Mail S. P. Co.	London
Aug.	Tabor	Earn Line	Cuba
Aug.	Skogstad	Earn Line	Cuba

*Other than vessels which passed through the Canal, United Fruit Company's vessels, and vessels in regular service to the United States.

PORT OF BALBOA.

*ARRIVALS.

Date	Vessel	Line	From
Aug. 13	Peru	Pacific Mail S. S. Co.	San Francisco

DEPARTURES.

Date	Vessel	Line	To
Aug. 13	Peru	Pacific Mail S. S. Co.	San Francisco

*EXPECTED ARRIVALS.

Date	Vessel	Line	From
Aug. 19	San Jose	Pacific Mail S. S. Co.	San Francisco

*EXPECTED DEPARTURES.

Date	Vessel	Line	To
Aug. 19	Peru	Pacific Mail S. S. Co.	San Francisco

*Other than vessels passing through the Canal.

Sailings of Vessels in Regular Service with the United States.

NEW YORK TO CRISTOBAL-COLON.

Sails	Arrives
Almirante	U. F. C. Aug. 11
Panama	P. R. R. Aug. 12
Pastores	U. F. C. Aug. 14
Zacapa	U. F. C. Aug. 18
Allianca	P. R. R. Aug. 19
Calamares	U. F. C. Aug. 21
Carillo	U. F. C. Aug. 25
Colon	P. R. R. Aug. 26

CRISTOBAL-COLON TO NEW YORK.

Santa Marta	U. F. C. Aug. 19
Advance	P. R. R. Aug. 21
Metapan	U. F. C. Aug. 23
Almirante	U. F. C. Aug. 26
Panama	P. R. R. Aug. 28
Pastores	U. F. C. Aug. 30
Zacapa	U. F. C. Sept. 2
Allianca	P. R. R. Sept. 4

NEW ORLEANS TO CRISTOBAL-COLON.

Atenas	U. F. C. Aug. 11
Cartago	U. F. C. Aug. 14

Turrialba	U. F. C. Aug. 18
Heredia	U. F. C. Aug. 21
Abangarez	U. F. C. Aug. 25
Parismina	U. F. C. Aug. 28

CRISTOBAL-COLON TO NEW ORLEANS.

Parismina	U. F. C. Aug. 19
Atenas	U. F. C. Aug. 19
Cartago	U. F. C. Aug. 26
Turrialba	U. F. C. Aug. 26
Heredia	U. F. C. Sept. 2
Abangarez	U. F. C. Sept. 2

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