

CANAL RECORD

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THE PANAMA CANAL RECORD

PUBLISHED WEEKLY UNDER
THE AUTHORITY AND SUPER-
VISION OF THE PANAMA CANAL

AUGUST 8, 1928, TO JULY 31, 1929

VOLUME XXII
WITH INDEX

THE PANAMA CANAL
BALBOA HEIGHTS, CANAL ZONE
1929

THE PANAMA CANAL PRESS
MOUNT HOPE, CANAL ZONE
1929

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Volume XXII. Balboa Heights, C. Z., August 8, 1928.

No. 1.

Canal Traffic During July.

During the month of July, 1928, 509 commercial vessels and 10 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,109,083.19, and on the launches, \$73.35, or a total tolls collection of \$2,109,156.54.

The daily average number of transits of seagoing vessels for the month was 16.41, and the daily average tolls collection, \$68,034.94. The average amount of tolls paid by each of the commercial transits was \$4,143.58, as compared with \$4,191.67 for the month of June, 1928. Traffic in July exceeded that of June by 28 transits and by almost \$93,000 in tolls.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 7 months of the current calendar year, with the daily averages of transits and tolls:

	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January	540	\$2,212,752.50	17.42	\$71,379.20
February	547	2,253,755.37	18.86	77,715.70
March	542	2,223,370.57	17.48	71,271.63
April	531	2,187,607.82	17.70	72,914.55
May	508	2,118,969.83	16.38	68,353.86
June	481	2,016,211.09	16.03	67,206.43
July	509	2,109,083.19	16.41	68,034.94
Totals	3,658	15,121,750.37	17.17	70,994.13

Tanker Traffic Through the Panama Canal in July, 1928.

During the month of July, 1928, 96 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 506,542, on which tolls of \$442,108.53 were collected. Cargo amounted to 462,483 tons. This included 9,340 tons of molasses routed from Honolulu to Mobile. In point of net tonnage, tanker traffic for the past month showed a decrease of 22.9 per cent under the same traffic for the corresponding month a year ago, while cargo tonnage decreased 22.7 per cent under the cargo tonnage of July, 1927.

Tank ships comprised 18.8 per cent of the total commercial transits through the Canal during the month; made up 21.8 per cent of the total Panama Canal net tonnage; were the source of 20.9 per cent of the tolls collected; and carried 20.2 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of July, 1928, segregated by direction of transit and nationality of vessels, are shown in the following tabulations, with comparative totals for the two preceding months and for July, 1927:

(Continued on page 6.)

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, August 4, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From--	For--	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Steele.	7-28	4 00	29	6 10	29	13 53	29	15 05	American	Ore S. S. Corp.	550 3	72 2	22 9	Norfolk, Va.	Cruz Grande, Chile	Ballast.	15,551	4,297	
Apple Branch.	8-28	22 25	29	6 20	29	14 12	29	15 30	British	F. & W. Watson.	375 0	51 0	19 2	Liverpool, England	Corral, Chile.	General	1,864	5,112	
Empire Arrow.	29	6 08	29	7 25	29	14 12	29	16 10	American	Standard Transp. Co.	408 0	63 0	16 6	New York, N. Y.	Los Angeles, Calif.	Ballast	9,841	6,946	
American.	29	3 30	29	7 30	29	15 05	29	16 10	American	Amer-Hawaiian Line.	404 6	53 6	18 6	Boston, Mass.	Portland, Ore.	General	3,496	6,777	
Pacific Fir.	29	7 15	29	8 30	29	15 45	29	17 35	American	Diamond S. S. Co.	410 5	54 0	21 6	New York, N. Y.	Seattle, Wash.	General	5,377	6,622	
Andrus.	29	2 40	29	9 15	29	17 00	29	18 35	British	Andrew Weir & Co.	401 6	54 3	23 0	Tampico, Mexico	Auckland, N. Z.	Asphalt	6,885	6,271	
Urubamba.	24	18 25	29	10 35	29	17 43	29	19 30	Peruvian	Peruvian Line.	381 2	46 0	19 3	Cristobal, C. Z.	Callao, Peru	General	94	4,803	
Minden.	28	20 39	11	20 39	11	18 37	23	20 15	German	North German Lloyd.	385 0	51 0	18 6	Bremen, Germany.	Champerne, Guat.	General	1,947	4,822	
M. S. Dollar.	29	10 05	29	11 50	29	19 12	30	5 00	British	Can-Am. S. S. Co.	475 0	61 0	23 3	Tampa, Fla.	Vancouver, B. C.	Phosphate rock.	6,505	10,116	
Robin Adair.	29	11 40	29	12 10	29	19 25	29	21 25	American	Island S. S. Lines.	425 0	55 2	24 2	New York, N. Y.	Vancouver, B. C.	Steel, general.	6,385	7,470	
Golden Gate.	29	13 45	29	13 50	29	21 07	30	2 20	Norwegian.	Seand-Sjo, Pacific Co.	381 5	53 1	21 0	Oslo, Norway.	Corral, Chile.	General	3,302	5,010	
Sudawsonco.	29	14 05	29	14 15	29	21 55	29	23 07	American.	Transmarine Lines.	324 0	46 2	17 1	Newark, N. J.	San Francisco, Cal.	General	1,000	3,984	
Norwich City.	29	14 10	29	14 25	29	21 47	30	4 25	British.	Canadian Transp. Co.	397 0	53 5	15 9	Cardenas, Cuba.	Los Angeles, Calif.	Sugar	3,000	6,051	
Portland.	28	21 55	29	14 55	29	22 22	30	3 00	German.	Hamburg-American Line.	462 2	61 2	24 0	New York, N. Y.	Vancouver, B. C.	General	5,651	9,139	
Trevoran.	29	17 40	29	17 55	30	13 30	14	45	British.	Royal Neth. S. S. Co.	202 0	33 1	12 0	Hamburg, Germany.	Dunedin, N. Z.	General	2,793	6,022	
Baralt.	25	20 20	30	6 05	30	14 32	30	15 35	Dutch.	Transmarine Lines.	324 0	46 0	23 8	New York, N. Y.	Tumaco, Colombia.	General	78	1,183	
Surico.	30	2 05	30	6 10	30	14 38	30	16 13	American.	Common Brothers.	390 0	53 6	16 0	Mobile, Ala.	Seattle, Wash.	General	2,745	3,984	
Servicio.	30	3 20	30	6 15	30	15 15	30	19 00	British.	U. S. Navy.	385 4	53 0	16 0	Kingston, Jamaica.	Portland, Ore.	Ballast	5,619	4,127	
Anthea.	30	5 55	30	7 20	30	16 56	30	16 58	British.	C. T. Bowring & Co.	231 0	43 0	20 6	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	5,788	3,852	
S-14.	30	7 44	30	7 44	30	16 30	30	21 00	American.	U. S. Navy.	231 0	21 0	10 0	Cristobal, C. Z.	Balboa, C. Z.				
S-15.	30	7 44	30	7 44	30	16 30	30	21 00	American.	U. S. Navy.	231 0	21 0	10 0	Cristobal, C. Z.	Balboa, C. Z.				
S-17.	30	7 44	30	7 44	30	16 30	30	21 00	American.	U. S. Navy.	231 0	21 0	10 0	Cristobal, C. Z.	Balboa, C. Z.				
O-8.	30	6 00	30	8 35	30	16 54	30	21 00	Danzig.	Baltic-Amer. Pet. Co.	489 0	68 0	21 6	Hamburg, Germany.	Los Angeles, Calif.	Ballast.	9,302	6,127	
Pendolope.	30	6 10	30	8 50	30	17 16	30	18 36	American.	United Fruit Co.	330 6	45 0	20 6	Port Limon, C. R.	San Francisco, Cal.	Bananas, coffee.	707	3,075	
Linon.	30	6 10	30	8 50	30	17 16	30	18 36	American.	United Fruit Co.	330 6	45 0	20 6	Port Limon, C. R.	San Francisco, Cal.				
George W.	30	16 30	30	9 38	30	17 30	30	19 00	American.	Huasteca Petroleum Co.	417 0	56 0	20 3	Baltimore, Md.	Los Angeles, Calif.	Ballast	6,763	4,759	
Bonito.	30	6 40	30	10 18	30	18 30	30	19 00	American.	Standard Shipping Co.	495 0	57 2	21 6	New York, N. Y.	Los Angeles, Calif.	Ballast	7,481	4,946	
M. F. Elliott.	30	14 30	30	14 30	30	21 35	31	1 32	British.	Dagge Oil Transp. Co.	407 0	52 3	19 6	Hull, England.	Los Angeles, Calif.	Ballast	6,183	4,343	
San Manuel.	30	14 30	30	14 30	30	21 35	31	1 32	British.	Dagge Oil Transp. Co.	407 0	52 3	19 6	Hull, England.	Los Angeles, Calif.	Ballast	6,183	4,343	
Bagaduce.	30	7 55	31	6 08	31	14 42	31	21 30	American.	U. S. Navy.	343 0	50 2	21 0	Cristobal, C. Z.	Balboa, C. Z.		4,334	5,534	
Santa Cruz.	30	20 15	31	6 31	31	15 17	31	16 25	German.	Grace Line.	475 0	59 6	25 0	New York, N. Y.	Tocopilla, Chile	General	5,862	8,734	
Lippe.	31	2 15	31	7 15	31	15 32	31	16 35	American.	North German Lloyd.	424 2	56 2	25 3	Bremen, Germany.	Portland, Ore.	General	7,901	7,611	
Steel Engineer.	31	11 05	31	11 15	31	17 35	31	18 25	Japanese.	Island S. S. Lines.	475 0	61 0	21 0	Mobile, Ala.	Kobe, Japan.	(s)	2,318	10,173	
Hawth Maru.	31	11 05	31	11 15	31	17 35	31	18 25	Japanese.	Osaka Steamship Kaisha.	475 0	61 0	21 0	Buenos Aires, Arg.	Kobe, Japan.	(s)	2,318	10,173	
Martha.	31	13 05	31	13 20	31	21 30	31	2 55	Norwegian.	H. C. Stensson.	181 0	30 0	10 3	Covanas, Colombia.	Buenaventura, Col.	Cattle	150	180	
Britishbank.	31	14 35	31	15 05	31	22 07	1	2 35	British.	Bank Line, Ltd.	420 0	53 9	23 6	New York, N. Y.	Shanghai, China.	General	6,411	7,137	
British.	31	14 35	31	15 05	31	22 07	1	2 35	British.	Bank Line, Ltd.	420 0	53 9	23 6	New York, N. Y.	Shanghai, China.	General	6,411	7,137	
Ycoman.	31	14 55	31	20 58	8-1	9 29	1	10 50	British.	Shell Oil Co.	440 0	57 0	18 3	Falmouth, England.	Los Angeles, Calif.	Ballast	7,044	5,070	
Tanker.									Submarine.	*Tuz.									

*Tug.

*Submarine.

*Motor ship.

*Tug.

*Submarine.

*Tug.

*Tug.

	27	15	20	1	6	05	1	14	08	1	15	00	British	T. & J. Harrison	420	0	55	0	20	6	Liverpool, England	Vancouver, B. C.	Ballast	6,652	4,688
Logician	30	17	40	1	6	05	1	14	08	1	15	00	British	Pacific Steam Nav. Co.	413	0	52	0	22	7	Hull, England	Corral, Chile	General	4,200	5,816
Ballea	31	8	30	1	6	37	1	15	07	1	15	00	British	Royal Neth. S. S. Co.	406	0	62	0	20	2	Hamburg, Germany	Corral, Chile	General	3,298	5,905
Alkmaar	31	17	00	1	7	55	1	15	26	1	16	42	American	Alkmaar	445	0	54	0	19	2	Boston, Mass.	Seattle, Wash.	General	3,177	5,905
Missourian	31	17	00	1	8	20	1	15	46	1	23	30	American	Roevel S. S. Co. S. E.	416	0	54	0	24	11	Baltimore, Md.	Darien, China	Case oil, general	6,737	7,097
Unito	31	17	00	1	8	20	1	15	46	1	23	30	American	Roevel S. S. Co. S. E.	416	0	54	0	24	11	Baltimore, Md.	Darien, China	Case oil, general	6,737	7,097
Ingola	8-1	00	45	1	9	00	1	16	40	1	20	00	British	Armstrong Coal & S. S. Co.	332	0	50	5	21	6	Baltimore, Md.	Toopilla, Chile	General	4,534	3,202
Eleazar	1	2	55	1	9	35	1	17	28	1	18	30	American	Christensen S. S. Co.	410	5	54	3	17	6	Baltimore, Md.	Seattle, Wash.	General	2,556	4,788
Christensen	1	2	25	1	10	05	1	18	28	1	19	27	Chilean	South American Line	423	0	56	2	26	3	New York, N. Y.	Valparaiso, Chile	General	2,387	7,764
Aconagua	1	00	10	1	10	55	1	18	55	1	20	10	Norwegian	Chile S. S. Corp.	465	7	62	0	19	0	Rotterdam, Holland	Los Angeles, Calif.	Ballast	7,764	4,705
Lillian Lucken	1	6	42	1	12	00	1	19	10	1	20	30	American	Luckenbach Line	449	0	60	2	23	6	Boston, Mass.	Seattle, Wash.	General	5,500	6,885
enbach	1	5	50	1	13	35	1	20	42	1	23	15	Danish	East Asiatic S. S. Co.	410	5	55	2	19	0	Copenhagen, Denk	Vancouver, B. C.	General	3,270	7,013
Tounging	7-16	14	40	2	6	00	2	13	30	2	17	15	British	Pacific Steam Nav. Co.	245	0	33	5	16	7	Cristobal, C. Z.	Champerio, Guat	General	1,073	735
Solador	8-2	6	45	2	7	05	2	14	26	2	15	43	Japanese	Nippon Yusen Kaisha	415	0	58	0	24	0	Baltimore, Md.	Kobe, Japan	General	7,190	8,058
Toba Maru	2	7	28	2	7	45	2	14	11	3	13	05	American	U. S. Army	487	0	58	0	25	0	New York, N. Y.	San Francisco, Cal.	Army supplies	465	
Chateau	2	7	45	2	8	20	2	15	08	3	18	00	American	Sun Oil Co.	429	3	59	2	21	6	Philadelphia, Pa.	Los Angeles, Calif	Ballast	7,709	5,220
Starbuck	2	11	30	2	11	35	2	18	45	2	19	48	Norwegian	Brunsgaard Kiostrud	389	8	51	1	21	6	Cardiff, England	Los Angeles, Calif	Coal and coke	3,820	5,660
Hermles	2	11	30	2	11	35	2	18	45	2	19	48	Norwegian	C. A. Wickham	389	8	51	1	21	6	Cardiff, England	Los Angeles, Calif	Coal and coke	3,820	5,660
Succes	2	11	30	2	11	35	2	18	45	2	19	48	Norwegian	C. A. Wickham	389	8	51	1	21	6	Cardiff, England	Los Angeles, Calif	Coal and coke	3,820	5,660
No. 19	2	11	30	2	11	35	2	18	45	2	19	48	Norwegian	C. A. Wickham	389	8	51	1	21	6	Cardiff, England	Los Angeles, Calif	Coal and coke	3,820	5,660
No. 20	2	11	30	2	11	35	2	18	45	2	19	48	Norwegian	C. A. Wickham	389	8	51	1	21	6	Cardiff, England	Los Angeles, Calif	Coal and coke	3,820	5,660
Pomona	3	8	00	3	8	15	3	15	01	3	16	30	American	American Banana Corp.	445	0	56	0	16	6	Baltimore, Md.	Everett, Wash.	Ballast	8,324	6,036
Mary Ellen	3	11	50	3	12	05	3	20	20	3	21	21	American	California Petroleum Co	509	7	70	3	22	6	Chester, Pa.	Los Angeles, Calif	Ballast	12,425	7,338
O'Neil	3	12	45	3	13	00	3	21	09	3	22	40	American	Gulf-Pacific Line	335	0	46	0	18	0	Tampa, Fla.	Seattle, Wash	General	2,400	3,984
Point Sur	3	12	45	3	13	00	3	21	09	3	22	40	American	Charles Nelson Line	321	0	50	0	18	6	Baltimore, Md	Seattle, Wash	General	2,710	3,872
Castletown	3	14	15	3	14	20	3	21	58	3	22	40	British	Arand Petroleum Co.	305	0	51	3	11	0	Balboa, C. Z.	Balboa, C. Z.	Ballast	3,049	5,977
San Claude	3	23	10	4	6	25	4	13	34	4	17	40	Norwegian	Westfal, Larsen & Co.	375	3	52	4	16	0	Santos, Brazil	San Francisco, Cal.	General	3,049	5,977
Hardanger	3	23	10	4	6	25	4	13	34	4	17	40	Norwegian	Westfal, Larsen & Co.	375	3	52	4	16	0	Santos, Brazil	San Francisco, Cal.	General	3,049	5,977
Manchuria	4	6	10	4	7	10	4	13	38	4	23	15	American	Panama-Pacific Line	600	0	65	3	27	6	New York, N. Y.	San Francisco, Cal.	General	1,947	17,044
Louise Maersk	4	3	45	4	7	35	4	14	30	4	16	15	Danish	Islands-Pacific Line	362	2	44	0	19	8	Savannah, Ga.	Kobe, Japan	General	3,360	3,212
Touledo	4	8	35	4	8	55	4	15	09	4	18	53	Norwegian	Barber S. S. Line	375	2	52	5	20	9	New York, N. Y.	Manila, P. I.	General	4,311	5,491
H. C. Folger	4	17	40	4	18	20	5	10	35	5	12	00	American	Atlantic Refining Co.	435	0	56	0	22	0	Philadelphia, Pa.	Los Angeles, Calif	Ballast	7,461	5,159

Tanker.

Transport.

Launch.

Barge.

Towing barges.

10 Towing barges.

9 Barge.

8 Launch.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

7 Transport.

6 Tanker.

5 Tanker.

4 Tanker.

3 Tanker.

2 Tanker.

1 Tanker.

Papoose	28	17	15	29	6	17	29	18	30	29	18	30	American	Petroleum Nav. Co.	423	0	53	2	27	0	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline	8,945	4,370
F. H. Hillman	29	6	00	29	6	59	29	19	40	30	00	45	American	Standard Oil Co of Cal.	500	0	68	2	29	0	Los Angeles, Calif.	Hull, England	Gasoline	13,685	11,225
Ruahine	28	12	50	29	7	12	29	17	55	29	17	55	British	N. Z. Shipping Co.	449	6	58	3	23	7	Wellington, N. Z.	London, England	(*)	3,982	11,443
Witani	28	20	30	29	8	10	29	20	15	30	1	25	German	North German Lloyd	480	9	58	2	25	6	Vancouver, B. C.	Hamburg, Germany	General	7,800	7,820
Astril	28	8	30	29	6	13	30	13	30	2	15	45	American	Standard Transp. Co.	439	5	58	0	27	8	Los Angeles, Calif.	Baltimore, Md.	Gasoline	8,428	8,913
Ranja	29	23	30	30	6	57	30	14	10	30	14	10	Norwegian	H. H. B. Amer.	408	3	55	3	26	8	Los Angeles, Calif.	United Kingdom	Gasoline	8,688	6,468
Helen Onsted	30	3	00	30	7	08	30	15	10	30	15	10	American	The Texas Co.	425	8	57	0	27	0	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline	11,085	7,484
Phoenix	29	15	12	30	8	12	30	16	25	30	16	25	American	American Tankers Corp.	407	0	54	3	27	3	Honolulu, T. H.	Mobile, Ala.	Ballast	6,336	4,389
Padilla	29	17	01	30	8	21	30	17	15	4	10	05	Colombian	Colombian S. S. Co.	240	8	43	3	12	6	Buenaventura, Col.	Pro. Colombia	Col.	2,206	4,389
Danaborg	29	19	10	30	9	21	30	18	35	31	2	00	Danish	C. T. Hansen	369	0	49	5	23	0	Vancouver, B. C.	Antwerp, Belgium	Wheat	6,106	5,757
Frederick	29	21	30	30	10	30	19	40	30	19	55	3	British	Hamburg-Amer. Line	359	0	49	5	23	0	Corral, Chile	Hamburg, Germany	General	9,001	7,684
Uria	29	21	30	30	10	30	19	40	30	19	55	3	British	C. T. Bowring & Co.	391	0	53	3	23	6	Victoria, B. C.	Boston, Mass.	Lumber	6,600	5,801
Santa Elisa	30	4	21	30	10	41	30	18	40	30	20	15	American	Grace Line	360	3	51	7	25	6	Talcahuano, Chile	New York, N. Y.	General	3,469	5,957
California	30	10	06	30	11	08	30	19	35	30	20	15	American	Amer-Hawaiian Line	445	1	59	8	25	0	Portland, Oreg.	Boston, Mass.	General	7,046	8,567
Bethore	31	1	00	31	6	18	31	16	05	31	16	05	American	Ore S. S. Corp.	550	3	72	2	33	6	Cruz Grande, Chile	New York, N. Y.	Iron ore	19,800	15,476

*) Tanker.

**) Cold storage and general.

11 Cold storage and general.

12 Motor ship.

13 Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Socony ¹	30	23 30	31	6 46	31	15 10	31	20 30	American	General Petroleum Corp.	321.7	43.0	23.6	Los Angeles, Calif.	New York, N. Y.	Gasoline.....	4,359	3,833	2,388
No. 88 ²	30	23 30	31	7 30	31	20 15	31	20 30	American	General Petroleum Corp.	250.0	43.0	20.2	Los Angeles, Calif.	New York, N. Y.	Gasoline.....	3,060	2,658	1,665
Orangeleaf ³	29	10 50	31	7 56	31	18 10	31	18 10	British	Anglo-Saxon Petr. Co.	405.0	54.0	19.2	Balboa, C. Z.	Curacao, D. W. I.	Ballast.....	5,829	6,623	4,668
Mystic.....	30	18 37	31	8 00	31	20 10	31	20 10	American	Muson, McCork'k Line.	400.7	54.2	24.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	6,675	8,508	6,170
F. J. Luckenbach.....	31	4 00	31	8 28	31	17 00	31	17 00	American	Luckenbach Line.	446.0	56.1	24.0	Portland, Oreg.	Boston, Mass.	Lumber, general.	6,675	8,508	6,170
Brighton.....	31	8 15	31	9 24	31	19 05	31	19 05	British	R. Chapman & Son.	409.6	54.0	25.3	Vancouver, B. C.	United Kingdom.	Wheat.....	8,227	8,718	4,091
Right.....	31	9 35	31	10 38	31	21 30	31	21 30	Norwegian	Camillo Etzen & Co.	412.0	52.6	23.6	Aberdeen, Wash.	Rotterdam, Holland.	Lumber, general.	7,650	8,392	4,066
Longer.....	31	11 10	31	12 00	31	20 25	31	20 25	French	Messageries Maritimes	447.3	58.0	21.7	Noumea, N. C.	Dunkirk, France.	(*)	5,263	7,487	5,162
Durazo.....	31	5 00	31	12 14	31	22 26	31	22 26	German	Hamburg-Amer. Line.	226.9	34.3	14.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee, hides	271	1,633	1,041
J. W. Van Dyke ⁴	31	8 40	31	6 10	31	15 15	31	15 15	American	Atlantic Refining Co.	364.9	51.0	25.2	Los Angeles, Calif.	Philadelphia, Pa.	Bulk gasoline.....	6,815	5,174	3,528
Mongolia.....	31	12 55	31	6 24	31	14 15	31	14 15	American	Panama-Pacific Line.	600.0	63.3	28.6	San Francisco, Cal.	New York, N. Y.	General	3,888	17,041	11,426
Suolvi.....	8-1	6 06	1	7 11	1	15 55	1	15 55	American	Sun Oil Co.	480.6	66.0	28.6	San Francisco, Cal.	Narves Hook, Pa.	Gasoline.....	13,773	9,610	6,396
Pear Branch.....	1	5 50	1	8 06	1	17 10	1	17 10	British	F. & W. Rittson.	398.6	53.9	23.4	Valparaiso, Chile.	Liverpool, England	(*)	5,998	5,760	3,866
Victorie ⁵	1	5 50	1	8 43	1	17 50	1	17 50	British	Imperial Oil Co., Ltd.	510.2	68.2	30.0	Talara, Peru.	Montreal, Canada	Crude oil.....	17,343	41,575	8,078
All America ⁶	6-5	7 20	1	9 26	1	17 13	1	17 13	American	All America Cables.	278.4	37.0	18.5	Puntarenas, C. R.	Cuba.	Cable gear.....	280	1,919	875
Orbe.....	8-1	9 30	1	10 17	1	19 00	1	19 00	Colombian	Estrada S. S. Line.	237.0	32.0	14.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee, hides	800	1,151	663
Oregonian.....	1	9 40	1	10 22	1	18 20	1	18 20	American	Amer.-Hawaiian Line.	404.0	54.0	23.0	Seattle, Wash.	Boston, Mass.	General	5,150	6,754	4,800
Eyaandhus.....	1	11 20	1	12 14	1	19 55	1	19 55	British	Clan Line, Ltd.	452.0	52.1	26.0	Suva, Fiji Islands.	London, England	General	8,000	7,047	5,100
Thomas P. Beal.....	1	14 00	1	14 41	1	21 25	1	21 25	American	Isthmian S. S. Lines	394.1	55.1	26.0	Vancouver, B. C.	New York, N. Y.	Lumber, general.	6,692	7,273	4,053
Nentworth.....	1	14 30	1	15 06	1	22 37	1	22 37	British	R. S. Dalglish & Co.	400.0	52.2	23.0	San Francisco, Cal.	Avonmouth, Eng.	Barley in bags.	5,400	5,732	4,131
Abroon.....	1	15 05	1	15 46	1	20 02	3	20 02	American	Redwood Line.	386.8	52.2	23.0	San Francisco, Cal.	New Orleans, La.	Lumber, general.	5,400	5,732	4,131
Chlore.....	2	1 00	2	6 04	2	15 10	2	15 10	American	Ore S. S. Corp.	550.0	72.2	34.0	Guayaguay, Chile	Baltimore, Md.	Iron ore.....	20,000	14,538	9,348
Almagro.....	2	00 50	2	6 59	2	15 30	3	14 35	British	Pacific Steam Nav. Co.	303.4	43.0	13.6	Chile.	New York, N. Y.	Ballast.....	155	2,826	1,760
San Patricio ⁷	2	4 00	2	8 13	2	18 20	2	19 00	German	Anglo-Mexican Transp. Co.	530.0	66.6	18.8	Iquique, Chile.	Aruba, D. W. I.	Coffee, general	108	886	564
Westfalen ⁸	2	4 00	2	8 40	2	18 10	2	18 15	British	Colombian Transp. Co.	168.7	31.0	11.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee, general	108	886	564
Volumbia.....	2	8 00	2	9 04	2	17 35	2	18 15	British	DuPont de Nemours	423.6	56.0	24.0	Tocopilla, Chile	New York, N. Y.	Nitrates.....	8,700	6,229	4,524
San Mateo.....	2	9 30	2	9 45	2	17 35	3	16 00	American	United Fruit Co.	315.2	44.2	19.7	San Francisco, Cal.	Port Limon, C. R.	General	507	3,496	2,141
City of Panama ⁹	2	7 30	2	10 05	2	17 35	2	17 35	Panaman	Panama Mail S. S. Co.	296.2	45.9	18.4	San Francisco, Cal.	Cristobal, C. Z.	(*)	1,049	3,848	2,603
King City.....	2	10 50	2	11 34	2	18 35	2	18 35	British	St. Just S. S. Co., Ltd.	400.5	54.3	26.0	Olympia, Wash.	Devonport, Eng.	Lumber	7,500	6,993	5,397
Venezuela.....	2	8 20	3	13 42	3	18 45	3	18 45	American	Panama Mail S. S. Co.	380.0	48.7	21.6	San Francisco, Cal.	New York, N. Y.	General	3,944	6,033	4,353
La Salina ¹⁰	7-26	19 50	8	6 25	3	14 05	3	14 05	British	Lago Shipping Co.	305.0	50.0	12.6	Balboa, C. Z.	Maracaibo, Ven. I.	Ballast.....	8,700	6,016	4,178
Vofvoda ¹¹	8-2	17 20	3	7 10	3	15 50	3	17 15	Jugoslav	Baburiza & Co.	400.0	50.4	28.5	Tocopilla, Chile.	Azores ¹²	Nitrates.....	8,700	6,016	4,178
Willwello.....	2	23 30	3	7 39	3	17 35	3	17 35	American	Williams S. S. Line.	409.8	54.2	25.6	Seattle, Wash.	New York, N. Y.	Lumber, general	7,963	6,821	4,927
Pacific Pine.....	2	23 30	3	8 13	3	17 35	3	17 35	American	Dimon S. S. Corp.	410.5	54.3	24.8	Seattle, Wash.	New York, N. Y.	Lumber	7,000	6,583	4,808
J. R. Gordon.....	3	00 45	3	8 43	3	18 25	3	18 40	American	Union Sulphur Co.	409.8	54.2	24.5	Tacama, Wash.	Poughkeepsie, N. Y.	Lumber	6,700	6,581	4,784
Curaca.....	3	2 25	3	9 05	3	18 40	3	18 40	Panaman	Grace Line.....	463.0	52.4	23.0	Magallanes, Chile.	New York, N. Y.	Manganese ore.....	5,475	6,804	4,897

¹³ Cotton, sugar, and nitrates.¹⁴ Sugar, logs, hides, and general.¹⁵ Copra, coffee, shells, cotton, nickel, and general.¹⁶ July 26th for drydocking only.¹⁷ Cable ship.¹⁸ Coffee, cocoa, hides, and ivory nuts.¹⁹ Motor ship.²⁰ Barge.²¹ Tanker.

William F. Humfrey ¹	3	9.10	3	9.55	3	23.10	American.	Tidewater Oil Co.	468.3	62.7	27.0	Los Angeles, Calif.	New York, N. Y.	Naphtha toys	11,800	9,776	6,903
Persephone ¹	3	18.10	4	6.25	4	13.25	Danzig	Deutscher Amer. Pet. Co.	468.3	63.2	27.1	Talara, Peru	Rotterdam, Holland	Peru naphtha	11,545	9,336	6,838
Nienburg	3	20.00	4	7.13	4	14.00	German	North German Lloyd	380.0	51.0	23.8	Punta Arenas, Chile	Hamburg, Germany	(²¹)	5,870	4,813	3,362
Cerigo	3	11.00	4	11.55	4	19.30	German	Hamburg-Amer. Line	227.2	34.6	13.3	Guayaquil, Ecuador	Cristobal, C. Z.	General	5,161	1,572	1,011
Anglo Indian	4	15.30	4	16.08	4	23.20	British	Lawther, Latta, & Co.	426.0	59.6	24.6	Vancouver, B. C.	Edinburgh, Eng.	Bulk wheat	9,141	7,130	5,322
Rembek	4	16.30	4	17.11	5	12.10	German	Knorr & Burchard	236.3	37.5	17.3	Yavaros, Mexico	New York, N. Y.	Chick peas	2,103	1,710	1,167

¹ Tanker.²¹ Nitrates, copper, and general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.					* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—		
July 29.	Pastores	United Fruit Co.	Port Limon, Costa Rica.	July 29.	Inapaquina ²¹ .	United Fruit Co.	Colon, R. P.		
July 29.	Inapaquina ²¹ .	United Fruit Co.	Colon, R. P.	July 29.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.		
July 29.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.	July 29.	Pastores	United Fruit Co.	New York via Habana.		
July 30.	Mayari	United Fruit Co.	New York via waypoints.	July 29.	Simon Bolivar.	Royal Netherlands S. S. Co.	Amsterdam via waypoints.		
July 30.	Uba.	United Fruit Co.	New York via Habana.	July 30.	Cleveland ²⁶ .	U. S. Navy.	Nicaragua.		
July 30.	Resolute ²⁴ .	D. L. Lynton.	Colon, R. P.	July 30.	Parishina	United Fruit Co.	New Orleans and waypoints.		
July 31.	Rugia.	Hamburg-American Line.	Hamburg via waypoints.	July 30.	Mayari	United Fruit Co.	New York via Kingston.		
August 1.	Coppename	United Fruit Co.	New Orleans, La.	July 30.	Regia.	D. L. Lynton.	Colon, R. P.		
August 1.	Cristobal	Panama Railroad S. S. Line	New York via Haiti.	August 1.	Uba.	Hamburg-American Line.	Port Limon, Costa Rica.		
August 1.	Zacapa	United Fruit Co.	New York via Kingston.	August 1.	Uba.	United Fruit Co.	Port Limon, Costa Rica.		
August 1.	Saramacca	United Fruit Co.	Bocas, R. P.	August 2.	Zacapa	United Fruit Co.	New York via waypoints.		
August 2.	Virginia	American Fruit & S. S. Corp	New Orleans, La.	August 2.	Coppename	United Fruit Co.	Port Limon via Bocas.		
August 2.	Sesotris	Hamburg-American Line	Vera Cruz, Mexico.	August 2.	Saramacca	United Fruit Co.	New Orleans, La.		
August 3.	Lizzie D. Peabody ²⁵	Colon, R. P.	Avonmouth via waypoints.	August 2.	Virginia	American Fruit & S. S. Corp	San Blas, R. P.		
August 4.	Mayari	Elders & Fyffes Line	New Orleans via waypoints.	August 2.	Cayna.	Elders & Fyffes Line.	Kingston, Jamaica.		
August 4.	Virginia	United Fruit Co.	New Orleans, La.	August 4.	Virginia	American Fruit & S. S. Corp	New Orleans, La.		
August 4.	Hedra.	American Fruit & S. S. Corp	New Orleans via waypoints.	August 4.	Inapaquina ²¹ .	United Fruit Co.	Colon, R. P.		
August 4.	William M ²⁴ .	United Fruit Co.	Colon, R. P.	August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.		
August 4.	Inapaquina ²¹ .	G. I. Bryan	New Orleans via Habana	August 4.	William M ²⁴ .	G. I. Bryan	Bluefields, Nicaragua.		
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.	August 4.	Sesotris	Hamburg-American Line.	Hamburg, Germany.		
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.	August 4.	Maravi	Elders & Fyffes Line.	New York via Kingston.		
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
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August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
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August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
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August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						
August 4.	Anachuena ²¹ .	United Fruit Co.	Colon, R. P.						

²⁵ Motor boat.

PORT OF BALBOA.

July 29.	San Luis ²⁷	Chiriqui Land Co.	Chiriqui, R. P.	July 29.	Cricamola ²⁸	Chiriqui Land Co.	Chiriqui, R. P.
July 30.	H. M. Storey	Standard Oil Co.	Los Angeles Calif.	July 30.	San Luis ²⁷	Chiriqui Land Co.	Chiriqui, R. P.
July 31.	Chiriqui ²⁷	Chiriqui Land Co.	Chiriqui, R. P.	July 31.	H. M. Storey	Standard Oil Co.	Los Angeles Calif.
August 1.	Frost ²⁸	Svea S. S. Co.	Talara, Peru.	July 31.	Chiriqui ²⁷	Chiriqui Land Co.	Chiriqui, R. P.
August 1.	A. Valdez	Pacific Fruit Co.	Bayano River, R. P.	August 1.	Frost ²⁸	Svea S. S. Co.	Champerico, Guatemala.
August 1.	Des Hermanos ²⁷	Bayano River, R. P.	Bayano River, R. P.	August 1.	Des Hermanos ²⁷	A. Valdez	Bayano River, R. P.
August 1.	A. B. Obarrio ²⁷	Bayano River, R. P.	Bayano River, R. P.	August 1.	A. B. Obarrio ²⁷	Pacific Fruit Co.	Bayano River, R. P.
August 1.	Chuman ²⁶	El Real, R. P.	El Real, R. P.	August 1.	Epoca	Grace Line	Buenaventura, Colombia.
August 1.	Chuman ²⁶	Chiriqui Land Co.	Chiriqui, R. P.	August 1.	Epoca	Grace Line	Buenaventura, Colombia.
August 2.	Cricamola ²⁸	Chiriqui Land Co.	Chiriqui, R. P.	August 2.	Chuman ²⁸	Isthmian Land & Fruit Co.	El Real, R. P.
August 2.	Cricamola ²⁸	Chiriqui Land Co.	Chiriqui, R. P.	August 3.	Chuman ²⁸	Isthmian Land & Fruit Co.	El Real, R. P.
August 2.	Cricamola ²⁸	Chiriqui Land Co.	Chiriqui, R. P.	August 4.	Cricamola ²⁸	Chiriqui Land Co.	Chiriqui, R. P.

* Other than ships passing through the Canal.

²⁷ Motor schooner.²⁸ Motor ship.

Tanker Traffic Through the Panama Canal in July, 1928.

(Continued from page 1.)

Nationality.	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	16	76,107	\$56,235.99	5,835
Danish.....	1	6,024	4,337.28	
Danzig.....	2	12,465	8,974.80	
French.....	1	4,635	3,337.20	
Norwegian.....	2	9,589	6,904.08	
United States.....	28	155,868	115,994.83	12,386
Totals, July, 1928.....	50	264,688	195,784.18	18,521
Totals, June, 1928.....	51	270,917	207,154.95	53,676
Totals, May, 1928.....	32	170,811	125,686.91	12,995
Totals, July, 1927.....	62	345,496	252,532.90	14,846
<i>Pacific to Atlantic.</i>				
British.....	8	34,530	36,355.30	59,482
Norwegian.....	2	9,388	10,108.75	18,740
United States.....	36	197,936	199,860.30	365,380
Totals, July, 1928.....	46	241,854	246,324.35	443,962
Totals, June, 1928.....	39	211,872	215,261.95	382,036
Totals, May, 1928.....	41	209,621	216,418.53	363,702
Totals, July, 1927.....	54	311,682	321,670.00	583,227

¹ Includes 9,340 tons of molasses.

Of the total tanker traffic shown above, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months, and for July, 1927:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
July, 1928.....	33	176,648	\$129,046.42	5,831
June, 1928.....	37	202,294	147,178.32	4,641
May, 1928.....	26	139,992	100,794.24	
July, 1927.....	48	268,988	195,611.70	6,028
<i>From Los Angeles.</i>				
July, 1928.....	39	209,472	212,735.30	384,358
June, 1928.....	27	141,569	144,231.95	261,233
May, 1928.....	26	138,180	144,904.45	255,893
July, 1927.....	45	263,810	271,442.50	492,975

Compagnie Generale Transatlantique Plans New Service.

The inauguration of a supplementary passenger and freight service between Europe and the west coast of North America is being planned by the Compagnie Generale Transatlantique. Three new vessels of 11,000 tons deadweight capacity, capable of making 14 knots, the *Oregon*, *Wyoming*, and *Wisconsin*, are now under construction and are to be placed in service next year. Each of the boats is to have cabin accommodations for 40 passengers and 500 tons of refrigerator cargo. Two will be steamers and one a motorship.

The vessels will make Cristobal a port of call and stop at San Pedro, San Francisco, Portland, Seattle, and Vancouver northbound and southbound. This line has at present a fortnightly service to the west coast, its boats sailing from Havre, Dunkirk, Bordeaux, and Antwerp.

• Traffic by Nationality for July, 1928.

The following tabulation shows the commercial traffic through the Canal during the month of July, 1928, classified according to nationality of vessel by direction of transit, and the combined traffic in both directions, together with corresponding totals for July, 1927 and 1926:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	6,211	4,522	7,130	4,013	\$5,652.50	7,300
British.....	75	378,017	282,341	460,693	281,942	324,536.55	220,355
Chilean.....	2	7,436	5,980	10,875	6,236	7,475.00	3,228
Colombian.....	5	2,587	2,225	3,777	2,278	2,762.45	3,066
Cuban.....	1	194	194	176	136	242.50	20
Danish.....	4	17,578	14,799	21,398	13,264	14,131.89	2,853
Danzig.....	2	12,465	10,504	17,895	10,048	8,974.80	.....
Dutch.....	6	23,923	16,299	26,834	16,498	20,373.75	12,100
French.....	5	23,591	18,143	29,823	17,839	20,985.95	10,429
German.....	15	61,539	42,769	71,850	43,519	53,461.25	40,922
Italian.....	1	5,867	4,372	7,057	4,455	5,465.00	1,419
Japanese.....	6	33,185	28,975	42,181	27,303	33,809.98	35,813
Norwegian.....	12	42,390	32,795	54,694	32,827	36,147.72	29,548
Panamanian.....	1	2,606	1,384	3,644	2,594	1,730.00	2,728
Peruvian.....	3	6,885	3,978	10,204	5,356	4,953.55	2,375
Spanish.....	1	3,844	3,017	5,205	3,226	3,771.25	306
Swedish.....	5	22,687	14,895	33,837	18,013	16,355.32	10,044
United States.....	125	609,381	471,147	761,750	470,626	533,853.75	251,855
Yugoslav.....	2	8,699	7,140	11,344	7,111	8,925.00	14,061
Totals, July, 1928.....	272	1,269,085	965,479	1,580,367	967,284	1,103,618.21	748,160
Totals, July, 1927.....	280	1,323,649	1,032,027	1,686,511	1,031,969	1,149,465.16	739,656
Totals, July, 1926.....	241	1,156,000	906,259	1,490,562	909,056	1,001,504.93	686,354

* Includes Naval vessel of 5,150 displacement tons.

* Includes barge of 67 net tons and yacht of 20 net tons, Panama Canal and United States measurements; no registered tonnage.

* Two hundred and sixty-two tons of cargo from Gatun Lake not included.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,792	4,142	6,511	4,172	\$5,177.50	8,141
British.....	53	240,346	184,805	304,432	186,414	231,231.70	315,017
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	2,613
Colombian.....	5	2,587	2,225	3,777	2,278	2,348.02	870
Danish.....	4	16,669	11,283	18,417	11,389	14,103.75	27,572
Dutch.....	6	25,827	18,444	31,142	18,320	23,055.00	37,078
Finnish.....	1	1,675	1,648	1,817	1,523	2,010.00	3,100
French.....	4	19,376	14,940	24,002	15,068	18,675.00	26,490
German.....	19	71,806	51,031	84,171	51,487	63,336.90	93,474
Italian.....	3	21,120	13,962	25,791	15,699	17,452.50	21,633
Japanese.....	2	10,105	8,749	12,828	8,573	10,756.30	16,142
Norwegian.....	12	43,098	32,209	53,010	31,577	40,260.28	71,255
Panamanian.....	1	233	233	.....	.....	24.75	.....
Peruvian.....	2	5,356	2,495	8,049	4,187	3,118.75	4,340
Spanish.....	1	2,827	2,459	4,349	2,565	3,073.75	728
Swedish.....	3	13,836	10,364	38,636	12,427	12,955.00	48,200
United States.....	118	561,740	441,353	713,999	440,241	550,053.28	859,949
Yugoslav.....	1	3,412	2,800	4,296	2,781	3,500.00	6,931
Totals, July, 1928.....	237	1,049,310	806,408	1,342,537	812,677	1,005,464.98	1,543,795
Totals, July, 1927.....	229	1,083,306	851,111	1,385,744	853,689	1,066,050.83	1,710,812
Totals, July, 1926.....	215	998,821	786,109	1,285,166	794,331	979,214.74	1,499,173

* Includes 2 Naval vessels having a total displacement tonnage of 3,170 tons.

* Barge having no registered tonnage.

* Includes barge of 169 net tons, Panama Canal and United States measurements; no registered tonnage.

* Includes 262 tons of cargo from Gatun Lake.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	2	11,003	8,664	13,641	8,185	\$10,830.00	15,441
British	128	618,363	467,146	765,125	468,356	555,768.25	535,372
Chilean	3	12,141	9,446	18,185	10,212	11,807.50	5,841
Colombian	10	5,174	4,450	7,554	4,556	5,110.47	3,936
Cuban	1	194	194	176	136	242.50	20
Danish	8	34,247	26,082	39,815	24,653	28,235.64	30,425
Danzig	2	12,465	10,504	17,895	10,048	8,974.80	.....
Dutch	12	49,750	34,743	57,976	34,818	43,428.75	49,178
Finnish	1	1,675	1,648	1,817	1,523	2,010.00	3,100
French	9	42,967	33,083	53,825	32,907	39,660.95	36,919
German	34	133,345	93,800	156,021	95,006	116,798.15	134,396
Italian	4	26,987	18,334	32,848	20,154	22,917.50	23,052
Japanese	8	43,290	37,724	55,009	35,876	44,566.28	51,955
Norwegian	24	85,488	65,004	107,704	64,404	76,408.00	100,803
Panaman	2	2,639	1,417	3,644	2,594	1,754.75	2,728
Peruvian	5	12,241	6,473	18,253	9,543	8,072.30	6,715
Spanish	2	6,671	5,476	9,554	5,791	6,845.00	1,034
Swedish	8	36,523	25,259	72,473	30,440	29,310.32	58,244
United States	243	1,171,121	912,500	1,475,749	910,867	1,083,917.03	1,211,804
Yugoslav	3	12,111	9,940	15,640	9,892	12,425.00	20,992
Totals, July, 1928.	509	2,318,395	1,771,887	2,922,904	1,779,961	2,109,083.19	2,291,955
Totals, July, 1927.	509	2,406,955	1,883,138	3,072,255	1,885,658	2,215,515.99	2,450,468
Totals, July, 1926.	456	2,154,821	1,692,368	2,775,728	1,703,387	1,980,719.67	2,185,527

¹ Includes 3 Naval vessels having a total displacement tonnage of 8,320 tons.

² Includes barge of 33 net tons, Panama Canal and United States measurements; no registered tonnage.

³ Includes 2 barges having a total of 236 net tons and yacht of 20 net tons, Panama Canal and United States measurements; no registered tonnage.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 3, 1928.

The following was received by the Hydrographic Office from the Port Captain, Balboa:

"The wrecking tug *Killerig* is jettisoning the cargo on the M. S. *Cynthiana*, ashore 4 miles W. S. W. of Cape Mala. As some of the large timbers may go adrift, request has been made and the radio station will broadcast every 12 hours a warning to shipping to look out for timbers from this vessel.

S. A. TAFFINDER.
Port Captain."

Message being sent is:

"Ships approaching Cape Mala should look out for large drifting timbers jettisoned from steamer *Cynthiana* ashore four miles West Southwest of Cape Mala."

M. L. WALKER, Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 7, 1928.

The following was received at the Hydrographic Office through the Balboa Office:

"S. S. *Columbia*, 6 p. m., August 6, reports that the red buoy marking Lafayette Shoal in Puerto Colombia is missing." (No signature.)

* * * * *

M. L. WALKER, Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending August 4, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Orangeleaf	Anglo-Saxon Petroleum Co.	July 29.	July 31.	5,836	.....
H. M. Storey.	Standard Oil Co. of Calif.	July 31.	July 31.	15,021	.....
Santa Cruz	Grace Line	July 31.	July 31. ....	.....	4
Durazzo	Hamburg-American Line.	July 31.	July 31. ....	.....	157
Tongking	East Asiatic Co.	August 1.	August 2.	351	.....
Frost.	Hans Ericson.	August 1.	August 1.	300	.....
Salvador.	Pacific Steam Navigation Co.	August 2.	August 2. ....	.....	28
City of Panama	Panama Mail S. S. Co.	August 2.	August 2.	74	.....
Venezuela.	Panama Mail S. S. Co.	August 2.	August 2.	45	.....

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., August 15, 1928.

No. 2.

New Shaw, Savill and Albion Vessel Transits Canal.

The motor ship *Coptic* of the Shaw, Savill & Albion Company transited the Canal for the first time on August 7, 1928, en route from the United Kingdom to New Zealand. The *Coptic* is the third of a fleet of four new motor ships, being placed in this trade by this company, having been preceded by the *Zealandic* and the *Taranaki*. The fourth vessel of this new fleet, the *Karamea*, is under construction and is to be placed in the service within a short time.

The *Coptic* is 482 feet long, 64 feet beam and of 11,190 deadweight tons. She carried 9,000 tons of general cargo on her maiden voyage.

Supplement No. 11 to Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 11, 1928.

Regulation 47.5 is changed to read as follows:

Regulation 47.5. *Vessels Carrying Volatile Crude Oil Products:* Vessels whose cargoes consist of volatile crude oil products in bulk, with flash point below 85° Fahrenheit, may be brought into either terminal day or night at the discretion of the Port Captain concerned, except when overdraft. Notice of such move into the inner harbor shall be given in advance to the Fire Division by the Captain of the Port.

(a) When overdraft, vessels of this class will not be handled in Canal Zone waters except during daylight.

(b) In addition to compliance with Rule 73 as to display of signals, such vessels shall exercise the utmost precautions to prevent explosion or fire.

(c) Vessels of this class shall not shift volatile crude oil products from ship to ship while in Canal waters.

Regulation 47.7, contained in Supplement No. 2 of May 12, 1926, to the "Rules and Regulations Governing Navigation of the Panama Canal and Adjacent waters," is hereby canceled.

M. L. WALKER,
Governor.

* Published in THE PANAMA CANAL RECORD of July 7, 1926, page 646.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 12 cents per pound and forequarters at 9½ cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, August 11, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Corinthian	4	10 50	5	6 05	5	13 56	British	Slaw, Savill & Albion	500.0	63.4	27.10	London, England.	Lytleton, N. Z.	General	6,750	12,821	9,597
Vinpark	3	16 15	5	6 15	5	14 50	British	J. & J. Denton, Ltd.	289.1	41.9	12.0	Charleston, S. C.	Xavaro, Mexico.	Ballast	2,212	1,379	
Garfield	3	15 35	5	6 15	5	15 30	American	N. O. & S. S. Line	280.4	45.9	17.11	New Orleans, La.	Corral, Chile	General	1,253	3,256	2,010
Canadian	4	16 50	5	7 05	5	14 51	British	Can. Nat. Steamships	400.0	52.0	20.6	Montreal, Canada.	Adelaide, Australia.	General	3,442	5,014	4,195
Montana	4	18 50	5	7 10	5	15 33	American	Amer-Hawaiian Line	405.0	54.0	18.0	Boston, Mass.	Portland, Ore.	General	3,157	6,756	4,775
Equator	4	1 00	5	9 40	5	16 49	Italian	Nap. Gen. Italiana	370.0	53.0	15.7	Genoa, Italy	Valparaiso, Chile	General	1,379	5,098	4,415
Glamorganshire	5	1 00	5	11 03	5	17 43	British	Royal Mail S. P. Co.	445.0	58.0	25.0	Rotterdam, Holland	Vancouver, B. C.	General	4,278	8,229	5,982
Minnesota	4	16 40	5	12 00	5	18 40	French	French Line	410.0	50.0	20.0	Havre, France.	Valparaiso, Chile.	General	1,171	6,483	4,441
Winfred	5	13 25	5	13 35	5	20 13	American	The Texas Co.	434.0	56.0	22.0	Baltimore, Md.	Los Angeles, Calif.	Ballast	7,425	5,202	
O'Donnell	5	13 40	5	18 20	6	9 17	British	Empire Shipping Co.	390.0	54.8	17.3	Philadelphia, Pa.	Vancouver, B. C.	Ballast	6,245	4,627	
Overbridge	5	18 35	5	18 50	6	10 08	British	Davis & Newman	430.0	57.0	18.0	New Orleans, La.	Los Angeles, Calif.	Ballast	7,426	5,095	
Axel Johnson	5	9 40	6	6 05	6	12 33	Swedish	Johnson Line	392.0	52.0	19.2	Gothenburg, Sweden	San Francisco, Cal.	General	3,341	6,642	4,890
Port Napier	5	17 20	6	6 12	6	13 49	British	Com'ith & Dom. Line	490.0	61.0	29.4	London, England	Bluff, N. Z.	General	8,480	10,978	8,115
San Rosendo	6	00 45	6	7 20	6	15 12	British	Anglo-Mex. Petr. Co.	407.0	52.3	24.9	New Orleans, La.	Valparaiso, Chile	Gasoline, kero he	7,289	6,237	4,353
San Mateo	6	4 55	6	7 15	6	15 28	American	United Fruit Co.	315.2	44.2	19.3	Port Limon, C. R.	San Francisco, Cal.	Bananas, coffee	966	3,496	2,141
O-9	6	3 30	6	7 15	6	15 30	American	U. S. Navy	172.4	18.0		Cristobal, C. Z.	Balboa, C. Z.		7,851	7,330	5,249
Steel Voyager	6	3 30	6	8 15	6	17 24	American	U. S. Steel Products Co.	365.5	55.0	26.9	Baltimore, Md.	Tacoma, Wash.	Seed, general	3,882	6,627	4,993
Alsaroka	6	5 30	6	8 30	6	16 50	American	McCormick S. S. Co.	409.6	54.1	19.0	New York, N. Y.	San Francisco, Cal.	General	7,886	6,214	4,665
England Maru	6	6 50	6	9 35	6	17 49	Japanese	Kokusan Kisen Kaisha.	385.0	51.0	27.6	Jacksonville, Fla.	Yawata, Japan		224	3,724	2,817
August Leonhardt	5	18 10	6	11 20	6	18 15	German	Colombian Transp. Co.	328.0	46.0	13.5	New York, N. Y.	Buenaventura, Col.	General	3,730	6,570	4,798
Oakpark	6	14 05	6	14 15	6	21 05	American	Roosevelt S. S. Co. (S.B.)	402.0	43.0	21.0	New Orleans, La.	Premantle, Australia	General, case oil	8,044	7,611	5,454
Steel Scientist	6	15 10	6	15 20	6	22 40	American	Norton, Lilly & Co.	425.0	56.0	26.0	Philadelphia, Pa.	Belayan, Sumatra	General	4,968	8,219	5,861
Silverash	6	15 35	6	15 50	7	8 48	British	Kerr Line	425.6	58.3	23.0	New York, N. Y.	Par. Est.	General	1,633	1,041	
Durazzo	7-31	22 26	7	6 20	7	16 16	German	Hamburg-American Line	226.5	34.0	15.0	Cristobal, C. Z.	Buenaventura, Col.	Passengers only	7,808	5,139	
Feltore	5	9 30	7	6 15	7	16 28	American	Ore S. S. Corp.	449.1	57.2	17.4	Newport News, Va.	Cruz Grande, Chile	Ballast	9,000	11,819	8,366
Neches	4	6 45	7	6 45	7	16 56	American	U. S. Navy	455.0	56.2	21.0	Guantanamo, Cuba	Los Angeles, Calif.	General	6,665	9,658	6,867
Neches	6	17 55	7	7 20	7	17 16	British	Shaw, Savill & Albion	482.6	64.2	24.0	Newcastle-on-Tyne	Dundin, N. Z.	General	9,620	9,620	6,421
Parcora	7	1 05	7	8 30	7	17 45	British	Federal Steam Nav. Co.	480.0	62.0	25.0	New York, N. Y.	Premantle, Australia	General	9,620	9,620	6,421
San	7	3 45	7	9 50	7	18 13	American	San Oil Co.	480.0	62.0	21.2	Chester, Pa.	Los Angeles, Calif.	Ballast	9,620	9,620	6,421
Sixie Arrow	7	7 45	7	9 55	7	18 13	American	Standard Oil Co.	488.3	62.7	17.0	New York, N. Y.	Vancouver, B. C.	Ballast	9,620	9,620	6,421
Cape Orizaba	7	10 30	7	11 05	7	18 53	British	Lytle Shipping Co.	485.0	62.0	14.3	Genoa, Italy	Tumaco, Colombia	General	750	750	4,227
Guasmas	7	8 10	7	11 05	7	20 23	Colombian	Colombian Government	171.6	34.2	16.0	Manaus, Colombia	Portland, Ore.	Salt	2,563	6,755	4,895
Myrtle	7	16 40	7	17 55	8	9 25	American	States S. S. Co.	410.5	54.0	27.0	Wilmington, Del.	Balboa, C. Z.	General	2,563	6,755	4,895
Reclacher	7	11 35	8	6 00	8	13 00	American	U. S. Navy	380.0	48.7	27.0	Cristobal, C. Z.	San Francisco, Cal.	General	2,431	6,015	4,281
Colombia	7	2 45	8	6 03	8	13 24	American	Panama Mail S. S. Co.	379.0	48.7	25.7	New York, N. Y.	San Francisco, Cal.	General	2,431	6,015	4,281

* Motor ship.

* Tanker.

* Submarine.

* Steel, cotton, phosphates, and resin.

* Cruiser.

Tuscaloosa	7	19.55	8	7.05	8	14.11	8	15.40	American	Isthmian S. S. Lines	441.0	56.0	25.6	Mobile, Ala.	Vancouver, B. C.	8,413	7,611	5,456
City	7	20.50	8	7.25	8	15.15	8	18.15	American	Williams S. S. Line	386.8	53.2	22.0	Norfolk, Va.	Seattle, Wash.	5,730	5,984	5,070
Pennsylvania	7	21.10	8	8.30	8	15.24	8	16.35	American	Amer-Hawaiian Line	407.7	52.7	20.0	Boston, Mass.	Tacoma, Wash.	2,430	7,107	5,041
Walter A. Luck-	8	3.00	8	8.55	8	16.09	8	17.00	American	Luckenbach Line	446.5	56.1	24.0	Boston, Mass.	Tacoma, Wash.	5,467	8,785	6,567
embach	8	3.18	8	9.55	8	17.59	8	18.55	American	Calmar S. S. Corp	384.6	51.2	27.0	Baltimore, Md.	Seattle, Wash.	8,207	6,347	4,453
Sweland	8	6.10	8	10.05	8	16.50	8	23.53	Swedish	Ore S. S. Corp.	572.0	72.0	20.0	Baltimore, Md.	Cruz Grande, Chile	15,425	4,421	
Canadille	7	23.58	8	10.40	8	18.34	9	8.24	British	Imperial Oil Co.	510.9	68.5	22.3	Montreal, Canada	Talara, Peru	11,556	7,658	
Leon XIII	7	10.25	8	12.30	8	19.40	8	20.48	Spanish	Spanish Line	410.0	46.5	22.3	Barcelona, Spain	Valparaiso, Chile	388	5,521	3,729
West Katana	8	13.25	8	13.45	8	21.04	8	22.05	American	Calif. & East'n S.S. Co.	410.5	54.3	19.0	Philadelphia, Pa.	Tacoma, Wash.	3,822	6,573	4,916
Santa Teresa	8	20.10	8	6.10	8	12.52	9	17.00	American	Grace Line	360.2	51.6	23.5	New York, N. Y.	Talcahuano, Chile	2,622	5,726	4,086
City of Batavia	8	22.40	9	7.55	9	13.33	9	15.45	British	Amer. & Aust. Line	420.5	53.9	20.0	New York, N. Y.	General	3,056	6,488	4,680
Tilghorn City	9	5.00	9	7.25	9	14.38	9	16.50	Norwegian	DuPont de Nemours	425.0	53.9	14.3	Norfolk, Va.	Tocopilla, Chile	7,300	6,591	4,780
Quebec City	9	4.45	9	7.25	9	15.14	9	16.50	British	Reardon-Smith Line	415.0	54.3	24.0	Houston, Texas	Yokohama, Japan	7,300	7,004	5,406
Rio Diamante	8	16.40	9	10.25	9	17.42	9	19.00	British	Thames-Smth Line	400.0	56.0	26.2	Port Arthur, Texas	Shanghai, China	7,300	6,359	4,583
Proposa	8	16.40	9	12.05	9	18.46	9	20.00	British	Pacific Steam Nav. Co	552.0	66.2	23.9	Liverpool, England	Talcahuano, Chile	3,889	4,827	10,630
Buffalo Bridge	9	11.50	9	12.05	9	19.52	9	21.00	American	Charles Nelson Line	324.0	46.2	19.0	Baltimore, Md.	San Francisco, Cal.	1,593	3,985	2,630
Corinto	7-23	20.15	9	12.35	9	20.36	9	21.55	American	Panama Mail S. S. Co.	429.3	50.2	19.0	Cristobal, C. Z.	San Francisco, Cal.	2,109	2,352	1,549
Atlantic Sun	9	14.15	9	12.35	9	21.35	9	22.45	American	Sun Oil Co.	429.3	50.2	19.0	Tampa, Fla.	Los Angeles, Calif.	7,568	5,283	
Sutro	9	19.10	9	20.05	9	19.36	10	12.35	American	Tangmarine Lines	324.0	46.2	19.0	Newark, N. J.	Seattle, Wash.	3,005	3,984	2,628
Americanland	9	23.05	10	6.10	10	13.32	10	19.00	Swedish	Ore S. S. Corp.	561.0	72.0	22.0	Baltimore, Md.	Cruz Grande, Chile	15,580	4,496	
Cleveland	9	16.25	10	6.07	10	14.15			American	U. S. Navy	292.0	44.0	17.8	Nicaragua	Balboa, C. Z.			
President Van	10	5.50	10	7.08	10	14.44	10	21.05	American	Dollar Line	502.0	62.0	28.0	New York, N. Y.	San Francisco, Cal.	5,212	12,023	8,495
Buren	10	1.05	10	7.40	10	15.28	10	16.30	British	Ellerman-Hall Line	410.0	55.0	27.0	Sydney, C. B.	Shanghai, China	6,680	7,012	5,145
City of Well-	9	4.50	10	9.28	10	15.45	10	16.35	British	Furness, Withy & Co.	450.0	60.6	20.0	Glasgow, England	Vancouver, B. C.	1,955	10,086	7,226
Pacific Presi-	10	8.10	10	10.10	10	16.52	10	18.00	German	Knobrand Burchard	280.0	40.0	13.0	Guaymas, Mexico	General bananas	2,221	1,469	
dent	10	19.00	10	10.15	10	17.56	10	19.16	Colombian	Esdrada G. Hernanes	227.4	31.7	14.6	Cristobal, C. Z.	Ballast	1,200	1,154	663
Flotbek	10	6.20	10	11.05	10	18.04	10	19.15	British	Imperial Oil Co.	440.0	57.6	21.0	Quebec, Canada	Talara, Peru	7,468	5,042	
Urbe	10	11.25	10	11.35	10	18.45	10	21.05	American	Atlantic Refining Co.	431.0	59.2	20.0	Philadelphia, Pa.	Ballast	7,860	5,101	
El Grillo	10	11.25	10	12.20	10	19.47	10	21.05	German	Hamburg-American Line	427.0	54.2	13.3	Cristobal, C. Z.	General	357	1,572	1,011
Francis E.	10	23.55	10	12.30	10	19.16	10	20.25	American	Little River Redwood	288.8	44.6	15.8	Humacao, P. R.	San Francisco, Cal.	2,515	1,443	
Powell	10	12.40	10	14.10	10	20.50	10	21.53	American	Standard Transp. Co.	435.0	56.2	20.0	Providence, R. I.	Ballast	7,408	5,112	
W. R. Cham-	10	13.55	10	14.30	10	21.53	10	23.45	Norwegian	H. C. Stevens	183.3	30.0	10.0	Covenas, Colombia	Buenaventura, Col.	150	780	504
berlin, Jr.	10	6.00	11	6.14	11	13.50	11	15.35	American	Panama R. R. S. S. Line	251.0	43.6	20.0	New York, N. Y.	Cattle	1,382	2,874	1,944
Aladdin	10	23.30	11	6.20	11	13.11	11	14.45	British	T. & J. Brocklebank	469.6	58.3	24.0	Philadelphia, Pa.	Guayaquil, Ecuador	4,189	7,445	4,910
Martha	11	4.00	11	7.15	11	14.11	11	15.40	British	F. & W. Riteon	400.5	51.9	18.6	Liverpool, England	Freunante, Austr.	1,634	5,403	3,960
Guayaquil	11	5.10	11	7.10	11	15.10	11	16.40	American	Dimon S. S. Corp	409.5	54.2	19.0	New York, N. Y.	Corral, Chile	4,976	6,537	4,841
Makani	11	6.50	11	8.10	11	15.52	12	00.40	British	Can. Nat. Steamships	400.0	52.4	20.10	Montreal, Canada	Tacoma, Wash.	3,600	6,238	4,491
Cherry Branch	11	10.05	11	10.15	11	16.16	11	17.10	British	Furness, Withy & Co.	441.0	60.0	25.0	New York, N. Y.	Dunedin, N. Z.	6,036	9,240	6,145
Pacific	11	14.50	11	11.25	11	21.35	11	22.55	American	Associated Oil Co.	424.0	58.0	22.0	Philadelphia, Pa.	General	7,333	5,182	
Redwood	11	17.20	11	18.00	12	20.34	12	21.48	American	Richfield Oil Co.	430.0	59.2	18.6	New York, N. Y.	Ballast	7,494	5,181	

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
W. H. Libby ¹	4	10 40	5	6 12	5	13 50	5	13 50	American	Standard Shipping Co.	462 4	60 2	27 6	Los Angeles, Calif.	Baltimore, Md.	Gasoline	10,472	8,461	6,104
Oysterie ¹	4	22 05	5	7 10	5	15 20	5	22 15	British	Andrew Weir & Co.	420 3	54 6	26 5	Los Angeles, Calif.	Manchester, Eng.	Gasoline	8,462	6,397	4,358
Boskoop	4	18 45	5	8 05	5	16 10	5	20 40	Dutch	Royal Neth. S. S. Co.	416 0	58 0	27 0	Corral, Chile	Hamburg, Germany	Nitrates, general	8,304	7,817	6,097
Suarezco	4	21 00	5	8 55	5	16 50	5	22 10	American	Transmarine Lines	324 0	46 2	23 0	Aberdeen, Wash.	Newark, N. J.	Lumber	4,100	3,984	2,628
Buenos Aires	5	6 45	5	9 51	5	17 10	5	23 10	Swedish	Johnson Line	440 0	56 0	26 0	San Francisco, Cal.	London, England	General	7,667	7,591	5,661
Anika Maru	4	21 45	5	15 00	5	22 05	5	23 20	Japanese	Nippon Yusen Kaisha	440 0	57 0	25 0	Iloilo, P. I.	New York, N. Y.	Sugar, general	7,816	8,139	5,389
Denver ⁶	7-25	6 00	5	11 15	5	11 15	7	5 00	American	U. S. Navy	292 0	44 0		Balboa, C. Z.	Cristobal, C. Z.	Ballast		780	504
Martha	5	17 05	6	6 36	6	14 10	6	18 00	Norwegian	Chr. Hansevig	183 0	30 1	10 0	Buenaventura, Col.	Covenas, Col.	Ballast		780	504
Perge	5	21 00	6	6 40	6	14 45	7	00 40	Peruvian	Peruvian Line	270 0	39 0	17 0	Callao, Peru	New York, N. Y.	Specie, general	2,112	2,168	1,529
Pacific Com- merce ⁷	6	1 40	6	7 19	6	14 40	6	14 40	British	Furness, Withy & Co.	420 0	54 0	25 0	Longview, Wash.	Immingham, Eng.	Railroad ties	7,530	6,996	5,346
Teno	6	2 20	6	8 02	6	15 48	6	22 35	Chilean	Chilean Line	422 8	56 2	26 5	Valparaiso, Chile	New York, N. Y.	General	4,942	7,764	4,672
Indiana	6	11 00	6	11 40	6	19 20	6	21 30	British	Maclean & Meluttre	402 0	52 0	24 5	Vancouver, B. C.	Boston, Mass.	Lumber	6,700	5,634	4,172
King Arthur ⁷	6	11 20	6	12 18	6	19 40	6	20 30	British	Dodd, Thomson & Co	400 7	54 8	22 6	Vancouver, B. C.	Cape Town, S. Africa	Lumber, general	6,428	6,284	4,335
Cal.	6	11 30	6	12 29	6	20 05	7	5 55	German	North German Lloyd	298 1	32 9	13 6	Guayaquil, Ecuador	Pto. Colombia, Col.	General	310	1,105	698
Rochester ⁶	6	15 49	7	11 35	7	11 35	8	6 00	American	U. S. Navy	384 0	64 9	22 9	Balboa, C. Z.	Cristobal, C. Z.	Gasoline	7,454	6,984	4,375
Vineta ¹	6	16 20	7	6 56	7	13 35	8	13 35	British	Gov. Harison & Co.	410 1	54 5	22 9	Los Angeles, Calif.	Land's End, Eng.	General	7,318	7,025	5,055
Kuma Maru	6	15 10	7	7 35	7	15 15	8	5 25	Japanese	Nippon Yusen Kaisha	405 0	53 0	21 0	Iloilo, P. I.	New York, N. Y.	General	20,000	15,551	4,297
Maore	7	1 35	7	8 00	7	16 50	7	16 50	American	Ore N. Corp.	550 3	72 2	34 9	Cruz Grande, Chile	New York, N. Y.	Iron ore	151	2,472	1,513
Fun	7	5 30	7	8 44	7	13 45	7	18 20	Swedish	Cia. Mari. Colombiana	271 0	41 0	13 1	Buenaventura, Col.	New York, N. Y.	Coffee in sacks	2,950	1,839	1,087
Grace Harwar ⁷	6	19 35	7	9 48	7	19 15	8	8 35	Finnish	H. Clarkson & Co., Ltd	266 7	39 1	21 6	Callao, Peru	Wilmington, N. C.	Guano	9,016	9,262	6,853
Harry Lucken- bach	7	9 55	7	10 35	7	17 45	7	17 45	American	Luckenbach Line	448 9	60 2	29 6	Portland, Ore.	Boston, Mass.	Lumber, general			
PacificReliance ⁷	7	10 20	7	11 05	7	18 15	7	18 15	British	Furness, Withy & Co.	435 0	60 2	27 0	Vancouver, B. C.	Glasgow, Scotland	General	7,801	9,044	6,967
Buenos Aires ¹	7	3 00	7	12 18	7	19 55	8	2 10	Spanish	Spanish Line	407 5	47 9	26 0	Valparaiso, Spain	Barcelona, Spain	General	1,818	5,224	3,494
W. L. Sneed ¹	7	23 00	8	5 58	8	13 45	8	13 45	American	Huasteca Petroleum Co	416 8	56 1	26 0	Los Angeles, Calif.	Baltimore, Md.	Gasoline	8,900	6,731	4,795
Norfolk	7	15 30	8	6 44	8	14 50	8	14 50	British	Federal Steam Nav. Co	520 0	61 2	26 0	Port Chalmers, N.Z.	Liverpool, England	Frozen, general	6,302	12,963	9,291
Massar	7	16 30	8	7 06	8	16 10	8	16 10	American	Cahnan S. S. Corp.	285 0	51 2	26 0	Aberdeen, Wash.	Philadelphia, Pa.	Lumber	6,908	6,242	4,471
Texas	7	18 30	8	7 58	8	17 10	8	17 10	American	Amer.-Hawaitan Line	471 0	57 2	27 0	Portland, Ore.	Boston, Mass.	General	7,543	9,154	6,906
El Lobo ¹	7	18 45	8	8 19	8	17 40	8	18 05	British	C. T. Bowring & Co.	385 2	51 0	23 0	La Libertad, Ecuador	Philadelphia, Pa.	Crude oil	6,197	4,851	3,326
Arizona	7	21 30	8	8 57	8	18 35	10	14 25	British	French Line	425 0	54 8	24 0	Champerio, Peru	Philadelphia, Pa.	General	7,611	7,097	4,936
Acapula	7	22 40	8	9 30	8	18 40	8	18 40	British	Pacific Steam Nav. Co.	215 7	32 5	13 8	Champerio, Peru	Cristobal, C. Z.	General	320	1,273	706
Easton Knight	8	6 00	8	10 02	8	19 15	8	19 15	American	Arrow Line	415 0	56 9	27 6	Portland, Ore.	Land's End, Eng.	Lumber, general	7,742	7,643	5,657
Spontius ¹	8	15 45	9	6 26	9	13 50	9	13 50	British	Anglo-Saxon Pet. Co.	440 4	59 5	25 0	Los Angeles, Calif.	New York, N. Y.	Gasoline	8,890	7,915	4,797
San Claudio ¹	8	21 58	9	6 53	9	15 00	9	15 00	British	Eagle Oil Transp. Co.	305 0	51 2	10 3	Victoria, B. C.	Maracaibo, Venezuela	Ballast	9,467	9,165	7,056
Moerdijk	8	19 20	9	7 21	9	16 22	9	22 55	Dutch	Holland-American Line	472 6	61 1		Albion, C. Z.	Antwerp, Belgium	General	6,587	5,466	3,841
General Smuts	8	20 45	9	7 40	9	17 00	10	00 10	British	W. L. Comyn & Co.	386 7	52 8	20 6	Vancouver, B. C.	Hartlepool, Eng.	Wheat, lumber	8,316	7,712	5,437
Collegian	8	21 00	9	7 56	9	18 05	9	23 25	British	T. J. Harrison	455 4	56 2	25 0	Vancouver, B. C.	London, England	General	4,700	3,984	2,628
Fort Armstrong	9	5 25	9	8 47	9	18 35	9	18 35	American	Charles Nelson & Co.	324 0	46 2	24 0	Seattle, Wash.	Baltimore, Md.	Lumber, copper			

** For orders.

* August 3d for drydocking only.

* Sailing ship.

* Motor ship.

* Cruiser.

* Tanker.

Epatoria	Charles R.	McCormick	Sugillero	Lauch	Oilrader	Gargoye	Bagle	Orla	Mobile City	George Wash- ington	1	San Francisco, Cal.	Philadelpia, Pa.	General	273	3,673	2,367								
9	10	25	9	11	22	9	18	35	10	17	05	American	United Fruit Co.	330	6	44	6	17	0	San Francisco, Cal.	Port Limon, C. R.	Lumber, general	6,100	7,082	5,167
9	11	50	9	12	44	9	19	55	9	19	55	American	Munson-McCor'k Line	401	0	53	2	26	4	Tacoma, Wash.	Pt. Newark, N. J.	Lumber	3,912	3,982	2,612
9	11	55	9	13	50	9	21	30	9	21	30	American	Transmarine Lines	324	0	46	2	23	0	Balboa, C. Z.	Cristobal, C. Z.	Gasoline	8,021	5,928	3,919
9	8	50	10	6	02	10	13	55	10	13	55	British	U. S. Navy	410	0	53	6	24	6	San Francisco, Cal.	Land's End, Eng. ¹⁸	Crude gas oil	9,986	7,510	4,989
10	00	10	6	37	10	17	10	17	10	17	10	American	British Oil Shipp. Co.	425	0	57	0	27	5	San Francisco, Cal.	Providence, R. I.	Gas oil	8,257	8,201	6,226
10	2	30	10	7	30	10	18	10	18	10	18	American	Vacuum Oil Co.	410	0	56	0	27	6	Los Angeles, Calif	New York, N. Y.	General	7,065	9,936	6,226
10	5	00	10	8	17	10	16	05	11	00	10	British	Standard Transp. Co.	485	0	58	0	28	9	Coronel, Chile	Liverpool	Lumber, general	6,780	7,330	5,241
10	00	20	10	8	43	10	18	40	10	18	40	American	Pacific Steam Nav. Co.	395	5	55	0	25	4	Seattle, Wash.	Portland, Maine		9,250	7,505	5,627
10	2	15	10	9	12	10	19	30	12	00	10	Norwegian	Isthmian S. S. Lines	425	5	55	0	29	4	Vancouver, B. C.	Oalo, Norway	Grain, general	3,530	2,832	1,803
10	7	30	10	9	23	10	20	05	10	22	05	American	Fred Olsen & Co.	298	6	40	0	21	0	Mollendo, Peru	New Orleans, La. ^(*)	Fuel oil	8,998	6,977	4,959
10	8	54	10	10	08	10	20	12	10	22	45	American	N. O. & S. A. S. Co.	419	5	56	5	26	0	Los Angeles, Calif	Pro. Castilla, Hond	General	8,988	7,156	4,984
10	9	05	10	10	36	10	21	50	11	13	14	French	United Fruit Co.	403	0	56	5	26	4	Vaparo, Chile	Liverpool, England	General	4,400	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
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10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
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10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15	09	10	22	15	10	22	15	American	Amer-Hawaian Line	404	0	55	9	27	0	Seattle, Wash.	Boston, Mass	General	7,148	6,766	4,767
10	14	30	10	15																					

1 Tanker.

12 Submarine.

13 Tug.

14 Nitrates, sheepskins, and antimony ores.

15 Chrome ore and rubber seed.

16 Coffee, hides, and platinum.

All hours are expressed on the 24 hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

ARRIVALS.				DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
August 5.	Napierian	Leyland Line	Liverpool via waypoints.	August 5.	Inapauquina	United Fruit Co.	Colon, R. P.
August 5.	Ulua	United Fruit Co	Port Limon, Costa Rica.	August 5.	Ulua	United Fruit Co.	New York via Habana.
August 5.	Bowden	United Fruit Co	New Orleans via waypoints.	August 5.	Cristobal	Panama R. R. S. S. Line	New York via Haiti.
August 5.	Inapauquina	United Fruit Co	Colon, R. P.	August 6.	Bowden	United Fruit Co	Mobile, Ala.
August 6.	Tolon	United Fruit Co	New York via Habana.	August 6.	Heredia	United Fruit Co	New Orleans via waypoints.
August 6.	Anachucuna	United Fruit Co	Colon, R. P.	August 7.	Napierian	Leyland Line	Port Limon, Costa Rica.
August 7.	Pellerin de la Touche	French Line	Havre via waypoints.	August 7.	Lizette D. Peabody	M. P. Martine	Colon, R. P.
August 7.	Cryssen	Royal Netherlands S. S. Co	Amsterdam via waypoints.	August 8.	Linda S.	Surgeon Brothers	Bluefields, Nicaragua.
August 7.	R. Fenillebois	Colon, R. P.	Colon, R. P.	August 8.	Cryssen	Royal Netherlands S. S. Co	Port Limon, Costa Rica.
August 8.	Carmania	United Fruit Co	New Orleans, La.	August 8.	Coppename	United Fruit Co	Port Limon, Costa Rica.
August 8.	Suriname	United Fruit Co	New York via Kingston.	August 9.	Pellerin de la Touche	French Line	New Orleans, La.
August 8.	Santa Marta	United Fruit Co	Port Limon, Costa Rica.	August 9.	Favorita	American Fruit & S. S. Corp.	Havre via waypoints.
August 9.	Coppename	United Fruit Co	New Orleans, La.	August 10.	Anachucuna	United Fruit Co	San Blas, R. P.
August 9.	Favorita	American Fruit & S. S. Co	New Orleans, La.				Colon, R. P.

18 Motor schooner.

27 Motor boat.

* Other than ships passing through the Canal.

(Continued on page 20, column 2.)

Commercial Traffic Through the Panama Canal in July, 1928, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of July, 1928, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for July, 1927, and 1926. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations.

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	82	418,535	321,391	513,325	321,461	\$365,802.96	220,004
Europe to west coast of United States:							
British	19	86,919	66,646	108,761	65,924	65,366.85	18,095
Danish	1	4,744	4,318	4,500	2,747	3,415.68	
Danzig	1	6,127	5,268	8,939	5,007	4,411.44	
French	1	4,635	4,024	6,477	3,488	3,337.20	
German	3	18,990	12,733	21,734	13,095	15,916.25	16,507
Norwegian	4	19,356	16,740	27,888	16,738	16,091.77	1,006
United States	2	12,216	9,142	14,867	9,113	9,541.11	6,600
Totals	31	152,987	118,871	193,166	116,112	118,080.30	42,208
Europe to west coast of South America:							
Belgian	1	6,211	4,522	7,130	4,013	5,652.50	7,300
British	5	30,880	24,255	40,603	25,060	30,318.75	14,574
Danish	1	6,024	5,036	8,278	5,064	4,337.28	
Danzig	1	6,338	5,236	8,956	5,041	4,563.36	
Dutch	2	9,761	5,445	9,235	5,616	6,806.25	7,253
French	2	9,186	7,511	12,205	7,577	9,388.75	2,773
German	4	19,453	14,019	22,925	14,123	17,523.75	11,467
Norwegian	1	3,879	2,962	4,854	2,950	3,702.50	3,302
Spanish	1	3,844	3,017	5,205	3,226	3,771.25	306
Swedish	1	1,513	1,307	1,600	1,054	1,089.36	
Yugoslav	2	8,699	7,140	11,344	7,111	8,925.00	14,061
Totals	21	105,788	80,450	132,335	80,835	96,078.75	61,036
East coast of United States to west coast of South America:							
British	3	9,694	7,553	13,431	8,020	9,441.25	6,621
Chilean	2	7,436	5,980	10,875	6,236	7,475.00	3,228
Norwegian	1	3,160	2,189	3,664	2,178	2,736.25	2,455
Peruvian	1	1,529	1,483	2,155	1,169	1,834.80	2,077
Swedish	1	4,421	3,743	15,331	4,377	3,183.12	
United States	10	44,970	36,825	64,344	36,920	36,219.84	15,054
Totals	18	71,210	57,773	109,800	58,900	60,890.26	29,435
East coast of United States to Far East:							
British	6	31,817	21,451	34,568	21,166	26,813.75	43,803
Japanese	4	21,127	18,679	26,895	17,174	22,975.60	33,495
Norwegian	2	9,482	6,594	10,895	6,630	8,242.50	16,573
United States	5	27,858	19,206	31,059	19,046	24,007.50	42,580
Totals	17	90,284	65,930	103,417	64,016	82,039.35	136,451
Europe to west coast Canada:							
British	5	30,159	20,063	32,777	19,156	24,155.19	6,925
Danish	1	5,341	4,257	6,650	4,247	5,321.25	2,853
Dutch	2	12,678	10,266	16,039	10,236	12,832.50	4,723
French	2	9,770	6,608	11,141	6,774	8,260.00	7,656
German	2	12,633	7,944	13,422	8,140	9,930.00	6,614
Italian	1	5,867	4,372	7,057	4,455	5,465.00	1,419
Swedish	1	5,122	3,129	5,293	4,046	3,687.84	
Totals	14	81,570	56,639	92,379	57,054	69,651.78	30,190
Cristobal, C. Z., to west coast South America:							
Colombian	4	1,081	1,026	1,722	1,027	1,263.70	791
Dutch	2	1,484	588	1,560	646	735.00	124
German	4	3,359	2,432	4,508	2,459	3,040.00	896
Peruvian	2	5,356	2,495	8,049	4,187	3,118.75	298
United States	2	9,436	8,649	15,333	8,671	6,829.83	
Totals	14	20,716	15,190	31,172	16,990	14,987.28	2,199

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to Australasia:							
British.....	6	31,888	22,503	35,972	22,800	\$28,128 75	33,647
United States.....	1	5,450	3,465	5,687	3,450	4,331.25	7,430
Totals.....	7	37,338	25,968	41,659	26,250	32,460.00	41,077
Europe to Australasia:							
British.....	6	48,407	36,171	58,243	36,852	45,213.75	40,350
Swedish.....	1	6,098	3,286	6,059	4,311	4,107.50	2,506
Totals.....	7	54,505	39,457	64,302	41,163	49,321.25	42,856
East coast of United States to west coast Canada:							
British.....	2	11,520	9,488	13,102	9,199	11,860.00	8,105
United States.....	4	22,692	17,750	28,235	17,743	22,187.50	26,893
Totals.....	6	34,212	27,238	41,337	26,942	34,047.50	34,998
East coast of Central America to west coast United States:							
United States.....	6	16,310	11,595	23,439	14,436	16,574.93	3,852
Around the World:							
Japanese.....	1	7,354	5,958	9,455	5,902	7,447.50	2,318
United States.....	4	29,463	22,152	36,634	22,020	27,690.00	13,779
Totals.....	5	36,817	28,110	46,089	27,922	35,137.50	16,097
Foreign vessels in ballast— United States inter- coastal:							
British.....	3	14,136	8,512	13,786	8,447	9,936.37	.....
Japanese.....	1	4,704	4,338	5,831	4,227	3,386.88	.....
Totals.....	4	18,840	12,850	19,617	12,674	13,323.25	.....
West Indies to west coast of United States:							
British.....	3	13,163	11,099	18,175	10,922	10,677.28	3,000
West Indies to west coast of South America:							
Cuban.....	1	194	194	176	136	242.50	20
United States.....	2	136	215	394	225	146.40	.....
Totals.....	3	330	409	570	361	388.90	20
Cristobal, C. Z., to west coast of Central America:							
British.....	2	1,328	1,252	2,308	1,256	1,543.90	2,008
Norwegian.....	1	606	485	855	482	606.25	945
Totals.....	3	1,934	1,737	3,163	1,738	2,150.15	2,953
East coast of United States to Philippine Islands:							
British.....	1	6,089	4,970	7,786	4,934	6,212.50	5,742
United States.....	1	6,036	4,828	7,597	4,754	6,035.00	8,123
Totals.....	2	12,125	9,798	15,383	9,688	12,247.50	13,865
East coast of Canada to west coast South America:							
British.....	2	16,219	13,154	22,814	13,409	11,677.68	.....
East coast of Canada to Australasia:							
British.....	2	10,598	8,612	13,416	8,372	10,765.00	9,721
East coast of Central America to Australasia:							
British.....	2	9,158	5,932	9,497	5,929	7,415.00	13,016
East coast of South America to west coast Canada:							
Norwegian.....	1	4,722	2,728	4,624	2,765	3,410.00	4,855
United States.....	1	4,989	3,517	5,550	3,517	4,396.25	4,902
Totals.....	2	9,711	6,245	10,174	6,282	7,806.25	9,757
South American intercoastal:							
Colombian.....	1	1,506	1,199	2,055	1,251	1,498.75	2,275
Norwegian.....	1	504	433	732	291	541.25	150
Totals.....	2	2,010	1,632	2,787	1,642	2,040.00	2,425

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Cristobal, C. Z., to west coast of United States:							
Panamanian.....	1	2,606	1,384	3,644	2,594	\$1,730.00	2,728
United States.....	1	5,199	4,315	7,059	4,349	3,743.28	.....
Totals.....	2	7,805	5,699	10,703	6,943	5,473.28	2,728
West Indies to Balboa, C. Z.:							
British.....	2	2,865	2,721	5,927	2,627	5,976.25	5,835
Europe to west coast of Cen- tral America:							
German.....	2	7,104	5,641	9,261	5,702	7,051.25	5,348
East coast of United States to Balboa, C. Z.:							
British.....	1	3,326	2,872	4,800	2,949	2,394.72	.....
United States.....	1	4,264	3,468	5,580	3,379	4,335.00	255
Totals.....	2	7,590	6,340	10,380	6,328	6,729.72	255
East coast of United States to west coast of Cen- tral America:							
Danish.....	1	1,469	1,188	1,970	1,206	1,057.68	.....
East coast of United States to Hawaiian Islands:							
United States.....	1	1,740	1,542	2,647	1,542	1,927.50	2,383
Europe to Hawaiian Islands:							
Swedish.....	1	5,533	3,430	5,554	4,225	4,287.50	7,538
Europe to Far East:							
British.....	1	5,521	4,641	7,435	4,407	3,975.12	.....
Canadian intercoastal:							
British.....	1	4,182	3,318	5,757	3,554	4,147.50	2,374
East coast of Canada to west coast United States:							
British.....	1	5,867	3,468	5,677	3,510	4,335.00	4,066
East coast of Canada to Far East:							
British.....	1	4,129	3,258	5,334	3,242	4,072.50	2,473
West Indies to west coast of Central America:							
British.....	1	152	102	524	197	109.44	.....
Gatun Lake, C. Z., to Balboa, C. Z.:							
United States.....	2	67	67	(2)	(2)	80.40	.....
Cristobal, C. Z., to Balboa, C. Z.:							
United States.....	3	20	20	(3)	(3)	15.00	.....
East coast of United States to Gatun Lake, C. Z.:							
Norwegian.....	1	681	664	1,182	693	817.20	.....
Grand totals, July, 1928..	272	1,269,085	965,479	1,580,367	967,284	1,103,618.21	748,160
Grand totals, July, 1927..	280	1,323,649	1,032,027	1,686,511	1,031,969	1,149,465.16	739,656
Grand totals, July, 1926..	241	1,156,000	906,259	1,490,562	909,056	1,001,504.93	686,354

¹ Includes naval vessel of 5,150 displacement tons.² Barge having no registered tonnage.³ Yacht having no registered tonnage.

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	85	437,688	340,897	548,131	340,506	\$425,211.55	643,926
West coast of South America to Europe:							
British.....	9	44,482	35,541	58,098	35,974	44,426.25	57,300
Dutch.....	2	10,864	6,890	11,879	6,698	8,612.50	17,479
French.....	1	4,187	3,353	5,505	3,366	4,191.25	6,182
German.....	8	39,036	29,977	48,333	30,065	37,471.25	61,926
Italian.....	1	9,373	5,223	11,669	6,779	6,528.75	3,845
Norwegian.....	2	7,167	4,722	7,930	4,642	5,902.50	12,424
Spanish.....	1	2,827	2,459	4,349	2,565	3,073.75	728
Totals.....	24	117,936	88,165	147,763	90,089	110,206.25	159,884

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to east coast United States:							
British	4	15,665	11,822	20,655	12,527	\$14,777.50	17,293
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	2,613
German	2	3,726	2,234	3,907	2,207	2,792.50	908
Swedish	2	8,917	7,486	33,676	8,762	9,357.50	42,500
United States	15	62,706	51,395	87,309	51,340	64,038.20	129,257
Totals	24	95,719	76,403	152,857	78,812	95,298.20	192,571
West coast Canada to Europe:							
British	10	50,420	35,089	57,284	35,143	43,861.25	81,440
Danish	1	4,268	2,634	4,289	2,675	3,292.50	6,106
Dutch	2	13,479	10,966	17,703	10,976	13,707.50	18,907
French	1	4,464	2,948	4,745	2,969	3,685.00	7,534
German	3	15,439	10,201	16,629	10,245	12,751.25	21,652
Italian	2	11,747	8,739	14,122	8,920	10,923.75	17,788
Norwegian	1	5,854	4,679	7,468	4,724	5,848.75	8,885
Swedish	1	4,919	2,878	4,900	3,665	3,597.50	5,700
Totals	21	110,590	78,134	127,200	79,317	97,667.50	168,012
West coast of United States to Europe:							
British	5	21,187	18,214	29,889	18,028	22,767.50	37,143
Danish	1	4,418	3,585	5,702	3,583	4,481.25	8,455
French	1	5,563	4,282	6,863	4,287	5,352.50	9,511
German	1	6,344	3,826	6,780	4,057	4,782.50	7,321
Japanese	1	4,424	4,391	5,865	4,293	5,308.80	7,919
Norwegian	4	17,700	14,642	24,300	14,666	18,302.50	32,218
United States	4	29,857	19,308	31,047	19,145	24,135.00	41,568
Totals	17	85,493	68,248	110,446	68,059	85,130.05	144,135
West coast of South America to Cristobal:							
Colombian	4	1,081	1,026	1,722	1,027	1,263.70	870
Dutch	2	1,484	588	1,560	646	735.00	692
German	4	3,491	2,260	4,327	2,334	2,825.00	1,667
Peruvian	2	5,356	2,495	8,049	4,187	3,118.75	4,340
Totals	12	11,412	6,369	15,658	8,194	7,942.45	7,569
West coast of Canada to east coast United States:							
British	5	20,437	14,798	23,895	14,828	18,497.50	32,162
Danish	2	7,983	5,064	8,426	5,131	6,330.00	13,011
Norwegian	1	4,343	2,500	4,319	2,441	3,125.00	7,000
Totals	8	32,763	22,362	36,640	22,400	27,952.50	52,173
Australasia to Europe:							
British	5	37,504	29,236	46,796	29,732	36,545.00	22,422
Finnish	1	1,675	1,648	1,817	1,523	2,010.00	3,100
French	1	5,162	4,357	6,889	4,446	5,446.25	3,263
Totals	7	44,341	35,241	55,502	35,701	44,001.25	28,785
West coast United States to east coast of Central America:							
United States	5	14,169	12,627	20,211	12,557	15,730.70	10,904
West coast of Central America to Cristobal, C. Z.:							
British	3	2,063	1,900	3,436	1,906	2,353.90	1,159
Norwegian	1	606	485	855	482	606.25	565
Totals	4	2,669	2,385	4,291	2,388	2,960.15	1,724
Canadian intercoastal:							
British	3	13,947	9,661	15,920	9,788	12,076.25	18,536
West coast of South America to West Indies:							
British	2					1,585.00	
United States	1	115	75	419	201	82.80	
Totals	3	115	75	419	201	1,667.80	

* Naval vessels having a total of 3,170 displacement tons.

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Philippine Islands to east coast of United States:							
British	1	6,263	4,602	7,362	4,599	\$5,752 50	9,263
Japanese	1	5,681	4,358	6,963	4,280	5,447 50	8,223
United States	1	6,612	4,973	7,587	4,808	6,216 25	10,000
Totals	3	18,556	13,933	21,912	13,687	17,416 25	27,486
West coast of United States to West Indies:							
British	1	3,430	3,188	5,203	3,199	3,985 00	7,055
United States	1	1,443	1,270	2,264	1,300	1,587 50	2,784
Totals	2	4,873	4,458	7,467	4,499	5,572 50	9,839
West coast of United States to Cristobal, C. Z.:							
United States	2	6,748	5,482	9,033	5,510	6,852 50	12,170
West coast of South America to east coast Canada:							
British	2	12,096	9,826	16,613	9,843	12,282 50	23,300
West coast of Central America to Europe:							
Norwegian	2	2,894	2,716	4,024	2,169	3,394 03	3,000
South American intercoastal:							
Colombian	1	1,506	1,199	2,055	1,251	1,084 32	.....
West coast of South America to Egypt:							
Yugoslav	1	3,412	2,800	4,296	2,781	3,500 00	6,931
West coast of South America to Africa:							
Belgian	1	4,792	4,142	6,511	4,172	5,177 50	8,141
Central American intercoastal:							
German	1	3,770	2,533	4,195	2,579	2,714 40	.....
West coast of Central America to West Indies:							
United States	1	1,824	1,342	2,247	1,348	1,313 28	.....
Australasia to east coast Can- ada:							
British	1	4,172	3,286	5,454	3,340	4,107 50	2,450
Hawaiian Islands to east coast of United States:							
United States	1	4,389	3,795	5,731	3,512	4,743 75	9,340
Hawaiian Islands to Cristobal, C. Z.:							
United States	1	20	20	20	14	15 00	.....
Balboa, C. Z., to Gatun Lake:							
Panaman	1	33	33	(¹)	(¹)	24 75	.....
Balboa, C. Z., to Cristobal, C. Z.:							
United States	1	169	169	(¹)	(¹)	126 75	.....
Balboa, C. Z., to West Indies:							
British	1	2,865	2,721	5,927	2,627	2,062 80	.....
Far East to east coast United States:							
British	1	5,815	4,921	7,900	4,880	6,151 25	5,494
Far East to West Indies:							
Norwegian	1	4,534	2,465	4,114	2,453	3,081 25	7,163
Gatun Lake to east coast of United States:							
Norwegian	1	681	664	1,182	693	817 20	262
Grand totals, July, 1928 ..	237	1,049,310	806,408	1,342,537	812,677	1,005,464 98	1,543,795
Grand totals, July, 1927 ..	229	1,083,306	851,111	1,385,744	853,689	1,066,050 83	1,710,812
Grand totals, July, 1926 ..	215	998,821	786,109	1,285,166	794,331	979,214 74	1,499,173

¹ Barge having no registered tonnage. ² This vessel entered the Canal at Cristobal and proceeded as far as Gatun Lake, where after loading a cargo of bananas she returned to Cristobal. As vessels transiting the Canal as far as Gatun Lake only, are entitled to return to Canal port of entry without payment of tolls for return voyage, the only item taken up in connection with this transit in the Pacific-to-Atlantic traffic statistics is the amount of cargo tonnage.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Notices to Mariners.

No. 414.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 13, 1928.

The Pilot in Charge, Lighthouse Subdivision of The Panama Canal, has requested the following preliminary notice to be issued:

"PACIFIC OCEAN—PANAMA BAY.

"On or about September 15, 1928, the characteristic of the South Fraille Combination Gas and Whistling Buoy will be changed to the following:

"1 second light—3 seconds dark, a period of 4 seconds. (Signed) F. KARIGER, *Pilot in Charge.*"

M. L. WALKER,
Governor.

No. 416.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 14, 1928.

The following appeared in Notice to Mariners, Washington, D. C., July 8th:

"Colombia—Puerto Colombia—Shoal depth. The Master of the German steamer *Orinoco* reports that his vessel, drawing 22½ feet, took the ground about midway between Lafayette Rock Light Buoy and the wreck-marking Light Buoy, where the chart shows depths of 5½ to 6 fathoms.

"Approximate position: 11° 00' 00" N., 74° 59' 30" W."

M. L. WALKER,
Governor.

No. 418.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 14, 1928.

The following appeared in Hydrographic Office, Notice to Mariners No. 31, dated August 4, 1928:

"West Indies—Virgin Islands—St. Thomas Island: Wreck gas buoy changed. On July 13, 1928, Graiton Wreck Gas Buoy was changed to show flashing green every 6 seconds, flash 1 second, eclipse 5 seconds, of 40 candlepower, 13 feet above the water. The buoy is spar shaped. Approximate position: 18° 16' 45" North, 65° 00' 15" West."

"Nicaragua—West Coast—Corinto Harbor—Nonexistence of shoal—Decreased depths: The Commanding Officer of the U. S. S. *Galveston* reports that a survey has failed to locate the 16-foot shoal about 650 yards 105° from Cardon Head Lighthouse, in the entrance to Corinto Harbor, the least depth found in this vicinity being 21 feet.

"Sawyer Bank is extending to the southward, the 30-foot curve being considerably southward of the present charted position.

"Soundings between buoy No. 6 and buoy No. 8 indicate considerable shoaling in this vicinity, the least depth found being 12 feet.

"Approximate position: 12° 28' North, 87° 12' West."

Quoted from H. O. Notice to Mariners No. 29:

"Panama—Gulf of Panama—Pernas Island—San Jose Island Light—Are of visibility: The Commanding Officer of the U. S. S. *Niagara* reports that San Jose Light is visible over an arc of 226° from 274° to 150°.

"Approximate position: 8° 12' 50" N., 79° 07' 55" W."

M. L. WALKER,
Governor.

No. 421.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 15, 1928.

* * * * *

The following appeared in Hydrographic Bulletin, August 8:

"Guatemala, Honduras Bay, Cape Three Points Light, Position: The new flashing white light every 6 seconds, recently established by the United Fruit Company at Cape Three Points, is located practically in the same position as the old light, in latitude 15° 56' 44" N., longitude 88° 35' 35" W., on H. O. Chart No. 1496."

M. L. WALKER,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending August 11, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Chateau Thierry.....	U. S. Government.....	August 2.....	August 3.....	52	31
Asuka Maru.....	Nippon Yusen Kaisha.....	August 4.....	August 5.....	600	
Kuma Maru.....	Nippon Yusen Kaisha.....	August 6.....	August 7.....	263	
Buenos Aires.....	Spanish Line.....	August 7.....	August 7.....	174	
Canadote.....	Imperial Oil Co., Ltd.....	August 8.....	August 9.....		8
Colombia.....	Panama Mail S. S. Co.....	August 8.....	August 8.....	13	
Cisneros.....	Colombian Government.....	August 7.....	August 9.....		17
Corinto.....	Panama Mail S. S. Co.....	August 9.....	August 9.....		1

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Diesel oil is sold by the Canal at \$2.20 per barrel.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.25 per barrel at Balboa and Cristobal. Diesel oil, Balboa only, \$1.80 per barrel.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers at \$8.00 per ton of 2,240 pounds at Cristobal, and \$11.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, \$8.00 per ton at Balboa. When coal is delivered from lighters in quantities of 50 tons or more, the price is \$9.00 per ton at Cristobal, \$12.00 at Balboa. If less than 50 tons is taken from lighters, prices are \$11.00 per ton at Cristobal and \$14.00 per ton at Balboa with minimum charge for 20 tons and maximum charge not to exceed that for 50 tons at \$9.00 Cristobal and \$12.00 Balboa. For furnishing lump coal for galley use, or run of mine coal, in sacks, \$6.00 additional per ton; but if vessels furnishes sacks \$3.00 additional per ton.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

For trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, when requested, an additional charge of 90 cents per ton will be made for extra handling.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Tolls Charges for Transit of The Panama Canal.

- 1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity \$1. 20
- 2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity .72
- 3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton..... .50
- 4. Army and navy transports, colliers, hospital ships, and supply ships, the vessels to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton..... 1.20
- 5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton.
- 6. Vessels returning from Gatun Lake to original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
- 7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage in such cases, as provided in Paragraph 4, Item 3, of the tariff, and for handling lines in accordance with Item 4 of the tariff.

Ships' Chandlery Supplies.

Panama Canal storehouses stock a complete line of ships' chandlery supplies available for sale to shipping, at cost prices plus 25 per cent surcharge, which surcharge includes freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 13.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
PORT OF CRISTOBAL.		PORT OF BALBOA.		PORT OF CRISTOBAL.		PORT OF BALBOA.	
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
August 9.....	Banan	United Fruit Co.	Mobile, Ala.	August 10.....	Banan	United Fruit Co.	Perme, R. P.
August 11.....	Crynssen	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	August 10.....	Santa Marta	United Fruit Co.	New York via wayports.
August 11.....	Favorita	American Fruit & S. S. Corp.	San Blas, R. P.	August 10.....	Suriname	United Fruit Co.	Puerto Colombia.
August 11.....	Inapaquina ¹⁹	United Fruit Co.	Colon, R. P.	August 11.....	Favorita	American Fruit & S. S. Corp.	New Orleans, La.
August 11.....	Cartago	United Fruit Co.	New Orleans via Habana.	August 11.....	Inapaquina ¹⁹	United Fruit Co.	Colon, R. P.
August 11.....	Banan	United Fruit Co.	Perme, R. P.	August 11.....	Amct. reuna ¹⁹	United Fruit Co.	Colon, R. P.
August 11.....	Mercan	Leyland Line	Liverpool via wayports.	August 11.....	Crynssen	Royal Netherlands S. S. Co.	Amsterdam via wayports.
August 11.....	Anachueuna ¹⁹	United Fruit Co.	Colon, R. P.				
¹⁹ Motor boat.				PORT OF BALBOA.			
August 8.....	Chiman ²⁰	Isthmian Land & Fruit Co.	El Real, R. P.	August 8.....	A. B. Obarrio ²¹	Pacific Fruit Co.	Bayano River, R. P.
August 8.....	A. B. Obarrio ²¹	Pacific Fruit Co.	Bayano River, R. P.	August 8.....	Des Hermanos ²¹	A. Valdez	Bayano River, R. P.
August 8.....	Des Hermanos ²¹	A. Valdez	Bayano River, R. P.	August 10.....	Killerig ²²	Lindsay, Swan & Hunter.	Cape Mala, R. P.
August 10.....	Killerig ²²	Lindsay, Swan & Hunter.	Cape Mala, R. P.				
August 11.....	Vinland	O. A. Knutson & Co.	Seattle, Wash.				

²⁰ Motor ship. ²¹ Motor schooner. ²² Tug.

²⁰ Motor ship. ²¹ Motor schooner. ²² Tug.

²⁰ Motor ship. ²¹ Motor schooner. ²² Tug.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., August 22, 1928.

No. 3.

Canal Traffic During First Fifteen Days of August.

During the first 15 days of August, 243 commercial vessels and 3 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,047,324.39, and on the launches, \$30.30, or a total tolls collection of \$1,047,354.69.

The daily average of transits of commercial vessels was 16.20, and the daily average tolls collection, \$69,821.62. The average amount of tolls paid by each of the commercial transits was \$4,309.98, as compared with \$4,168.39 for the first 15 days of July. Tolls for the first 15 days of August were over \$5,000 higher than those for the corresponding period in July, although the number of transits was two less in August than in July.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 7 $\frac{1}{2}$ months of the current calendar year, with the daily averages of transits and tolls:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January	540	\$2,212,752.50	17.42	\$71,379.20
February	547	2,253,755.37	18.86	77,715.70
March	542	2,223,370.57	17.48	71,271.63
April	531	2,187,607.82	17.70	72,914.55
May	508	2,118,969.83	16.38	68,353.86
June	481	2,016,211.09	16.03	67,206.43
July	509	2,109,083.19	16.41	68,034.94
August (first 15 days)	243	1,047,324.39	16.20	69,821.62
Totals	3,901	16,169,074.76	17.11	70,916.99

New Liner for Panama Pacific Line.

The International Mercantile Marine Company has announced that a contract has been awarded for the construction of a third new turbo-electric liner for the Panama Pacific Line, operating between New York and Los Angeles and San Francisco, via Habana and the Panama Canal. This vessel which follows the *California*, now in service, and the *Virginia*, launched this month, is to be ready for service in December, 1929. The new ship will be a sister ship of the *Virginia*, and will be 612 feet long, by 82 feet beam, with a displacement of 35,000 tons. These two vessels, which are slightly larger than the *California*, are said to be the largest ships ever built in the United States.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, August 18, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From--	For--	Cargo.		Panama Canal tonnage.					
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.				
Columbian.	11	19	20	12	6	12	12	34	12	13	38	American	Amer-Hawaiian Line.	404	6	54	0	19	6	3,554	6,760	4,450	
Halo.	11	22	45	12	6	30	12	13	12	14	29	American	Crew, Levick & Co.	435	0	56	0	17	0	7,434	5,145		
Lena Luckenbach.	12	3	35	12	7	20	12	14	00	12	15	03	American	Luckenbach Line.	425	0	53	8	24	0	5,708	7,217	5,295
Lancaster.	12	5	45	12	7	25	12	14	37	12	19	30	American	Argonaut S. S. Co.	434	3	57	7	22	6	6,667	7,935	5,811
Pajala.	12	6	10	12	8	35	12	15	06	12	18	40	Swedish	Can-Amex. Shipp. Co.	418	0	55	0	27	8	5,487	7,274	5,213
Lisbon Maru.	12	10	50	12	11	00	12	17	32	12	18	40	Japanese	Nippon Yusen Kaisha.	445	0	58	0	24	0	6,885	8,015	5,819
Bread Arrow.	12	12	00	12	11	00	12	18	30	12	19	30	American	Standard Transp. Co.	467	0	62	6	12	6	9,700	6,812	
China.	12	17	15	12	17	35	13	9	32	13	10	55	American	Isthmian S. S. Lines	403	0	52	4	23	6	6,678	6,872	4,973
San Nicholas.	12	17	23	12	18	05	13	10	25				British	Lago Shipping Co.	365	7	50	0	9	6			
Adolf Von Byeyer.	11	9	35	13	6	05	13	13	10	13	18	39	German	Hamburg-American Line	409	10	53	11	23	6	5,795	7,173	5,514
Independence.	12	21	55	13	6	20	13	13	56	13	15	15	American	Roosevelt S.S. Co., S.E.	400	0	56	0	28	0	8,315	8,290	6,063
Adria.	13	00	30	13	7	25	13	14	30	13	21	38	German	Anglo-Saxon Petr. Co.	412	0	55	0	21	0	6,579	4,574	
Esparita.	13	5	10	13	8	00	13	15	32	13	16	45	American	United Fruit Co.	380	6	46	0	9	6	625	3,673	2,367
Japan Arrow.	13	6	45	13	8	20	13	15	32	13	16	45	American	Standard Transp. Co.	468	3	62	7	22	0		10,084	7,426
Bish.	13	14	00	13	18	00	14	10	06	14	11	27	British	Anglo-Mexican Petr. Co.	439	0	57	0	20	10			
Arana.	13	14	03	14	6	00	14	14	41	14	16	05	British	Pacific Steam Nav. Co.	363	4	43	0	16	3	1,259	2,851	1,776
China Maru.	14	00	15	14	6	20	14	15	09	15	2	36	Japanese	Kawasaki S. S. Co.	405	0	53	0	25	6	7,384	6,994	5,277
Dard.	14	3	00	14	7	17	14	15	42	14	16	35	American	Tilewater Oil Co.	430	0	59	0	18	0			
McKelvy.	14	11	55	14	12	15	14	19	30	14	20	15	American	Standard Oil Co.	435	0	56	0	20	0			
Uacarbon.	14	12	05	14	13	05	14	20	37	15	7	14	American	Union Oil Co.	500	0	68	0	19	0			
Floridan.	14	14	48	14	15	00	14	21	15	15	00	15	American	Amer-Hawaiian Line.	415	0	53	7	20	8	3,304	7,273	5,144
Atlantic.	14	15	55	14	20	26	15	9	36	15	20	00	Norwegian	Anglo-Saxon Petr. Co.	440	0	57	6	18	0			
La Plata Maru.	14	13	50	15	6	00	15	13	02	15	14	00	Japanese	Osaka Shosen Kaisha.	430	0	56	0	21	8			
Kensington.	14	21	25	15	6	20	15	13	59	15	15	25	British	Inter-Island S. N. Co.	395	0	53	0	25	6			
Court.	15	5	20	15	7	19	15	14	35	15	15	25	American	Luckenbach Line.	471	0	59	0	22	6			
Paul Luckenbach.	15	8	33	15	9	30	15	15	58	15	16	50	American	Huasteca Petroleum Co.	435	0	56	2	17	0			
Franklin K. Lane.	14	23	05	15	8	38	15	16	55	15	18	05	American	Transmarine Lines.	324	0	46	2	20	0			
Sunesecco.	15	11	50	15	17	30	15	19	50	15	19	00	American	Ritchfield Oil Co.	417	0	56	0	20	0	800	3,984	2,612
Hadnot.	15	13	57	15	14	10	15	20	54	15	22	25	American	Chas. Nelson Line	324	0	46	2	19	0			
Tashmo.	15	13	57	15	14	10	15	20	54	15	22	25	American	Chas. Nelson Line	324	0	46	2	19	0	1,650	3,984	2,628
Emil Kindorf.	15	14	32	15	19	27	16	9	08	16	11	39	German	Hamburg-American Line	410	0	54	0	23	2			
Lebore.	15	13	20	15	20	55	16	10	22	16	10	31	American	Ore S. S. Corp.	549	0	72	0	24	7	5,874	7,141	5,468
Lebore.	15	13	20	15	20	55	16	10	22	16	10	31	American	Ore S. S. Corp.	549	0	72	0	24	7	14,325	4,635	

* Pig iron, paraffin wax, and general.

* Scrap iron, lubricating oil, phosphates, and rosin.

* Motor ship.

* Tanker.

Artinoos.....	15	9	35	16	6	10	16	13	36	16	14	35	French.....	Messageries Maritimes.....	413.0	56.9	22.10	Dunkirk, France.....	Noumea, N. Calid.....	General.....	2,677	7,643	5,364
Wido.....	15	11	20	16	6	13	16	14	14	19	10	56	German.....	Roland Line.....	393.0	54.0	22.0	Hamburg, Germany.....	Valparaiso, Chile.....	General.....	3,499	6,585	4,631
Soumerstad ¹	16	8	00	16	10	35	16	17	38	16	18	56	Norwegian.....	A. F. Klavness & Co.....	381.0	55.2	16.6	New Orleans, La.....	Los Angeles, Calif.....	Ballast.....	7,709	5,517	
Dean Emery ¹	16	11	15	16	12	16	19	40	17	18	05	British.....	Huasteca Petroleum Co.....	429.3	59.2	19.0	Baltimore, Md.....	Los Angeles, Calif.....	General.....	6,003	8,555	6,167	
City of Lille ²	16	7	00	16	11	40	16	18	44	16	19	56	American.....	Hail S. S. Line.....	448.0	58.0	26.0	New York, N. Y.....	Adelaide, Australia.....	General.....	295	238	163
Carca ²	11	21	50	17	6	05	17	13	51	18	2	20	Colombian.....	National Navigation Co.....	107.2	22.0	10.8	Cristobal, C. Z.....	Buenaventura, Col.....	General.....	1,950	9,248	6,112
Point Arena.....	17	1	45	17	6	15	17	13	51	17	15	10	American.....	Gulf-Pacific Line.....	324.0	46.0	19.0	New Orleans, La.....	Seattle, Wash.....	General.....	1,950	9,248	6,112
Chio ²	17	6	25	17	7	30	17	15	16	17	20	08	Danzig.....	Baltic-Amer. Petr. Co.....	470.0	63.2	19.0	Hamburg, Germany.....	Los Angeles, Calif.....	Ballast.....	4,295	9,291	6,301
Andagoya ⁵	17	6	30	17	8	35	17	15	10	18	18	40	Colombian.....	Colombian Government.....	92.6	57.0	8.0	Favosham, Eng.....	Buenaventura, Col.....	Ballast.....	206	1,105	598
Ebro.....	16	21	35	17	10	21	17	16	52	17	18	05	British.....	Pacific Steam Nav. Co.....	450.0	57.0	26.1	New York, N. Y.....	Talcahuano, Chile.....	General.....	189	804	503
Calif.....	15	8	30	17	13	15	17	20	18	17	21	15	German.....	North German Lloyd.....	128.0	32.9	12.6	Pto. Colombia, C. Z.....	Buenaventura, Col.....	General.....	2,601	5,651	4,114
Westfalen ²	2	18	20	17	12	35	17	21	51	18	10	08	German.....	Colombian Transp. Co.....	269.0	30.0	11.0	Cristobal, C. Z.....	Buenaventura, Col.....	General.....	2,601	5,651	4,114
Niagara ⁶	16	17	45	17	14	35	17	21	38	17	22	50	American.....	U. S. Navy.....	373.0	34.0	36.0	Cristobal, C. Z.....	Buenaventura, Col.....	General.....	2,601	5,651	4,114
Hallfried ²	17	15	35	17	16	15	18	9	36	18	13	35	Norwegian.....	Ocean Transport Co.....	346.0	51.6	14.6	Genoa, Italy.....	Kobe, Japan.....	Ballast.....	2,601	5,651	4,114
Sirius ⁷	17	13	03	17	21	00	18	12	55	19	14	30	American.....	U. S. Navy.....	390.0	54.0	20.3	Boston, Mass.....	Bremerton, Wash.....	Navy cargo.....	2,601	5,651	4,114
City of Pan-ama ¹	2	17	35	18	6	07	18	14	23	18	15	25	Panamanian.....	Panama Mail S. S. Co.....	296.0	46.0	20.5	Cristobal, C. Z.....	San Francisco, Cal.....	General.....	2,928	3,848	2,603
Baralt.....	16	16	13	18	6	30	18	14	12	18	15	25	Dutch.....	Royal Neth. S. S. Co.....	200.0	33.0	11.10	Cristobal, C. Z.....	Guayaquil, Ecuador.....	General.....	129	1,183	742
Texas.....	16	10	50	18	6	17	18	15	11	18	16	15	French.....	French Line.....	409.0	52.0	24.0	Havre, France.....	Vancouver, B. C.....	General.....	5,008	6,824	4,885
Westmoreland.....	17	21	10	18	7	35	18	15	43	19	17	15	British.....	Quaker Line.....	473.0	60.0	23.0	London, England.....	Bluff, N. Z.....	General.....	4,894	10,423	7,456
Oriole.....	18	8	20	18	8	35	18	16	20	18	17	35	American.....	Federal Steam Nav. Co.....	410.5	54.2	20.0	Philadelphia, Pa.....	Portland, Ore.....	General.....	3,666	6,755	4,873
Mongolia.....	18	7	00	18	8	45	18	15	58	18	23	52	American.....	Panama Pacific Line.....	600.0	65.0	27.0	New York, N. Y.....	San Francisco, Cal.....	General.....	1,911	17,041	11,426
Peter Kerr.....	18	8	40	18	9	20	18	16	48	18	19	14	American.....	Arrow Line.....	415.0	56.0	22.0	Baltimore, Md.....	Portland, Ore.....	General.....	3,838	7,704	5,707
Royal Arrow ²	18	10	00	18	10	15	18	17	50	18	19	14	American.....	Standard Transp. Co.....	467.6	62.7	27.6	Beaumont, Texas.....	Shanghai, China.....	Kerosene.....	11,688	9,693	6,995
Willzipo.....	18	11	35	18	11	40	18	18	04	18	19	14	American.....	Williams S. S. Line.....	415.0	56.0	23.0	Baltimore, Md.....	Seattle, Wash.....	General.....	5,650	7,731	5,805
Niagara ⁶	18	7	40	18	12	30	18	19	20	18	22	30	Swedish.....	Johnson Line.....	425.0	55.6	21.0	Gothenburg, Sweden.....	Seattle, Wash.....	General.....	5,844	7,476	5,485
Radnorshire.....	17	19	10	18	14	49	18	21	20	18	22	30	British.....	Royal Mail S. P. Co.....	411.6	55.6	15.6	Rotterdam, Holland.....	Vancouver, B. C.....	General.....	719	6,988	4,887
Swaiby.....	18	15	12	18	19	20	19	9	26				British.....	Kerr, Gifford & Co.....	390.0	55.6	16.0	Naples, Italy.....	Vancouver, B. C.....	Ballast.....	5,930	4,282	

* Tanker.

* Lighthouse tender.

* Survey ship.

* Auxiliary.

* Copper ore, pulp, paper, and general.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

San Teodoro ¹	12	5	30	12	6	38	12	13	40	12	17	05	British.....	Anglo-Saxon Pet. Co.....	412.0	53	4	24	6	Los Angeles, Calif.....	Lizard Head, Eng.....	Gasoline.....	7,271	6,006	4,200
Ingrid.....	11	18	40	12	7	04	12	15	05	12	15	05	Norwegian.....	Arns Andreasen.....	279.0	40	1	18	6	Callao, Peru.....	Dublin, Ireland.....	2,700	2,217	1,493	
Erden.....	12	00	12	12	8	07	12	16	15	12	19	05	German.....	Hamburg-American Line.....	398.0	52	3	26	0	Calcuttano, Chile.....	Hamburg, Germany.....	8,451	5,994	4,057	
Florence Luck- embach.....	12	14	45	12	15	44	12	23	00	12	23	00	American.....	Loekenebach Line.....	401.8	52	2	24	2	Portland, Oreg.....	Mobile, Ala.....	6,670	6,002	4,621	
Pat Doheny ¹	12	14	00	13	6	21	13	13	55	13	13	55	American.....	Richfield Oil Co.....	430.0	59	2	27	6	Los Angeles, Calif.....	Philadelphia, Pa.....	9,450	7,978	5,840	
Santa Maria ²	12	16	45	13	6	39	13	13	30	13	15	58	American.....	Grace Line.....	466.0	66	0	24	6	Artes, Chile.....	New York, N. Y.....	4,401	10,350	6,382	
Leeds City.....	12	22	30	13	7	10	13	15	25	13	17	56	British.....	E. L. Eyre & Co.....	400.5	54	3	25	6	Portland, Oreg.....	Queenstown, Ire.....	8,030	6,697	5,401	
Almeo.....	13	6	10	13	7	55	13	16	05	13	17	30	Dutch.....	Royal Neth. S. S. Co.....	447.3	62	7	27	0	Cerral, Chile.....	Hamburg, Germany.....	10,051	9,403	6,653	
Canadian Challenger.....	13	9	45	13	10	30	13	17	22	14	2	55	British.....	Can. Nat. Steamships.....	400.1	52	0	17	0	Auckland, N. Z.....	Montreal, Canada.....	2,281	6,142	4,354	
La Crescenta ¹	13	10	15	13	11	07	13	18	30	13	18	30	British.....	Harris & Dixon, Ltd.....	400.0	53	0	28	0	San Francisco, Cal.....	Curacao, D. W. I.....	8,206	6,128	4,062	
C. O. Stillman ²	13	10	50	13	11	49	13	20	25	13	20	25	British.....	Inter. Petroleum, Ltd.....	565.7	75	3	33	0	Talara, Peru.....	New York, N. Y.....	20,790	16,780	11,044	
Uranienborg.....	13	14	05	13	14	57	13	21	30	13	21	30	Danish.....	C. K. Hansen.....	345.0	50	0	23	0	Victoria, B. C.....	Curacao, D. W. I.....	5,109	4,784	3,643	
West Montop.....	13	15	10	13	15	51	13	22	35	13	22	35	American.....	Calif. & East'n S. S. Co.....	410.0	54	4	24	0	Seattle, Wash.....	Philadelphia, Pa.....	7,123	6,484	4,675	
Canadian Constructor.....	13	15	30	13	16	16	14	11	12	14	21	00	British.....	Can. Nat. Steamships.....	430.0	56	0	22	6	Adelaide, Australia.....	Montreal, Canada.....	3,496	7,680	5,494	
Standard Arrow ¹	13	10	30	14	6	11	14	13	45	14	13	45	American.....	Standard Transp. Co.....	467.6	62	7	27	0	Los Angeles, Calif.....	New York, N. Y.....	11,306	9,698	6,783	

* Tanker.

Stedore	18	3	00	18	6	05	18	15	55	18	15	55	American	Ore S. S. Corp.	550	3	72	2	34	6	Cruz Grande, Chile	Baltimore, Md	20	000	15	551	4	297	Iron ore.
Santos ²	17	16	15	18	7	00	18	17	10	18	22	10	Swedish	Johnson Line	384	9	51	5	25	9	Vancouver, B. C.	Göteborg, Sweden	5	558	5	391	4	033	General
Harco ²	17	14	15	18	7	00	18	16	10	18	16	10	Danish	Thavenot S. S. Co.	262	4	39	1	19	0	San Juan del Sur.	Chester, Pa.	2	484	2	149	1	469	Dye woods
Okanama	18	8	45	18	8	34	18	18	00	18	18	00	American	Oriental Navigation Co.	410	5	54	2	26	6	Aborden, Wash.	Wilmington, Del.	5	713	6	755	4	887	General (*)
Orkhot	18	8	45	18	8	36	18	19	00	14	15	French	French Line	400	5	51	5	23	0	Talcahuano, Chile.	La Havre, France.	7	976	6	014	4	477	General	
Anglo-Peruvian	18	9	00	18	10	02	18	19	40	18	25	British	Lawther, Latia & Co.	426	0	58	2	04	0	Prince Rupert, B.C.	Fayal, Azores ¹⁷ .	9	130	7	392	5	452	Wheat	
Omphale ²	18	9	45	18	10	46	18	20	05	18	23	45	French	Le Gasgogne Guillaume	422	4	57	5	25	6	Los Angeles, Calif.	Liverpool, England.	7	800	6	871	4	635	Gasoline.
Streevald ²	18	5	51	18	12	31	18	20	45	19	13	27	German	Hamburg-American Line	399	4	54	2	26	0	Corral, Chile.	Hamburg, Germany	7	899	6	791	4	997	General
El Grillo ¹	18	17	25	18	18	08	19	20	11	19	11	45	British	C. T. Bowring & Co.....	440	0	57	6	27	9	Talara, Peru	Halifax, N. S.	9	660	7	468	5	042	Crude oil

¹ Tauker.

² Lumber, and empty oil drums.

¹⁷ For orders.

17 For orders.

Lumber, and empty oil drums,

Tanker.

All hours are expressed on the 24-hour basis and all hours greater than 12 are post meridian.

PORT OF CRISTOBAL.

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	From—	Date.	Vessel	For—
August 12.....	United Fruit Co.....	Port Limon, Costa Rica.	August 12.....	Inapaquima ¹⁸	Colon, R. P.
August 12.....	Anglo-Saxon Petroleum Co.....	Curacao, D. W. I.	August 12.....	Banan	Mobile, Ala.
August 12.....	United Fruit Co.....	Colon, R. P.	August 12.....	Tolosa	New York via Habana.
August 13.....	Hamburg-American Line.....	Hamburg via wayports.	August 13.....	Cartago	New Orleans via wayports.
August 14.....	United Fruit Co.....	New York via wayports.	August 14.....	J. S. Wilkinson ¹⁶	Tampa, Fla.
August 14.....	Calmaras	Colon, R. P.	August 14.....	Mercian	New Orleans via Pt. Limon.
August 14.....	Surgeon Brothers	Boston, Mass.	August 14.....	Rugia	Hamburg and wayports.
August 14.....	Huasteca Petroleum Co.....	New York via Haiti.	August 14.....	Macabi	New York via Kingston.
August 15.....	Panama Railroad S. S. Line.	New York via Kingston.	August 15.....	Linda S. ¹⁹	Bluefields and wayports.
August 15.....	Ancon	New Orleans, La.	August 15.....	Carnania ¹⁹	Colon, R. P.
August 15.....	United Fruit Co.....	Bocas del Toro, R. P.	August 15.....	J. M. Danziger	Aruba, D. W. I.
August 15.....	United Fruit Co.....	Mobile, Ala.	August 15.....	Calmaras	Port Limon, Costa Rica.
August 16.....	United Fruit Co.....	New Orleans, La.	August 16.....	Bowden	Perme, R. P.
August 16.....	American Fruit & S. S. Co	Puerto Cabezas, Nicaragua.	August 16.....	Saramacca	Port Limon and Bocas.
August 16.....	Standard Fruit & S. S. Co	San Blas, R. P.	August 16.....	Suriname	New Orleans, La.
August 18.....	American Fruit & S. S. Co	Avonmouth via wayports.	August 16.....	Virginia	Curacao, D. W. I.
August 18.....	Elders & Fyfe, Ltd	Perme, R. P.	August 17.....	Sangro	New Orleans via wayports.
August 18.....	United Fruit Co.....	Colon, R. P.	August 17.....	Melagro	New Orleans, La.
August 18.....	United Fruit Co.....	Colon, R. P.	August 18.....	Virginia	Bristol via Kingston.
August 18.....	United Fruit Co.....	Colon, R. P.	August 18.....	Arguani	Puerto Cabezas, Nicaragua.
August 18.....	Maehucuma ¹⁶		August 18.....	Waunta	Colon, R. P.
August 18.....	Inapaquima ¹⁸		August 18.....	Inapaquima ¹⁸	Colon, R. P.
August 18.....	United Fruit Co.....		August 18.....	Anaehuma ¹⁸	Colon, R. P.

¹⁸ Motor boat. ¹⁹ Motor schooner. ²⁰ Schooner.

PORT OF BALBOA.

August 12.	Craftsman ²¹ .	R. J. McArdle Constructing Co.	Buenaventura.	Colombia.	August 12.	Chiman ²² .	Isthmian Land & Fruit Co.	El Real, R. P.
August 12.	Cricamola ²² .	Chiriqui Land Co.	Chiriqui, R. P.		August 12.	Cricamola ²² .	Chiriqui Land Co.	Chiriqui, R. P.
August 13.	Chiriqui ²¹ .	Chiriqui Land Co.	Chiriqui, R. P.		August 13.	Craftsman ²¹ .	R. J. McArdle Constructing Co.	Buenaventura.
August 15.	Chiman ²² .	Isthmian Land & Fruit Co.	El Real, R. P.		August 14.	Chiriqui ²¹ .	Chiriqui Land Co.	Chiriqui, R. P.
August 15.	Chiman ²² .				August 14.	Chiriqui ²¹ .	Chiriqui Land Co.	Chiriqui, R. P.
August 15.	Dos Hermanos ²¹ .	A. Valdez	Bayano River, R. P.		August 15.	Dos Hermanos ²¹ .	A. Valdez	Bayano River, R. P.
August 15.	A. B. O'Barrio ²¹ .	Pacific Fruit Co.	Bayano River, R. P.		August 15.	A. B. O'Barrio ²¹ .	Pacific Fruit Co.	Bayano River, R. P.
August 15.	Bertha ²³ .	Chiriqui Land Co.	Chiriqui, R. P.		August 15.	Bertha ²³ .	Chiriqui Land Co.	Chiriqui, R. P.
August 15.	Sau Luis ²³ .	Chiriqui Land Co.	Chiriqui, R. P.		August 16.	San Luis ²³ .	Chiriqui Land Co.	Chiriqui, R. P.
August 15.	Sau Luis ²³ .				August 16.	Vinland ²² .	O. A. Knudsen.	Arica, Chile.

21 Tug.	22 Motor ship.	23 Motor schooner.
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• Other than ships passing through the Canal.

Cargo Through Canal During July, 1928.

On pages 28 and 29 of this issue will be found tables showing the origin and destination of cargo passing through the Canal during July, 1928. The aggregate of all cargo for the month was 2,291,955 long tons, as compared with 2,450,468 tons passing through the Canal in July last year. The heavy decrease was in the Atlantic-bound cargo and was brought about by small shipments of several commodities usually shipped in bulk, viz., mineral oils, nitrates, and lumber, as compared with the shipments in July of 1927.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Over 66 per cent of the cargo from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 23.6 per cent in Europe. Cargo originating in the United States was 23,488 tons, or 4.9 per cent greater than the amount coming from this area in July last year. Cargo from Europe showed a relative as well as an actual decrease under the amount carried through the Canal in July last year. The decrease from this area was 15,031 tons, or 7.8 per cent.

Destination.—Forty-four per cent of the Pacific-bound cargo tonnage was destined to the United States; 21.1 per cent to Asia (including the Philippines); 15 per cent to Australasia; and 13 per cent to South America. Cargo tonnages to the United States and Asia increased both relatively and actually over July last year, the increases amounting to 35,707 tons, or 12.1 per cent, and 11,096 tons, or 7.6 per cent respectively. Tonnages to Australasia and South America showed small decreases.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo tonnage moving in this direction, 56.1 per cent originated on the west coast of the United States; 25.8 per cent in South America; 12.5 per cent in Canada; 2.6 per cent in Asia (including the Philippines); and 2.1 per cent in Australasia. Cargo from all of these areas, with the exception of Canada, showed decreases under July of last year, although that coming from Asia and Australasia, were, relatively, about the same as last year. The decrease from the United States was 149,669 tons, that from South America, 59,998 tons, from Asia, 4,891 tons; and from Australasia, 4,105 tons. The large decreases from the United States and South America were occasioned by comparatively light shipments of mineral oils and nitrates. Cargo from Canada increased 44,658 tons on account of the heavy wheat shipments.

Destination.—Segregated according to direction, 60.3 per cent of the cargo in this direction went to the United States and 31.9 per cent to Europe. Tonnage to the United States showed an actual decrease of 96,748 tons, or 9.4 per cent, but a small relative increase in its proportion of all cargo from the Pacific as compared with July last year, while that to Europe increased 7,210 tons, or 1.4 per cent. Light shipments of mineral oils and nitrates were responsible for the decreased tonnage to the United States.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify over 89 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 11 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic-to-Pacific-bound commodities which aggregated more than 10,000 tons for July, 1928, or July, 1927, are listed in the following tabulation, showing differences:

Commodity.	July, 1928.	July, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	12,645	7,420	+5,216
Asphalt.....	15,162	7,104	+8,058
Automobiles.....	14,466	6,912	+7,554
Cement.....	12,600	25,111	-12,511
Coal and coke.....	29,367	20,203	+9,164
Cotton.....	12,502	25,186	-12,684
Manufactured goods:			
Iron and steel.....	171,255	171,739	-484
Machinery.....	13,457	22,086	-8,629
Railroad material.....	11,058	15,531	-4,473
Tin plate.....	21,644	13,909	+7,735
Textiles.....	11,739	10,751	+988
Metals, various.....	16,652	10,135	+6,517
Oils, mineral.....	61,992	50,273	+11,719
Paper.....	23,397	14,184	+9,213
Phosphates.....	23,598	12,874	+10,724
Sulphur.....	32,510	14,881	+17,629

The above 16 commodity groups comprise approximately 65 per cent of the cargo moving from the Atlantic to the Pacific during July, 1928. It will be noted that 11 of the items show increases and 5 decreases. The heaviest increases were in sulphur, mineral oils, and phosphates, while cotton and cement showed the heaviest decreases.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify almost 99 per cent of all cargo moving from the Pacific to the Atlantic during the month of July, 1928. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month a year ago are listed below, showing differences:

Commodity.	July, 1928.	July, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	14,815	23,957	-9,142
Canned goods (fish, fruit, vegetables, etc.).....	37,701	35,408	+2,293
Cold storage (food products).....	22,788	11,515	+11,273
Cotton.....	11,231	8,347	+2,884
Fruit, dried.....	13,013	8,456	+4,557
Lumber.....	344,836	380,612	-35,776
Metals, various.....	65,171	62,469	+2,702
Nitrates.....	148,983	221,379	-72,396
Oils, mineral.....	434,369	594,741	-160,372
Ores (principally iron).....	140,575	121,573	+19,002
Sugar.....	26,428	43,644	-17,216
Wheat.....	124,042	63,402	+60,640
Wool.....	11,373	9,899	+1,474

¹ Does not include fresh fruit.

The above 13 commodity groups comprise over 90 per cent of the cargo moving from the Pacific to the Atlantic during July, 1928. Eight of the items show increases and 5 decreases. The heaviest increase was in wheat, which showed a gain of 60,640 tons over July, 1927. Mineral oils and nitrates showed heavy decreases.

(Continued on next page.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending August 18, 1928.

Name of vessel:	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Santa Maria.....	Grace Line.....	August 12.....	August 13.....	6	.....
Altmark.....	Hamburg-American Line.....	August 14.....	August 14.....	1	.....
Sylvan Arrow.....	Standard Transportation Co.....	August 14.....	August 14.....	830	.....
Kenowis.....	U. S. Government.....	August 15.....	August 17.....	472	119
Guatemala.....	Panama Mail S. S. Co.....	August 16.....	August 17.....	50	1
Sirius.....	U. S. Government.....	August 18.....	August 19.....	278	29
City of Panama.....	Panama Mail S. S. Co.....	August 18.....	August 18.....	.....	2

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, July, 1928.

(Figures represent tons of 2,240 pounds.)

From—	SOUTH AMERICA.					NORTH AMERICA.					ASIA.					AUSTRALASIA.				Grand totals.	Per cent of total cargo.				
	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	West coast of United States.	West coast of Canada.	West coast of Central America.	West North America. ¹	Balboa, C. Z. ²	Hawaii.	Total, North America.	Japan.	China.	Philippines.	Far East. ¹	Total, Asia.	Australia.			New Zealand.	Australasia. ¹	Total, Australasia.	
NORTH AMERICA:																									
UNITED STATES—																									
North Atlantic ports	9,423	2,381	433	8,870	2,717	23,824	190,202	3,446	1,423	...	74	9,551	204,666	29,054	27,422	7,281	16,962	80,719	24,852	7,108	7,380	39,340	348,575	46.8	
South Atlantic ports	...	...	...	...	...	...	2,445	...	...	...	...	...	2,415	2,932	...	100	335	3,767	...	...	...	...	6,212	0.8	
Gulf ports	...	...	...	...	1,331	1,331	52,786	310	...	...	255	413	53,764	56,246	10,250	4,432	801	71,769	15,550	1,000	...	...	16,550	143,418	19.0
Totals, U. S.	9,423	2,381	433	8,870	4,048	25,155	245,433	3,756	1,423	...	329	9,964	260,905	88,232	38,112	11,813	18,098	156,255	40,402	8,108	7,380	55,890	498,205	66.6	
Cristobal, C. Z. ²	...	...	...	...	...	...	7,334	20	5,615	...	...	...	12,999	...	2	...	...	...	2	...	...	...	21,210	2.7	
East coast Canada	...	...	...	...	...	...	4,066	2,374	...	...	...	...	6,440	...	...	...	511	...	1,962	5,406	...	...	7,368	14,319	1.9
West Indies	16	20	...	...	...	36	3,002	...	5,835	...	...	...	8,857	...	...	...	...	...	...	...	...	...	8,873	1.2	
E. coast Mexico and Central America	...	2,650	...	...	...	2,650	2,663	...	...	...	...	...	2,663	...	...	...	500	...	5,631	6,885	...	...	12,516	18,329	2.5
Totals, N. America.	10,723	7,390	1,285	9,794	6,858	36,050	262,498	6,150	7,068	...	6,164	9,964	291,844	88,232	38,114	11,813	19,109	157,268	47,995	20,399	7,380	75,774	560,386	74.9	
Europe:																									
British Isles	30,647	186	381	1,160	3,912	36,286	13,795	3,939	...	...	...	...	17,734	...	...	...	...	...	...	35,320	...	...	35,320	89,340	11.9
Belgium	829	724	215	867	2,715	5,350	16,400	1,402	215	...	...	...	18,017	...	...	...	...	...	...	...	...	...	23,367	3.2	
France	1,168	...	72	57	1,297	4,087	44	121	...	...	...	...	4,252	...	...	...	...	...	...	...	...	...	5,549	0.8	
Germany	2,905	870	718	1,474	2,174	8,141	8,766	2,234	695	...	770	1,230	13,695	...	...	...	...	...	330	...	...	...	330	22,166	3.0
Holland	755	151	647	132	1,957	3,645	4,097	530	186	...	...	...	4,813	...	...	...	...	...	...	...	...	...	8,458	1.1	
Italy	...	...	...	...	...	...	319	2	...	...	...	...	321	...	...	...	...	...	...	...	...	...	...	321	...
Norway and Sweden	241	...	1	100	567	909	3,383	49	624	...	450	2,424	6,930	...	...	...	...	...	2,176	...	...	...	2,176	10,015	1.4
Spain and Portugal	421	...	27	76	29	553	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	553	...
Europe ¹	511	28	13	61	3,331	3,944	8,929	237	3,400	...	1,220	3,654	12,566	...	...	...	...	...	...	...	...	...	...	16,510	2.2
Totals, Europe	37,477	1,962	2,074	3,927	14,685	60,125	59,776	8,437	5,241	...	1,220	3,654	78,328	...	...	...	...	...	2,506	35,320	...	...	37,856	176,279	23.6
E. coast South America.	...	...	...	...	...	...	7,357	3,165	...	...	...	...	10,522	224	39	...	160	423	...	...	...	...	...	10,945	1.5
Grand totals	48,200	9,352	3,359	13,799	21,465	96,175	329,631	17,752	12,309	...	7,384	13,618	380,694	88,456	38,153	11,813	19,209	157,691	50,501	55,719	7,380	113,600	748,160	100.0	
Per cent of total cargo:																									
July, 1928	6.5	1.2	0.5	1.9	2.9	13.0	44.0	2.4	1.6	...	1.0	1.9	50.9	11.8	5.1	1.6	2.6	21.1	6.7	7.4	0.9	15.0	100.0	...	
July, 1927	7.0	1.8	0.8	4.5	1.6	15.7	39.7	6.2	0.9	...	...	0.9	47.6	8.8	7.3	2.3	1.5	19.9	13.1	3.5	0.2	16.8	100.0	...	
July, 1926	4.3	1.2	0.4	0.2	8.4	14.5	42.7	3.1	2.3	2.8	...	...	50.9	6.8	4.5	1.1	6.6	19.0	19.1	5.8	0.7	15.6	100.0	...	

¹ General cargo not routed so as to allow segregation between definite ports.² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, July, 1928.

(Figures represent tons of 2,240 pounds.)

FROM —	NORTH AMERICA.										EUROPE.												Grand totals.	Per cent of total cargo.										
	UNITED STATES.					Total, North America.	Cristobal, C. Z. ¹	East coast of Central America.	West Indies.	East coast of Canada.	Total, United States.	EUROPE.																						
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	France.							Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ²	Total, Europe.	East coast of South America.	Egypt.	South Africa.													
SOUTH AMERICA:																																		
Chile.....	150,382		17,320	167,702	7,500	594	34	95	175,925	26,716	8,055	422	6,036	10,754	6,790	1,602	1,600	5,007	70,075	137,117	1,056	15,072					329,170	21.3						
Colombia.....	908			908				1,407	2,375		7				131	59					197						2,572	0.2						
Ecuador.....	7,022			7,022		6		2,477	9,505	70					105	32					385						9,922	0.6						
Peru.....	17,032			17,032		20		2,062	35,814	15,560	729				12	1,892	365	23			395	18,976					54,790	3.5						
West coast S. Am. ¹	552			552				221	773	28	360				71						810	1,269					2,042	0.2						
Totals, So Am.....	176,856		17,320	194,176	23,300	620	34	6,262	224,392	42,374	9,151	422	6,224	12,829	7,246	1,625	1,600	5,133	71,280	157,944	1,088	15,072					398,496	25.8						
NORTH AMERICA:																																		
West coast Canada.	58,616		793	59,409	12,516	1,610	710	260	74,505	61,050	14,781				1,631	5,349	3,084	300	4,100	26,635	116,940	1,009					192,454	12.5						
W. coast Can. Am						6		2,488	2,494						36	100				403,325	3,501						5,995	0.4						
W. coast U. S.....	604,373	16,272	12,843	633,488	5,600	13,409	11,450	14,830	678,786	138,045	5,989	1,312	9,595	18,872	1,972	704	768	1,226	7,445	185,928	1,155						865,869	56.1						
Hawaii.....									9,340																		9,340	0.7						
Gatun Lake.....				262					262																		262							
Totals, No. Am.....	667,989	16,272	23,238	702,499	18,116	15,025	12,169	17,578	765,387	199,095	20,770	1,312	11,262	24,321	5,056	1,044	8,103	1,236	34,080	306,369	2,164						1,073,920	69.5						
ASIA:																																		
China.....	7,921			7,921		7,163			15,084																			15,084	1.0					
Japan.....	297								297																			297						
Philippines.....	19,759		4,000	23,759					23,759																			23,759	1.5					
Far East.....	1,003			1,003					1,003																			1,003	0.1					
Totals, Asia.....	28,980		4,000	32,980		7,163			40,143																			40,143	2.6					
AUSTRALASIA:																																		
Australia.....	2,450			2,450					2,450																			2,450	0.2					
New Zealand.....	10			10					10																			22,423	1.5					
Australasia ¹															3,263						6,363							6,363	0.4					
Totals, Australasia.....	2,460			2,460					2,460						3,263						6,363							31,236	2.1					
Grand totals.....	871,285	16,272	41,558	932,115	41,416	22,808	12,203	23,840	1,032,382	266,024	29,921	1,734	20,749	37,150	12,302	2,689	9,853	6,369	106,318	493,089	3,252	15,072					1,543,795	100.0						
Percent of total cargo:																																		
July, 1928.....	56.4	1.0	2.9	60.3	2.7	1.5	0.8	1.6	66.9	17.2	1.9	0.1	1.3	2.4	0.8	0.2	0.7	0.4	6.9	31.9	0.2	1.0					100.0							
July, 1927.....	54.0	3.0	3.2	60.2	3.8	1.4	0.1	3.4	68.9	12.7	0.5		0.5	2.9	0.9	0.6	0.8	0.7	8.8	28.4	1.6	1.1					100.0							
July, 1926.....	54.0	1.0	2.4	57.4	6.8	1.0		1.7	66.9	14.7	0.9		0.4	2.5	0.3				11.1	29.9	0.6	2.1					100.0							

¹ General cargo not routed so as to allow segregation between definite ports.² Includes both local and transit cargo.

United States Intercoastal Shipments Transshipped at Canal Zone.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 14, 1928.

MEMORANDUM FOR STEAMSHIP AGENTS:

This office recently made inquiry of the Treasury Department as to the status of intercoastal shipments transshipped at Canal Zone ports. A reply has just been received in which it is stated that the following regulations for handling the traffic in question will be published in an early issue of the weekly Treasury Decisions:

"Shipments via Panama Canal Zone.

"Regulations governing the customs treatment of domestic merchandise transshipped in the Panama Canal Zone while en route between any two ports of the United States, including its island possessions.

"TREASURY DEPARTMENT,
"OFFICE OF THE COMMISSIONER OF CUSTOMS,
"WASHINGTON, D. C.

"To Collectors of Customs and Others Concerned:

"The following regulations are prescribed for the customs treatment of domestic merchandise transshipped in the Panama Canal Zone while en route between ports of the United States, including its island possessions:

"(1) Where domestic merchandise shipped between ports of the United States, including its island possessions, via the Isthmus of Panama, is to be transshipped in the Panama Canal Zone, a special manifest shall be prepared in triplicate and in the form provided in Article 217 of the Customs Regulations of 1923, modified to meet the circumstances and certified by the collector of customs at the port of departure. One copy of the manifest shall be filed in the office of the collector at the said port, one copy delivered to the master of the vessel and one mailed to the collector at the port of destination of the merchandise.

"(2) It will not be necessary to seal the packages or the compartments in which they are shipped, nor will any supervision of the transshipment in the Canal Zone be required. However, upon arrival of the merchandise at the port of destination, the packages will be examined by officers of the customs and compared with the marks and numbers on the manifest and checked thereon before delivery to the consignee. All goods so shipped not corresponding with the manifest will be held for duty. Baggage of passengers may be manifested in this manner.

"These regulations shall not apply to merchandise shipped in bond.

"(Signed) FRANK DOW,
Acting Commissioner of Customs.

"(110809)

"Approved, July 26, 1928.

"(Signed) OGDEN L. MILLS,
"Acting Secretary of the Treasury."

C. A. McILVAINE,
Executive Secretary.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
For steamships, including warships of all nations when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.....	11.00	14.00

United States Intercoastal Traffic by Commodities for July, 1928.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for July, 1928, and the totals for July, 1927 and 1926. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise but they are indicative of the kind and quantity of the cargo in transit through the Canal. The figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Aeroplanes.....	5	.....	5
Agricultural implements.....	1,114	209	1,323
Alfalfa meal.....	.....	674	674
Ammonia.....	150	.....	150
Ammunition.....	65	.....	65
Asbestos.....	1,258	.....	1,258
Asphalt.....	356	24	380
Automobiles.....	1,190	61	1,251
Automobile accessories.....	649	31	680
Bamboo.....	.....	96	96
Bananas.....	872	.....	872
Bark, cascara.....	.....	6	6
Barley.....	.....	2,070	2,070
Beans.....	52	2,284	2,336
Bones and bonemeal.....	30	42	72
Borax.....	.....	1,232	1,232
Bricks.....	270	.....	270
Burlap.....	105	61	166
Calcium carbide.....	83	.....	83
Camphor.....	.....	192	192
Canned goods:			
Fish.....	486	3,987	4,473
Fruit.....	218	13,730	13,948
Meat.....	25	158	183
Milk.....	.....	694	694
Soup.....	1,119	.....	1,119
Vegetables.....	830	2,139	2,969
Miscellaneous.....	1,997	7,874	9,871
Carbon black.....	11	103	114
Celite filtercd.....	.....	921	921
Cement.....	1,679	105	1,784
Charcoal.....	76	163	239
Chemicals.....	2,287	314	2,601
China and fire clay.....	132	20	152
Coal.....	4,510	.....	4,510
Cocoa.....	544	.....	544
Coconuts.....	50	598	648
Coffee.....	240	26	266
Cold storage:			
Cheese.....	5	.....	5
Eggs.....	.....	392	392
Lard.....	1,083	.....	1,083
Meat.....	14	.....	14
Other.....	120	.....	120
Confectionery.....	182	12	194
Cork.....	256	.....	256
Cotton.....	60	1,038	1,098
Cyanide.....	142	.....	142
Drugs.....	503	.....	503
Earthenware.....	.....	88	88
Eggs, dried.....	.....	134	134
Fertilizer.....	51	150	201
Flour.....	132	6,800	6,932
Fruit:			
Dried.....	.....	6,928	6,928
Fresh.....	44	2,661	2,705
Fuller's earth.....	934	.....	934
Furniture.....	365	65	430
General.....	42,074	10,197	52,271
Glass and glassware.....	3,107	134	3,241
Glue.....	75	27	102
Granite.....	12	.....	12
Hair.....	54	79	133
Hardwoods.....	324	50	374
Hay.....	.....	525	525
Hemp.....	215	346	561

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Honey.....		331	331
Hops.....		163	163
Jute.....	515	88	603
Linoleum.....	770	290	1,060
Liquors.....	122		122
Lumber.....	2,340	224,559	226,899
Malt.....	197		197
Manufactured goods:			
Iron and steel.....	87,440	338	87,778
Machinery.....	3,787	397	4,184
Railroad material.....	2,833		2,833
Tinplate.....	13,342		13,342
Textiles.....	5,168	476	5,644
Miscellaneous.....	3,850	3,009	6,859
Marble.....	2,559		2,559
Matches.....	77	29	106
Metals:			
Antimony.....		45	45
Copper.....	40	9,500	9,540
Iron.....	156		156
Scrap.....	291	1,359	1,650
Tin.....		63	63
Zinc.....	18	513	531
Other.....		550	550
Milk, powdered.....	55	776	831
Molasses.....	39		39
Musical instruments.....	57		57
Nitrates.....		45	45
Nuts.....		204	204
Oils:			
Cottonseed.....	89		89
Crude.....	5,846	60,016	65,862
Gas oil, fuel oil.....		19,474	19,474
Gasoline, benzine, and naphtha.....		216,650	216,650
Lubricating and greases.....	3,464	91	3,555
Olive.....	20		20
Vegetable.....	300	56	356
Wood.....		60	60
Other.....	512	120	632
Ores:			
Copper.....		800	800
Magnesite.....	54	2,083	2,137
Manganese.....	67	18	85
Zinc.....		32	32
Paint.....	712	88	800
Paper.....	7,121	3,163	10,284
Paper, pulp.....	12	1,109	1,121
Paper roofing.....	280		280
Peanuts.....	41	436	477
Peas.....	16		16
Phosphates.....	1,151		1,151
Plaster.....	24	3	27
Porcelain.....	95	804	899
Quicksilver.....		4	4
Rags.....		807	807
Rice.....	62	171	233
Rope.....	288	67	355
Rosin.....	694		694
Rubber:			
Manufactured.....	1,602	73	1,675
Raw.....	40		40
Scrap.....		37	37
Salt.....	393		393
Saltpetre.....	40		40
Seeds:			
Cotton.....	46		46
Grass.....		22	22
Hemp.....		50	50
Other.....		173	173
Shells.....	1,257		1,257
Silk.....	20	95	115
Skins and hides.....	25	2,062	2,087
Slag.....	800		800
Slate.....	441		441
Soap.....	3,529	14	3,543
Soda.....	605		605
Soda, ash.....	1,399		1,399
Soda, bicarbonate.....	35		35
Soda, caustic.....	925		925
Sugar.....	103	4,952	5,055
Sulphur.....	15,930		15,930
Syrup.....	93		93
Talc.....		202	202
Tallow.....		448	448
Tar.....	15		15

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Tea.....	135	51	186
Tobacco.....	2,816	20	2,836
Toys.....	201	10	211
Turpentine.....	82	.....	82
Vegetables.....	60	210	270
Waste.....	29	223	252
Wax.....	56	.....	56
Wine.....	21	341	362
Wool.....	.....	8,278	8,278
Zinc oxide.....	76	.....	76
Totals, July, 1928.....	245,433	633,488	878,921
Totals, July, 1927.....	212,214	726,553	938,767
Totals, July, 1926.....	216,831	617,535	834,366

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Three Weeks Ending August 18, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Uruhamba.....	Peruvian Line.....	.....	July 29.....	.....	120
Portland.....	Hamburg-American Line.....	.....	July 29.....	.....	300
Pastores.....	United Fruit Co.....	July 29.....	July 29.....	8	234
Baralt.....	Royal Netherlands S. S. Co.....	.....	July 30.....	.....	77
Parismina.....	United Fruit Co.....	.....	July 30.....	.....	22
Saint Joseph.....	French Line.....	July 29.....	July 30.....	325	12
Witram.....	North German Lloyd.....	July 29.....	July 30.....	(¹)	55
Mayari.....	United Fruit Co.....	July 30.....	July 30.....	20	320
Santa Cruz.....	Grace Line.....	July 30.....	July 31.....	135	286
Poseidon.....	Hamburg-American Line.....	July 30.....	July 31.....	235	(²)
Ballena.....	Pacific Steam Navigation Co.....	July 30.....	August 1.....	63	230
Ulua.....	United Fruit Co.....	July 30.....	August 1.....	604	4
Astral.....	Standard Transportation Co.....	July 30.....	August 2.....	1,000	(²)
Alkmaar.....	Royal Netherlands S. S. Co.....	July 31.....	August 1.....	308	86
Rugia.....	Hamburg-American Line.....	July 31.....	August 1.....	144	79
Durazzo.....	Hamburg-American Line.....	July 31.....	.....	271	.....
Tongking.....	Danish East Asiatic Co.....	August 1.....	August 1.....	211	(²)
Abron.....	Finkbine Guild Trans. Co.....	August 1.....	August 2.....	350	(²)
Zacapa.....	United Fruit Co.....	August 1.....	August 2.....	456	229
Coppename.....	United Fruit Co.....	August 1.....	August 2.....	555	103
Cristobal.....	Panama Railroad S. S. Line.....	August 1.....	.....	2,889	.....
Uribe.....	United Fruit Co.....	August 1.....	.....	800	.....
Saramacca.....	United Fruit Co.....	August 2.....	August 2.....	8	415½
Virginia.....	American Fruit & S. S. Corp.....	August 2.....	August 2.....	200	4
Salvador.....	Pacific Steam Navigation Co.....	.....	August 2.....	.....	1,074
City of Panama.....	Panama Mail S. S. Co.....	August 2.....	.....	1,050	.....
San Mateo.....	United Fruit Co.....	August 2.....	August 3.....	617	420
Westfalen.....	Colombian Transport Co.....	August 2.....	.....	108	.....
Almagro.....	Pacific Steam Navigation Co.....	August 2.....	August 3.....	219	40
Sesostriis.....	Hamburg-American Line.....	August 2.....	August 4.....	(¹)	735
Venezuela.....	Panama Mail S. S. Line.....	August 3.....	August 4.....	360	93
Firpark.....	Munson Line.....	August 3.....	.....	1,500	.....
Virginia.....	American Fruit & S. S. Corp.....	August 4.....	August 4.....	(¹)	327
Maravi.....	United Fruit Co.....	August 4.....	August 4.....	48	695
Padilla.....	Colombian S. S. Line.....	.....	August 4.....	.....	550
William M.....	R. Feuillebois.....	August 4.....	August 4.....	(²)	30
Ecuatore.....	Italian Line.....	August 4.....	.....	215	.....
Minnesota.....	French Line.....	August 4.....	.....	134	.....
Cerigo.....	Hamburg-American Line.....	August 4.....	.....	516	.....
Garfield.....	N. O. & S. A. S. S. Line.....	August 4.....	.....	25	.....
Heredia.....	United Fruit Co.....	August 4.....	.....	548	.....
Cristobal.....	Panama Railroad S. S. Line.....	.....	August 5.....	.....	3,566
Garfield.....	N. O. & S. A. S. S. Line.....	.....	August 5.....	.....	112
Buenos Aires.....	Johnson Line.....	August 5.....	August 5.....	(¹)	140
Boskoop.....	Royal Netherlands S. S. Co.....	August 5.....	August 5.....	429	70
Axel Johnson.....	Johnson Line.....	August 5.....	August 6.....	193	(²)
Glamorganshire.....	Royal Mail S. P. Co.....	August 5.....	August 5.....	48	17
Ulua.....	United Fruit Co.....	August 5.....	August 5.....	20	469
Bowden.....	United Fruit Co.....	August 5.....	August 6.....	(²)	343
Asuka Maru.....	Nippon Yusen Kaisha.....	August 5.....	August 6.....	329	(²)
Napierian.....	Leyland Line.....	August 5.....	August 7.....	1,074	12
Heredia.....	United Fruit Co.....	.....	August 6.....	.....	273
Minnesota.....	French Line.....	.....	August 6.....	.....	355
Teno.....	Chilean Line.....	August 6.....	August 6.....	5	(¹)
Perene.....	Peruvian Line.....	August 6.....	August 7.....	3	50

¹ No cargo discharged.

² No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z.—Continued.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Tolosa	United Fruit Co.	August 6.	August 8.	854	87
Linda S.	R. Feuillebois	August 7.	August 7.		45
Finn	Colombian Transport Co.	August 7.	August 7.	32	1
Colombia	Panama Mail S. S. Co.	August 7.	August 8.	509	134
Kuma Maru	Nippon Yusen Kaisha	August 7.	August 8.	318	(¹)
Crijnsen	Royal Netherlands S. S. Co.	August 7.	August 8.	3	8
Leon XIII.	Spanish Line.	August 7.	August 8.	227	68
Buenos Aires	Spanish Line.	August 7.	August 8.	199	408
Pellerin de Latouche	French Line	August 7.	August 9.	345	967
Corinto	Panama Mail S. S. Co.		August 9.		1,990
Oropesa	Pacific Steam Navigation Co.	August 8.	August 9.	105	254
Arizona	French Line.	August 8.	August 10.	40	154
Santa Marta	United Fruit Co.	August 8.	August 10.	1,094	475
Suriname	United Fruit Co.	August 8.	August 10.	745	68
Acajutla	Pacific Steam Navigation Co.	August 8.		330	
Favorita	American Fruit & S. S. Corp.	August 9.	August 9.	343	27
Pacific President	Furness, Withy & Co.	August 9.	August 10.	(¹)	48
Moerdijk	Holland-American Line	August 9.	August 9.	(¹)	144
Coppename	United Fruit Co.	August 9.	August 9.	11	1,341
Esparta	United Fruit Co.	August 9.	August 10.	587	53
Uribe	United Fruit Co.	August 9.	August 10.		1,193
Cerigo	Hamburg-American Line		August 10.		357
Guayaquil	Panama Railroad S. S. Line.	August 10.	August 11.	829	293
George Washington	Fred Olson & Co.	August 10.	August 11.	(¹)	300
Mississippi	French Line.	August 10.	August 11.	198	(¹)
Orita	Pacific Steam Navigation Co.	August 10.	August 11.	2	1
Mercian	Leyland Line	August 11.		640	
Adolf von Baeyer	Hamburg-American Line	August 11.		507	
Favorita	American Fruit & S. S. Co.	August 11.	August 11.	(¹)	288
Crijnsen	Royal Netherlands S. S. Co.	August 11.	August 11.	(¹)	492
Cauca	National Navigation Co.	August 11.		271	
Utacarbon	Union Oil Co.	August 11.		5,715	
Cartago	United Fruit Co.	August 11.		718	
Banan	United Fruit Co.		August 12		527
Tolosa	United Fruit Co.	August 12	August 12	13	187
Sangro	Anglo-Saxon Petroleum Co.	August 12	August 17	7,116	(¹)
Adolf von Baeyer	Hamburg-American Line		August 13		417
Cartago	United Fruit Co.		August 13		24
Santa Maria	Grace Line.	August 13	August 13.	(¹)	108
Rugia	Hamburg-American Line	August 13.	August 14.	7	288
Mercian	Leyland Line		August 14.		137
Arana	Pacific Steam Navigation Co.	August 13.	August 14.	77	86
Linda S.	R. Feuillebois		August 14.		40
Canadian Constructor	Canadian National Steamships	August 14.	August 14.	22	(¹)
Macabi	United Fruit Co.	August 14.	August 14.	112	417
Bogota	Pacific Steam Navigation Co.	August 14.	August 14.	471	37
Calamares	United Fruit Co.	August 14.	August 15.	1,079	5
J. M. Danziger	Huasteca Petroleum Co.	August 14.	August 15.	9,285	(¹)
La Plata Maru	Osaka Shosen Kaisha	August 14.	August 15.	109	(¹)
Sylvan Arrow	Standard Transport Co.	August 15.	August 15.	450	(¹)
Ancon	Panama Railroad S. S. Line.	August 15.		3,101	
Saramacca	United Fruit Co.	August 15.	August 16.	691	88
Metapan	United Fruit Co.	August 15.	August 16.	469	157
Wido	North German Lloyd	August 15.	August 16.	195	(¹)
Emil Kirdorf	Hamburg-American Line	August 15.	August 16.	3	(¹)
Cal	North German Lloyd	August 15.	August 16.	209	221
Durazzo	Hamburg-American Line	August 15.		117	
Suriname	United Fruit Co.	August 16.	August 16.	4	401
Canadian Prospector	Canadian National Steamships	August 16.	August 16.	1	(¹)
August Leonhardt	Colombian Transport Co.	August 16.	August 16.	19	(¹)
Virginia	American Fruit & S. S. Corp.	August 16.	August 16.	189	5
Atrato	Colombian Transport Co.	August 16.		118	
La Perla	United Fruit Co.	August 16.	August 17.	535	121
Buenaventura	Panama Railroad S. S. Line.	August 16.	August 17.	351	(¹)
Waunta	American Fruit & S. S. Corp.	August 16.	August 18.	726	44
Cauca	National Navigation Co.		August 17.		295
Ebro	Pacific Steam Navigation Co.	August 16.	August 17.	19	33
Baralt	Royal Netherlands S. S. Co.	August 16.	August 17.	408	126
Westfaen	Colombian Transport Co.		August 17.		116 ¹
Radnorshire	Pacific Steam Navigation Co.	August 17.	August 18.	507	(¹)
Guatemala	Panama Mail S. S. Co.	August 17.	August 18.	504	396
Illinois	French Line	August 18.		143	
Okkhotma	French Line	August 18.		288	
Virginia	American Fruit & S. S. Corp.	August 18.	August 18.	(¹)	337
City of Panama	Panama Mail S. S. Co.		August 18.		2,905
Spreewald	Hamburg-American Line	August 18.		92	
Canada	Johnson Line.	August 18.	August 18.	82	11
Santos	Johnson Line.	August 18.	August 18.	(¹)	152
Texas	French Line.	August 16.	August 18.	795	18

* No cargo discharged.

* No cargo laded.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors. An illustrated pamphlet explaining in detail the arrangement may be had upon application to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

On general merchandise the rates are as follows:

(a) For handling cargo from ship's side to storage place, the customary inward local charge of \$1 per ton.

(b) For delivery or reforwarding, customary outward local charge of \$1 per ton. (Total of 20 cents per ton more than regular transfer charge.)

(c) For storage, 3 cents per ton per day, except that no charge will be made for the first 35 days.

The Panama Railroad Company stores this cargo in four fireproof warehouses, 160 feet by 850 feet, at Cristobal, and in one of the same dimensions at Balboa.

Cargo stored for orders can be reforwarded from the Isthmus—each carrier to collect its proportion of the through rate instead of the local. This means that should a shipment move from New York to the Canal Zone, it will of course pay regular local rate to Balboa or Colon, as the case may be—but should owner wish to reforward to, say, "Guayaquil," he can do so by paying the oncarrier's proportion of the through rate. Upon evidence that the shipment or any part of it moved beyond the Canal Zone, the initial carrier will refund the difference between the through and local rate.

Cargo intended for warehousing at Cristobal or Balboa should be so indicated on the bill of lading, thus "Cristobal for orders" or "Balboa for orders." When so consigned it is not necessary for shippers to secure consular papers at original point of shipment, nor to have bills of lading consulated. Cargo consigned to Canal Zone for orders may be delivered in the Republic of Panama in which case it is necessary to prepare an invoice on which duties can be paid. When evidence of payment of duty is presented to the Canal Zone customs officers they will issue the necessary release and delivery can be taken in the usual way. For those on the Canal Zone who are allowed to import goods duty free the Panama Canal customs release is all that is necessary. For reshipment from storage to a foreign country the shipper takes out bill of lading, consular invoice and sobordo if necessary and cargo is forwarded as regular outward local.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," are shown in the pamphlet referred to above.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 12 cents per pound and forequarters at 9½ cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, White male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat....	Tuesdays, Thursdays, and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m.; Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Section "B:"	
Ward 5, Male, private rooms, American boys.....	Daily, 9.30 to 11 a. m.; 2.00 to 4.30 p. m.;
Ward 6, Foreign, male and female, private rooms, American girls.....	6.30 to 8.00 p. m.
Ward 7, White female, private rooms.....	(No visitors permitted in nursery.)
Ward 8, Obstetrical department, white females (Nursery).....	
Section "C:"	
Ward 9, White foreign, male.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p.m.
Ward 11, Colored, male, surgical.....	
Ward 12, Colored, male, medical, eye and ear.....	
Ward 13, Colored, male, G. U.....	
Ward 14, American, male, G. U.....	
Section "D:"	
Ward 15, American, male, surgical.....	Tuesdays, Thursdays, and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m.
Ward 16, American, male, medical, eye and ear.....	Sundays and holidays, 9.30 to 11 a. m.; 2.00 to 4.00 p. m.
Ward 17, Colored children.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p.m.
Ward 18, White children.....	Daily, 9.30 to 11 a. m.; 2 to 4 p. m.
Ward 19, Colored, female, medical.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p.m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation.....	No visitors permitted except to visit tuberculosis patients, Thursdays, Sundays, and holidays, 1.30 to 3 p. m.

Permission to visit outside of visiting hours will be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., August 29, 1928.

No. 4.

Proportion of Traffic by Frequency, Fiscal Year 1928.

The following tabulation shows for the fiscal year ended June 30, 1928, the number of vessels making the indicated number of transits through the Panama Canal, the per cent which each class formed of the total number of individual vessels (1,811), their aggregate number of transits, and their per cent of the total commercial transits (6,456):

Number of transits.	Number of vessels.	Per cent of individual vessels. (1,811)	Total number of transits.	Per cent of total Canal transits.
1.....	493	27.2	493	7.6
2.....	493	27.2	986	15.3
3.....	175	9.7	525	8.1
4.....	202	11.2	808	12.5
5.....	111	6.1	555	8.6
6.....	98	5.4	588	9.1
7.....	64	3.5	448	6.9
8.....	49	2.7	392	6.1
9.....	29	1.6	261	4.0
10.....	23	1.3	230	3.6
11.....	8	.4	88	1.4
12.....	16	.9	192	3.0
13.....	17	.9	221	3.4
14.....	4	.2	56	.9
15.....	6	.3	90	1.4
16.....	3	.1	48	.7
17.....	2	.1	34	.5
18.....	3	.1	54	.8
19.....	3	.1	57	.9
20.....	1	.1	20	.3
21.....	2	.1	42	.6
22.....	2	.1	44	.7
23.....	1	.1	23	.4
24.....	1	.1	24	.4
25.....	1	.1	25	.4
26.....	1	.1	26	.4
30.....	1	.1	30	.5
31.....	1	.1	31	.5
65.....	1	.1	65	1.0
Totals.....	1,811	100.0	6,456	100.0

FREQUENCY OF TRANSITS OF VESSELS THROUGH THE PANAMA CANAL.

During the fiscal year 1928, 1,811 individual commercial vessels representing 23 nationalities, passed through the Panama Canal. The number of transits per individual ship varied from 1 to 65, the 1,811 vessels making a total of 6,456 transits, or an average of 3.57 transits per vessel.

The highest number of transits made by any vessel during the fiscal year was 65, made by the motor ship *Chiman*, operated by the Isthmian Land and Fruit Company. This vessel is of Panaman registry, and operates between Cristobal and the west coast of the Republics of Panama and Colombia. It is a vessel of 124 net tons, Panama Canal measurement, 116 feet long by 12 feet beam.

Vessels of the United States registry led in aggregate number of transits, though not in number of individual ships. While representing only 29 per cent of the individual vessels passing through the Canal,

they made up approximately 43 per cent of the total transits. Ships of the British registry ranked second in total transits with 1,842, and Germany third with 316.

The following table shows the number of individual ships, the frequency of transit per vessel, and total transits for the year, segregated by nationality:

NATIONALITY, NUMBER, AND TRANSITS OF VESSELS THROUGH THE PANAMA CANAL, FISCAL YEAR 1928.

Nationality of vessels.	Vessels making indicated number of transits per vessel during fiscal year 1928.																															Total ships.	Total transits.	Average number of transits.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	30	31	65					
Belgian.....	2	2	1	1																										6	13	2.17		
British.....	253	243	70	77	34	29	3	7	1	1	1	3	1					1	1					1	1					727	1,842	2.53		
Chilean.....	4	1											2																	7	32	4.57		
Colombian.....		1									1		1					1									1	1		6	99	16.50		
Costa Rican.....		1																												1	2	2.00		
Danish.....	3	7	4	6	2	1																								23	69	3.00		
Danzig.....	3	3	1	1	1				1																					10	29	2.90		
Dutch.....	10	5	2	1	9	4	1																					1		33	137	4.28		
Ecuadorian.....	1																													1	1	1.00		
Finnish.....	3																													3	3	1.00		
French.....	10	9	12	12	3																									46	127	2.76		
German.....	19	29	9	7	8	2		1					1								2	2				1				81	316	3.90		
Greek.....	5	2	1																											8	12	1.50		
Honduran.....	1																													1	1	1.00		
Italian.....	10	20	5	6	3	1		1																						46	118	2.57		
Japanese.....	22	21	8	18	3	1	1																							74	188	2.54		
Norwegian.....	47	37	10	10	7	7	2	1		1			1																	123	313	2.54		
Panamanian.....	3	4		2	2		1			1	1					1												1		16	138	8.62		
Peruvian.....	2	1				1	1	1				1		1																8	53	6.62		
Spanish.....	2	9		1			2	1																						15	46	3.07		
Swedish.....	10	4	1	3	3	2	2												1	1										27	111	4.11		
United States.....	79	91	47	54	36	48	51	36	27	19	6	12	11	3	6	2	2		2											532	2,753	5.17		
Yugoslavian.....	4	3	4	3			2	1																						17	53	3.12		
Totals.....	493	493	175	202	111	98	64	49	29	23	8	16	17	4	6	3	2	3	3	1	2	2	1	1	1	1	1	1	1	11	811	6,456	3.57	

From the above it will be noted that 493, or approximately 27 per cent of the individual vessels using the Canal during the year, made but one transit; that 46 per cent made 3 or more transits; and that less than 6 per cent made 10 or more transits.

CANAL WORK IN JULY, 1928.

The following is the report of the Governor to the Secretary of War, of Canal work in July, 1928.

BALBOA HEIGHTS, C. Z., August 24, 1928.

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

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of July, 1928:

NUMBER OF TRANSITS.

During the month 509 commercial vessels passed through the Canal. In addition to these, 10 nonseagoing launches, measuring under 20 tons, and 28 vessels belonging to or chartered by the United States Government transited the Canal. There were also 3 transits of a Panama Government vessel and 8 transits of vessels solely for repairs, on which no tolls were collected, making a total of 558 transits for the month, or a daily average of 18.

Tolls on the 509 commercial vessels amounted to \$2,109,083.19, and on the launches to \$73.35, a total of \$2,109,156.54, or a daily average on all traffic of \$68,037.31. Total traffic for July exceeded that of the preceding month by 23 transits and almost \$93,000 in tolls.

The total number of craft of all kinds transiting the Canal during the month of July, 1928, as compared with the same month in 1927 and 1926, are shown in the following tabulation:

	July, 1928.	July, 1927.	July, 1926.
Commercial vessels.....	509	509	456
Noncommercial vessels (Army and Navy).....	28	29	19
Launches (under 20 tons measurement).....	10	16	7
Panama Government vessels.....	3	2	1
Vessels for repairs.....	8	2	2
Total vessels transiting Canal.....	558	558	485

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Total.
Gatun.....	14	9	23
Pedro Miguel.....	35	27	62
Miraflores.....	37	23	60
Totals.....	86	59	145

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year 1928, to the end of July, 1928, as compared with the same months in the preceding year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1927.	1928.	1927.	1928.	1927.	1928.	1927.	1928.
January....	443	540	2,121,631	2,422,770	2,241,765	2,372,061	\$1,984,760.71	\$2,212,752.50
February....	449	547	2,201,328	2,460,111	2,230,107	2,660,425	1,994,860.82	2,253,755.37
March.....	496	542	2,413,999	2,441,077	2,533,525	2,428,662	2,217,913.20	2,223,370.57
April.....	464	531	2,224,500	2,384,491	2,429,807	2,473,884	2,065,206.92	2,187,607.82
May.....	471	508	2,248,892	2,274,612	2,379,713	2,497,588	2,066,070.73	2,118,969.83
June.....	455	481	2,152,926	2,227,865	2,229,097	2,139,565	1,970,377.97	2,016,211.09
July.....	509	509	2,406,955	2,318,395	2,450,468	2,291,955	2,215,515.99	2,109,083.19
Totals.....	3,287	3,658	15,770,231	16,529,321	16,494,482	16,864,140	14,514,706.34	15,121,750.37

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States Government, including merchant vessels chartered by the Government, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Nonecommercial traffic."

The following is a summary of the commercial traffic for July, 1928, as compared with the corresponding month in 1927 and 1926, and the monthly averages for the fiscal year 1928:

	July, 1928.	July, 1927.	July, 1926.	Average per month for fiscal year 1928.
Number of vessels.....	509	509	456	538
Panama Canal net tonnage.....	2,318,395	2,406,955	2,154,821	2,454,886
United States net tonnage.....	1,771,887	1,883,138	1,692,368	1,905,316
Registered gross tonnage.....	2,922,904	3,072,255	2,775,728	3,100,239
Registered net tonnage.....	1,779,961	1,885,658	1,703,387	1,903,974
Tolls.....	\$2,109,083.19	\$2,215,515.99	\$1,980,719.67	\$2,245,374.98
Tons of cargo carried.....	2,291,955	2,450,468	2,185,527	2,469,225

The average daily number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year.
	July, 1928.	July, 1927.	July, 1926.	
Number of transits.....	16.41	16.42	14.71	17.63
Panama Canal net tonnage.....	74,787	77,644	69,510	80,488
Tolls.....	\$68,034.94	\$71,358.56	\$63,894.18	\$73,618.85
Tons of cargo carried.....	73,934	79,047	70,501	80,958

¹ Does not include \$3,400.54 collected on supplemental bill.

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of July, 1928, as compared with July, 1927, and 1926, are shown in the following tabulation:

	Average per vessel.		
	July, 1928.	July, 1927.	July, 1926.
Panama Canal net tonnage.....	4,554	4,729	4,725
United States net tonnage.....	3,481	3,700	3,711
Registered gross tonnage.....	5,742	6,036	6,087
Registered net tonnage.....	3,497	3,705	3,735
Tolls.....	\$4,143.58	\$4,346.08	\$4,343.68
Tons of cargo (including vessels in ballast).....	4,503	4,814	4,792
Tons of cargo (laden vessels only).....	5,431	6,126	5,843

* Does not include \$3,400.54 collected on supplemental bill.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and 72 cents per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per ton nor be less than 75 cents per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined both in accordance with the Panama Canal and the United States rules of measurement.

Due to this limiting proviso the tolls actually collected on laden vessels averaged \$0.943 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.72 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of July, 1928, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1.00 laden and \$0.60 ballast. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$10,830.00	\$11,003.00	\$173.00	
British.....	555,768.25	571,818.60	16,050.35	
Chilean.....	11,807.50	12,141.00	333.50	
Colombian.....	5,110.47	4,571.60		\$538.87
Cuban.....	242.50	194.00		48.50
Danish.....	28,235.64	29,352.20	1,116.56	
Danzig.....	8,974.80	7,479.00		1,495.80
Dutch.....	43,428.75	49,750.00	6,321.25	
Finnish.....	2,010.00	1,675.00		335.00
French.....	39,660.95	41,113.00	1,452.05	
German.....	116,798.15	131,837.00	15,038.85	
Italian.....	22,917.50	26,987.00	4,069.50	
Japanese.....	44,566.28	41,408.40		3,157.88
Norwegian.....	76,408.00	80,182.00	3,774.00	
Panaman.....	1,754.75	2,625.80	871.05	
Peruvian.....	8,072.30	12,241.00	4,168.70	
Spanish.....	6,845.00	6,671.00		174.00
Swedish.....	29,310.32	34,149.40	4,839.08	
United States.....	1,083,917.03	1,098,727.80	14,810.77*	
Yugoslav.....	12,425.00	12,111.00		314.00
Totals.....	2,109,083.19	2,176,037.80	73,018.66	6,064.05
Net increase for all traffic.....			66,954.61	

* Includes \$4,160 collected for naval vessels at 50 cents per displacement ton.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$13,910.49
United States foreign trade.....	1,713.06
United States-Canal Zone trade.....	812.78
Net increase.....	14,810.77

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in July, 1928, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Belgian.....	1.17	1.70	1.40
British.....	.87	1.33	1.09
Chilean.....	.43	.55	.48
Colombian.....	1.18	.95	1.12
Cuban.....	.10	.....	.10
Danish.....	.53	1.65	1.38
Dutch.....	.51	1.44	.99
Finnish.....	.....	1.85	1.85
French.....	.55	1.36	.96
German.....	.67	1.37	1.03
Italian.....	.24	1.02	.85
Japanese.....	1.26	1.59	1.35
Norwegian.....	1.01	1.66	1.40
Panamanian.....	1.05	.....	1.05
Peruvian.....	.35	.81	.55
Spanish.....	.08	.25	.15
Swedish.....	.60	3.49	1.90
United States.....	.82	1.53	1.22
Yugoslavian.....	1.62	2.03	1.73
Averages, July, 1928.....	.82	1.49	1.18
Averages, July, 1927.....	.90	1.58	1.29
Averages, July, 1926.....	.90	1.51	1.25

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of July, is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	4	16,544	\$17,020.00	45	238,989	\$244,261.55
Ballast.....	46	248,144	178,764.18	1	2,865	2,062.80
General cargo ships:						
Laden.....	192	896,498	827,752.34	181	799,970	752,159.05
Ballast.....	25	107,591	77,235.85	5	7,302	5,263.50
Noncargo-carrying ships:						
Naval vessels.....	1	.....	2,575.00	2	.....	1,585.00
Tugs.....	3	288	255.84	2	164	118.08
Yachts.....	1	20	15.00	1	20	15.00
Totals.....	272	1,269,085	1,103,618.21	237	1,049,310	1,005,464.98
Method of propulsion:						
Steam.....	216	1,017,206	901,696.26	195	869,497	841,516.78
Motor.....	53	250,256	200,577.55	38	176,297	159,788.70
Sail.....	1	1,362	1,021.50	1	1,675	2,010.00
Nonpropelled.....	2	261	322.90	3	1,867	2,149.50
Totals.....	272	1,269,085	1,103,618.21	237	1,049,310	1,005,464.98

Of the 411 steam-driven vessels, 285 were oil-burning, 124 coal-burning, and 2 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of July, 1928. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Ammunition ships.....	1			1	34,405	\$5,506.25
Cruisers.....	2	9,725	\$4,862.50	3	22,500	11,250.00
Minesweepers.....	2	1,900	950.00	2	1,900	950.00
Submarines.....	5	3,602	1,801.00			
Survey ships.....	1	703	527.25	1	703	527.25
Tankers.....				2	11,118	13,341.60
Tugs.....	1	1,000	509.00			
U. S. Army vessels:						
Launches.....	2	20	15.00			
Mineplanters.....				1	1,208	604.00
Transports.....	3	11,724	14,655.00	2	7,816	9,770.00
Totals, U. S. Government.....	16		23,310.75	12		41,949.10
Panama Government vessels:						
Transports.....	1	101	72.72	2	202	145.44
Vessels for repairs:						
Tankers.....	4	5,240	3,930.00	1	5,233	3,924.75
Grand totals.....	21		27,313.47	18		46,016.29

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of July, 1928, carried cargo as follows: Atlantic to Pacific, 2,127 tons; Pacific to Atlantic, 16,757 tons; total, 18,884 tons.

The following statement shows the number of launches transiting the Canal during the month of July, 1928. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	No. of transits.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Atlantic to Pacific.....	6	41	\$50.40	15
Pacific to Atlantic.....	4	27	22.95	.....
Totals.....	10	68	73.35	15

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of July, 1928, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	69,143	62,132	131,275
Local cargo shipped..... tons..	8,210	1,081	9,291
Transit cargo arriving..... tons..	2,322,567	2,297,991	4,620,558
Transit cargo clearing..... tons..	2,304,278	2,296,793	4,601,071
Cargo received for transshipment..... tons..	31,589	728	32,317
Cargo transhipped..... tons..	25,343	719	26,067
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	72	27	99
Number of withdrawals.....	375	133	508
Tons received.....	1,952	215	2,167
Tons withdrawn.....	1,458	229	1,687
Packages received.....	12,658	2,130	14,788
Packages withdrawn.....	6,467	1,567	8,034
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Co.....	61	8	69
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Co..... tons..	17,827	85	17,912
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	79	7	86
U. S. Army, excepting vessels..... tons..	55	1	56
Individuals and companies..... tons..	165		165
Panama Railroad Company..... tons..	18	12	30
Transferred to Navy..... tons..	105		105
Total sales and issues..... tons..	13,249	105	13,354

		Cristobal.	Balboa.	Total.
Coal on hand, July 1, 1928	tons	36,928		36,928
Coal on hand, August 1, 1928	tons	47,311		47,311
Coal received during month	tons	28,632		28,632
Coal received from Navy	tons		105	105
Fuel oil issued from Panama Canal tanks:				
Panama Canal departments	bbls.	6,576.03	14,624.68	21,200.71
Panama Railroad Company	bbls.	540.83		540.83
U. S. Army and Navy	bbls.		921.09	921.09
Individuals and companies	bbls.		354.86	354.86
Total sales and issues	bbls.	7,116.86	15,900.63	23,017.49
Fuel oil on hand, August 1, 1928	bbls.	92,349.78	44,756.74	137,106.52
Diesel oil received from Union Oil Co.	bbls.		26.19	26.19
Diesel oil sold during July, 1928	bbls.	103.97	26.19	130.16
Diesel oil on hand, August 1, 1928	bbls.	23,964.65	493.25	24,457.90
Miscellaneous transfers	bbls.	301.84	629.11	930.95
Gasoline and kerosene pumped for The Panama Canal	bbls.	1,819.81	2,843.19	4,763.00
Gasoline pumped for individuals and companies	bbls.		27,532.65	27,532.65
Oil pumped for individuals and companies	bbls.	530,430.68	673,435.18	1,203,915.86
Oil pumped for U. S. Navy	bbls.	5,353.00	42,500.46	47,853.46
Total fuel oil, gasoline, and kerosene handled	bbls.	545,126.16	763,017.41	1,308,143.57
Admeasurement of vessels:				
U. S. equivalent certificates issued		29	1	30
Measured for Panama Canal net tonnage		9	1	10
Remeasured for Panama Canal net tonnage		23		23
Panama Canal net tonnage corrected		7	5	12
U. S. equivalent tonnage corrected		13	9	22
Service of harbor equipment:				
Tugs, total operating hours		475	389½	864½
Launches, total operating hours		1,354½	1,734	3,088½
Revenue from tug service, pilotage, etc.:				
Tug revenue		\$14,022.50	\$12,377.50	\$26,400.00
Pilotage		18,285.00	8,867.00	27,152.00
Seamen		12,560.00	10,780.00	23,340.00
Launch service		1,753.50	3,440.50	5,194.00
Wharfage		16,383.82	6,406.71	22,790.53
Ships measured		110.00	50.00	160.00
Miscellaneous		1,022.35	586.50	1,608.85
Ships repaired at Panama Canal shops:				
Commercial		68	24	92
U. S. Army and Navy		7	6	13
Panama Canal equipment		4	7	11
Totals		79	37	116
Vessels dry docked:				
Commercial		8	8	16
U. S. Army and Navy			2	2
Panama Canal equipment			2	2
Totals		8	12	20
Clearances issued		271	282	553
Bills of health issued		276	288	564

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal	579	3,326,720	2,041,615	544	3,105,373	1,927,498
Vessels entering port but not transiting Canal	65	281,130	168,804	17	74,238	51,041
Vessels transiting Canal and handling passengers and cargo at terminal ports	119	682,661	414,689	98	579,821	357,891
<i>Ships clearing.</i>						
All vessels, including those transiting Canal	576	3,298,683	2,024,183	539	3,098,548	1,912,759
Vessels clearing port but not transiting Canal	65	271,963	163,368	17	85,074	48,622
Vessels transiting Canal and handling passengers and cargo at terminal ports	114	663,585	402,427	97	564,379	348,583

THE PANAMA CANAL RECORD

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,608	889	2,497	174	211	385
From Pacific ports.....	240	73	313	255	192	447
Total disembarking.....	1,848	962	2,810	429	403	832
Embarking:						
For Atlantic ports.....	1,492	667	2,159	156	236	392
For Pacific ports.....	228	378	606	234	133	367
Total embarking.....	1,720	1,045	2,765	390	369	759
Remaining on board:						
From Atlantic to Pacific ports.....	1,833	2,229	4,062	1,783	2,210	3,993
From Pacific to Atlantic ports.....	1,569	2,074	3,643	1,623	1,787	3,410
From Atlantic to Atlantic ports.....	685	149	834			
From Pacific to Pacific ports.....				14	477	491
Total remaining on board.....	4,087	4,452	8,539	3,420	4,474	7,894
Total arriving.....	5,935	5,414	11,349	3,849	4,877	8,726
Total departing.....	5,807	5,487	11,304	3,810	4,843	8,652

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	272	52	19.1
Pacific to Atlantic.....	237	50	21.1
Totals.....	509	102	20.1

In addition to the aforesaid, 65 passenger-carrying vessels called at the port of Cristobal and 4 at Balboa without transiting the Canal, making a total of 171 passenger-carrying vessels calling at Canal ports during the month.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of July, 1928:

	Ice.	Groceries.	Cold Storage.	Laundry.	Miscellaneous.	Totals.
Sales at Cristobal to:						
Commercial vessels.....	\$2,996.84	\$11,352.82	\$30,899.15	\$134.09	\$7,454.66	\$52,837.56
Government vessels.....	235.85	2,683.89	13,230.96		1,327.14	17,477.84
Panama Railroad vessels.....	9.45	17.88	2,208.08	799.45	342.97	3,377.83
Total sales, July, 1928.....	3,242.14	14,054.59	46,338.19	933.54	9,124.77	73,693.23
Total sales, July, 1927.....	2,691.41	13,939.85	35,004.87	989.21	8,785.42	61,410.76
Total sales, July, 1926.....	3,225.31	10,810.19	37,245.48	797.23	4,718.05	56,796.26
Sales at Balboa to:						
Commercial vessels.....	1,569.48	13,073.08	22,038.95	503.33	5,061.07	42,245.91
Government vessels.....	344.46	3,036.63	14,870.93	1,017.00	915.31	20,194.33
Panama Railroad vessels.....				28.46		28.46
Total sales, July, 1928.....	1,913.94	16,109.71	36,909.88	1,548.79	5,976.38	62,468.70
Total sales, July, 1927.....	1,609.13	14,796.73	44,371.58	340.14	5,616.69	66,734.27
Total sales, July, 1926.....	1,454.85	10,349.87	27,692.13	569.41	3,164.74	43,231.00

The aggregate sales to Government vessels during the month was \$37,672.17, to Panama Railroad vessels, \$3,406.29; and to other commercial vessels, \$95,083.47; making the total sales to all vessels \$136,161.93.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of July, 1928, as compared with the corresponding month in 1927 and 1926:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial.					
	North.	South.	Total.	North.	South.	Total.	July, 1928.	July, 1927.	July, 1926.
Gatun.....	222	256	478	12	11	23	501	503	440
Pedro Miguel.....	225	261	486	17	17	34	520	531	463
Miraflores.....	226	258	484	17	17	34	518	527	455
Number of vessels put through locks.									
Gatun.....	238	271	509	39	30	69	578	598	514
Pedro Miguel.....	241	273	514	56	53	109	623	628	533
Miraflores.....	241	273	514	58	50	108	622	634	530

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	28	28	29
Panama Canal equipment.....	23	62	60
Launches (under 20 tons).....	7	8	8
Panaman Government vessels.....	3	3	3
Vessels for repairs.....	8	8	8

The total consumption of water for lockages and loss in leakage was as follows in July, 1928, as compared with the preceding month and the corresponding month in 1927:

	Gatun.	Pedro Miguel.	Miraflores.
Lockages.....	<i>Cubic feet.</i> 2,054,850,000	<i>Cubic feet.</i> 1,714,930,000	<i>Cubic feet.</i> 1,547,360,000
Leakage.....	20,000,000	30,000,000	20,000,000
Totals, July, 1928.....	2,074,850,000	1,744,930,000	1,567,360,000
Totals, June, 1928.....	1,962,830,000	1,669,670,000	1,507,340,000
Totals, July, 1927.....	2,049,880,000	1,696,540,000	1,623,920,000

HYDROGRAPHY.

In the following tabulation the hydrographic conditions in the Canal Zone and vicinity during the month of July, 1928, are shown in comparative form:

	July.		July—Years of record.		
	1928.	1927.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Chagres River at Alhajuela:					
Monthly mean discharge.....	2,127	6,197	6,197	1,248	2,837
Maximum momentary discharge.....	11,379	37,700	37,700		
Gatun Lake watershed:					
Total yield.....	5,262	14,663	14,663	2,677	7,205
Net yield.....	4,665	14,156	14,156	1,898	6,656
Draft on Gatun Lake for lockages and power.....	2,812	2,760	2,812	1,244	2,203

* July 22, 1927.

* Not including July, 1914.

The total yield of the Gatun Lake watershed for the month of July was 27 percent below the 15-year July average, or 5,262 c. f. s., compared with an average of 7,205 c. f. s. Maximum and minimum July total yields of record are 14,663 c. f. s. in 1927, and 2,677 c. f. s. in 1914, respectively. The Lake varied in elevation from 85.23

feet on the 3d to 85.70 feet on the 11th, averaged 85.48 feet and ended at elevation 85.44 feet. There was an increase in storage during the month of 228 million cubic feet. The net yield for the month was 12.5 billion cubic feet.

Miraflores Lake varied from elevation 54.66 feet on the 4th to 53.13 feet on the 5th, averaged 53.87 feet and ended at elevation 53.84 feet. Two hundred and forty-one c. f. s. was wasted over the Miraflores spillway.

SEISMOLOGY.

Three seismic disturbances were recorded during the month, all of which had the epicenter over 1,000 miles distant.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 4,767,000 kilowatt hours and the computed water consumption was 3,761,119,368 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 5,300 kilowatt hours, with a fuel oil consumption of 23.39 barrels.

In addition to the usual operating and maintenance work performed, 45 work orders comprising 56 items of additions or repairs were completed on 30 vessels during the month. There were 350 work orders issued during the month, as compared with 368 for the previous month.

MECHANICAL DIVISION.

During the month miscellaneous repairs were made on 79 vessels at Cristobal and 37 at Balboa. Eight vessels were drydocked at Cristobal and 12 at Balboa. The annual overhaul of submarines *O-7*, and *O-10* was started during the month. The annual overhaul of the mineplanter *Gen. Wm. M. Graham* was completed during the month.

MUNICIPAL ENGINEERING DIVISION.

Work was performed on several improvements in the cities of Colon and Panama, and in the Canal Zone. The usual maintenance work was performed on roads, streets, and walks, and the sewer and water systems. The amount of water pumped during the month totaled 726,642,250 gallons.

DREDGING DIVISION.

East Culebra, West Culebra, Cucaracha, and Lirio slides showed practically no movements during July. There were no other slides and no delays to shipping during the month.

The total excavation during July was 218,895 cubic yards, as follows:

Items.	Wet excavation.			Character, of work.
	Earth.	Rock.	Total.	
Work excavation:				
Canal prism, Gaillard Cut—				
Project No. 2.....	7,950	24,150	32,100	Maintenance.
Project No. 9.....	4,500	40,650	45,150	Maintenance.
Maintenance.....	1,700	9,700	11,400	Maintenance.
Canal prism, Pacific entrance—				
Project No. 1.....		54,700	54,700	Maintenance.
Maintenance.....	19,150	1,550	20,700	Maintenance.
Balboa inner harbor—				
Project No. 1.....		3,800	3,800	Maintenance.
Maintenance.....	2,550		2,500	Maintenance.
Plant excavation:				
Naval Air Station, Coco Solo fill.....	47,000		47,000	Auxiliary.
Dredging sand at Chame.....	1,495		1,495	Auxiliary.
Totals.....	84,345	134,550	218,895	

The ferry crossing at the north end of Pedro Miguel locks operated 31 days during the month. Five hundred and twenty-two trips were made, and 137 Panama Canal, 6 U. S. Army, and 2,381 other vehicles, a total of 2,524, were ferried across the Canal.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal and Panama Railroad quarters on July 31, 1928, totaled 21,331, composed of 7,330 Americans, 2,640 of whom were men, 2,174 women, and 2,516 children; 197 Europeans, 86 of whom were men, 32 women, and 79 children; and 13,804 West Indians, 4,124 of whom were men, 2,579 women, and 7,101 children. The total number of persons in quarters on July 31, 1927, was 20,791.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of July 18, 1928, with a comparison of the working force for the preceding month and for July, 1927:

	As of July 18, 1928.			Total employees.	
	Gold.	Silver.	Total.	June, 1928.	July, 1927.
Operation and Maintenance:					
Office.....	42	59	101	80	78
Electrical.....	155	173	328	336	326
Municipal Engineering.....	81	669	750	777	700
Lock Operation.....	226	704	930	933	817
Dredging.....	183	924	1,107	1,061	1,111
Mechanical.....	441	840	1,281	1,250	1,277
Marine.....	215	707	922	912	823
Fortifications.....	23	376	399	301	166
Totals.....	1,366	4,452	5,818	5,650	5,298
Supply Department:					
Quartermaster.....	197	1,700	1,897	1,941	1,897
Subsistence.....	7	103	110	113	106
Commissary.....	220	1,154	1,374	1,349	1,272
Cattle Industry.....	5	134	139	136	156
Washington Hotel.....	8	92	100	102	104
Transportation.....	55	211	266	262	252
Totals.....	492	3,394	3,886	3,903	3,787
Accounting Department.....	195	8	203	201	209
Health Department.....	284	849	1,133	1,145	1,031
Executive Department.....	482	299	781	794	777
Totals.....	961	1,156	2,117	2,140	2,017
Panama Railroad Company:					
Superintendent.....	49	268	317	344	284
Transportation.....	65	118	183	186	176
Receiving and Forwarding Agency.....	86	1,076	1,162	1,411	1,642
Coaling Stations.....	49	257	306	288	290
Totals.....	249	1,719	1,968	2,229	2,392
Grand totals, July, 1928.....	3,068	10,721	13,789		
Grand totals, June, 1928.....	3,038	10,834		13,922	
Grand totals, July, 1927.....	2,946	10,548			13,494

Additions to the gold force on the Isthmus in July were as follows: Employed in the United States, 14; reemployed in the United States, 6; employed on the Isthmus, 30; reemployed on the Isthmus, 16; total, 66. Separations from the gold force totaled 33, as follows: Resigned, 21; discharged, 8; retired, 3; died, 1. At the end of the month there were on file 102 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 161 deaths occurred during the month of July, 1928, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 14.92 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 24; diarrhea and enteritis, 19; organic diseases of the heart, 11; nephritis (acute and chronic), 11; and pneumonia (broncho and lobar), 9. There were 6 deaths from cancer, 5 from apoplexy, 1 from diphtheria, and 1 from influenza. There were 17 deaths among nonresidents of the Isthmus. These are not included in the above statistics.

There were 266 live births, and 12 stillbirths, reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 25.76 per 1,000 population. Deaths among children under 1 year of age numbered 40, giving an infant mortality rate of 150.38.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during July was 193, of whom 21 were employees (6 white and 15 colored), 20 were members of employees' families (2 white and 18 colored), 23 were Canal Zone agriculturists, 41 were other civilian nonemployees, and 88 were Army and Navy personnel. Of the 41 employees and members of employees' families, 18 were probably

infected outside our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There were 2 deaths from malaria, both of colored nonemployees living in the city of Panama.

RECEIPTS AND SALES OF MATERIALS AND SUPPLIES.

The value of material ordered on United States requisitions and received on the Isthmus during the month totaled \$294,136.88, of which \$272,906.80 was for the Department of Operation and Maintenance and \$21,230.08 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material amounted to \$42,387.76.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of June, 1928, as compared with June, 1927, together with the figures for the fiscal year as compared with the fiscal year 1927.

It is impossible to submit figures for the month of July at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	Month.		Fiscal year ending June 30.	
	June, 1928.	June, 1927.	1928.	1927.
Tolls.....	\$2,016,277.34	\$1,959,542.72	\$26,943,513.11	\$24,217,185.32
Other receipts.....	337,208.27	289,642.37	3,600,907.34	3,574,643.27
Total transit revenues.....	2,353,485.61	2,249,185.09	30,544,420.45	27,791,828.59
Total transit expenses.....	1,104,678.05	1,094,894.78	12,319,575.59	12,180,734.79
Net transit revenues.....	1,248,807.56	1,154,290.31	18,224,844.86	15,611,093.80
Three per cent capital charge....	614,221.58	609,589.16	7,343,774.39	7,309,248.28
Transit surplus.....	634,585.98	544,701.15	10,881,070.47	8,301,845.52
Business revenues.....	1,466,862.57	1,781,710.12	16,929,247.24	15,878,654.57
Business expenses.....	1,526,222.69	1,902,423.72	16,192,527.81	15,002,117.77
Net business revenues.....	59,360.12	120,713.60	736,719.43	876,536.80
Three per cent capital charge.....	60,543.93	59,313.34	781,864.15	744,496.74
Business surplus.....	119,904.05	180,026.94	45,144.72	132,040.06
Combined revenues.....	3,820,348.18	4,030,895.21	47,473,667.69	43,670,483.16
Combined expenses.....	2,630,900.74	2,997,318.50	28,512,103.40	27,182,852.56
Net revenue.....	1,189,447.44	1,033,576.71	18,961,564.29	16,487,630.60
Three per cent capital charge.....	674,765.51	668,902.50	8,125,638.54	8,053,745.02
Combined surplus.....	514,681.93	364,674.21	10,835,925.75	8,433,885.58

* Indicates credit.

Respectfully,

M. L. WALKER,
Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 27, 1928.

No. 426.

The Hydrographic Office received the following information from the Pilot in Charge, Lighthouse Subdivision, The Panama Canal:

"CRISTOBAL HARBOR.

"Effective August 24, 1928, the flashing white beacon located 550 yards, 156 degrees from Margarita Point, was permanently discontinued. (Signed) F. KARIGER."

"BALBOA HARBOR.

"Temporary Gas Buoy No. 20 was permanently discontinued, effective August 24, 1928, and on the same date Electric Beacon No. 18½ was established.

"The beacon has been placed on the southeastern extremity of dock No. 4, and exhibits a fixed red light, electric, 200 candle power. Focal plane 45 feet above mean low water springs. (Signed) F. KARIGER."

M. L. WALKER,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending August 25, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Jamaica	Pacific Steam Navigation Co.	August 19.	August 19.	377	
Magellan	Pacific Steam Navigation Co.	August 19.	August 19.	4	(¹)
Calamares	United Fruit Co.	August 19.	August 19.	4	238½
Ancon	Panama Railroad S. S. Line.	August 19.	August 19.		726
Illinois	French Line.	August 19.	August 19.		681
Spreewald	Hamburg-American Line.	August 19.	August 19.		101
Bowden	United Fruit Co.	August 19.	August 19.		479
Napierian	Leyland Line.	August 19.	August 20.	(¹)	166½
Theodore Roosevelt	Fred Olsen & Co.	August 19.	August 20.	255	(²)
Parismina	United Fruit Co.	August 19.	August 20.	832	115
Manizales	North German Lloyd	August 19.	August 25.	326	146
Targis	North German Lloyd	August 20.	August 20.	(¹)	205
Breda	Royal Netherlands S. S. Co.	August 20.	August 21.	235	272
Alvarado	Pacific Steam Navigation Co.	August 20.	August 21.	277	143
Essequibo	Pacific Steam Navigation Co.	August 20.	August 21.	4	67
Loreto	Pacific Steam Navigation Co.	August 20.	August 21.	31	105
Perou	French Line.	August 20.	August 22.	38	742
Pastores	United Fruit Co.	August 20.	August 22.	1,109	58
William M.	R. Feuillebois	August 21.	August 21.	(¹)	28
Stuyvesant	Royal Netherlands S. S. Co.	August 21.	August 22.	45	(¹)
Virgilio	Italian Line.	August 21.	August 23.	387	(²)
Ucayali	Peruvian Line.	August 21.	August 23.	2,143	(²)
Nitherory	Pacific Steam Navigation Co.	August 22.	August 23.	59	59
Orbita	Pacific Steam Navigation Co.	August 22.	August 23.	78	297
San Francisco	Hamburg-American Line.	August 22.	August 23.	(¹)	94
Albingia	Hamburg-American Line.	August 22.	August 23.	156	(²)
Elmshorn	Hamburg-American Line.	August 22.	August 24.	37	394
Coppename	United Fruit Co.	August 22.	August 22.	932	26
Sixaola	United Fruit Co.	August 22.	August 23.	946	474
Saramacca	United Fruit Co.	August 23.	August 23.	2	176
Favorita	American Fruit & S. S. Corp.	August 23.	August 23.	256	1
Australien	Danish East Asiatic Co.	August 23.	August 23.	83	(²)
Pacific Enterprise	Furness, Withy & Co.	August 23.	August 24.	(¹)	335
Cid	Pacific Steam Navigation Co.	August 23.	August 24.	112	10
Santa Cecelia	Grace Line.	August 23.	August 24.	67	45
San Jose	United Fruit Co.	August 23.	August 24.	726	45
Leme	Italian Line.	August 23.	August 24.	(¹)	11
Atrato	Colombian Transport Co.	August 23.	August 24.		160
Notre Dame de Fourviere	French Line	August 23.	August 25.	10	647
Salvador	Pacific Steam Navigation Co.	August 24.	August 24.	440	
Cissy	Mexican Petroleum Co.	August 24.	August 24.	19	(¹)
Dramatist	T. & J. Harrison Line.	August 24.	August 25.	600	(²)
Durazzo	Hamburg-American Line.	August 24.	August 25.		115
Heredia	United Fruit Co.	August 25.	August 25.	284	
Phoenix	American Tankers Corp.	August 25.	August 25.	9,260	
Stella	Panama Mail S. S. Co.	August 25.	August 25.	684	
Acajutla	Pacific Steam Navigation Co.	August 25.	August 25.		1,169
Favorita	American Fruit & S. S. Corp.	August 25.	August 25.	(¹)	303
Eemdijk	Holland-American Line.	August 25.	August 25.	(¹)	149
Stuyvesant	Royal Netherlands S. S. Line.	August 25.	August 25.	(¹)	790
Manaquí	United Fruit Co.	August 25.	August 25.	24	141
Linda S.	R. Feuillebois	August 25.	August 25.	(¹)	45
Banan	United Fruit Co.	August 25.	August 25.	(¹)	338½

* No cargo discharged.

* No cargo laded.

* 215 pounds.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending August 25, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
U. S. Grant	U. S. Government	August 20.	August 20.	12	1
William A. McKenney	Mystic S. S. Co.	August 20.	August 29.	700	700
American Star	Charles Nelson & Co.	August 18.	August 23.	802	802
Theodore Roosevelt	Fred Olsen & Co.	August 21.	August 23.	1,421	
Ferndale	Fearnley & Eager	August 22.	August 22.	4	
Australien	East Asiatic Co.	August 23.	August 24.	110	

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, August 25, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Gustaf E. Reuter	18	16	40	19	6	25	19	13	05	20	1	20	Swedish				
Mexican	18	21	50	19	6	45	19	13	54	19	14	55	American				
Cape York	19	1	00	19	7	40	19	14	38	19	15	45	British				
Helen Olmsted	19	8	20	19	12	12	19	19	00	19	20	15	American				
Illinois	18	12	35	19	13	30	19	20	41	19	21	55	French				
Munaires	19	15	55	19	10	15	19	20	17	20	10	28	American				
Hanley	19	16	50	19	17	40	20	11	24	20	12	35	American				
Point Breze	19	16	45	20	6	10	20	13	55	20	15	00	American				
La Perla	20	3	10	20	6	20	20	14	48	20	16	15	American				
Nordval	19	22	25	20	6	25	20	14	45	20	16	15	Japanese				
Hague Maru	20	00	55	20	7	15	20	15	56	20	17	00	American				
Bethore	20	1	25	20	7	20	20	15	56	20	17	00	American				
S-14	20	1	25	20	9	15	20	16	55	20	18	00	American				
Bagaduce	20	9	15	20	16	55	20	18	00	20	18	00	American				
S-15	20	9	15	20	17	00	20	18	00	20	18	00	American				
S-16	20	9	15	20	17	00	20	18	00	20	18	00	American				
Swan	20	7	15	20	15	56	20	17	00	20	18	00	American				
Robin Gray	20	13	30	20	13	40	20	20	34	20	22	30	American				
Albert E. Watts	20	14	12	20	20	21	18	20	21	20	22	30	American				
Toronto	20	15	55	20	17	20	21	9	32	21	10	36	Norwegian				
Theodore	19	21	25	20	18	30	21	11	38	21	13	25	21	14	40	American	
Rossvall	19	21	25	20	18	30	21	11	38	21	13	25	21	14	40	American	
Sunoli	20	20	30	21	6	10	21	13	25	21	14	40	American				
Canadian Miller	20	20	30	21	6	10	21	13	25	21	14	40	American				
Tuscorora	20	22	18	21	7	20	21	14	16	21	15	30	British				
Kina	20	22	18	21	7	20	21	14	16	21	15	30	British				
Breda	21	6	30	21	7	35	21	16	17	21	18	00	Danish				
Loreto	20	15	50	21	11	16	21	18	24	21	19	23	Dutch				
Antonio	20	18	50	21	13	45	21	20	15	22	1	15	British				
Loreto	20	18	50	21	13	45	21	20	15	22	1	15	British				
Saale	21	11	55	21	14	55	21	21	10	22	2	28	German				
Mary Ann	21	11	55	21	14	55	21	21	10	22	2	28	German				
Harbridge	21	11	55	21	14	55	21	21	10	22	2	28	German				
Ferdith Luck	21	20	20	22	6	15	22	13	08	22	14	10	British				
Kentuckian	21	23	30	22	8	00	22	14	26	22	15	45	American				
	22	2	45	22	7	15	22	14	03	22	14	36	American				
	21	23	30	22	8	00	22	14	26	22	15	45	American				

* Tanker.

* Motor ship.

* Submarine.

* Tug.

* Minesweeper.

* Launch.

* Towing barge No. 2.

* Cotton and phosphates.

Ribera	22	8	40	22	11	45	22	18	42	22	20	10	British	Anglo-Mexican Oil Co.	387	0	51	0	26	3	Tampico, Mexico	Brisbane, Australia	5,658	5,469	4,042
Rudby	22	13	15	22	13	35	22	20	26	22	22	00	British	Ropner & Co	380	0	55	0	16	0	Norfolk, Va.	Vancouver, B. C.	5,888	4,305	
Richmond	22	00	40	22	13	35	22	21	40				American	Alken Tow. & Barge Co.	135	0	30	0	15	0	Tampico, Mexico	Buenaventura, Col.	426	90	
No. 101	22	9	55	22	14	22	22	21	40				American	Robt. J. McCardle Co.	150	0	30	0	2	0	Tampico, Mexico	Buenaventura, Col.	342	342	
Berwick Law.	22	00	40	22	13	35	22	21	40				American	Andrew Weir & Co.	420	0	30	0	25	0	Galveston, Texas	Melbourne, Aust. Isl.	6,600	6,719	5,110
Virgilio	21	15	25	23	6	10	23	12	43	23	23	50	British	Navy Gen. Italian.	482	0	61	0	24	7	Genoa, Italy	Valparaiso, Chile	1,200	12,941	9,329
Santa Blasa	21	15	25	23	6	10	23	12	43	23	17	15	American	Grace Line.	380	0	51	0	25	5	New York, N. Y.	Talcahuano, Chile	2,452	5,957	4,325
Albion	22	3	40	23	7	10	23	14	29	23	15	46	German	Hamburg-American Line	376	0	51	0	23	2	Hamburg, Germany	Champerico, Guat.	4,817	5,651	3,751
Labrafel	22	23	45	23	7	25	23	14	36	23	15	46	Belgian	Soc. Anonyme de Arme- mont Industrie and Commerce.	440	8	57	4	18	6	Houston, Texas.	San Francisco, Cal.	7,615	4,976	
Nordvart	22	00	55	23	8	25	23	15	14	23	16	20	Norwegian.	Texas S. S. Co.	377	6	54	0	23	8	Port Arthur, Texas	Manila, P. I.	7,303	6,108	4,358
Orbita	22	14	58	23	10	07	23	16	46	23	17	50	British	Pacific Steam Nav. Co.	550	3	67	3	29	4	Liverpool, England	Talcahuano, Chile.	3,737	16,844	11,731
Australen	23	5	45	23	10	25	23	17	25	24	17	15	Danish	East Asiatic Co.	410	0	54	0	18	0	Copenhagen, Den.	Vancouver, B. C.	4,140	7,031	5,338
West Notus	22	10	45	23	10	55	23	18	04	23	22	05	American	McCormick S. S. Co.	410	5	54	3	18	0	Buenos Aires, Arg.	San Francisco, Cal.	2,154	6,583	5,014
Nicktheroy	22	23	12	25	12	15	23	19	03	23	20	05	British	Royal Mail S. P. Co.	430	2	58	4	21	11	Rotterdam, Holland	Vancouver, B. C.	3,807	8,874	6,558
Atlas	22	13	05	23	12	35	23	19	55	23	21	05	British	Standard Transp. Co.	430	0	58	2	20	6	New York, N. Y.	Los Angeles, Calif.	7,348	5,104	
Koranton.	23	13	45	23	14	10	23	20	57	23	22	05	British	Empire Shipping Co.	412	0	55	5	17	0	Algiers, Algeria	Vancouver, B. C.	3,266	6,811	4,810
Sunewarken.	23	14	08	23	14	35	23	21	46	24	00	02	American	Transmarine Lines.	321	0	46	0	20	6	Mobile, Ala.	Seattle, Wash.	3,266	6,811	4,810
Riberton.	23	15	35	23	17	40	24	9	21	24	10	51	British	R. Chapman & Son.	409	6	46	0	18	0	Newcastle-on-Tyne	Portland, Oreg.	5,761	4,129	
Flushort.	22	16	55	24	8	30	24	15	43	24	17	15	German	Hamburg-American Line	397	0	54	0	23	2	Antwerp, Belgium	Buenaventura, Col.	4,470	5,965	4,288
Santa Isabel	22	14	00	24	6	15	24	13	32	24	15	05	American	Isthmian S. S. Lines.	251	0	54	0	22	0	Baltimore, Md.	Honolulu, T. H.	2,377	2,823	1,740
Santa Cecilia	23	17	38	24	6	20	24	13	12	24	17	15	American	Grace Line.	408	0	55	0	19	4	New York, N. Y.	Callao, Peru	2,683	6,672	4,905
President	24	6	00	24	7	20	24	14	09	24	22	16	American	Dollar Line	502	1	62	2	27	0	New York, N. Y.	Singapore, Ma. Ph.	4,258	12,023	8,443
Hayes	23	23	15	24	7	15	24	15	07	25	1	25	British	Comth & Dom. Line.	468	9	59	8	20	0	London, England	Napier, N. Z.	3,400	9,959	7,226
Port Dundon	24	00	40	24	8	45	24	16	49	24	18	05	Norwegian.	Bruegaard Knusterd.	380	0	54	0	21	6	Antwerp, Belgium.	Seattle, Wash.	5,200	5,746	4,232
Hermion.	16	15	37	24	8	35	24	17	17	25	1	25	Colombian.	Colombian Transp. Co.	34	0	24	0	7	0	Cristobal, C. Z.	Buenaventura, Col.	160	160	92
Attrato	23	22	42	24	9	55	24	17	21	24	18	25	Norwegian.	Richfield Oil Co.	385	0	55	0	15	0	Hull, England.	Los Angeles, Calif.			
Stristad	23	19	40	24	12	10	24	18	28	24	19	35	British	Furness, Withy & Co.	435	0	60	1	21	0	Glasgow, England.	Vancouver, B. C.	2,422	9,641	6,989
Pacific	24	12	25	24	12	35	24	19	19	24	20	25	American	Standard Transp. Co.	431	0	59	0	17	6	New York, N. Y.	Los Angeles, Calif.	7,825	5,102	
Aurora	24	13	05	24	13	15	24	20	34	25	2	45	American	U. S. Steel Products Co.	424	0	56	0	27	0	Baltimore, Md.	Shanghai, China.	8,081	7,611	5,450
Chatanooga	23	23	15	24	14	00	24	21	40	24	22	50	British	Pacific Steam Nav. Co.	264	8	41	2	17	8	New York, N. Y.	Callao, Peru	2,613	2,746	1,626
City	24	7	00	24	19	10	25	8	50	25	10	11	Norwegian.	Comp. Mex. Petroleum.	289	5	44	2	19	0	Minatitlan, Mex.	Seattle, Wash.	1,992	2,937	2,080
Cid	15	20	45	25	5	55	25	11	31	25	16	10	German	Hamburg-American Line	236	5	32	0	13	0	Cristobal, C. Z.	Guayaquil Ecuador	415	1,637	1,041
Cissy	23	21	18	25	6	15	25	13	03	25	14	10	French	French Line	427	3	58	3	20	2	Havre, France.	Vancouver, B. C.	2,833	8,043	5,454
Durazo	25	00	55	25	7	15	25	14	29	25	15	30	American	Calmar S. S. Corp.	385	3	51	3	24	10	Philadelphia, Pa.	Seattle, Wash.	6,863	6,224	4,465
Nore Dame de	24	23	35	25	8	05	25	14	48	25	16	10	American	Charles Nelson & Co.	324	0	46	2	18	3	Baltimore, Md.	Seattle, Wash.	2,500	3,953	2,631
Fourviere.	25	8	25	25	8	35	25	15	19	25	16	25	American	Ore S. S. Corp.	550	3	72	2	20	6	Baltimore, Md.	Cruz Grande, Chile	15,351	4,297	
Plow City	22	16	00	25	9	30	25	18	18				American	A. C. Brown	76	0	16	6			New London, Conn.	Guayaquil Ecuador	38	38	34
Marore.	22	16	00	25	9	30	25	18	18				American	General S. S. Corp.	436	0	56	0	14	0	Gothenburg, Swed'n	Los Angeles, Calif.	7,614	5,384	
Chance	25	8	30	25	9	55	25	16	48	25	20	00	Swedish	T. & C. Capley	410	0	52	0	17	10	Liverpool, England	Vancouver, B. C.	6,202	4,154	
Bullaren	24	9	20	25	10	07	25	17	14	25	18	46	British	I. C. Capley	181	2	52	2	11	6	New York, N. Y.	Gulf of Calif., Mex.	563	244	
Dramatist	23	12	25	25	10	20							American	Pacific Steam Nav. Co.	215	7	33	5	17	4	Cristobal, C. Z.	Champerico, Guat.	1,169	1,273	706
Happy Days	8	18	40	25	11	30	25	18	15	25	20	50	German	North German Lloyd.	216	3	33	0	13	4	Cristobal, C. Z.	Guayaquil Ecuador	1,132	741	
Acapula.	19	18	20	25	13	25	25	18	14	25	21	00	British	Federal Steam Line	473	0	59	0	30	6	Newport, Monm'th	N. Plymouth, N. Z.	8,197	9,957	6,801
Devon.	24	16	50	25	13	45	25	21	04	25	22	24	British	Roscevelt Line (S. B.).	410	5	54	2	23	8	New York, N. Y.	Adelaide, Australia.	4,195	7,614	5,823
Jadden.	25	15	30	25	20	10	26	10	05	25	23	19	American												

⁹ Barge.

¹¹ Yacht.

¹² Towing barge No. 101.

¹³ Steel, sugar, and automobiles.

¹⁴ Case oil and gasoline.

¹⁵ Case oil, automobiles, and general.

¹⁶ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From —	To —	Cargo.			Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.		Net.
K. R. Kingsbury ¹	18	23 45	19	6 03	19	13 35	19	13 35	American	Standard Oil Co. of Cal.	440 0	58 2	28 6	San Francisco, Cal.	Baltimore, Md	Gasoline	10,000	9,033	5,938
Selma ²	19	00 30	19	6 49	19	14 22	19	16 16	American	Associated Oil Co.	419 2	56 5	25 9	Los Angeles, Calif.	Bayonne, N. J.	Gasoline	9,245	7,060	5,025
Killing ³	18	23 30	19	7 17	19	14 00	19	16 45	British	Merritt, Chapman Co	172 2	30 0	13 0	High seas	Kingston, Jamaica	Ballast	575	439	20
Kellum ⁴	19	2 20	19	7 21	19	14 00	19	14 00	American	L. T. Lehman	60 0	14 6		Bahoa, C. Z	Cristobal, C. Z.	Ballast	357	1,187	622
Tamara ⁵	19	2 20	19	7 21	19	15 27	19	15 27	British	Pacific Steam Nav. Co	220 0	34 0	11 4	Champerico, Guatemala	Cristobal, C. Z.	(*)	7,331	6,753	4,823
Sithonia ⁶	19	6 50	19	8 09	19	16 50	20	6 10	British	H. M. Thompson	420 0	56 0	23 9	Crofton, B. C.	Garston, England.	Lumber	7,321	6,753	4,823
Robin Good-fellow.....	19	7 40	19	8 37	19	16 55	19	16 55	American	Seas Shipping Co	424 8	55 2	26 0	Englewood, B. C.	New York, N. Y.	Lumber	7,140	7,473	5,536
Magellan.....	19	8 15	19	9 07	19	18 25	19	18 25	British	Pacific Steam Nav. Co	461 5	59 2	26 6	Talcahuano, Chile	Liverpool, England	(*)	5,135	8,817	6,061
Manizales.....	19	10 00	19	11 13	19	18 20	25	11 30	German	Roland Line	216 0	33 0	11 0	Guayaquil, Ecuador	Cristobal, C. Z.	General	294	1,132	741
Canadian.....	19	10 50	19	11 48	19	19 55	19	23 00	British	Can. Nat. Steamships	399 3	52 4	23 3	Vancouver, B. C.	Montreal, Canada	Lumber, general	5,800	5,891	4,186
Cragness.....	19	14 55	19	15 07	19	22 40	19	22 40	British	Sir W. R. Smith & Sons	412 0	55 0	24 6	Victoria, B. C.	Hamburg, Germany	Lumber	7,700	7,022	5,296
Keifuku Maru.....	19	17 00	19	17 34	20	12 20	20	13 00	Japanese	Kokusai Kisen Kaisha.	355 0	51 0	26 0	Bat, P. I.	Boston, Mass	Sugar	7,799	6,213	4,670
Crowl ¹⁸	19	20 20	19	6 06	20	13 35	20	18 17	American	U. S. Army	413 0	53 4	24 0	Bahoa, C. Z	Pedro Miguel, C. Z.	Gasoline	7,451	5,976	4,069
San Ugon ¹⁹	19	19 00	20	6 33	20	14 10	20	15 35	British	Anglo-Mexican Pet. Co.	440 0	57 5	26 9	Los Angeles, Calif	Lizard Head, Eng. ²⁰	Crude oil	9,702	7,555	5,049
El Aleto ²⁰	19	19 00	20	6 33	20	14 10	20	15 35	British	C. T. Bowring	440 0	57 5	26 9	Talara, Peru	Halifax, N. S.	Crude oil	9,702	7,555	5,049
Asby ²¹	19	19 15	20	7 12	20	15 10	20	16 15	British	Sir R. Ropner & Co.	405 0	53 5	23 9	Vancouver, B. C.	Hampton Roads, Va.	Wheat	4,124	5,523	4,068
Agwistar ²²	19	19 40	20	8 02	20	15 55	20	18 30	American	Grace Line	370 0	53 1	19 0	Quique, Chile	New York, N. Y.	Nitrates	4,124	5,523	4,068
Birk ²³	20	1 00	20	8 30	20	19 12	20	18 50	Norwegian	Chile S. S. Corp	329 0	52 0	23 0	Valparaiso, Chile	Baltimore, Md	Nitrates, copper	6,200	4,751	3,160
Targis.....	20	4 30	20	9 19	20	18 00	21	2 44	German	North German Lloyd.	459 0	55 0	26 0	Valparaiso, Chile	Bremen, Germany	General	5,950	7,533	5,413
Alvarado.....	20	7 50	20	10 11	20	18 45	21	2 00	British	Pacific Steam Nav. Co	303 0	43 0	15 0	Falta, Peru	New York, N. Y.	(*)	565	2,844	1,748
San Nicolas ²⁴	13	10 26	20	11 29	20	18 35	20	18 35	British	Lago Shipping Co	305 0	50 0	10 0	Bahoa, C. Z	Aruba, D. W. I.	Ballast	2,594	2,594	
Essequibo.....	20	11 20	20	12 24	20	19 12	21	00 12	British	Pacific Steam Nav. Co	450 3	57 8	22 3	Talcahuano, Chile	New York, N. Y.	(*)	1,949	9,037	6,176
Sidney M. Hauptman.....	20	16 55	20	17 35	21	12 45	21	12 45	American	McCormick S. S. Co	401 4	53 2	26 6	Seattle, Wash.	Baltimore, Md	Lumber, general	7,663	7,082	5,167
Sea Dog ²⁵	21	3 30	21	6 07	21	13 50	21	13 50	Panaman	M. Arosencia	25 6	7 6		Gatun Lake, C. Z.	Cristobal, C. Z.	Gasoline	8,558	6,474	4,321
Markland ²⁶	20	17 30	21	6 38	21	14 50	21	14 50	Norwegian	O. & A. Jregus-Bergen	408 3	55 3	25 8	Los Angeles, Calif.	Avonmouth, Eng	Lumber, copper	4,420	3,984	2,628
Chetopa.....	20	17 30	21	6 38	21	14 50	21	14 50	American	Nelson S. S. Co.	324 0	46 2	23 0	Tacoma, Wash.	Port Newark, N. J.	Lumber	4,000	3,984	2,612
Susparco.....	21	1 30	21	6 55	21	14 55	21	15 20	American	Transmarine Lines	324 0	46 2	23 0	Portland, Ore	Baltimore, Md	Lumber	8,000	8,312	6,097
Hedron.....	21	1 35	21	7 36	21	15 45	21	15 45	American	Hedron S. S. Co	440 0	56 0	27 8	Everett, Wash.	Cristobal, C. Z.	General	2,143	4,466	2,466
Ucayali.....	21	1 15	21	8 29	21	18 38	24	7 05	Peruvian	Peruvian Line	374 7	46 3	21 3	Callao, Peru	Cristobal, C. Z.	General	2,143	4,466	2,466
Henry D. Whitton.....	21	5 15	21	8 52	21	19 20	21	19 20	American	Union Sulphur Co	356 0	51 6	26 0	Gray's Har., Wash.	New York, N. Y.	Lumber	5,600	5,367	2,925
Alaskan.....	21	6 30	21	9 10	21	19 42	21	19 42	American	Amer.-Hawaii Line	415 7	53 7	23 9	Portland, Ore	Boston, Mass	General	2,244	7,380	5,339
Grant ²⁷	20	10 34	21	10 17	21	18 28	21	23 40	American	U. S. Army, Q. M. C.	488 0	53 4	24 0	San Francisco, Cal	Brooklyn, N. Y.	General	2,244	7,380	5,339
Rio Claro.....	21	10 40	21	11 38	21	20 55	21	21 50	British	Thompson S. S. Line.	363 0	53 2	26 0	Portland, Ore	Queenstown, Ire.	Wheat	6,848	5,967	3,484
Tanker.....																			

¹ Tanker.² Wrecking tug.³ U. S. Army launch.⁴ Motor ship.⁵ August 13 for drydocking.⁶ Launch.⁷ U. S. Army transport.⁸ Coffee, sugar, hides, and wood.⁹ Copper, cotton, hides, and beans.¹⁰ Nitrates, sugar, and cotton.¹¹ For orders.

Ship	Date	Vessel	Line	From—	Date	Vessel	Line	For—
Panga Maru.	21 11 55	21 12 36	21 21 35	22 1 35	Japanese.	Nippon Yusen Kaisha.	400-0	54.5 22.0
Brockbeck	21 12 30	21 13 28	21 23 25	22 8 55	British.	Golden Line.	346-0	50.9 21.3
Lewis Luckenbach.	21 13 30	21 14 20	21 23 55	22 23 55	American.	Luckenbach Line.	396-0	68.2 30.7
Willpelo.	21 17 00	21 17 48	22 11 05	22 11 05	American.	Williams S. S. Line.	386-0	52.2 23.6
Alaska.	21 19 30	22 6 49	22 14 30	22 16 20	Norwegian.	Chr. Haaland	410-0	54.1 23.0
Exporter ¹² .	21 21 10	22 7 42	22 15 07	22 15 07	British.	Furness, Withy & Co.	435-9	60.9 37.4
Charles Christenson.	21 21 37	22 8 39	22 17 40	22 17 40	American.	Sudden & Christensen.	409-7	54.2 23.6
Movera.	21 21 30	22 9 40	22 18 03	22 18 05	British.	Donaldson Line.	385-2	51.5 27.6
San Francisco ¹⁴ .	21 20 05	22 10 50	22 19 53	23 11 07	German.	Hamburg-American Line.	432-3	59.4 27.0
Felix Taussig.	22 14 35	22 15 18	22 22 53	23 5 00	American.	Ischman S. S. Lines	395-0	55.0 27.6
Henry S. Grove.	22 17 15	22 17 54	23 11 15	23 14 50	American.	Argonaut S. S. Line.	404-6	53.9 25.6
San Quirino.	22 17 15	23 6 21	23 14 20	23 14 20	British.	Anglo-Mexican Pet. Co.	407-2	52.2 27.6
Julia Luckenbach.	23 1 00	23 7 10	23 16 00	23 16 00	American.	Luckenbach Line.	436-6	57.2 26.6
San Jose.	23 6 00	23 8 13	23 17 40	24 16 05	American.	United Fruit Co.	330-0	44.6 17.6
Lene ¹⁵ .	23 9 50	23 10 32	23 18 35	24 12 05	Italian.	Nav. Gen. Italian.	450-0	57.0 27.8
American Star.	18 20 20	23 14 55	23 22 50	23 22 50	American.	Charles Nelson & Co.	376-8	52.2 22.9
King Maelm ¹⁶ .	23 13 30	23 14 39	23 21 40	24 4 00	British.	Dodd, Thompson & Co.	400-3	59.0 26.0
Point Judith.	24 4 54	24 6 03	24 13 25	24 15 05	American.	Swayne & Hoyt	289-0	44.1 23.6
George H. Jones.	24 5 04	24 6 41	24 16 25	24 16 25	American.	Standard Shipping Co.	429-3	59.8 27.0
Eir.	23 18 45	24 7 11	24 19 10	24 19 30	Norwegian.	E.I. Dupont de Nemours	400-0	53.0 27.0
Richmond ¹⁷ .	22 21 40	24 7 10	24 16 15	24 18 55	American.	Allen Tow. & Barge Co.	135-0	21.6 15.0
Dio.	24 1 00	24 8 06	24 18 00	24 18 00	American.	Redwood Line.	386-8	52.2 24.6
Nebraskan.	24 9 00	24 10 20	24 18 38	24 18 38	American.	Amer-Hawaitan Line.	472-0	60.0 28.8
Lincoln.	24 9 00	24 10 18	24 19 00	24 19 00	Norwegian.	T. Hannevig & Co.	381-0	55.2 26.2
Ellsworth ¹⁸ .	24 10 03	24 10 51	24 19 50	24 19 50	British.	Pacific Steam Nav. Co.	215-0	33.5 14.0
Salvador.	24 10 03	24 10 51	24 19 50	24 19 50	Norwegian.	Scand.-So. Pacific Line.	380-0	53.2 24.0
Key West.	24 12 03	24 12 59	24 20 50	24 20 50	Norwegian.	Andreas Knutsen.	300-0	47.3 20.0
Lisbeth.	24 16 00	24 17 04	25 11 00	25 13 15	Norwegian.	L. F. Hauss	407-0	52.3 21.6
La Pita ¹⁹ .	24 17 50	25 6 14	25 14 15	25 14 15	British.	Eagle Oil Transp. Co.	195-1	32.0 13.0
San Manuel.	25 3 20	25 7 20	25 15 00	25 15 00	Norwegian.	Panama Mail S. S. Co.	470-0	58.8 25.6
Sted a.	25 7 03	25 7 50	25 15 35	25 22 40	Dutch.	No. Pacific Coast Serv.	416-8	56.1 27.0
Georgie W. Bendjje.	25 14 05	25 14 42	25 21 45	25 21 45	American.	American Oil Co.	416-8	56.1 27.0
Barnes.	25 14 05	25 14 42	25 21 45	25 21 45	American.	American Oil Co.	416-8	56.1 27.0

* Tanker.

** Canned red salmon.

** Tug.

** Lanch.

** Coffee, sugar, and wood.

** Lumber, sugar, and general.

** Gasoline.

** Gasoline.

** Gasoline.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.

* DEPARTURES.

Date	Vessel	Line	From—	Date	Vessel	Line	For—
August 19.	Napherian	Leyland Line	Puerto Cortes, Honduras	August 19.	Bowden	United Fruit Co.	Mobile, Ala.
August 19.	Parinama	United Fruit Co	New Orleans via Habana.	August 19.	Calamares	United Fruit Co.	New York via Habana.
August 19.	Colamares	United Fruit Co	Port Lome, Cotea Rica.	August 19.	Ancon	Panama R. R. S. S. Line	New York via Haiti.
August 20.	Perou	French Line.	St. Nazaire via waypoints.	August 20.	Parinama	United Fruit Co.	New Orleans via waypoints.

* Other than ships passing through the Canal.

(Continued on next page.)

MOVEMENTS OF OCEAN VESSELS.—Continued from page 53.

PORT OF CHRISTOPAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
August 20.....	Pastores	United Fruit Co.	New York via Habana.	August 23.....	Napierian	Leyland Line	Puerto Colombia.
August 20.....	Ville Riestra ³³	Costa Rican Government	Colon, R. P.	August 23.....	Ville Riestra ³³	Costa Rican Government	Colon, R. P.
August 21.....	Mayari	United Fruit Co.	New York, N. Y.	August 21.....	Mayari	United Fruit Co.	Puerto Colombia.
August 21.....	Stuyvesant	Royal Netherlands S. S. Co.	Hamburg via wayports.	August 21.....	William M. ³⁴	G. I. Bryan	Bluefields, Nicaragua.
August 21.....	William M. ³⁴	G. I. Bryan	Colon, R. P.	August 22.....	Peron	French Line	Havre via wayports.
August 22.....	Coppename	United Fruit Co.	New Orleans, La.	August 22.....	Stuyvesant	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
August 22.....	Shirala	United Fruit Co.	New York via Kingston.	August 22.....	Pastores	United Fruit Co.	Port Limon, Costa Rica.
August 23.....	Favorita	American Fruit & S. S. Corp.	New Orleans, La.	August 23.....	Coppename	United Fruit Co.	Pto. Colombia via Boera.
August 23.....	Saramacca	United Fruit Co.	Boca del Toro, R. P.	August 23.....	Si arla	United Fruit Co.	New York via wayports.
August 23.....	Banan	United Fruit Co.	Mobile, Ala.	August 23.....	Banan	United Fruit Co.	Perme, R. P.
August 23.....	Manaquí	American Fruit & S. S. Corp.	San Blas, R. P.	August 23.....	Saramacca	United Fruit Co.	New Orleans, La.
August 23.....	Stuyvesant	Royal Netherlands S. S. Co.	New York via wayports.	August 23.....	Favorita	American Fruit & S. S. Corp.	San Blas, R. P.
August 23.....	Heredia	United Fruit Co.	Port Limon, Costa Rica.	August 23.....	Favorita	American Fruit & S. S. Corp.	New Orleans, La.
July 23.....	Polarland	United Fruit Co.	New Orleans via Habana.	August 25.....	Manaquí	United Fruit Co.	New York via Kingston.
August 23.....	Banan	Estrada Hermanos	N. Y. via Puerto Colombia.	August 25.....	Stuyvesant	Royal Netherlands S. S. Co.	Amsterdam via wayports.
August 25.....	Polarland	United Fruit Co.	Perme, R. P.	August 21.....	Polarland	Estrada Hermanos	Rio Hacha.
August 25.....	Linda S. ³⁵	Surgeon Brothers	Colon, R. P.	August 25.....	Linda S. ³⁵	Surgeon Brothers	Bluefields, Nicaragua.

PORT OF BALBOA.

³³ Motor boat. ³⁴ Schooner. ³⁵ Motor schooner.

August 19.....	Orizuela ³⁶	Chiriqui Land Co.	Port Armuelles, R. P.	August 21.....	Craftsman ³⁷	R. J. McArdle Contracting Co.	Buenaventura, Colombia.
August 20.....	Craftsman ³⁷	R. J. McArdle Contracting Co.	Buenaventura, Colombia.	August 21.....	Martha ³⁸	Chr. Hannevig	Peñal, R. P.
August 20.....	Martha ³⁸	Chr. Hannevig	Buenaventura, Colombia.	August 22.....	A. B. de O'Barrio ³⁸	Pacific Fruit Co.	Bayano River, R. P.
August 22.....	Clinan ³⁶	Isimian Land & Fruit Co.	El Real, R. P.	August 23.....	San Luis ³⁸	Chiriqui Land Co.	Port Armuelles, R. P.
August 22.....	A. B. de O'Barrio ³⁸	Pacific Fruit Co.	Bayano River, R. P.				
August 23.....	San Luis ³⁸	Chiriqui Land Co.	Port Armuelles, R. P.				
August 25.....	Craftsman ³⁷	R. J. McArdle Contracting Co.	Buenaventura, Colombia.				

³⁶ Motor ship. ³⁷ Tug. ³⁸ Motor schooner.³⁶ Motor ship. ³⁷ Tug. ³⁸ Motor schooner.³⁶ Motor ship. ³⁷ Tug. ³⁸ Motor schooner.³⁶ Motor ship. ³⁷ Tug. ³⁸ Motor schooner.³⁶ Motor ship. ³⁷ Tug. ³⁸ Motor schooner.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1928, of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the passenger steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	Leave New York 3 p. m.	Leave Port-au-Prince p. m.	Arrive Cristobal a. m.	Leave Cristobal 3 p. m.	Leave Port-au-Prince p. m.	Arrive New York a. m.
Cristobal.....	August 21....	August 26....	August 29....	September 2..	September 5..	September 10.
Ancon.....	September 5...	September 10..	September 13..	September 17..	September 20.	September 25.
Cristobal.....	September 18..	September 23..	September 26..	September 30..	October 3....	October 8....
Ancon.....	October 2....	October 7....	October 10....	October 14....	October 17....	October 22....
Cristobal.....	October 16....	October 21....	October 24....	October 28....	October 31....	November 5....
Ancon.....	October 30....	November 4....	November 7....	November 11..	November 14..	November 19..
Cristobal.....	November 13..	November 18..	November 21..	November 25..	November 28..	December 3....
Ancon.....	November 27..	December 2....	December 5....	December 9....	December 12..	December 17..
Cristobal.....	December 11..	December 16..	December 19..	December 23..	December 26..	December 31..
Ancon.....	December 24..	December 29..	January 1....	January 6....	January 9....	January 14....

NOTE.—Effective May 1, steamers sail daylight saving time. Due to discontinuance of the daylight saving time, departures after steamer *Cristobal*, September 18, will be at 3 p. m. standard time.

Steamers sail at 3 p. m. from Pier 65, North River, foot of West 25th St., New York.

Both steamers call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of steamers at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

West coast freight service.—In addition, a regular freight service is maintained from New York, with occasional calls at Haiti and to Cristobal, Buenaventura and Ecuadorian ports. Particulars upon application to the Panama Railroad Co., 24 State Street, New York, or Balboa Heights, Canal Zone.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
For steamships, including warships of all nations when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.....	11.00	14.00

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Diesel oil is sold by the Canal at \$2.20 per barrel.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.25 per barrel at Balboa and Cristobal. Diesel oil, Balboa only; \$1.80 per barrel.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers at \$8.00 per ton of 2,240 pounds at Cristobal, and \$11.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, \$8.00 per ton at Balboa. When coal is delivered from lighters in quantities of 50 tons or more, the price is \$9.00 per ton at Cristobal, \$12.00 at Balboa. If less than 50 tons is taken from lighters, prices are \$11.00 per ton at Cristobal and \$14.00 per ton at Balboa with minimum charge for 20 tons and maximum charge not to exceed that for 50 tons at \$9.00 Cristobal and \$12.00 Balboa. For furnishing lump coal for galley use, or run of mine coal, in sacks, \$6.00 additional per ton; but if vessels furnishes sacks \$3.00 additional per ton.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

For trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, when requested, an additional charge of 90 cents per ton will be made for extra handling.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Official Circulars.

Acting Governor.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 31, 1928.

To all concerned.—Effective September 3, 1928, and until further notice, Colonel Harry Burgess, U. S. A., Engineer of Maintenance, will be Acting Governor.

M. L. WALKER,
Governor.

Duties of President of Panama Railroad Company.

PANAMA RAILROAD COMPANY,
OFFICE OF THE PRESIDENT,
BALBOA HEIGHTS, C. Z., August 31, 1928.

To all concerned.—Effective September 3, 1928, and until further notice, Colonel Harry Burgess, U. S. A., Second Vice President, will perform such duties of the President as relate to the operations of the Company on the Isthmus.

M. L. WALKER,
President.

Trips Through the Canal.

The following lines operating passenger vessels through the Canal carry local passengers from one terminal to the other: Panama Mail Steamship Company, Pacific Steam Navigation Company, Grace Line, Chilean Line, Navigazione Generale Italiana, Hamburg-American Line. The Panama Mail and Hamburg-American Line charge \$6 for the trip, the others \$10 for first-class passage. The Chilean Line has also a rate of \$4 for intermediate class, and the Panama-Pacific Line a rate of \$6 for tourist class. The several services together afford about 4 transits of the Canal each way every week.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office
at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., September 5, 1928. No. 5.

Canal Traffic During August.

During the month of August, 1928, 526 commercial vessels and 6 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,199,069.31, and on the launches, \$42.39, or a total tolls collection of \$2,199,111.70.

The daily average number of transits of seagoing vessels for the month was 16.97, and the daily average tolls collection, \$70,937.72. The average amount of tolls paid by each of the commercial transits was \$4,180.74, as compared with \$4,143.58 for the month of July. Traffic for August showed a slight increase over July, both with respect to the number of transits and the amount of tolls collected.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 8 months of the current calendar year, with the daily averages of transits and tolls:

Month.	Totals for month.		Daily average.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	540	\$2,212,752.50	17.42	\$71,379.20
February.....	547	2,253,755.37	18.86	77,715.70
March.....	542	2,223,370.57	17.48	71,271.63
April.....	531	2,187,607.82	17.70	72,914.55
May.....	508	2,118,969.83	16.38	68,353.86
June.....	481	2,016,211.09	16.03	67,206.43
July.....	509	2,109,083.19	16.41	68,034.94
August.....	526	2,199,069.31	16.97	70,937.72
Totals.....	4,184	17,320,819.68	17.14	70,986.96

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 28, 1928.

No. 427.

The following are quoted from Notice to Mariners, Washington, August 18, 1928:

"Colombia, Cartagena Harbor, Boca Chica, Light buoy missing.—The Second Officer of the American steamer *J. A. Bostwick* reports that on July 28, 1928, the gas buoy marking the southern side of Boca Chica entrance to Cartagena Harbor was missing.

"Approximate position: 10° 19' N., 75° 35' W."

"West Indies, Martinique. Information concerning lights.—The master of the *Doris Hamlin* reports that the light on Caravelle Peninsula is very unreliable.

"The master also reports that a new light is to be established on Cabrit Islet, southern end of Martinique Island.

"Further notice will be given.

"Approximate position: 14° 23' 30" N., 60° 52' 30" W."

M. L. WALKER,
Governor.

Notice to Mariners.—Aids to Navigation.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 5, 1928.

No. 433.

1. The following cablegram was received by the Captain of the Port of Cristobal:

"Buenaventura, Colombia, September 5th.—The white light, first buoy entering port side of harbor was accidentally put out. (Signed) T. LOPEZ, Captain of the Port."

H. BURGESS,
Acting Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, September 1, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.	
Nitro ²	24	13	10	26	6	04	26	13	05	27	7	23	American	U. S. Navy	483	10	Navy cargo	3,439	5,962	3,650
San Leonardo ¹	25	18	45	26	6	12	26	13	17	26	14	55	British	Eagle Oil Transp. Co.	400	8	Los Angeles, Calif	4,076	7,156	5,094
Dakota.	25	19	00	26	7	27	26	13	55	26	15	05	American	Amer.-Hawaiian Line	407	7	Portland, Ore.	5,710	6,630	4,878
Pacific Hemlock	26	8	05	26	8	15	26	14	57	26	16	15	American	Dillon S. S. Line.	409	7	Tacoma, Wash.	6,295	4,917	3,516
Stensby ¹	26	8	15	26	9	26	17	13	27	17	55	Danish	W. L. Gonyon & Co.	350	0	Kobe, Japan	6,295	4,917	3,516	
Point Bonita.	26	9	20	26	9	35	26	17	05	26	18	10	American	Gulf-Pacific Line	324	0	Powell River, B.C	2,307	3,984	2,617
Canadian	26	1	30	26	10	40	26	17	30	26	18	45	British	Can. Nat. Steamships	400	0	Adelaide, Australia	2,521	5,956	4,172
Victor	26	12	25	26	12	40	26	19	37	26	21	30	American	Calif. & East'n S.S. Co.	386	8	Seattle, Wash.	2,971	5,684	4,082
New Britain	25	15	05	26	17	10	27	9	31	27	11	32	American	American Tankers Corp	400	8	Los Angeles, Calif	6,336	4,389	3,389
Phoenix ¹	26	18	25	26	18	35	27	11	30	27	12	55	British	Seaboard Lumber Sales	379	0	Vancouver, B. C.	5,487	4,180	3,162
Fishpool.	26	18	25	26	18	50	27	11	30	27	12	55	British	Seaboard Lumber Sales	379	0	Vancouver, B. C.	5,487	4,180	3,162
Superior.	26	21	05	27	6	00	27	13	21	27	14	30	American	Transmarine Lines	324	0	Los Angeles, Calif.	1,500	3,984	2,612
Montgomery	26	21	55	27	6	00	27	14	06	27	16	00	American	Latham S. S. Lines	424	2	Darien, China.	8,008	7,611	5,450
El Lobo ¹	27	3	00	27	7	20	27	15	34	27	16	50	British	Atlantic Refining Co	385	2	La Libertad, Ecuador	4,851	3,326	2,326
San Jose.	27	4	05	27	7	35	27	15	54	27	16	50	American	United Fruit Co.	330	0	San Francisco, Cal.	470	3,670	2,353
Port Victor	27	3	55	27	8	40	27	16	24	27	17	25	British	Com'lth & Dom. Line	470	0	Adelaide, Australia.	3,300	9,336	6,683
Glenn Mayne ¹	25	9	00	27	9	15	27	17	55	28	00	38	American.	Otto Paulsen.	142	0	Los Angeles, Calif.	436	436	235
Edward Luck-enbach	27	6	10	27	9	30	27	16	51	27	18	07	American	Luckenbach Line	436	6	Tacoma, Wash	5,037	8,543	6,427
Dana ¹	25	7	10	27	10	45	27	14	59	2	19	04	Danish	Danish Government....	138	0	Pacific Ocean.	373	373	164
Ucayali.	26	17	05	27	10	45	27	18	01	27	19	55	Peruvian	Peruvian Line	374	7	Callao, Peru.	275	4,466	2,405
Pacific.	27	15	15	27	15	20	28	9	45	28	14	30	American	Argonaut S. S. Line.	400	0	Tacoma, Wash	7,899	6,517	4,723
Eurana.	27	13	25	27	18	28	28	11	31	28	12	45	American	Planet Line.	400	0	Vancouver, B. C.	7,395	7,381	5,595
Mariposa ¹	27	13	25	27	18	28	28	11	31	28	12	45	American	Amer. Banana Corp.	400	0	Gatun, C. Z.	3,955	7,381	5,595
Major Pullen ¹	27	20	55	28	6	15	28	14	02	28	15	15	American	U. S. Army	425	0	Gatun, C. Z.	4	4	4
Silverguava ¹	27	20	55	28	6	15	28	14	02	28	15	15	British	Silver Line, Ltd	425	0	Gatun, C. Z.	5,262	8,216	6,037
W. L. Steed ¹	27	21	45	28	6	16	28	14	23	28	15	40	American	Huasteca Petroleum Co.	416	8	Los Angeles, Calif.	6,751	4,795	3,795
San Carlos ¹	28	7	35	28	8	00	28	15	02	28	16	00	British	Lago Shipping Co.	305	0	Balboa, C. Z	5,262	8,216	6,037
City of Cam-bridge.	28	2	30	28	10	35	28	17	37	28	18	48	British	Geo. Smith & Sons	454	0	Sydney, Australia.	5,217	9,183	6,954
Jane Maersk ¹	28	9	05	28	11	50	28	18	09	28	22	12	Danish	Anglo-Saxon Pet. Co.	456	8	Los Angeles, Calif.	8,102	5,623	4,623
Willkenu.	28	15	00	28	15	10	28	22	19	29	1	50	American	Williams S. S. Line	415	0	Seattle, Wash.	4,025	7,500	5,805
Venezuela.	27	21	15	29	6	08	29	13	20	29	22	40	American	Panama Mail S. S. Co.	380	0	San Francisco, Cal.	2,286	6,033	4,353
Vestard ¹	28	19	50	29	6	15	29	13	56	30	1	45	Norwegian.	Klostors Rederi.	386	0	Fremantle, Aust'n	6,600	6,108	4,343
Jane Christen-son.	29	4	10	29	7	15	29	14	24	29	15	45	American	Sudden & Christenson.	409	5	San Francisco, Cal.	1,819	6,615	4,966
Orient.	29	6	50	29	7	30	29	14	50	29	16	05	American	Oriental Navigation Co.	376	0	Portland, Ore	3,540	5,455	3,879
																	General			Launch.

¹ Launch.² Motor ship.³ Ammunition ship.⁴ Tanker.⁵ Scientific ship.

Jamaica	19	15	27	29	9	40	29	16	39	29	17	50	British	220.0	34.0	13.11	Cristobal, C. Z.	Champerico, Guat.	General	841	1,187	622
Teno	28	23	55	29	10	45	29	16	56	29	17	50	Chilean	421.8	56.0	25.5	New York, N. Y.	Valparaiso, Chile.	General	2,319	7,764	4,772
Ivo Rado	29	15	40	29	17	00	30	9	49	30	11	28	Yugoslav	350.0	49.0	21.0	Casle Sucurac, Yugoslav	Antofagasta, Chile.	Cement, sardines	4,804	4,470	3,288
Kangan	30	5	50	30	6	40	30	14	22	30	15	35	American	404.6	53.9	17.6	Boston, Mass.	Seattle, Wash.	General	3,492	6,779	4,927
Katrina Luckenbach	30	6	35	30	7	35	30	15	20	30	16	20	American	446.0	52.0	23.6	Boston, Mass.	Seattle, Wash.	General	6,146	8,508	6,179
Rialto	29	17	30	30	13	20	30	19	35	30	23	00	Italian	430.0	55.3	18.0	Trieste, Italy	Vancouver, B. C.	General, bananas	3,423	7,789	6,025
Chileop	29	13	20	30	13	30	30	20	50	30	24	00	American	411.0	54.0	23.0	New York, N. Y.	Chancal, Chile	General	5,017	6,909	4,973
Chilore	29	3	55	31	6	15	31	13	08	31	14	10	American	549.0	72.0	22.8	Norfolk, Va.	Cruz Grande, Chile	Ballast	14,538	9,348	
Port Hunter	30	16	25	31	6	20	31	14	57	31	16	00	British	481.0	62.0	26.0	S. Shields, England	Dundee, N. Z.	General	2,904	10,825	7,968
California	31	6	10	31	7	00	31	14	02	9-1	00	25	American	574.4	80.3	27.0	New York, N. Y.	San Francisco, Cal.	General	2,800	24,506	17,565
Lemuel Burrows	30	17	30	31	7	25	31	15	06	31	16	15	American	437.0	63.0	19.6	New York, N. Y.	Aberdeen, Wash.	Ballast	9,105	6,004	
Pat Doherty	30	20	50	31	8	20	31	15	46	31	17	00	American	430.0	59.2	19.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	7,978	5,840	
Sacramento	31	4	45	31	9	35	31	17	50	31	18	05	American	380.0	53.0	19.0	Norfolk, Va.	Los Angeles, Calif.	Oil pipe, general	4,186	5,653	4,122
Canea	29	15	35	31	9	40	31	17	50	31	21	09	Colombian	107.2	22.0	9.1	Cristobal, C. Z.	Buenaventura, Col.	General	335	238	163
Tenysama Maru	31	6	20	31	11	00	31	18	10	31	19	35	Japanese	475.0	58.0	23.0	Calveston, Texas	Yokohama, Japan	General	6,021	7,956	5,681
Seapool	31	8	14	31	11	15	31	19	44	31	21	09	British	379.0	56.0	23.0	Antwerp, Belgium	Tacoma, Wash.	General	6,475	5,521	4,138
Santa Tecla	30	22	40	31	12	10	31	18	56	9-1	1.10	American	345.0	56.0	23.0	Calveston, Texas	Tacoma, Wash.	General	2,388	2,832	1,803	
Montrolite	31	10	31	12	55	31	20	35	1	1.10	British	298.6	40.0	20.8	New Orleans, La.	Taleahuano, Chile	General	11,555	7,639			
Rapet	30	23	55	31	13	45	31	21	00	1	16	40	German	510.9	68.3	21.0	Montreal, Canada	Los Angeles, Calif.	Ballast	2,879	5,583	4,626
Lalcham	31	15	35	31	16	40	9-1	9.15	1	12	00	German	385.0	54.0	19.6	Hamburg, Germany	Valparaiso, Chile	General	2,879	5,583	4,626	
Benuekom	31	6	30	9-1	6.02	1	13	16	1	16	40	Dutch	351.0	53.1	15.0	Boston, Mass.	Arica, Chile	Ballast	5,007	3,370		
Lochoil	31	6	50	1	6.50	1	14	07	1	17	15	British	449.0	62.3	21.0	Hamburg, Germany	Corral, Chile	General	3,165	7,849	5,806	
Lesada	31	20	55	1	11	45	1	20	52	2	00	30	British	485.6	62.3	21.0	Rotterdam, Holland	Vancouver, B. C.	General	2,926	10,803	7,606
														404.0	54.2	18.5	Liverpool, England	Corral, Chile	General	3,627	7,221	4,814

* Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Annon	25	17	30	26	6	15	26	13	50	26	22	22	German	348.2	55.3	25.0	Corral, Chile	Hamburg, Germany	General	8,446	7,334	5,221
Hessen	26	16	25	26	7	10	26	15	00	26	22	22	German	468.5	58.2	27.0	Megallanes, Chile	Hamburg, Germany	Nitrates, ores	11,097	9,568	6,680
Maria Petrina	26	7	40	26	8	43	26	16	00	26	16	00	Yugoslav	400.0	53.0	26.8	Antofagasta, Chile	London, England	Nitrates, iodine	8,178	5,808	4,163
Santa Veronica	26	13	45	26	14	44	26	11	30	27	1	40	American	251.0	43.6	18.4	Honolulu, T. H.	New York, N. Y.	(*)	1,844	2,823	1,740
Maltran	26	16	00	26	16	59	27	11	40	27	11	40	American	233.8	48.0	23.6	Aberdeen, Wash.	New York, N. Y.	Lumber	4,600	4,171	2,827
Pendlope	27	4	27	27	6	16	27	13	50	27	15	15	Danzig	470.0	63.2	27.0	Los Angeles, Calif.	Hamburg, Germany	Gasoline	11,545	9,302	6,127
Glenworth	26	14	00	27	6	45	27	14	55	27	14	55	British	480.0	55.0	27.0	Pt. Alberni, B. C.	Boston, Mass.	Lumber	8,000	7,999	5,867
Oakmar	26	18	10	27	7	21	28	19	35	27	20	40	American	398.4	51.2	22.3	Gray's Hbr., Wash.	Philadelphia, Pa.	Lumber	5,806	6,327	4,433
Santa Luisa	26	7	45	27	8	01	27	16	35	27	17	50	American	360.2	51.5	24.6	Valparaiso, Chile	New York, N. Y.	(*)	3,719	5,710	4,023
Knoxville City	27	7	15	27	8	45	27	17	50	27	17	50	American	422.0	56.0	26.0	Everett, Wash.	Newark, N. J.	Lumber	6,952	7,611	5,450
British	27	3	00	27	10	32	27	19	10	27	19	10	British	440.0	57.1	26.7	Los Angeles, Calif.	England	Gasoline	9,078	7,644	5,070
Ycoman	26	14	50	27	11	39	27	19	40	28	10	20	Japanese	407.0	51.0	22.3	Hongkong, China	Boston, Mass.	(*)	7,082	6,538	4,769
Habana Maru	27	13	00	27	15	35	27	22	45	28	11	10	Norwegian	452.0	59.5	27.6	Vancouver, B. C.	Oso, Norway	Grain, general	8,517	9,082	6,140
Benjamin Franklin	27	5	30	27	17	05	28	11	00	28	18	28	Japanese	445.0	58.0	22.6	Manila, P. I.	Boston, Mass.	(*)	6,427	7,989	5,856
Takaoka Maru																						

* Canned pineapples.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Svealand ¹⁰ ...	27	9.15	27	17.05	28	11.43	28	11.45	Swedish....	561.1	72.2	33.0	Cruz Grande, Chile	Iron ore.....	21,000	15,425 4,421
Mary Ellen	28	2.30	28	6.14	28	14.30	28	14.30	American....	509.7	70.3	30.3	Los Angeles, Calif	Gasoline.....	17,000	12,425 8,338
O'Neil ¹⁰ ...	27	12.30	28	6.46	28	15.25	28	15.25	British....	420.0	57.5	27.0	San Francisco, Cal	Gasoline.....	8,479	7,132 4,658
Clydefield ¹⁰ ...	27	15.30	28	7.16	28	15.45	28	18.45	German....	360.7	51.0	15.0	Champerico, Guat.	Ballast.....	4,822	3,272
Minden.....	27	20.15	28	8.08	28	17.20	28	17.20	Danish....	410.0	55.0	28.6	Portland, Oreg....	General.....	8,841	7,027 5,341
Panama ¹⁰ ...	28	2.00	28	8.32	28	16.40	28	16.40	American....	448.9	60.2	30.0	Copenhagen, Den.	General.....	8,000	9,294 6,861
J. L. Lucken- bach.....	28	8.00	28	9.24	28	19.05	28	19.05	American....	407.7	53.7	24.8	Boston, Mass....	General.....	6,547	7,098 5,065
Panama.....	28	10.30	28	11.22	28	19.35	28	19.35	American....	445.0	58.0	27.6	New York, N. Y.	General.....	8,258	8,787 6,275
East Indian ¹⁰ ...	28	12.00	28	6.12	28	13.32	29	13.55	American....	600.0	65.3	30.0	New York, N. Y.	General.....	7,740	17,044 11,488
Manchuria.....	28	12.00	28	7.13	28	14.30	30	6.10	American....	241.0	41.2	13.3	San Francisco, Cal	General.....	7,740	17,044 11,488
Tulsa ¹⁰ ...	24	14.20	29	7.14	29	15.35	31	9.40	American....	107.2	23.0	10.0	San Antonio, Calif	(¹⁴).....	128	238 163
Cauca ¹⁰ ...	29	00.20	29	10.37	29	17.45	29	23.20	Colombian....	485.0	62.3	29.6	Buenaventura, Col	Grain, general..	9,828	10,802 7,595
Lochkatrine ¹⁰ ...	29	9.50	29	10.37	29	17.45	29	23.20	British....	485.0	62.3	29.6	Vancouver, B. C.	Grain, general..	9,828	10,802 7,595
William A. McKenney..	20	8.00	29	11.10	29	19.05	29	19.05	American....	395.0	55.0	26.0	Rotterdam, Holland	Lumber, ore.....	8,600	9,993 4,990
Canadian	29	13.05	29	13.52	29	21.18	30	5.10	British....	400.0	52.0	15.0	Baltimore, Md....	General.....	1,050	6,192 4,402
Highlander....	29	19.00	30	6.02	30	13.52	31	10.14	British....	425.0	57.0	26.0	Montreal, Canada	Gasoline.....	8,623	7,133 5,159
Tuscarora ¹⁰ ...	29	23.00	30	6.43	30	14.30	30	14.30	American....	435.0	57.0	27.0	London, England	Gasoline.....	9,223	7,461 5,159
H. C. Fogler ¹⁰ ...	29	23.00	30	6.43	30	14.30	30	14.30	American....	435.0	57.0	27.0	Philadelphia, Pa.	Gasoline.....	9,223	7,461 5,159
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
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M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....	9,190	7,481 4,946
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M. F. Elliott ¹⁰ ...	30	4.25	30	7.09	30	15.05	30	15.05	American....	425.0	57.2	25.7	New York, N. Y.	Gasoline.....		

¹⁰ Motor ship.¹¹ Cruiser.¹² Tender.¹³ For orders.¹⁴ Plathum and general.¹⁵ Towing barge No. 2.¹⁶ Lumber, piling, and hay.

Ship	Date	31	6.40	31	8.55	31	17.55	31	17.55	American	Charles Nelson & Co.	324.0	46.2	23.7	Seattle, Wash.	Baltimore, Md.	Lumber, general.	4,448	3,983	2,629
Swiflet	August 26	31	6.05	31	9.58	31	18.00	31	17.55	Colombian	Estadado S. S. Co.	227.4	31.7	13.3	Buenaventura, Col.	Cristobal, C. Z.	Coffee, hides	613	1,154	663
Urbie	August 26	31	12.50	31	12.08	31	19.30	31	23.45	British	Pacific Steam Nav. Co.	550.3	67.0	30.8	Talcahuano, Chile	Liverpool, England	General	6,114	17,146	12,015
Orduna	August 27	31	12.50	31	13.40	31	21.30	31	23.40	American	Swayne & Hoyt	324.0	46.2	21.6	Powell River, B. C.	New Orleans, La.	General	3,460	3,984	2,617
Point Perlin	August 28	31	14.17	31	15.20	31	22.35	31	23.00	American	Tempa Intercean Co.	435.0	57.5	26.0	Fusan, Korea.	New York, N. Y.	(*)	7,901	7,982	5,911
Hanover	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
Sabotana	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
Albert E.	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
Watts	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
Bagaduce	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
S-14	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
S-15	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
S-17	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
Zenon	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
Haadem	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
Tekoa	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
Amerikland	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
Ethan Allen	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
Seattle	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
Flatbottom	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
Eno	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
No. 31023	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138
No. 31052	August 29	31	15.45	31	16.30	9-1	11.00	9-1	11.00	American	Rampwood Line, Inc.	386.8	52.2	23.5	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,879	5,708	4,138

* Tanker. ** U. S. Navy tug. ** Submarine. ** Motor barge. ** Launch. ** Barge. ** Lumber, sugar, and general. ** Sugar, copra, and coconut oil. ** Towing barges. ** Towed by launch Eno.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.					* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—		
August 26	Pastores	United Fruit Co.	Port Limon, Costa Rica.	August 26	Banan	United Fruit Co.	Mobile, Ala.		
August 26	Danzig	Hamburg-American Line.	Hamburg via Habana.	August 26	Pastores	United Fruit Co.	New York via Habana.		
August 27	Ula	United Fruit Co.	New York via Habana.	August 27	Danzig	Hamburg-American Line.	Port Limon, Costa Rica.		
August 27	Inapaquina ²⁶	United Fruit Co.	Colon, R. P.	August 27	Heredia	United Fruit Co.	New Orleans via waypoints.		
August 28	Denver ²⁷	U. S. Navy	Puerto Cabezas, Honduras.	August 28	Inapaquina ²⁶	United Fruit Co.	Colon, R. P.		
August 28	Cristobal	Panama Railroad S. S. Line.	New York via Haiti.	August 28	Ula	United Fruit Co.	Port Limon, Costa Rica.		
August 29	Suriname	United Fruit Co.	New Orleans, La.	August 29	Resolute ²⁸	D. L. Lynton	San Andres and Bluefields.		
August 29	Zacapa	United Fruit Co.	New York via Kingston.	August 29	Anachucuna ²⁶	United Fruit Co.	Colon, R. P.		
August 29	Resolute ²⁸	D. L. Lynton	Colon, R. P.	August 30	Zacapa	United Fruit Co.	New York via waypoints.		
August 30	Coppename	Hamburg-American Line.	Bocas del Toro, R. P.	August 30	Suriname	United Fruit Co.	Port Limon via Bocas.		
August 30	Tenitonia	American Fruit & S. S. Co.	New Orleans, La.	August 30	Coppename	United Fruit Co.	Port Limon, La.		
August 30	Anachucuna ²⁶	United Fruit Co.	Colon, R. P.	August 31	Tenitonia	American Fruit & S. S. Co.	San Blas, R. P.		
August 30	Anachucuna ²⁶	United Fruit Co.	Colon, R. P.	August 31	Anachucuna ²⁶	United Fruit Co.	Port Limon and Puerto Barrios.		
August 31	Inapaquina ²⁶	United Fruit Co.	Colon, R. P.	August 31	Inapaquina ²⁶	United Fruit Co.	Colon, R. P.		
August 31	Virginia	American Fruit & S. S. Co.	San Blas, R. P.	August 31	Virginia	American Fruit & S. S. Co.	Colon, R. P.		
September 1	Carare	Elders & Fyfe, Ltd.	Avonmouth via waypoints.	September 1	Carare	Elders & Fyfe, Ltd.	New Orleans, La.		
September 1	Cartago	United Fruit Co.	New Orleans via Habana.	September 1	Carare	Elders & Fyfe, Ltd.	Avonmouth via Kingston.		

²⁶ Motor boat.

²⁷ Cruiser.

²⁸ Schooner.

* Other than ships passing through the Canal.

(Continued on page 64, column 2.)

Tanker Traffic Through The Panama Canal in August, 1928.

During the month of August, 1928, 95 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 520,764, on which tolls of \$459,139.45 were collected. Cargo amounted to 495,713 tons. In point of net tonnage, tanker traffic for the past month showed a decrease of 22.2 per cent under the same traffic for the corresponding month a year ago, while cargo tonnage decreased 16.9 per cent under the cargo tonnage of August, 1927.

Tank ships comprised 18 per cent of the total commercial transits through the Canal during the month; made up 21.3 per cent of the total Panama Canal net tonnage; were the source of 20.8 per cent of the tolls collected; and carried 20.4 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of August, 1928, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for August, 1927:

Nationality.	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
Belgian.....	1	4,976	\$3,582.72	.....
British.....	9	47,001	35,196.56	7,289
Danish.....	1	5,623	4,048.56	.....
Danzig.....	1	6,310	4,543.20	.....
German.....	1	4,574	3,293.28	.....
Norwegian.....	2	9,501	6,840.72	.....
Swedish.....	1	4,497	3,237.84	.....
United States.....	30	169,607	124,470.27	14,413
Totals, August, 1928.....	46	252,089	185,213.15	21,702
Totals, July, 1928.....	49	264,688	195,784.18	18,521
Totals, June, 1928.....	51	270,917	207,154.95	53,676
Totals, August, 1927.....	62	353,368	256,276.41	7,638
<i>Pacific to Atlantic.</i>				
British.....	19	102,084	105,926.30	175,992
Danzig.....	2	12,465	13,130.00	23,090
French.....	1	4,635	5,030.00	7,860
Norwegian.....	2	7,948	8,737.50	16,179
United States.....	25	141,543	141,102.50	250,890
Totals, August, 1928.....	49	268,675	273,926.30	474,011
Totals, July, 1928.....	46	241,854	246,324.35	443,962
Totals, June, 1928.....	39	211,872	215,261.95	382,036
Totals, August, 1927.....	54	315,850	314,781.25	589,231

Of the tanker traffic shown above, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for August, 1927:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
August, 1928.....	34	187,964	\$135,334.08	.....
July, 1928.....	33	176,648	129,046.42	5,831
June, 1928.....	37	202,294	147,178.32	4,641
August, 1927.....	52	297,107	214,209.09	7,638
<i>From Los Angeles.</i>				
August, 1928.....	32	170,030	173,221.25	301,968
July, 1928.....	39	209,472	212,735.30	384,358
June, 1928.....	27	141,569	144,231.95	261,233
August, 1927.....	43	254,004	251,755.00	469,890

Executive Order.

The area of land hereinafter described, to be known as Bruja Point Military Reservation, situated in the Canal Zone, is hereby set apart and assigned to the uses and purposes of a military reservation under the jurisdiction of the Secretary of War; but said area shall be subject to the civil control and jurisdiction of the Governor of The Panama Canal, in conformity with the Panama Canal Act.

The boundaries of said reservation are described as follows:

Beginning at a point where the meridian 79° 36' intersects the mean low water line at Venado Beach and following along a course of due north along the meridian 79° 36' for a distance of 8,400 feet more or less to a concrete monument marked A, whose geodetic coordinates are 8° 55' north and 79° 36' west; thence along a course of due east for a distance of 8,708 feet to a concrete monument marked B; thence along a course of S. 45° 00' E. for a distance of 2,710 feet to a concrete monument marked C, which is a point on the western boundary of tract No. 1 of the Palo Seco Leper Colony Reservation; thence along the western boundary of tract No. 1 on a course of S. 13° 30' W. for a distance of 1,412 feet to a concrete monument marked D, which is the southwest corner of tract No. 1 of the Palo Seco Leper Colony Reservation; thence along the southern boundary of tract No. 1 following a course of S. 76° 30' E. for a distance of 1,500 feet more or less to its intersection with the mean low water line near Batcle Point; thence along the mean low water line in a southerly and westerly direction to the point of beginning. The area of the reservation, as described, is 1,804 acres, plus or minus. All bearings refer to the true north and coordinates to the Panama Colon datum.

The above area is shown on Map of Bruja Point Military Reservation, U. S. Engineer Office, Balboa Heights, C. Z., dated February 18, 1928, revised March 12 and May 24, 1928. File No. 2778.

CALVIN COOLIDGE

THE WHITE HOUSE,
August 11, 1928.

[No. 4947]

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending September 1, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Danzig	Hamburg-American Line	August 26....	August 26....	78	(¹)
Ammon	Hamburg-American Line	August 26....	August 26....	48	48
Hessen	Hamburg-American Line	August 26....	August 26....	138	(¹)
Pastores	United Fruit Co.	August 26....	August 26....	8	84
Ucayali	Peruvian Line	August 26....	August 27....	(¹)	116
Santa Luisa	Grace Line	August 27....	August 27....	(¹)	280
Benjamin Franklin	Fred Olsen & Co.	August 27....	August 28....	(¹)	97
Havana Maru	Osaka Shosen Kaisha	August 27....	August 28....	656	(¹)
Ulua	United Fruit Co.	August 27....	August 29....	758	20
Venezuela	Panama Mail S. S. Co.	August 27....	August 29....	431	68
Takaoka Maru	Nippon Yusen Kaisha	August 28....	August 28....	204	(¹)
Teno	Chilean Line	August 28....	August 29....	(¹)	113
Jamaica	Pacific Steam Navigation Co.	August 29....	August 29....	.....	841
Resolute	R. Feuillebois	August 29....	August 29....	(¹)	32
Rialto	Nav. Libera-Triestina Line	August 29....	August 30....	208	49
Cristobal	Panama Railroad S. S. Line	August 29....	.....	5,624	.....
Zacapa	United Fruit Co.	August 29....	August 30....	517	580
Suriname	United Fruit Co.	August 29....	August 30....	719	84
Cauca	National Navigation Co.	August 29....	August 31....	143	336
Coppename	United Fruit Co.	August 30....	August 30....	82	37
Murla	North German Lloyd	August 30....	August 30....	197	(¹)
Rapot	Roland Line	August 30....	August 31....	34	200
Teutonia	Hamburg-American Line	August 30....	August 31....	320	196
Virginia	American Fruit & S. S. Corp.	August 30....	August 31....	378	3
Santa Tecla	N. O. & S. A. S. S. Co.	August 30....	August 31....	77	60
Limon	United Fruit Co.	August 30....	August 31....	724	58
Bennekom	Royal Netherlands S. S. Co.	August 31....	September 1....	350	392
Uribe	United Fruit Co.	August 31....	.....	613	.....
Orduna	Pacific Steam Navigation Co.	August 31....	August 31....	2	16
Loebgoll	Pacific Steam Navigation Co.	August 31....	September 1....	155	39
Losada	Pacific Steam Navigation Co.	August 31....	September 1....	(¹)	144
Virginia	American Fruit & S. S. Corp.	September 1....	September 1....	(¹)	314
Haarlem	Royal Netherlands S. S. Co.	September 1....	September 1....	2	45
Zenon	French Line	September 1....	September 1....	29	17
Cartago	United Fruit Co.	September 1....	.....	437	.....
Heredia	United Fruit Co.	September 1....	August 27....	.....	42

¹ No cargo discharged.

² No cargo laded.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Diesel oil is sold by the Canal at \$2.20 per barrel.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.25 per barrel at Balboa and Cristobal. Diesel oil, Balboa only, \$1.80 per barrel.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers at \$8.00 per ton of 2,240 pounds at Cristobal, and \$11.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, \$8.00 per ton at Balboa. When coal is delivered from lighters in quantities of 50 tons or more, the price is \$9.00 per ton at Cristobal, \$12.00 at Balboa. If less than 50 tons is taken from lighters, prices are \$11.00 per ton at Cristobal and \$14.00 per ton at Balboa with minimum charge for 20 tons and maximum charge not to exceed that for 50 tons at \$9.00 Cristobal and \$12.00 Balboa. For furnishing lump coal for galley use, or run of mine coal, in sacks, \$6.00 additional per ton; but if vessels furnishes sacks \$3.00 additional per ton.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

For trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, when requested, an additional charge of 90 cents per ton will be made for extra handling.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide the means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective, in the course of handling large traffic through the Canal in over 13 years of operation.

Ships' Chandlery Supplies.

Panama Canal storehouses stock a complete line of ships' chandlery supplies available for sale to shipping at cost prices plus 25 per cent surcharge, which surcharge includes freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 61.

PORT OF BALBOA.

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	Line.	Date.	Vessel.	Line.
August 27.....	Carabobo.....	Colombian Government.	August 27.....	Chiman ³⁰	Isthmian Land & Fruit Co.
August 31.....	Craftsman ²⁹	R. J. McArdle Contracting Co.	August 27.....	Craftsman ²⁹	R. J. McArdle Contracting Co.
August 31.....	Chiman ³⁰	Isthmian Land & Fruit Co.	August 31.....	Ginyo Maru.....	Nippon Yusen Kaisha.....
August 31.....	Isthmian Land & Fruit Co.	R. J. McArdle Contracting Co.	August 31.....	Craftsman ²⁹	R. J. McArdle Contracting Co.
August 31.....	Nippon Yusen Kaisha	Hongkong, China.	August 31.....	A. B. de O'Barrio ³¹	Pacific Fruit Co.
August 31.....	Pacific Fruit Co.	Bayano River, R. P.	August 31.....	Dos Hermanos ³¹	A. Valdez.....
August 31.....	A. Valdez.....	Bayano River, R. P.			

* Other than ships passing through the Canal.

³⁰ Motor schooner.

³¹ Motor ship.

³² Tug.

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OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., September 12, 1928. No. 6.

Danish Scientific Ship "Dana" Transits Canal.

The steam yacht *Dana*, owned by the Ministry of Agriculture of the Danish Government, arrived at Cristobal on August 25, 1928, from Copenhagen, Denmark, on the first leg of a scientific expedition that will take about 2½ years to complete. The vessel transited the Canal on August 27, and, after taking on fuel and commissary supplies, sailed on September 10 for Tahiti.

The *Dana* left Denmark last June, and has been making studies of deep sea life en route to the Isthmus. These studies will be continued through the South Pacific, North Pacific, and the Indian Oceans, the return trip to Denmark to be made via the Suez Canal. The vessel is equipped with modern instruments for such research and with facilities for preserving the live specimens.

The *Dana* is 134 feet long, 23 feet beam, and of 354 registered gross tons. She carries a crew of 25 men.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 5, 1928.

No. 435.

The following is quoted from Hydrographic Office Notice to Mariners No. 34, dated August 25, 1928:

1. "*Nicaragua, East Coast, Puerto Cabezas (Bragman Bluff), Light Discontinued.*—In consequence of the establishment of the new group flashing white light, the old fixed white light at Puerto Cabezas has been discontinued.

"Approximate position—14° 01' 32" N., 83° 22' 52" W.

2. "*Colombia, West Coast, Buenaventura River Approach, Palmas Island Light—Information.*—The master of the Italian steamer *Carso* reported that on June 4, 1928, Palmas Island Light was showing a group of 2 flashes every 10 seconds, and not as stated in the Light List.

"The master also reported that the light showed red from 67° to 113°.

"This report was confirmed by the master of the American steamer *Santa Tecla* on June 30, 1928.

"Approximate position—3° 53' 28" N., 77° 22' 12" W.

3. "*West Indies, Virgin Islands, St. Thomas Harbor, Rupert Rock Light, New Structure.*—About September 10, 1928, Rupert Rock Light will be reexhibited, 16 feet above the water, from a gray post without other change.

"Approximate position—18° 19' 45" N., 64° 55' 35" W.

4. "*Porto Rico, South Coast, Port Arroyo, Shoal Located.*—A recent survey shows a depth of 17 feet at mean low water 0.85 mile 204° from Port Arroyo Range Front Light, in latitude 17° 57' 05" N., longitude 66° 04' 12" W."

H. BURGESS,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 8, 1928.

No. 438.

The following was received from the Lighthouse Subdivision, The Panama Canal:

PANAMA BAY—PACIFIC OCEAN.

"Commission Rock gas buoy established on September 4, 1928, in 36 feet of water, M. L. W. S., on the following bearings:

Taboga Light, 12° 00' (N. 9/16 E. mag.).

Flamenco Light, 212° 00' (SSW. 3/8 W. mag.).

Urava Island R. T., 337° 00' (NNW. 1/2 W. mag.).

Color of aid—Red and black, horizontal stripes.

Color of light—Red.

Characteristic—Fashing thus: ½ second light, 1½ seconds dark, period of 2 seconds.

Focal plane—16 feet; visibility, 5 miles. F. KARIGER, Pilot in Charge."

H. BURGESS,
Acting Governor.

MOVEMENTS OF OCEAN VESSELS. *Week ending at midnight, September 8, 1928.*

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Ionic	9-1	15.45	2	6.15	2	12.56	2	14.24	British	Shaw, Savill & Albion.	500.3	63.3	28.6	London, England	Wellington, N. Z.	General	6,455	12,872	9,577
Salvador	8-24	19.50	2	6.10	2	13.40	2	15.35	British	Pacific Steam Nav. Co.	215.0	33.5	17.6	Cristobal, C. Z.	Champerio, Guat.	General	1,193	1,270	735
Turakina	9-2	00.20	2	7.10	2	14.32	2	18.35	British	N. Z. Shipping Co.	460.0	62.5	26.0	Liverpool, England	Auckland, N. Z.	General	8,744	10,618	7,806
Vietolia	2	4.50	2	7.15	2	14.38	2	18.23	British	Imperial Oil Co.	510.0	68.2	23.0	Quebec, Canada	Talara, Peru	Ballast	11,575	7,945	
Californian	2	11.05	2	11.20	2	17.54	2	21.35	American	Amer-Hawaiian Line.	445.0	59.8	22.0	New York, N. Y.	Portland, Ore.	General	4,135	8,567	6,020
Maple Branch	2	11.25	2	12.53	2	19.23	2	20.35	British	Nautilus S. S. Co.	400.0	52.0	19.0	Liverpool, England	Valparaiso, Chile	General	2,217	5,618	4,116
Mundela	2	12.15	2	12.55	2	20.18	2	21.23	American	Munson, McCork Line.	370.0	53.2	22.0	Baltimore, Md.	Tacoma, Wash.	Steel, general	4,750	5,668	4,297
Kastala	2	1.35	2	14.42	2	21.20	2	22.44	British	Donaldson Brothers.	381.9	52.2	16.6	Glasgow-England	Vancouver, B. C.	General, bananas	1,114	5,530	3,917
N. P. Nielsen	2	14.40	2	14.50	2	22.55	3	18.14	Norwegian	Molson and Melson.	481.0	57.2	32.5	Norfolk, Va.	Hobart, Tasmania	Ballast	10	388	7,609
Alonso	2	15.22	2	15.40	3	10.33	3	12.00	American	Finkbine Guild Lurn. Co.	381.0	52.2	24.3	New Orleans, La.	San Francisco, Cal.	General	6,150	5,732	4,131
Abron	2	15.55	3	6.09	3	12.46	4	19.25	Danish	East Asiatic Co.	410.0	55.2	17.2	Newcastle-on-Tyne	Vancouver, B. C.	Coke, general	2,049	7,067	5,286
Rochester	8-31	16.40	3	6.00	6	11.48			American	U. S. Navy	380.0	64.0	26.0	Cristobal, C. Z.	Balboa, C. Z.				
Limon	9-3	6.00	3	6.20	3	13.32	3	14.35	American	United Fruit Co.	330.6	44.0	20.6	Port Limon, C. R.	San Francisco, Cal.	Coffee, bananas	776	3,675	2,229
Mittelmeer	3	3.05	3	8.40	3	15.02	3	20.20	German	Atlantic Tank Rhederie	411.9	54.0	19.8	Liverpool, England	Talara, Peru	Ballast	6,605	4,340	
Sylvan Arrow	3	8.20	3	8.40	3	15.42	3	17.04	American	Standard Oil Co.	467.6	62.7	20.0	Baltimore, Md.	Los Angeles, Calif.	Ballast	9,698	6,862	
Benedek	3	7.30	3	9.15	3	16.05	3	21.20	British	Anglo-Saxon Pet. Co.	430.0	58.0	18.0	Greenock, England	Los Angeles, Calif.	Ballast	7,285	4,856	
Robin Hood	3	9.05	3	9.30	3	17.05	3	18.14	American	Seas Shipping Co.	424.0	55.0	27.0	Baltimore, Md.	Tacoma, Wash.	General	8,957	7,473	5,533
Haus Leonhard	3	2.10	3	10.58	3	18.05	3	19.35	German	Colombian Transp. Co.	230.8	36.8	14.0	New York, N. Y.	Tunaco, Colombia	Cattle, general	194	1,568	909
Schuyllkill	3	12.35	3	15.00	3	21.49	3	22.40	British	Anglo-American Oil Co.	476.0	63.8	19.0	Avonmouth, Eng.	Los Angeles, Calif.	Ballast	9,197	6,390	
K. Kistiakis	4	6.40	4	6.50	8	16.27	8	17.35	Greek	Alex. Cross & Sons	385.0	49.0	14.0	Oran, Algeria	Arica, Chile	Ballast	4,885	3,479	
Alaska	3	16.30	4	9.35	4	16.10	4	17.25	French	French Line	425.0	54.8	18.1	Havre, France	Vancouver, B. C.	(S)	1,328	6,989	4,854
Leikauger	4	1.45	4	10.20	4	17.27	4	18.47	Norwegian	Westfal Larsen & Co.	515.0	52.3	18.3	Buenos Aires, Arg.	Vancouver, B. C.	General	2,891	5,953	4,354
Steele	4	13.35	4	13.45	4	20.35	4	21.40	American	Ore S. S. Corp.	550.2	72.2	20.0	New York, N. Y.	Cruz Grande, Chile	Ballast	15,551	4,297	
Edenton	4	16.40	4	10.55	5	10.32	5	11.35	American	Roosevelt S. S. Co., S. B.	409.6	54.2	22.0	New York, N. Y.	Salmon, China	General	6,017	7,478	5,906
K. R. Kingsbury	4	18.48	4	20.00	5	11.00	5	13.10	American	Standard Oil Co.	440.0	58.0	21.0	Baltimore, Md.	Los Angeles, Calif.	Ballast	9,033	5,938	
Taiho Maru	4	18.15	5	6.10	5	13.06	5	14.25	Japanese	Kokusan Kisen Kaisha.	407.3	50.10	26.0	Baltimore, Md.	Osaka, Japan	Steel, phosphates	6,604	6,170	4,537
Olalipper	4	19.25	5	6.10	5	13.22	5	14.40	British	British Tanker Co.	410.0	53.5	20.0	Falmouth, England	Los Angeles, Calif.	Ballast	5,942	4,037	
J. R. Gordon	5	00.40	5	7.15	5	14.57	5	17.15	American	Crown Willamette	409.8	54.2	19.0	Galveston, Texas	Portland, Ore.	Sulphur	3,500	6,581	4,784
Japanese	5	4.20	5	7.10	5	14.13	5	15.25	British	Paper Co.	441.6	60.0	26.0	New York, N. Y.	Manila, P. I.	General	6,913	9,240	6,152
Prinze	5	9.40	5	9.50	5	16.14	5	17.15	British	Blue Star Line.	415.6	56.0	20.0	Tyne, England	Los Angeles, Calif.	Ballast	7,517	5,458	
Normanstar	5	10.25	5	10.40	5	17.33	5	18.30	American	Standard Shipping Co.	429.0	59.0	19.0	Wilmington, N. C.	Los Angeles, Calif.	Ballast	7,825	5,616	
Joseph Seep	5	10.05	5	11.15	5	17.38	5	19.09	American	Luckenbach Line.	445.0	58.0	22.6	Boston, Mass.	Seattle, Wash.	General	5,571	8,699	6,363
Honora Luck	5	9.45	5	12.50	5	19.37	5	21.08	American	Ore S. S. Corp.	449.0	57.0	19.6	Baltimore, Md.	Cruz Grande, Chile	Ballast	7,808	5,139	
Sandwich	5	10.05	5	11.15	5	17.38	5	19.09	American	Luckenbach Line.	445.0	58.0	22.6	Boston, Mass.	Seattle, Wash.	General	5,571	8,699	6,363
Enbark	5	9.45	5	12.50	5	19.37	5	21.08	American	Ore S. S. Corp.	449.0	57.0	19.6	Baltimore, Md.	Cruz Grande, Chile	Ballast	7,808	5,139	

¹ Tanker.

² Motor ship.

³ Whaler.

⁴ Cruiser.

⁵ Iron, steel, and general.

Bolton Castle.	5 10.12	5 13.50	5 21.40	5 23.06	British.	Barber S. S. Line.	424.0	53.0 87.3	New York, N. Y.	Chinwangtao, China	General.	7,289	6,537	4,837
Los Angeles.	4 2.00	5 14.25	5 20.34	5 21.45	German.	Hamburg-America Line	432.5	53.2 24.0	Hamburg, Germany	Vancouver, B. C.	General, bananas	7,415	8,454	6,344
Yokohama.	5 4.00	5 15.05	6 9.41	6 11.10	British.	DuPont and Co.	423.0	56.0 25.0	New York, N. Y.	San Antonio, Chile.	Steel rails, etc.	7,560	6,229	4,524
Navy launch.	6 6.10	6 20.20	6 13.41	6 15.00	American.	U. S. Navy.	525.3	62.8 24.6	Cristobal, C. Z.	Balboa, C. Z.	General.	3,473	13,137	9,067
Oroya.	5 16.52	6 6.20	6 14.15	6 18.00	British.	Pacific Steam Nav. Co.	420.0	53.9 23.6	Liverpool, England	Talcahuano, Chile.	General.	7,207	7,099	5,016
Cedarbank.	5 23.00	6 7.30	6 15.06	6 19.00	British.	Andrew Weir & Co.	405.0	52.0 18.0	Philadelphia, Pa.	Taku Bar, China.	General.	5,851	4,284	
Cape of Good Hope.	6 4.00	6 8.30	6 15.56	6 23.48	American.	Lytle Shipping Co.	406.0	64.0 24.5	Rotterdam, Holland	Vancouver, B. C.	Ballast.	2,715	10,350	6,382
Santa Maria.	5 11.45	6 13.55	6 17.48	6 19.00	British.	Furness Withy & Co.	430.0	57.0 18.3	Glasgow-England	Vancouver, B. C.	General, bananas	924	8,405	5,855
London Im-	6 13.45	6 13.55	6 20.20	6 21.40	American.	Tidewater Oil Co.	419.5	56.5 23.0	New York, N. Y.	San Francisco, Cal.	Ballast.	7,060	5,025	
Salina.	6 21.18	7 6.15	7 12.54	7 13.55	American.	Standard Oil Co.	500.0	68.2 19.10	London, England	Los Angeles, Calif.	Ballast.	11,225	7,913	
F. R. Hillman.	7 6.05	7 6.20	7 13.12	7 14.30	American.	Amer-Hawaiian Line.	404.0	53.0 19.0	Boston, Mass.	Seattle, Wash.	General.	3,679	6,754	4,800
Oregonian.	7 5.40	7 7.25	7 14.06	7 19.42	American.	Dollar Line	502.1	62.2 26.0	New York, N. Y.	Shanghai, China.	General.	3,226	12,660	9,254
President Polk.	7 7.10	7 7.55	7 14.50	7 21.01	American.	Iskhaman S. S. Lines	424.0	56.0 26.0	New York, N. Y.	San Francisco, Cal.	Steel, general.	8,142	7,611	5,450
Selma City.	7 3.20	7 9.00	7 16.17	7 17.35	American.	Williams S. S. Line.	406.0	54.0 18.2	Baltimore, Md.	Seattle, Wash.	Sand, general.	4,300	6,510	4,827
Wilmington.	7 4.45	7 10.65	7 17.17	7 18.30	British.	Ellerman Lines, Ltd.	436.0	48.0 25.6	New York, N. Y.	Adelaide, Australia.	General.	5,424	9,037	6,517
City of Roubaix.	4 18.35	7 11.50	7 18.30	7 19.40	Dutch.	Holland-American Line	469.4	50.3 19.3	Rotterdam, Holland	Vancouver, B. C.	General, bananas	2,803	8,515	6,060
Kinderkirk.	4 16.30	8 1.10	8 14.01	8 15.15	Dutch.	Royal Neth. S. S. Co.	200.0	30.4 12.6	Cristobal, C. Z.	Guayaquil, Ecuador	General.	205	1,183	742
Baralt.	7 20.15	8 6.15	8 13.55	8 15.00	American.	Transmarine Lines	324.0	46.0 23.0	New York, N. Y.	Seattle, Wash.	General.	3,782	5,984	2,612
Sucolanco.	7 14.28	8 6.30	8 14.59	8 16.05	Greek.	Rethymos & Kuluk's.	251.0	43.6 20.6	Tenerife, Can'y Is.	Taltal, Chile.	Ballast.	2,746	2,656	1,437
Aria Marina.	7 21.40	8 7.30	8 15.07	8 16.20	American.	Ford Motor Co.	425.0	57.2 22.0	Savannah, Ga.	Vancouver, B. C.	General.	7,204	4,769	
Onondaga.	8 2.35	8 7.40	8 15.51	8 17.40	American.	Atlantic Refining Co.	291.0	56.0 28.0	Fall River, Mass.	Los Angeles, Calif.	Case oil, general.	8,492	6,078	
Bohemian Club.	8 6.15	8 8.20	8 16.11	8 17.32	American.	Amer-Pioneer Lines, S.B.	440.0	56.0 28.0	New York, N. Y.	Manila, P. I.	Steel, general.	8,347	7,611	5,454
Eclipse.	8 9.00	8 9.40	8 17.21	8 18.35	American.	Ore S. S. Corp.	424.0	56.0 28.0	Philadelphia, Pa.	Batavia, Java.	Ballast.	7,862	5,049	
Steel Navigator.	8 9.35	8 10.00	8 17.53	8 19.00	American.	Iskhaman S. S. Lines	431.0	59.2 20.0	Baltimore, Md.	Talara, Peru.	General.	4,032	7,004	5,017
Herodian Falk.	7 17.55	8 13.12	8 19.53	8 22.30	German.	Oil Transport Co.	438.0	55.0 22.5	Hamburg, Germany	Valparaiso, Chile.	General.			
Hauri.						Hamburg-America Line								

* Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Pacific Spruce	1 22.50	2 3.55	2 14.48	2 14.45	American.	Dimon S. S. Corp.	410.5	54.0 23.0	Gray's Hbr., Wash.	New York, N. Y.	Lumber	8,200	6,624	4,757
Baralt.	2 8.20	2 9.35	2 16.30	2 16.30	Dutch.	Royal Neth. S. S. Co.	210.0	33.0 14.6	Guayaquil, Ecuador	Cristobal, C. Z.	(1)	367	1,183	742
Aladdin.	2 21.10	3 6.05	3 13.40	3 13.40	American.	Standard Transp. Co.	435.6	56.2 26.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	8,736	7,408	5,112
Sunco.	2 22.30	3 6.59	3 14.40	3 14.40	American.	Transmarine Lines.	324.0	56.2 26.0	Dollarion, B. C.	Port Newark, N. J.	Lumber	4,000	3,984	2,612
Aconagua.	3 4.00	3 8.15	3 15.25	3 20.34	Chilean.	South American Line.	422.8	56.2 26.0	Valparaiso, Chile.	New York, N. Y.	General	5,251	7,764	4,705
Leban.	4 2.30	4 6.11	4 15.10	4 15.00	American.	Ore S. S. Corp.	549.6	72.2 34.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	20,000	14,325	6,635
Haban.	4 3.24	4 6.49	4 16.15	4 19.25	German.	Hamburg-American Line	440.0	53.0 25.9	Valparaiso, Chile.	Hamburg, Germany	Nitrates, general.	7,418	7,621	5,313
Cisneros.	8-25 17.00	4 8.02	4 16.15	4 19.30	Colombian.	Colombian Government.	171.6	21.0 12.0	Buenaventura, Col.	Pto. Colombia, Col.	Ballast.			
Westfalen.	9-3 23.15	4 7.43	4 16.22		German.	Colombian Transp. Co.	169.0	31.0 11.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee, general.	171	804	503
K. I. Lucken-														
bach.	4 7.45	4 8.41	4 17.25	4 17.25	American.	Luckenbach Line.	446.0	56.1 28.0	Portland, Oreg.	Boston, Mass.	General	7,725	8,552	6,236
Iowa.	4 8.00	4 9.01	4 18.15	4 18.15	French.	French Line	448.9	53.3 26.0	Valparaiso, Chile.	Le Havre, France.	General	8,131	7,469	5,020
Houmont.	4 4.15	4 9.59	4 18.35	5 7.50	Finnish.	G. Erikson	292.4	43.2 22.0	Sanfa Rosa, Peru.	Jacksonville, Fla.	Guano	4,100	2,416	2,188
Minnesota.	4 8.20	4 10.16	4 18.20	4 18.20	American.	Amer-Hawaiian Line	407.7	53.7 26.6	Portland, Oreg.	Boston, Mass.	General	7,045	7,150	5,024
Maranki.	4 20.40	5 6.30	5 13.25	5 13.25	British.	Shaw, Savill & Albion	483.0	64.2 26.4	Dundee, N. Z.	Glasgow-England	Frozen, general.	6,777	11,706	8,320
San Francisco														
Maru.	4 22.00	5 7.16	5 15.20	5 18.35	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0 28.0	Portland, Oreg.	Europe.	Wheat	7,856	6,245	4,704
Bradley.	5 6.15	5 7.45	5 18.10	5 18.10	British.	Leeds Shipping Co.	400.0	54.3 25.6	Vancouver, B. C.	New York, N. Y.	Lumber	7,500	6,961	5,265
Winterhude.	5 3.00	5 10.28	5 20.02	6 8.25	Finnish.	G. Erikson	285.5	40.5 22.0	Sanfa Rosa, Peru.	Antwerp, Belgium	Guano	3,200		
El Lobo.	5 11.20	5 12.00	5 19.50	5 22.45	British.	C. T. Bowring & Co.	385.2	51.0 24.0	La Libertad, Ecuador	Philadelphia, Pa.	Crude oil.	6,215	4,851	3,326

* Sailing ship.

* Tanker.

* Coffee, cocoa, and ivory mts.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Francis E. Powell ¹	5	18.40	6	5.58	6	14.15	6	14.15	American.	Atlantic Refining Co.	431.0	59.2	26.6	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline.	9,521	7,680	5,101
Sun ²	5	19.45	6	6.42	6	14.55	6	14.55	American.	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Chesler, Pa.	Gasoline.	13,289	9,620	6,424
Pacific Trader ³	5	20.10	6	7.30	6	15.33	6	15.33	British.	Furness, Widby & Co.	420.0	56.0	27.0	Vancouver, B. C.	Glasgow-England.	General.	8,063	7,905	5,869
Jefferson Myers	5	20.00	6	8.10	6	16.45	6	16.45	American.	State S. S. Co.	435.0	56.0	29.0	Portland, Oreg.	Norfolk, Pa.	Lumber, general.	9,650	8,300	6,020
Algonquin ⁴	6	6.40	6	8.58	6	17.15	6	17.15	American.	Standard Transp. Co.	435.0	56.0	26.6	Los Angeles, Calif.	New York, N. Y.	Gas oil.	9,499	7,602	5,337
Halo ⁵	6	8.05	6	9.36	6	18.20	6	18.20	American.	Cities Service Corp.	435.0	56.0	29.0	Los Angeles, Calif.	Philadelphia, Pa.	Crude oil.	11,500	7,434	5,145
Calli ⁶	6	8.00	6	10.14	6	18.35	7	13.22	German.	North German Lloyd.	227.2	32.9	11.6	Guayaquil, Ecuador	Pto. Colombia, Col.	Machinery, gen.	251	1,105	698
Cerrito ⁷	6	8.40	6	10.21	6	18.40	10	10.08	German.	Hamburg-American Line	228.0	34.4	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	Machinery, gen.	730	1,572	1,011
Ansaldo San Giorgio II ⁸	6	2.30	6	11.12	6	19.08	7	6.50	Italian.	Soc. Nav. Di Nav.	391.7	51.5	24.0	N. Westmins ¹ , B. C.	Liverpool, England	Lumber.	6,000	5,591	3,975
Larry Doherty ⁹	6	11.20	6	12.25	6	20.28	6	20.28	American.	Richfield Oil Co.	430.0	59.0	28.8	Los Angeles, Calif.	Fall River, Mass.	Gasoline.	10,354	7,494	5,181
San Carlos ¹⁰	8-28	15.02	6	13.30	6	21.38	6	21.38	British.	Lago Shipping Co.	305.0	50.0	10.0	Balboa, C. Z.	Maracaibo, Venez.	Ballast.			
K. Kistakis ¹¹	6		6		8	18.27			Greek.	G. Kistakis	385.0	49.0	14.0	Paraiso, C. Z.	Gatun Lake, C. Z.	Ballast.			
W. S. Rheem ¹²	7	6.00	7	15.00	7	19.15	7	19.15	American.	Standard Oil Co. of Cal.	500.0	68.2	28.6	Los Angeles, Calif.	London, England.	Gasoline.	13,800	11,224	7,895
Broad Arrow ¹³	7	4.00	7	6.55	7	15.50	7	15.50	American.	Standard Transp. Co.	468.0	62.6	26.8	Los Angeles, Calif.	New York, N. Y.	Gasoline.	11,333	9,700	6,842
City of San Francisco ¹⁴	6	14.10	7	7.14	7	15.21			Panama.	Panama Mail S. S. Co.	296.0	46.0	16.3	San Francisco, Cal.	Cristobal, C. Z.	Case oil, general	1,022	3,848	2,006
San Mateo ¹⁵	7	00.22	7	7.05	7	15.22	8	11.15	American.	United Fruit Co.	315.0	44.2	19.3	San Francisco, Cal.	Port Limon, C. R.	Lumber, general	429	3,496	2,141
Virginian ¹⁶	7	3.00	7	7.47	7	16.30	7	16.30	American.	Amer-Hawaiian Line	495.0	58.2	29.0	Seattle, Wash.	Boston, Mass.	Ballast.	8,000	10,491	7,601
Florence ¹⁷	6	21.10	7	8.01	7	17.15	7	17.15	Colombian.	Colombian Transp. Co.	150.0	27.2	6.6	Pto. Armutelles R. P.	Cristobal, C. Z.	General.	3,541	2,835	1,805
Mincola ¹⁸	7	6.20	7	8.27	7	17.25	7	20.15	American.	N. O. & S. A. S. Co.	298.6	40.0	21.1	Iquique, Chile.	New Orleans, La.	General.	12,315	10,084	7,426
Japan Arrow ¹⁹	7	6.30	7	8.42	7	17.45	7	17.45	American.	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif.	Providence, R. I.	Frozen, general.	4,506	12,846	9,439
Rotonda ²⁰	7	1.00	7	13.25	7	20.00	7	20.00	British.	N. Z. Shipping Co.	530.0	61.4	24.9	Wellington, N. Z.	London, England.	Gasoline.	7,428	5,997	4,069
San Tiburcio ²¹	7	12.50	7	14.10	7	22.30	8	2.00	British.	Eagle Oil Transport Co.	413.0	53.2	24.0	Los Angeles, Calif.	Land's End, Eng.	Case oil, general	6,040	5,654	4,123
Sutherland ²²	7	13.55	7	14.40	7	22.55	7	22.55	American.	Charles Nelson & Co.	380.0	53.2	23.0	Everett, Wash.	Baltimore, Md.	Lumber, general.	8,558	7,611	5,450
Steel Trader ²³	7	14.40	7	15.19	8	00.19	8	4.33	American.	Isthmian S. S. Lines	424.2	56.0	26.0	Noumea, N. Calid.	Baltimore, Md.	Ballast.			
Martha ²⁴	5	18.13	7	15.56	8	12.30	8	12.30	Norwegian.	Chr. Hannevig	181.0	30.0		Pedregal, R. P.	Cartagena, Colom.				
Byron D. Benson ²⁵	7	16.45	8	6.04	8	13.45	8	13.45	American.	Tidewater Oil Co.	465.4	60.2	26.5	Los Angeles, Calif.	New York, N. Y.	Naphtha tops	10,877	8,546	5,860
Fernbank ²⁶	7	18.50	8	6.30	8	14.25	8	14.25	Norwegian.	Fearnley & Eger.	382.7	53.4	25.8	Kolschchang, Siam.	Habana, Cuba.	Rice in bags	7,350	6,112	4,265
Watertown ²⁷	8	5.50	8	7.06	8	15.15	8	15.15	American.	Cities Service Co.	416.9	56.2	27.0	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline.	9,700	6,717	4,778
Firpark ²⁸	7	21.50	8	7.30	8	17.00	8	17.00	British.	J. & J. Denholm, Ltd.	280.1	41.9	16.0	Yavaros, Mexico.	New York, N. Y.	Chick peas	2,000	2,212	1,379
Modavia ²⁹	7	20.45	8	8.19	8	16.05	8	16.05	British.	Donaldson Line.	385.2	53.4	26.8	Victoria, B. C.	Glasgow-England.	Wheat, general	5,831	6,719	4,979
La Paz ³⁰	8	1.00	8	8.55	8	17.40	8	17.40	British.	Pacific Steam Nav. Co.	406.3	54.2	29.0	Coral, Chile.	London, England.	Wheat, general	8,196	7,216	4,912
Yandura ³¹	8	8.25	8	9.07	8	17.45	8	17.45	British.	Gow, Harrison & Co.	375.1	51.7	24.0	Los Angeles, Calif.	Curaçao, D. W. I.	Gasoline.	5,832	5,073	3,537
King Neptune ³²	8	9.10	8	9.48	8	18.30	8	20.55	British.	Balfour, Guthrie & Co.	400.7	54.8	23.8	Portland, Oreg.	Dublin, Ireland.	Wheat.	7,087	6,279	4,336
Queenwood ³³	8	9.45	8	10.33	8	19.10	8	21.10	British.	Can-Amey S. S. Co.	370.5	56.3	21.8	Puget Sound, Wash.	Grimsby, England.	Lumber, wheat.	6,750	4,973	3,581

⁸ Motor ship.⁹ August 28 for dry docking only.¹⁰ Departed from Gatun Lake to Arica, Chile.¹¹ Chrome ore, sugar, and canned pineapples.¹² Coffee, hides, and general.¹³ Nitrate, copper, and general.¹⁴ Hides, coffee, and general.¹⁵ Tanker.

Tilthorn.....	8 10 55	8 11 44	8 20 15	8 20 15	Norwegian.....	O. G. & F. H. Olson.....	420 2	53.9	29.0	Tocopilla, Chile.....	Sord, Canada.....	10,450	6,591	4,780
Munbeaver.....	8 11 55	8 12 50	8 21 27	8 21 27	American.....	Munson S. S. Line.....	384.8	51.2	25.0	San Francisco, Cal.....	Boston, Mass.....	6,285	5,571	4,083
Chickasaw City	8 14 15	8 15 12	8 22 25	8 22 25	American.....	Isthmian S. S. Lines.....	395.5	55.0	25.0	Englewood, B. C.....	New York, N. Y.....	6,927	7,322	5,287

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
September 2.	War Nizam.	British Admiralty	Curacao, D. W. I.	September 2.	Ulva.	United Fruit Co.	New York via Habana.
September 2.	Ulva.	United Fruit Co.	Port Limon, Costa Rica.	September 2.	Cristobal.	Panama R. R. S. S. Line.	New York via Haiti.
September 2.	Mayari.	United Fruit Co.	New York, N. Y.	September 2.	Mayari.	United Fruit Co.	New York via Kingston.
September 2.	Macabi.	United Fruit Co.	New York, N. Y.	September 3.	Cartago.	United Fruit Co.	New Orleans via wayports.
September 3.	Tolosa.	United Fruit Co.	New York via Habana.	September 3.	Linda S. ¹⁷ .	Surgeon Brothers	Bluefields, Nicaragua.
September 4.	Linda S. ¹⁷ .	Surgeon Brothers	Colon, R. P.	September 3.	William M. ¹⁸ .	G. I. Bryan	Bluefields, Nicaragua.
September 5.	Saramacca.	United Fruit Co.	New Orleans, La.	September 5.	Inapaquina ¹⁹ .	United Fruit Co.	Colon, R. P.
September 5.	Venezuela.	Royal Netherlands S. S. Co.	Amsterdam via wayports.	September 5.	Macabi.	United Fruit Co.	Cartagena and Puerto Colombia.
September 5.	Santa Marta.	United Fruit Co.	New York via Kingston.	September 5.	Venezuela.	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
September 5.	William M. ¹⁸ .	United Fruit Co.	Colon, R. P.	September 5.	Tolosa.	United Fruit Co.	Port Limon, Costa Rica.
September 5.	Inapaquina ¹⁹ .	United Fruit Co.	Bocas del Toro, R. P.	September 6.	Saramacca.	United Fruit Co.	Bocas del Toro and Puerto Colombia.
September 6.	Suriname.	United Fruit Co.	New Orleans, La.	September 6.	Santa Marta.	United Fruit Co.	New York via wayports.
September 6.	Favorita.	American Fruit & S. S. Corp.	Hayre via wayports.	September 6.	Suriname.	United Fruit Co.	New Orleans, La.
September 6.	Macoris.	French Line	Colon, R. P.	September 6.	Anachucuna ¹⁹ .	United Fruit Co.	Colon, R. P.
September 6.	Anachucuna ¹⁹ .	United Fruit Co.	Colon, R. P.	September 6.	Favorita.	American Fruit & S. S. Corp.	San Blas, R. P.
September 7.	Venezuela.	Royal Netherlands S. S. Co.	Port Limon, C. R.	September 6.	War Nizam.	British Admiralty	Curacao, D. W. I.
September 7.	Eupatoria.	Hamburg-American Line.	Vera Cruz, Mexico.	September 7.	Eupatoria.	Hamburg-American Line.	Hamburg via wayports.
September 7.	Inapaquina.	United Fruit Co.	Colon, R. P.	September 7.	Inapaquina.	United Fruit Co.	Colon, R. P.
September 8.	Favorita.	American Fruit & S. S. Corp.	San Blas, R. P.	September 7.	Favorita.	American Fruit & S. S. Corp.	New Orleans, La.
September 8.	Parusima.	United Fruit Co.	New Orleans via Habana.	September 8.	Macoris.	French Line.	Hayre via wayports.
September 8.	Maravi.	United Fruit Co.	Puerto Colombia.	September 8.	Venezuela.	Royal Netherlands S. S. Co.	Amsterdam via wayports.

PORT OF BALBOA.

PORT OF BALBOA.									
17 Motor schooner.			18 Schooner.			19 Motor boat.			
September 2.....	Rakuyo Maru.....	Nippon Yusen Kaisha	Valparaiso, Chile.	September 2.....	Rakuyo Maru.....	Nippon Yusen Kaisha	September 2.....	Rakuyo Maru.....	Hongkong, China.
September 2.....	San Luis ²⁰	Chiriqui Land Co.	Pto. Armaelles, R. P.	September 2.....	Chuman ²²	Isthmian Land & Fruit Co.	September 3.....	Chuman ²²	El Real, R. P.
September 2.....	Cricamola ²⁰	Chiriqui Land Co.	Pto. Armaelles, R. P.	September 2.....	San Luis ²⁰	Chiriqui Land Co.	September 3.....	San Luis ²⁰	Pto. Armaelles, R. P.
September 4.....	Craftman ²¹	M. J. Dady Engr. & Const. Co.	Buenaventura, Colombia.	September 4.....	A. B. de O'Barrio ²⁰	Pacific Fruit Co.	September 6.....	A. B. de O'Barrio ²⁰	Bayano River, R. P.
September 5.....	Cathwood.....	Union Oil Co. of Calif	Los Angeles, Calif.	September 5.....	Dos Hermanos ²⁰	A. Valdez	September 6.....	Dos Hermanos ²⁰	Bayano River, R. P.
September 6.....	A. B. de O'Barrio ²⁰	Pacific Fruit Co.	Bayano River, R. P.	September 6.....	Cathwood.....	Union Oil Co. of Calif	September 7.....	Cathwood.....	Los Angeles, Calif.
September 6.....	Dos Hermanos ²⁰	Pacific Fruit Co.	Bayano River, R. P.	September 6.....	San Luis ²⁰	Chiriqui Land Co.	September 8.....	San Luis ²⁰	Pto. Armaelles, R. P.
September 6.....	Chuman ²²	Isthmian Land & Fruit Co.	El Real, R. P.	September 6.....					
September 8.....	San Luis ²⁰	Chiriqui Land Co.	Pto. Armaelles, R. P.	September 8.....					

* Other than ships passing through the Canal.

²⁰ Motor schooner.

²¹ Tug.

²² Motor ship.

¹⁹ Motor boat.

¹⁸ Schooner.

¹⁷ Motor schooner.

Commercial Traffic Through the Panama Canal in August, 1928, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of August, 1928, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for August, 1927, and 1926. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes, and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	84	442,373	344,038	552,975	343,360	\$382,916.82	219,421
East coast of United States to west coast So. Amer.							
British.....	7	23,954	18,927	32,152	19,395	21,069.87	19,990
Chilean.....	2	9,377	6,899	14,620	7,952	8,623.75	4,706
German.....	1	2,817	1,545	2,593	1,526	1,931.25	224
Norwegian.....	1	4,730	4,105	6,583	4,119	3,405.60	.....
Swedish.....	2	8,917	7,486	30,676	8,762	6,420.24	.....
United States.....	14	57,279	47,714	81,143	48,508	46,074.61	18,130
Totals.....	27	107,074	86,676	167,767	90,262	87,525.32	43,050
Europe to west coast of South America:							
British.....	6	40,630	31,995	53,407	32,938	38,104.48	16,781
Colombian.....	1	29	23	117	39	20.88	.....
Danish.....	2	4,787	3,150	5,104	3,169	3,857.00	5,939
Dutch.....	2	11,413	8,307	13,850	10,157	10,383.75	7,901
French.....	2	8,742	6,947	11,175	6,820	8,683.75	2,794
German.....	3	14,453	10,203	16,285	9,973	12,753.75	13,764
Italian.....	2	12,744	7,911	16,683	9,878	9,888.75	2,579
Spanish.....	1	3,729	2,960	5,087	3,000	3,700.00	388
Yugoslavian.....	1	3,288	2,355	3,724	2,324	2,643.75	4,864
Totals.....	20	99,795	73,851	125,432	78,298	90,336.11	55,010
Europe to west coast of United States:							
British.....	4	16,996	14,473	22,489	13,442	12,915.88	6,475
Danish.....	1	5,625	4,670	7,691	4,710	4,048.56	.....
Danzig.....	1	6,310	5,346	8,940	5,050	4,543.20	.....
German.....	1	4,574	3,832	6,358	3,637	3,293.28	.....
Norwegian.....	6	29,840	23,293	38,093	22,945	23,754.47	16,045
Swedish.....	4	20,226	13,476	22,562	16,884	14,848.07	9,244
United States.....	1	7,895	6,052	9,838	6,019	5,684.40	.....
Totals.....	18	91,464	71,142	115,971	72,687	69,087.86	31,764
Europe to west coast Canada:							
British.....	11	57,819	42,174	67,887	42,069	47,386.19	13,181
Danish.....	2	10,655	8,442	13,297	8,490	10,552.50	7,410
French.....	2	10,339	8,346	13,636	8,381	10,432.50	7,841
German.....	2	12,312	9,342	12,957	7,854	11,677.50	9,430
Italian.....	1	6,025	5,056	7,098	4,498	6,320.00	3,423
Totals.....	18	97,150	73,360	114,875	71,292	86,368.69	41,285
East coast of United States to Far East:							
British.....	2	9,989	5,723	9,387	5,692	7,153.75	14,500
Danish.....	2	5,722	4,115	6,878	4,142	5,143.75	9,655
Japanese.....	6	31,987	24,710	38,432	24,201	30,887.50	41,980
Norwegian.....	1	4,222	2,487	4,302	2,450	3,108.75	7,100
Swedish.....	1	5,213	4,170	6,865	4,972	5,212.50	5,487
United States.....	3	17,795	11,803	19,168	11,701	14,753.75	27,777
Totals.....	15	74,928	53,008	85,032	53,158	66,260.00	106,499
Cristobal, C. Z., to west coast of South America:							
Colombian.....	4	1,081	1,026	1,722	1,027	1,263.70	1,990
Dutch.....	1	742	294	780	323	367.50	129
German.....	6	8,963	6,310	11,038	6,259	7,854.85	3,959
Totals.....	11	10,786	7,630	13,540	7,609	9,486.05	6,078

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to Australasia:							
British.....	7	41,370	29,614	47,081	29,638	\$37,017.50	35,030
Norwegian.....	1	4,343	2,500	4,319	2,441	3,125.00	6,600
United States.....	1	5,823	5,395	6,870	5,259	6,743.75	4,195
Totals.....	9	51,536	37,509	58,270	37,338	46,886.25	45,825
Europe to Australasia:							
British.....	7	55,439	38,788	63,055	39,105	48,485.00	42,654
French.....	1	5,364	4,287	7,133	4,335	5,358.75	2,677
Totals.....	8	60,803	43,075	70,188	43,440	53,843.75	45,331
Around the world:							
British.....	1	5,861	3,129	5,299	3,091	3,911.25	4,998
Norwegian.....	2	7,603	5,671	9,461	5,773	7,088.75	8,698
United States.....	4	27,063	20,275	33,089	19,853	25,343.75	19,937
Totals.....	7	40,527	29,075	47,849	28,717	36,343.75	33,633
East coast of United States to west coast of Canada:							
British.....	3	13,453	9,370	15,066	9,282	9,686.16	.....
United States.....	3	13,185	9,678	15,320	9,500	12,097.50	16,380
Totals.....	6	26,638	19,048	30,386	18,782	21,783.66	16,380
East coast of Central America to west coast of United States:							
Norwegian.....	1	2,080	1,305	2,166	1,298	1,631.25	1,992
United States.....	5	14,331	12,680	20,596	12,601	14,138.68	2,898
Totals.....	6	16,411	13,985	22,762	13,899	15,769.93	4,890
East coast of United States to Philippine Islands:							
British.....	2	12,182	6,728	12,028	6,744	8,410.00	11,298
Norwegian.....	1	4,358	2,415	4,111	2,356	3,018.75	7,303
United States.....	1	6,063	4,838	7,597	4,754	6,047.50	8,315
Totals.....	4	22,603	13,981	23,736	13,854	17,476.25	26,916
Foreign ships in ballast, U. S. intercoastal:							
Belgian.....	1	4,976	4,568	7,138	3,988	3,582.72	.....
British.....	1	5,095	4,242	7,045	4,371	3,668.40	.....
Norwegian.....	1	3,876	3,438	5,923	3,381	2,790.72	.....
Totals.....	3	13,947	12,248	20,106	11,740	10,041.84	.....
East coast of United States to west coast of Central America:							
British.....	1	1,379	1,209	1,955	1,191	1,511.25	.....
German.....	1	1,469	1,155	1,930	1,128	1,057.68	.....
United States.....	1	244	227	545	236	175.68	.....
Totals.....	3	3,092	2,591	4,430	2,555	2,744.61	.....
East coast of Canada to west coast of South America:							
British.....	3	20,339	17,557	29,877	18,104	14,644.08	.....
East coast of Canada to Aus- tralasia:							
British.....	3	12,858	9,935	16,405	10,039	12,418.75	9,563
South American intercoastal:							
German.....	1	698	618	1,023	616	772.50	206
Norwegian.....	1	504	423	732	391	528.75	150
Peruvian.....	1	2,405	989	3,305	1,514	1,236.25	275
Totals.....	3	3,607	2,030	5,060	2,521	2,537.50	631
Cristobal, C. Z., to west coast of Central America:							
British.....	3	2,063	1,900	3,436	1,906	2,353.90	3,085
East coast of United States to Hawaiian Islands:							
United States.....	2	7,194	5,007	8,366	5,014	6,258.75	10,421

THE PANAMA CANAL RECORD

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of Central America to west coast of South America:							
United States.....	2	432	533	743	538	\$364.50	.....
Cristobal, C. Z., to west coast of United States:							
Panaman.....	1	2,603	1,383	2,461	1,384	1,728.75	2,928
United States.....	1	1,549	1,167	1,974	1,161	1,458.75	2,109
Totals.....	2	4,152	2,550	4,435	2,545	3,187.50	5,037
East coast of South America to west coast of United States:							
Norwegian.....	1	4,375	2,431	4,000	2,485	3,038.75	3,049
United States.....	1	5,014	3,508	5,550	3,533	4,385.00	2,154
Totals.....	2	9,389	5,939	9,550	6,018	7,423.75	5,203
Canadian intercoastal:							
British.....	1	4,186	3,322	5,439	3,336	4,152.50	2,511
East coast of Canada to Far East:							
British.....	1	5,115	3,623	5,714	3,629	4,528.75	6,680
Europe to west coast of Cen- tral America:							
German.....	1	3,751	2,480	4,381	2,515	3,100.00	4,817
Europe to Hawaiian Islands:							
British.....	1	3,754	2,954	4,863	2,951	3,692.50	5,491
Europe to Far East:							
Norwegian.....	1	4,114	3,228	5,247	3,267	2,962.08	.....
West Indies to west coast of United States:							
United States.....	1	1,443	1,270	2,264	1,301	1,038.96	.....
East coast of Central America to Australasia:							
British.....	1	4,042	2,603	4,221	2,633	3,253.75	5,658
East coast of Central America to Far East:							
Danish.....	1	4,467	2,690	4,473	2,737	3,362.50	7,503
East coast of South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	2,906
Africa to west coast of Canada:							
British.....	1	4,810	4,134	6,695	4,122	3,463.20	.....
Africa to Australasia:							
British.....	1	4,098	3,199	5,225	3,168	3,998.75	6,920
Gatun Lake, C. Z., to Balboa, C. Z.:							
United States.....	1	67	67	(1)	(1)	80.40	.....
Grand totals, August, 1928....	271	1,264,859	960,408	1,586,980	967,722	1,084,905.51	752,508
Grand totals, August, 1927....	298	1,387,511	1,079,237	1,751,014	1,073,081	1,167,476.40	669,187
Grand totals, August, 1926....	239	1,157,409	902,488	1,484,333	909,143	999,201.30	689,547

¹ Barge having no registered tonnage.

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	83	441,417	337,086	543,327	340,339	\$421,357.50	603,099
West coast of United States to Europe:							
British.....	20	91,163	67,485	111,427	67,527	84,356.25	156,224
Danish.....	1	5,341	4,257	6,650	4,247	5,321.25	8,841
Danzig.....	1	6,127	5,268	8,939	5,007	6,585.00	11,545
French.....	1	4,635	4,024	6,477	3,488	5,030.00	7,860
German.....	1	6,732	4,909	8,109	4,883	6,136.25	8,978
Norwegian.....	3	13,393	10,021	16,954	10,003	12,526.25	24,009
Swedish.....	1	5,661	3,406	5,642	4,320	4,257.50	7,665
Totals.....	28	133,052	99,370	164,198	99,475	124,212.50	225,122

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to Europe:							
British.....	8	44,761	34,872	56,633	35,176	\$43,590.00	54,890
Danzig.....	1	6,328	5,236	8,956	5,041	6,545.00	11,545
Dutch.....	2	12,750	7,380	12,437	7,737	9,225.00	18,355
French.....	2	9,461	7,105	11,373	7,087	8,881.25	16,084
German.....	7	35,108	25,803	42,149	25,802	32,253.75	56,591
Italian.....	1	4,344	3,768	6,275	3,955	4,710.00	8,450
Norwegian.....	4	12,472	9,248	15,139	9,181	11,560.00	20,559
Spanish.....	1	3,844	3,017	5,205	3,226	3,771.25	1,818
Yugoslavian.....	2	8,341	7,303	11,548	7,303	9,128.75	16,878
Totals.....	28	137,419	103,732	169,715	104,508	129,665.00	205,170
West coast of South America to east coast United States:							
British.....	6	28,588	23,459	40,275	24,157	29,323.75	38,384
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	2,250
Finnish.....	1	1,687	1,673	1,816	1,565	2,024.40	2,950
German.....	1	2,817	1,545	2,593	1,526	1,931.25	294
Norwegian.....	2	7,673	5,719	9,323	5,711	7,148.75	14,600
Panamanian.....	1	4,897	4,014	6,386	4,067	5,017.50	5,475
Peruvian.....	1	1,529	1,483	2,155	1,169	1,834.80	2,112
Swedish.....	2	5,934	5,050	16,939	5,431	6,312.50	21,152
United States.....	11	51,698	42,763	73,765	43,754	53,334.05	110,139
Totals.....	26	109,495	89,139	160,562	91,356	111,218.25	197,356
West coast of Canada to Europe:							
British.....	13	69,156	46,886	77,379	47,731	58,607.50	105,259
Dutch.....	3	20,673	15,186	24,364	15,108	18,982.50	28,624
German.....	2	12,143	7,578	12,806	7,821	9,472.50	14,506
Italian.....	1	6,497	4,963	8,124	5,128	6,203.75	9,233
Norwegian.....	2	11,767	9,784	15,606	9,818	12,230.00	17,798
Swedish.....	1	4,033	2,316	3,877	2,912	2,895.00	5,558
United States.....	1	4,964	3,663	5,856	3,663	4,578.75	8,400
Totals.....	23	129,233	90,376	148,012	92,181	112,970.00	189,378
West coast of South America to Cristobal, C. Z.:							
Colombian.....	5	1,744	1,643	2,826	1,654	2,044.35	1,930
Dutch.....	1	742	294	780	323	367.50	410
German.....	4	3,296	2,151	3,922	2,034	2,656.10	1,035
Norwegian.....	1	606	485	855	482	606.25	683
Peruvian.....	1	2,405	989	3,305	1,514	1,236.25	2,143
Totals.....	12	8,793	5,562	11,688	6,007	6,910.45	6,201
West coast of United States to east coast of Central America:							
United States.....	7	21,519	18,922	30,515	18,795	23,599.45	16,203
West coast of Canada to east coast of United States:							
British.....	4	18,415	12,877	20,675	12,947	16,096.25	29,692
United States.....	2	7,062	5,068	8,025	4,991	6,335.00	9,718
Totals.....	6	25,477	17,945	28,700	17,938	22,431.25	39,410
Philippine Islands to east coast of United States:							
Japanese.....	4	20,970	17,684	26,933	17,108	22,105.00	27,925
United States.....	1	5,956	5,510	7,700	5,599	6,887.50	9,846
Totals.....	5	26,926	23,194	34,633	22,707	28,992.50	37,771
West coast of South America to east coast of Canada:							
British.....	4	25,827	22,039	37,181	22,352	27,548.75	52,205
Australasia to Europe:							
British.....	4	28,482	22,430	32,908	20,554	28,037.50	26,268
Australasia to east coast of Canada:							
British.....	4	18,318	14,239	23,479	14,383	17,798.75	12,932
Far East to east coast of United States:							
Japanese.....	1	4,769	3,511	5,652	3,451	4,388.75	4,357
United States.....	2	11,156	8,320	12,004	7,389	10,400.00	12,302
Totals.....	3	15,925	11,831	17,656	10,840	14,788.75	16,659

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of Central America to Cristobal, C. Z.:							
British.....	3	2,063	1,900	3,436	1,906	\$2,353.90	1,122
Canadian intercoastal:							
British.....	2	7,168	5,897	9,104	5,750	7,371.25	10,490
West coast of Central America to east coast of United States:							
Danish.....	1	1,469	1,188	1,970	1,206	1,485.00	2,484
German.....	1	1,167	816	1,432	811	1,020.00	2,103
Totals.....	2	2,636	2,004	3,402	2,017	2,505.00	4,587
South American intercoastal:							
German.....	1	698	618	1,023	616	772.50	330
Norwegian.....	1	504	423	732	391	362.88	.....
Totals.....	2	1,202	1,041	1,755	1,007	1,135.38	330
Balboa, C. Z. to Cristobal, C. Z.:							
United States.....	2	895	851	1,839	894	1,053.75	.....
West coast of United States to West Indies:							
British.....	1	4,062	3,579	5,880	3,531	4,473.75	8,206
West coast of United States to Cristobal, C. Z.:							
Panaman.....	1	2,603	1,383	3,644	2,594	1,728.75	1,056
West coast of Canada to West Indies:							
Danish.....	1	3,643	1,919	3,300	1,998	2,398.75	5,109
West coast of Canada to Africa:							
British.....	1	4,335	3,144	5,224	3,136	3,930.00	6,428
Central American intercoastal:							
German.....	1	3,832	3,124	5,096	3,155	2,759.04	.....
West coast of Central America to Europe:							
German.....	1	3,272	2,801	4,165	2,547	2,355.84	.....
West coast of South America to West Indies:							
British.....	1	8,665	7,497	11,877	7,353	6,238.80	.....
Hawaiian Islands to east coast of United States:							
United States.....	1	1,740	1,542	2,647	1,542	1,927.50	1,845
Balboa, C. Z. to east coast of Central America:							
United States.....	1	111	191	401	196	143.25	.....
Balboa, C. Z. to West Indies:							
British.....	1	152	102	525	197	109.44	.....
Far East to Europe:							
Japanese.....	1	4,125	3,319	5,396	3,231	4,148.75	5,881
Grand totals, August, 1928....	255	1,172,387	896,159	1,470,265	902,489	1,114,163.80	1,672,828
Grand totals, August, 1927....	245	1,126,103	878,468	1,437,303	879,491	1,106,564.15	1,760,760
Grand totals, August, 1926....	225	1,073,496	849,614	1,381,787	851,379	1,055,840.61	1,632,150

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Balboa, C. Z., for Two Weeks Ending September 8, 1928.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Takaoka Maru.....	Nippon Yusen Kaisha.....	August 27.....	August 27.....	285	.....
Venezuela.....	Panama Mail S. S. Co.....	August 29.....	August 29.....	46	1
California.....	Panama-Pacific Line.....	August 31.....	August 31.....	.....	170
Santa Tecla.....	Grace Line.....	August 31.....	August 31.....	60	4
Ginyo Maru.....	Nippon Yusen Kaisha.....	August 31.....	August 31.....	159	.....
Ecuador.....	Panama Mail S. S. Co.....	September 1.....	September 9.....	680	.....
Losada.....	Pacific Steam Navigation Co.....	September 1.....	September 1.....	.....	50
Rakuyo Maru.....	Nippon Yusen Kaisha.....	September 2.....	September 2.....	.....	45
Annam.....	East Asiatic Co.....	September 3.....	September 3.....	660	.....
Cathwood.....	Union Oil Co.....	September 6.....	September 6.....	10,336	.....
City of San Francisco.	Panama Mail S. S. Co.....	September 6.....	September 7.....	28	229
President Polk.....	Dollar Line.....	September 7.....	September 7.....	.....	9
San Luis.....	United Fruit Co.....	September 8.....	September 8.....	.....	37

Traffic by Nationality for August, 1928.

The following tabulation shows the commercial traffic through the Canal during the month of August, 1928, classified according to nationality of vessel by direction of transit, and the combined traffic in both directions, with corresponding totals for August, 1927, and 1926:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,976	4,568	7,138	3,988	\$3,582.72	.....
British.....	67	345,462	255,599	418,726	256,846	291,825.91	204,815
Chilean.....	2	9,377	6,899	14,620	7,952	8,623.75	4,706
Colombian.....	5	1,110	1,049	1,839	1,066	1,284.58	1,990
Danish.....	8	31,254	23,067	37,443	23,248	26,964.31	30,507
Danzig.....	1	6,310	5,346	8,940	5,050	4,543.20	.....
Dutch.....	3	12,155	8,601	14,630	10,480	10,751.25	8,030
French.....	5	24,445	19,580	31,944	19,536	24,475.00	13,312
German.....	17	49,715	36,103	57,588	34,124	43,213.31	32,730
Italian.....	3	18,769	12,967	23,781	14,376	16,208.75	6,002
Japanese.....	7	37,808	28,880	45,699	28,588	36,100.00	44,886
Norwegian.....	16	69,347	50,678	83,914	50,290	53,680.37	50,607
Panamanian.....	1	2,603	1,383	2,461	1,384	1,728.75	2,928
Peruvian.....	1	2,405	989	3,305	1,514	1,236.25	275
Spanish.....	1	3,729	2,960	5,087	3,000	3,700.00	388
Swedish.....	7	34,356	25,132	60,103	30,618	26,480.81	14,731
United States.....	125	607,750	474,252	766,038	473,338	527,562.80	331,737
Yugoslavian.....	1	3,283	2,355	3,724	2,324	2,943.75	4,864
Totals, August, 1928.....	271	1,264,859	960,408	1,586,980	967,722	1,084,905.51	752,508
Totals, August, 1927.....	298	1,387,511	1,079,237	1,751,014	1,073,081	1,167,476.40	669,187
Totals, August, 1926.....	239	1,157,409	902,488	1,484,333	909,143	999,201.30	689,547

* Includes barge of 67 net tons, Panama Canal and United States measurements; no registered tonnage.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	72	351,155	266,406	436,003	266,700	\$329,835.89	502,100
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	2,250
Colombian.....	5	1,744	1,643	2,826	1,634	2,044.35	1,930
Danish.....	3	10,453	7,364	11,920	7,451	9,205.00	16,434
Danzig.....	2	12,465	10,504	17,895	10,048	13,130.00	23,090
Dutch.....	6	34,165	22,860	37,581	23,168	28,575.00	47,389
Finnish.....	1	1,687	1,673	1,816	1,565	2,024.40	2,950
French.....	3	14,096	11,129	17,850	10,575	13,911.25	23,944
German.....	18	68,367	48,727	80,272	48,579	58,584.73	83,507
Italian.....	2	10,841	8,731	14,399	9,083	10,913.75	17,683
Japanese.....	6	29,864	24,514	37,981	23,790	30,642.50	38,163
Norwegian.....	14	47,113	36,298	59,632	36,202	45,206.63	77,979
Panamanian.....	2	7,500	5,397	10,030	6,661	6,746.25	6,531
Peruvian.....	2	3,934	2,472	5,460	2,683	3,071.05	4,255
Spanish.....	1	3,844	3,017	5,205	3,226	3,771.25	1,818
Swedish.....	4	15,628	10,772	26,458	12,663	13,465.00	34,375
United States.....	111	546,518	423,916	686,079	427,162	529,616.75	771,552
Yugoslavian.....	2	8,341	7,303	11,548	7,303	9,128.75	16,878
Totals, August, 1928.....	255	1,172,387	896,159	1,470,265	902,489	1,114,163.80	1,672,828
Totals, August, 1927.....	245	1,126,103	878,468	1,437,303	879,491	1,106,564.15	1,760,760
Totals, August, 1926.....	225	1,073,496	849,614	1,381,787	851,379	1,055,840.61	1,632,150

(Continued on next page.)

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

Traffic by Nationality.—Continued.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,976	4,568	7,138	3,988	\$3,582.72	.....
British.....	139	696,617	522,005	854,729	523,546	621,661.80	706,915
Chilean.....	3	14,049	10,332	21,930	11,938	12,915.00	6,956
Colombian.....	10	2,854	2,692	4,665	2,720	3,328.93	3,920
Danish.....	11	41,707	30,431	49,363	30,699	36,169.31	46,941
Danzig.....	3	18,775	15,850	26,835	15,098	17,673.20	23,090
Dutch.....	9	46,320	31,461	52,211	33,648	39,326.25	55,419
Finnish.....	1	1,687	1,673	1,816	1,565	2,024.40	2,950
French.....	8	38,541	30,709	49,794	30,111	38,386.25	37,256
German.....	35	118,082	84,830	137,860	82,703	101,798.04	116,237
Italian.....	5	29,610	21,698	38,180	23,459	27,122.50	23,685
Japanese.....	13	67,672	53,394	83,680	52,378	66,742.50	83,049
Norwegian.....	30	116,460	86,976	143,546	86,492	98,887.00	128,586
Panamanian.....	3	10,103	6,789	12,491	8,045	8,475.00	9,459
Peruvian.....	3	6,339	3,461	8,765	4,197	4,307.30	4,530
Spanish.....	2	7,573	5,977	10,292	6,226	7,471.25	2,206
Swedish.....	11	49,984	35,904	86,561	43,281	39,945.81	49,106
United States.....	236	1,154,268	898,168	1,452,117	900,500	1,057,179.55	1,103,289
Yugoslavian.....	3	11,629	9,658	15,272	9,627	12,072.50	21,742
Totals, August, 1928.....	526	2,437,246	1,856,567	3,057,245	1,870,211	2,199,069.31	2,425,336
Totals, August, 1927.....	543	2,513,614	1,957,705	3,188,317	1,952,572	2,274,040.55	2,429,947
Totals, August, 1926.....	464	2,230,905	1,752,102	2,866,120	1,760,522	2,055,041.91	2,321,697

* Includes barge of 67 net tons, Panama Canal and United States measurements; no registered tonnage.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 10, 1928.

No. 439.

The following is quoted from Hydrographic Office Notice to Mariners No. 35, dated September 1:

"Caribbean Sea, Swan Island, Meteorological and weather information by radio.—The following notice has been received from the United States Weather Bureau, Department of Agriculture:

"The United States Weather Bureau has made arrangements for the reopening of the meteorological station at Swan Island in the western Caribbean Sea (approximately latitude 17° 25' N., longitude 83° 56' W.), in cooperation with the Tropical Radio Telegraph Company, for the months of August, September, and October, 1928.

"Meteorological observations from Swan Island are of great value during the hurricane season, not only to shipping in the Gulf of Mexico and the Caribbean but to the U. S. Weather Bureau in the issuing of its warnings and advice of storms and hurricanes. The observations are taken at 7 a. m. and 7 p. m. daily, 75th meridian time. They are transmitted by radio to the Weather Bureau at Washington on wave lengths of 600 and 630 meters at 7.15 a. m. and 7.15 p. m., 75th meridian time. There is no objection to ships copying these reports for their individual use and information."

H. BURGESS,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 10, 1928.

No. 440.

The following was received by the Hydrographic Office through the Captain of the Port, Cristobal:

"M. S. Westfalen, September 1, 7 p. m.—Passed Buenaventura River Buoy No. 1, latitude 3° 47' north, longitude 77° 19' west, and found that this buoy was not burning. (Signed) P. G. HOTZEL, Master."

H. BURGESS,
Acting Governor.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal Record, Balboa Heights, Canal Zone, or

The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., September 19, 1928.

No. 7.

Canal Traffic During First Fifteen Days of September.

During the first 15 days of September, 232 commercial vessels and 5 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,016,395.25, and on the launches, \$41.34, or a total tolls collection of \$1,016,436.59.

The daily average of transits of commercial vessels was 15.46, and the daily average tolls collection, \$67,759.68. The average amount of tolls paid by each of the commercial transits was \$4,381.01, as compared with \$4,309.98 for the first 15 days of August. Traffic for the first 15 days of September was lower by 11 transits and \$30,929.14 than the traffic for the first 15 days of August, 1928, and lower by 31 transits and \$95,298.57 than the traffic for the first 15 days of September, 1927.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 8½ months of the current calendar year, with the daily averages of transits and tolls:

Month.	Transits.	Tolls.	Transits.	Tolls.
January	540	\$2,212,752.50	17.42	\$71,379.20
February	547	2,253,755.37	18.86	77,715.70
March	542	2,223,370.57	17.48	71,271.63
April	531	2,187,607.82	17.70	72,914.55
May	508	2,118,969.83	16.38	68,353.86
June	481	2,016,211.09	16.03	67,206.43
July	509	2,109,083.19	16.41	68,034.94
August	526	2,199,069.31	16.97	70,937.72
September (first 15 days)	232	1,016,395.25	15.46	67,759.68
Totals	4,416	18,337,214.93	17.05	70,800.06

"City of New York" Transits Canal.

The first unit of the Byrd Antarctic Expedition, the *City of New York*, arrived at Cristobal on September 15, 1928, on the first leg of its voyage from New York to Dunedin, New Zealand, where it will be met by Commander Byrd and other units of the expedition. The vessel transited the Canal on the 17th and set sail the following day for New Zealand. Engine trouble developed, however, in the vicinity of Bona Island and the vessel returned to Balboa for repairs. After necessary repairs are made it will resume its voyage.

The *City of New York*, which is the flag ship of Commander Byrd's expedition, is a 3-masted bark with an auxiliary coal-burning engine. It is built entirely of wood and so constructed that the vessel will lift when in an ice pack. The vessel is about 43 years old and prior to purchase by the Byrd expedition was engaged in the whaling trade under Norwegian registry. It is 147.9 feet long by 31 feet beam, and of 503 gross tons.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, September 15, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Stella	8-25	15 00	9	6 05	9	15 36	9	16 55	Norwegian.	195.1	32.9	16.8	Cristobal, C. Z.	General	1,238	985	606
Cape Cornwall	9-9	7 58	9	8 10	9	15 13	9	16 55	British	405.0	53.0	22.0	Tyne, England	Coke, fire bricks.	4,161	3,741	4,088
Santa Cecilia	9	8 55	9	9 10	9	15 56	9	17 15	American	404.3	53.9	27.0	New York, N. Y.	Steel, general	7,778	6,745	4,562
Yorkmar	9	11 20	9	11 30	9	18 15	9	19 45	American	404.8	54.2	23.6	Baltimore, Md.	Steel, general	6,177	6,757	4,919
Knutte Nelson	8	13 40	9	11 50	9	19 05	9	19 45	Norwegian.	436.0	56.0	17.5	Oslo, Norway	Cement	945	8,016	5,854
El Aleto	9	13 45	9	14 04	9	20 52	9	22 25	British	440.8	57.6	19.4	Hallifax, N. S.	Ballast	7,855	5,049	5,049
Pacific Pine	9	19 45	9	20 15	10	10 31	10	10 31	American	410.5	54.3	22.0	Seattle, Wash.	General	5,055	3,383	4,808
Glasgow Maru	10	3 40	10	6 12	10	14 11	10	15 35	Japanese.	330.0	51.0	25.0	Yokohama, Japan	General	7,491	6,213	4,665
San Mateo	10	3 45	10	6 35	10	14 10	10	15 35	American	330.0	54.2	21.6	Port Limon, C. R.	Bananas, coffee.	1,019	3,496	2,141
Crown City	10	3 45	10	7 20	10	15 07	10	16 25	American	330.0	54.0	19.0	Adelaide, Australia	General	3,000	6,736	4,881
C. O. Stillman	10	6 50	10	7 45	10	14 54	10	16 25	British	565.0	75.0	27.1	New York, N. Y.	Ballast	16,780	9,885	9,885
Cerigo	10	12 40	10	10 08	10	17 17	10	18 35	German	227.0	34.0	14.0	Cristobal, C. Z.	General	371	1,572	1,011
Maine	10	12 40	10	12 45	10	19 30	10	21 15	American	406.0	54.0	27.0	Buenaventura, Col.	Steel, general	6,981	6,936	5,024
Padilla	9	22 30	10	13 35	10	20 20	10	21 50	Colombian	247.2	43.5	16.3	Vancouver, B. C.	Salt	1,250	2,206	1,506
Baron Indische	10	15 15	10	18 10	11	10 12	11	10 26	British	425.0	56.0	21.0	Manure, Col.	General	3,996	7,085	5,254
Wiel	10	18 40	10	18 55	11	13 04	11	14 20	German	449.0	58.2	25.6	Sydney, C. B.	General	4,972	7,816	5,755
William H. Doherty	11	1 15	11	6 20	11	14 01	11	15 10	American	435.0	56.2	20.3	Hamburg, Germany	General	7,406	5,111	5,111
Fort Armstrong	11	7 00	11	7 40	11	15 12	11	16 45	American	324.0	46.0	19.11	New York, N. Y.	Ballast	4,791	3,984	2,628
Trafalgar	11	5 12	11	9 03	11	16 45	11	18 03	British	385.0	52.0	25.3	Los Angeles, Calif.	General	5,969	5,174	3,657
King Howel	11	6 40	11	10 10	11	17 16	11	18 25	British	400.0	52.0	25.0	Valparaiso, Chile	Asphalt	6,001	5,797	4,078
Guatemala	10	16 15	11	11 01	11	17 30	11	18 30	American	360.2	51.6	22.7	Adelaide, Australia	General	2,109	5,776	4,081
Buenaventura	10	9 50	11	11 52	11	19 23	11	20 50	American	251.0	43.0	19.9	New York, N. Y.	General	1,372	2,873	1,776
Orangesiad	11	1 20	11	11 55	11	19 23	11	20 50	British	305.7	50.2	21.0	Guayaquil, Ecuador	Ballast	3,786	9,154	6,966
Texas	11	12 15	11	13 15	11	20 20	11	21 28	American	471.0	57.2	21.0	Balboa, C. Z.	General	3,163	3,984	2,643
Point Gorda	11	12 25	11	14 00	11	21 30	11	22 51	American	324.0	46.0	19.0	Portland, Oreg.	General	1,250	2,206	1,506
Calveston	11	9 20	11	14 20	11	21 40	11	22 51	American	282.0	44.0	19.0	Seattle, Wash.	General	1,250	2,206	1,506
Astral	11	18 50	11	19 05	12	9 23	12	10 24	American	439.5	58.0	21.3	Balboa, C. Z.	General	8,913	6,210	6
Pebo	11	9 30	11	9 30	11	19 23	11	20 50	Panamanian	227.4	31.7	12.2	Los Angeles, Calif.	Ballast	894	1,154	663
Urbe	8-31	18 00	12	6 00	12	16 05	13	11 57	Colombian	125.0	23.0	0	Buenaventura, Col.	General	1,154	288	101
El Panquiao	9-12	6 00	12	6 00	12	16 02	14	23 45	Panamanian	128.0	23.0	0	Panama, P.	Ballast	503	6,162	4,417
Grant	12	6 30	12	6 40	12	15 28	13	12 30	American	444.4	55.0	22.0	San Francisco, Cal.	General	5,300	3,706	3,706
Seekonk	12	00 55	12	7 15	12	17 12	12	18 05	American	390.0	52.0	22.0	Portland, Oreg.	General	6,162	4,417	4,417
Loeclum	12	6 25	12	10 10	12	17 52	12	18 54	British	380.1	50.8	22.0	Falmouth, England	Ballast	5,300	3,706	3,706
East Lynn	12	6 50	12	10 20	12	18 24	12	19 20	British	401.1	54.3	18.0	Los Angeles, Calif.	Ballast	6,784	5,107	5,107
Canadian	12	6 58	12	11 18	12	18 45	12	20 20	British	400.0	52.0	22.0	Newcastle-on-Tyne	General	2,527	5,954	4,139
Conqueror	11	22 45	12	12 10	12	19 47	13	19 30	German	411.0	50.6	25.5	Bluff, N. Z.	General	1,973	6,652	4,704
Nitokris	11	22 45	12	12 10	12	19 47	13	19 30	German	411.0	50.6	25.5	Valparaiso, Chile	General	1,973	6,652	4,704

* Tanker.

* Motor ship.

* Cruiser.

* Motor sloop.

* Steel, naphtha, and general.

* Transport.

[illegible]

THROUGH THE CANAL--PACIFIC TO ATLANTIC.

31	23	05	9	6	25	9	13	50	American	Panama Mail S. S. Co.	380	6	48	7	21	6	San Francisco, Cal.	New York, N. Y.	1,935	5,920	4,178
8	17	40	9	7	15	9	15	35	British	Andrew Weir & Co.	400	0	52	0	28	5	Makatoa, So. Pac.	Helmsborg, Swed	8,200	6,377	4,564
9	6	00	9	8	41	9	15	37	American	Grace Line.	384	0	50	2	16	6	Tecopilla, Chile	New York, N. Y.	978	5,534	3,868
			9	13	05	9	16	20	British	Can. Nat. Steamships	400	3	52	4	17	6	Adelaide, Australia	Montreal, Canada	1,863	5,891	4,115
			9	17	40	9	15	30	Italian	Nav. Libera-Tristina	430	0	55	3	27	0	Vancouver, B. C.	Trieste, Italy.	8,202	7,795	4,178
			9	17	45	9	17	45	American	Huasteca Petroleum Co.	435	0	56	2	26	0	Los Angeles, Calif.	New York, N. Y.	9,664	7,405	5,131
			9	22	40	9	22	40	American	Luckenbach Line.	442	0	57	0	30	0	Portland, Oreg.	New Orleans, La.	8,866	8,568	6,648
			9	10	13	9	13	15	Spanish	Spanish Line	410	0	46	5	23	0	Valparaiso, Chile	Barcelona, Spain...	1,749	3,729	2,729
			9	10	13	9	14	50	American	Sun Oil Co.	429	3	59	2	26	2	San Francisco, Cal.	Miami, Florida.	9,035	7,568	5,283
			9	17	05	9	17	05	American	Redwood Line, Inc.	386	8	53	2	24	6	Mobile, Ala.	New York, N. Y.	6,257	5,706	4,167
			9	10	10	9	16	00	American	Grace Line.	360	2	51	6	42	0	Talcahuano, Chile	New York, N. Y.	3,257	5,726	4,086
			9	11	15	9	11	45	French	French Line	417	8	53	9	35	0	Vancouver, B. C.	Haïve, France.	7,157	4,933	4,933
			9	10	10	9	18	05	German	Knorr & Burchard	293	0	30	18	9	0	Guaymas, Mexico	San Francisco, Cal.	2,733	2,221	1,469
			9	11	37	9	11	37	Dutch.	Royal Neth. S. S. Co.	400	0	58	0	26	0	Valparaiso, Chile.	Billbo, Spain.	8,240	7,819	6,101
			9	14	10	9	14	10	American	Huasteca Petroleum Co.	429	3	56	2	26	4	Los Angeles, Calif.	Hamburg, Germany	9,426	7,709	5,517

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Vietolite ¹	10	18 00	11	7 10	11	15 35	11	15 35	British	Imperial Oil Co., Ltd.	510.0	68.2	29.8	Talara, Peru	Halifax, N. S.	Crude oil	16,400	11,575	8,078
Mantaro	11	5 30	11	7 48	11	17 25	15	6 55	Peruvian	Peruvian Line	367.3	46.0	28.0	Callao, Peru	Covenas, Colombia	(*)	2,261	4,838	2,959
Arana	11	7 30	11	8 18	11	17 25	11	22 35	Peruvian	Pacific Steam Nav. Co.	303.4	63.0	14.4	Guayaquil, Ecuador	New York, N. Y.	(**)	216	2,851	1,776
Lillian Luck- cubach	11	8 00	11	8 53	11	18 05	11	18 05	American	Luckenbach Line	448.0	60.2	29.6	Portland, Ore.	Boston, Mass	Lumber, general	8,400	9,294	6,865
Texmar	11	7 05	11	9 26	11	18 35	11	18 35	American	Calmar S. S. Corp.	410.6	54.3	25.0	Gray's Harbor, Wash.	Philadelphia, Pa.	Lumber	7,647	6,567	4,905
Baron Salkour	11	11 05	11	12 26	11	19 55	11	21 05	British	H. Hogarth & Sons	342.1	58.6	20.0	Vancouver, B. C.	Three Rivers, Can	Lumber	3,052	3,929	2,817
American	11	12 15	11	12 56	11	20 05	11	20 05	American	Amer-Hawaiian Line	404.6	53.9		Portland, Ore.	Boston, Mass	General	6,430	6,777	4,761
Bethore	12	1 00	12	6 17	12	17 35	12	19 32	American	Ore S. S. Corp.	550.3	72.2	35.0	Cruz Grande, Chile	New York, N. Y.	Iron ore	19,800	15,476	4,354
Mongolia	11	12 55	12	6 31	12	13 52	12	14 20	American	Panama-Pacific Line	600.0	65.3	32.8	Cruz Grande, Chile	New York, N. Y.	General	8,000	17,041	11,426
Mitelmeyer ¹	11	22 20	12	7 19	12	17 15	12	17 15	German	Atlantic Tank Rhederei	431.0	55.0	25.2	Talara, Peru	Rio de Janeiro	Gasoline	8,525	6,905	4,340
Willabeo	11	17 45	12	8 19	12	17 55	12	17 55	American	Williams S. S. Line	408.5	58.5	28.0	Seattle, Wash.	New York, N. Y.	Lumber, general	11,503	8,460	6,162
Plum Branch	11	21 55	12	8 44	12	18 35	12	20 05	British	F. & W. Rison	398.5	53.8	21.9	Coronel, Chile	Liverpool, England	Nitrates, copper	9,761	5,761	3,881
Guayaquil	11	22 45	12	9 00	12	19 10	13	12 16	American	Panama R. R. S. S. Line	251.0	43.6	15.0	Guayaquil, Ecuador	New York, N. Y.	General	529	2,874	1,944
Nebraska	12	10 40	12	11 11	12	19 48	13	2 35	American	Royal Mail S. P. Co.	450.2	58.3	27.0	Vancouver, B. C.	Rotterdam, Holland	General	7,917	8,878	6,588
British Gov- ernor ¹	12	6 15	12	11 49	12	20 00	12	20 00	British	British Tankers, Ltd	440.2	57.0	26.9	Los Angeles, Calif.	Land's End, Eng.	Gasoline	9,298	7,554	5,079
Orleans	12	11 35	12	12 35	12	20 30	12	20 30	American	Quaker Line	395.5	55.0	27.0	Portland, Ore.	Philadelphia, Pa.	(*)	8,027	7,330	5,233
Skipska	12	11 45	12	12 42	12	22 05	12	23 40	British	Wm. Brown Atkinson Co	375.0	51.2	24.8	Portland, Ore.	Dublin, Ireland	Wheat	7,121	5,218	3,741
Kako Maru	12	7 00	12	14 53	12	22 55	13	1 30	Japanese	Nippon Yusen Kaisha	405.0	53.0	24.0	Manila, P. I.	Boston, Mass	General	4,724	7,025	5,055
Anthea	12	14 30	12	15 19	13	00 05	13	1 50	British	C. T. Bowring & Co.	385.4	53.0	20.6	Portland, Ore.	Gibraltar ¹	Wheat	7,374	5,788	3,852
Bessener City	12	16 45	12	17 55	13	11 25	13	11 25	American	Isthmian S. S. Lines	441.6	56.2	25.0	Seattle, Wash.	New York, N. Y.	General	11,665	7,611	5,450
Clio ¹	12	16 20	13	6 13	13	13 25	13	13 25	Danish	Deutsch Amer. Post. Co.	439.0	63.0	27.0	Los Angeles, Calif.	Hamburg, Germany	Naphtha	11,665	9,248	6,310
Lio ¹	13	2 00	13	7 07	13	15 45	13	15 45	American	Standard Transp. Co.	431.0	59.0	27.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,365	7,846	5,112
Esparla	13	2 00	13	7 21	13	14 30	14	16 10	American	United Fruit Co.	330.6	44.6	16.6	San Francisco, Cal.	Port Limon, C. R.	General	3,371	2,673	2,367
Challenger ¹	13	1 50	13	8 11	13	16 50	14	00 55	American	Sun Shipbuilding Co.	410.0	56.0	30.0	Seattle, Wash.	Avinmouth, Eng	General	9,952	7,780	5,811
Utacarbon ¹	13	4 30	13	8 23	13	17 55	14	12 45	American	Union Oil Co. of Calif.	435.0	56.0	30.0	Los Angeles, Calif.	Cristobal, C. Z.	Fuel oil	8,869	7,481	5,209
Nordpol ¹	13	4 45	13	8 52	13	18 00	13	18 00	Danish	DuPont de Nemours	380.8	53.9	27.0	Liqueur, Chile	Philadelphia, Pa.	Nitrates	8,700	6,242	4,519
Charles H.	13	7 00	13	9 21	13	18 15	13	18 15	American	Argonaut S. S. Co.	404.6	53.9	28.0	Seattle, Wash.	Baltimore, Md	Lumber, general	7,250	6,755	4,750
Cramp	13	6 30	13	10 34	13	19 05	13	23 30	American	Pomona S. S. Co.	440.0	56.0	28.0	Everett, Wash.	Baltimore, Md	Lumber	8,600	8,324	6,036
Pomona	13	6 00	13	10 35	13	19 25	13	19 25	American	Amer-Hawaiian Line	443.1	59.8	25.8	Tacoma, Wash.	New York, N. Y.	General, lumber	7,776	8,557	6,020
Missourian ¹	14	00 23	14	6 10	14	16 40	14	16 40	American	Ore S. S. Corp.	550.3	72.2	35.0	Cruz Grande, Chile	New York, N. Y.	Iron ore	20,000	15,551	4,297
Marore	13	12 15	14	7 28	14	18 08	14	19 25	American	Cities Service Tr. Co.	416.9	56.2	27.0	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline	8,734	6,706	4,639
Hadnot ¹	13	12 15	14	7 28	14	18 08	14	19 25	American	Shear Steam Ship. Co.	420.0	54.1	25.0	San Francisco, Cal.	Hull, England	Barley ¹ bags	8,341	6,555	5,012
Shefmoont	14	7 55	14	8 24	14	17 05	14	18 35	British	Atlantic Tank Rhederei	412.6	55.1	25.3	San Francisco, Cal.	Land's End, Eng.	Gasoline	8,557	6,979	4,574
Adria ¹	14	9 30	14	10 38	14	17 35	14	17 35	German	Colombian Maritime Co.	230.8	36.1	12.6	Buenaventura, Col.	New York, N. Y.	Coffee, hides	142 ¹	1,568	909
Hans Leon- hardt ¹	14	12 45	14	13 20	14	20 40	15	10 30	German	Babarizza & Co.	423.5	56.0	26.0	Antofagasta, Chile	Azores ¹	Nitrates	9,300	6,561	4,701
Aleksandar I.	14	15 30	14	16 23	15	11 25	15	11 25	Yugoslav		230.8	36.1	12.6						

¹ Coffee, hides, and ivory nuts.² For orders.³ Lumber, sugar, and hay.⁴ Coffee, tagua, and wood.⁵ Copper bars and general.⁶ Launch.⁷ Motor ship.⁸ Tanker.

Gustaf E. Reuter ¹⁸	14	17	15	14	18	15	15	12	50	15	12	50	Swedish	Rederiaktiebolaget Reu.	107.0	55.0	27.6	Los Angeles, Calif.	Land's End, Eng. ¹⁴	Gasoline	8,141	6,384	4,497
Echo ⁹	15	5	15	15	7	26	16	15	12	50	15	12	Panaman	H. A. Borden	480.6	66.0	28.6	Balboa, C. Z.	Cristobal, C. Z.	Ballast			
Sundil ¹⁸	15	5	15	15	6	10	15	14	23	15	17	35	American	Sun Oil Co.	300.0	53.5	26.0	Los Angeles, Calif.	Chester, Pa.	Gasoline	13,753	9,610	6,326
Selvisian	15	00	40	15	7	25	15	16	55	15	16	55	British	Common Brothers	530.0	68.3	29.0	Astoria, Oregon	Dublin, Ireland	Wheat	7,919	5,619	4,127
Oropesa	15	2	00	15	8	15	15	16	38	15	22	00	British	Pacific Steam Nav. Co.	530.0	68.3	29.0	Talcahuano, Chile	Liverpool, England	General	9,372	14,827	10,630
Cauca ⁸	14	18	45	15	9	13	15	15	15	20			Colombian	National Navigation Co.	107.2	22.9	11.0	Buenaventura, Col.	Cristobal, C. Z.	(¹⁴)	188	238	162

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	To—
September 9.	Toledo	United Fruit Co	Port Limon, Costa Rica.	September 9.	Toledo	United Fruit Co	New York via Habana.
September 10.	Dakotian	Leyland Line	Liverpool via wayports.	September 9.	Maravi	United Fruit Co	New York via Kingston.
September 10.	Calamares	United Fruit Co	New York via Habana.	September 10.	Parusina	United Fruit Co	New Orleans and wayports.
September 11.	Teutonia	Hamburg-American Line	Puerto Barrios, Colombia.	September 11.	Dakotian	Leyland Line	Cienfuegos via Port Limon.
September 12.	Coppename	United Fruit Co	New Orleans, La.	September 12.	Teutonia	Hamburg-American Line.	Hamburg via wayports.
September 12.	Metapan	United Fruit Co	New York via Kingston.	September 12.	Calamares	United Fruit Co	Port Limon, Costa Rica.
September 13.	Neon	Panama Railroad S. S. Line.	New Orleans, La.	September 13.	Anaehuena ¹⁵	United Fruit Co	Colon, R. P.
September 13.	Saramacca	United Fruit Co	Bocas del Toro, R. P.	September 13.	Ville Riestra ¹⁵	United Fruit Co	Colon, R. P.
September 13.	Anaehuena ¹⁵	United Fruit Co	Colon, R. P.	September 13.	Metapan	United Fruit Co	New York via wayports.
September 13.	Ville Riestra ¹⁵	Costa Rican Government	Colon, R. P.	September 13.	Coppename	United Fruit Co	Port Limon via Bocas.
September 14.	Commodore Rollins	United Fruit Co	Puerto Colombia.	September 13.	Saramacca	United Fruit Co	New Orleans, La.
September 14.	Inapaquina ¹⁵	United Fruit Co	Colon, R. P.	September 13.	Virginia	American Fruit & S. S. Corp.	San Blas, R. P.
September 15.	Virginia	American Fruit & S. S. Corp.	San Blas, R. P.	September 14.	Inapaquina ¹⁵	Elders & Fyffes, Ltd	Colon, R. P.
September 15.	Heredia	Elders & Fyffes, Ltd	Avenmouth via wayports.	September 15.	Virginia	American Fruit & S. S. Corp.	Avenmouth via Kingston.
September 15.	Jan Van Nassau	United Fruit Co	New Orleans via Habana.	September 15.	Anaehuena ¹⁵	United Fruit Co	New Orleans, La.
September 15.	Anaehuena ¹⁵	Royal Netherlands S. S. Co	Carlagena, Colombia.	September 15.	Commodore Rollins.	United Fruit Co	Perme, R. P.

PORT OF BALBOA.

September 9...	Craftsman ¹⁶	R. J. McArdle Contracting Co.	Buenaventura, Colombia.	September 10...	Nora	Grace Line	Los Angeles, Calif.
September 9...	Nora	Grace Line	Los Angeles, Calif.	September 10...	Craftsman ¹⁶	R. J. McArdle Contracting Co.	Buenaventura, Colombia.
September 10...	Alaska	French Line	High seas.	September 11...	Des Hermanos ¹⁷	A. Valdez	Bayano River, R. P.
September 10...	Bessie ¹⁷	Des Hermanos	Bayano River, R. P.	September 12...	Craftsman ¹⁶	R. J. McArdle Contracting Co.	Buenaventura, Colombia.
September 11...	Craftsman ¹⁶	Isthmian Land & Fruit Co.	High seas.	September 13...	El Real, R. P.	Colombia-Pacific Shipping Co.	Los Angeles, Calif.
September 12...	Craftsman ¹⁶	R. J. McArdle Contracting Co.	High seas.	September 14...	Chunan ¹⁸	Isthmian Land & Fruit Co	El Real, R. P.
September 13...	Dilworth	Colombia-Pacific Shipping Co.	Los Angeles, Calif.	September 15...			
September 14...	Mojave	General Petroleum Corp.	Los Angeles, Calif.				
September 15...	San Luis ¹⁷	Chiriqui Land Co	Pto. Arnuelles, R. P.				

* Other than ships passing through the Canal.

¹⁶ Tug. ¹⁷ Motor schooner. ¹⁸ Motor ship.

Cargo Through Canal During August, 1928.

On pages 84 and 85 of this issue will be found tables showing the origin and destination of cargo passing through the Canal during August, 1928. The aggregate of all cargo for the month was 2,425,336 tons, as compared with 2,429,947 tons passing through the Canal in August of last year. Pacific-to-Atlantic cargo movement decreased 87,932 tons under August, 1927, while the Atlantic-to-Pacific tonnage increased 83,321 tons. The present depression in the California mineral oil movement through the Canal as compared with last year is the chief reason for the decreased Atlantic-bound movement, together with rather heavy decreases in shipments of lumber, nitrates, and ores. While the total decreases in these four commodities aggregate 257,039 tons under August of last year, increases in wheat, canned goods, and barley offset partly this heavy loss.

ATLANTIC-TO-PACIFIC CARGO MOVEMENT.

Origin.—Over 69 per cent of the cargo from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 23 per cent in Europe. Cargo originating in the United States was 76,237 tons, or 17.1 per cent greater than the amount coming from that area in August last year. Cargo from Europe showed a small actual increase, although the percentage of the total cargo passing through the Canal in August, 1928, was somewhat smaller than that coming from Europe in August last year. The actual increase was less than 3,000 tons.

Destination.—Over 40 per cent of the Pacific-bound cargo tonnage was destined to the United States; 24.4 per cent to Asia (including the Philippines); 15.6 per cent to Australasia; and 13.6 per cent to South America. Cargo tonnage to the United States, Asia, and Australasia showed increases of 17,251 tons, or 6 per cent, 69,932 tons, or 60.9 per cent, and 9,411 tons, or 8.7 per cent, respectively, over August last year. While the tonnage to the United States and Australasia showed actual increases, the percentage of the total cargo was smaller in August this year. Cargo to South America showed an actual as well as a relative decrease under that of August, 1927. This decrease amounted to 8,931 tons, or 8.7 per cent.

PACIFIC-TO-ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo tonnage moving in this direction, 56 per cent originated on the west coast of the United States; 27.4 per cent in South America; 9.9 per cent in Canada; 3.3 per cent in Asia (including the Philippines); and 2.7 per cent in Australasia. Cargo from, the United States and South America showed decreases under August 1927, in the amounts of 141,927 tons, or 13.2 per cent, and 25,198 tons, or 5.4 per cent, respectively. The percentage of the total cargo from the United States in August last year was 61.2 per cent as compared with 56 per cent of the total in August this year, while that from South America was, relatively, approximately the same in 1928 as in 1927. Cargo from Canada showed a relative as well as an actual increase. The actual increase amounted to 71,477 tons, or 75.7 per cent, over August, 1927, which heavy increase was accounted for by the increased grain shipments from that area. Cargo tonnage from Asia and Australasia also increased 3,720 tons and 1,537 tons, respectively.

Destination.—Segregated according to destination, 53.1 per cent of the cargo in this direction went to the United States, and 39.2 per cent to Europe. Tonnage to the United States showed an actual decrease of 276,822 tons, or 23.7 per cent, as well as a relative decrease in its proportion of all cargo from the Pacific as compared with August

last year, while that to Europe increased 218,012 tons, or 49.7 per cent, together with a heavy relative increase in proportion of all cargo.

Over 200,000 tons of the decreased tonnage to the east coast of the United States was caused by lessened shipments of mineral oils. Mineral oil shipments to Europe increased approximately 80,000 tons over August, 1927. This item, together with heavy shipments of wheat, made up the larger portion of the gain in cargo tonnage to Europe.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify over 85 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 15 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic-to-Pacific-bound commodities which aggregated more than 10,000 tons for August, 1928, or August, 1927, are listed in the following tabulation, showing differences:

Commodity.	August, 1928.	August, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	10,249	10,327	-78
Automobiles.....	18,779	8,361	+10,418
Cement.....	26,631	36,663	-9,732
Coal and coke.....	17,879	22,795	-4,916
Cotton.....	15,962	12,873	+3,089
Manufactured goods:			
Iron and steel.....	186,714	155,634	+31,080
Machinery.....	17,840	25,071	-7,231
Railroad material.....	10,424	10,043	+381
Tinsplate.....	13,789	14,204	-415
Miscellaneous.....	15,171	7,887	+7,284
Metals, various.....	22,716	11,850	+10,866
Oils, mineral.....	69,494	52,882	+16,612
Paper.....	18,454	14,386	+4,068
Phosphates.....	37,168	19,581	+17,587
Sulphur.....	6,699	12,417	-5,718

The above 15 commodity groups comprise approximately 65 per cent of the cargo moving from the Atlantic to the Pacific during August, 1928. It will be noted that 9 of the items show increases and 6 decreases. The heaviest increases were in iron and steel, phosphates, mineral oils, and metals, while cement, machinery, sulphur, and coal and coke showed the heaviest decreases.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify almost 99 per cent of all cargo moving from the Pacific to the Atlantic during the month of August, 1928. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month a year ago are listed below, showing differences:

Commodity.	August, 1928.	August, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	66,414	48,226	+18,188
Canned goods (fish, fruit, vegetables, etc.).....	78,188	43,544	+34,644
Cold storage (food products).....	9,497	24,026	-14,529
Copra.....	10,707	3,917	+6,790
Fruit, dried.....	11,111	12,432	-1,321
Lumber.....	350,802	390,154	-39,352
Metals, various.....	51,810	44,493	+7,317
Nitrates.....	152,549	221,516	-68,967
Oils, mineral.....	475,301	589,341	-114,040
Ores (principally iron).....	123,733	158,413	-34,680
Sugar.....	61,393	52,129	+9,264
Wheat.....	121,899	44,697	+77,202

* Does not include fresh fruit.

The above 12 commodity groups comprise over 90 per cent of the cargo moving from the Pacific to the Atlantic during August, 1928. Six of the items show increases and 6 decreases. The heaviest increase was in wheat, which showed a gain of 77,202 tons over August, 1927. Mineral oils, nitrates, lumber, and ores decreased heavily.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, August, 1928.
(Figures represent tons of 2,240 pounds.)

From—	SOUTH AMERICA.					NORTH AMERICA.					ASIA.					AUSTRALASIA.			Grand totals.	Per cent of total cargo.					
	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total South America.	West coast of United States.	Canada.	West coast of Central America.	West coast of N. America. ¹	Bahoa, C. Z. ²	Hawaii.	Total, North America.	Japan.	China.	Philippines.	Far East. ¹	Total, Asia.			Australia.	New Zealand.	Australasia. ¹	Total, Australasia.	
NORTH AMERICA:																									
UNITED STATES—																									
North Atlantic ports	18,358	2,036	965	6,725	2,082	30,166	217,970	321	1,514	...	10,169	221,500	42,493	18,164	13,829	15,818	90,304	37,108	2,904	...	40,012	381,991	50.8		
South Atlantic ports	3,399	295	741	625	187	5,247	22,755	894	...	...	...	207	23,850	8,745	33,660	22,046	30,123	44	71,889	13,200	...	23,819	8.2		
Gulf ports																					13,200	114,192	15.1		
Totals, U. S.	21,757	2,331	1,706	7,350	2,269	35,413	243,405	1,215	1,514	...	10,190	248,045	84,898	40,210	15,623	42,601	183,332	50,308	2,904	...	53,212	520,002	69.1		
Cristobal, C. Z. ²	1,242	3,408	1,261	682	619	7,212	1,827	6	8,118	...	...	...	9,951	...	...	...	...	...	...	61	17,224	2.3			
East coast of Canada.								2,511	...	...	...	2,511	580	...	...	...	580	9,563	1.7	...	9,563	12,654	1.7		
West Indies	7				14	21	9	...	...	...	...	9	...	...	...	...	...	...	...	...	...	30	...		
East coast of Mexico									1,992	...	...	...	4,605	...	...	...	...	...	...	...	...	...	...		
and Central America.	5,725					5,725	2,703	...	...	...	...	...	...	...	...	...	...	5,658	...	...	...	...	...		
Totals, N. America.	28,731	5,739	2,967	8,032	2,902	48,371	247,944	3,732	11,624	...	10,190	265,211	85,478	40,210	15,623	42,601	183,912	65,529	2,904	61	68,494	565,988	75.2		
EUROPE:																									
British Isles.	6,448		688	2,547	2,121	11,804	6,026	4,931	...	...	5,491	16,448	...	...	...	...	...	...	...	...	31,980	7,770	39,750	68,002	9.0
Belgium	2,156	1,180	1,018	784	4,364	9,562	13,108	430	2,364	...	...	15,907	...	...	...	...	...	...	...	...	...	...	25,409	3.4	
Denmark						2,445				5		7,347	...	...	...	...	...	...	...	...	...	...	2,445	0.3	
France.	634	20	70	406	782	1,912	7,206	24	112	...	...	7,347	...	...	...	...	...	...	...	...	2,000		11,250	1.3	
Germany.	1,254	258	391	1,396	1,643	4,942	2,666	830	1,724	386	386	5,606	...	...	...	...	...	...	...	...	...	10,548	1.4		
Holland.	1,570	49	225	549	208	2,601	5,815	554	...	...	...	6,369	...	...	...	...	...	...	...	...	...	8,970	1.2		
Italy.	759			47	1,188	1,994	1,455	98	1,235	...	...	2,788	...	...	...	...	...	...	...	...	...	4,782	0.6		
Norway and Sweden.			45	700	745		10,896	6	2,921	1,285	1,285	15,108	...	...	...	...	...	...	...	...	...	15,853	2.1		
Spain and Portugal.	254		130	47	969		1,400	23	...	...	...	535	...	...	...	...	...	...	...	...	...	1,935	0.3		
Europe ¹ .	5,325	160	244	1,149	9,518	16,396	2,957	1,891	2,790	30	30	7,668	...	...	...	...	...	...	...	...	...	24,064	3.2		
Totals, Europe.	18,400	1,667	2,811	6,925	23,938	53,741	50,152	9,264	11,158	...	1,711	5,491	77,776	...	...	...	...	...	...	...	31,980	9,770	41,750	173,267	23.0
E. coast of S. America.												82	5,796	...	...	...	240	319	...	...	6,820		6,433	0.9	
Africa.																			...	...	...		6,820	0.9	
Grand totals	47,131	7,724	5,778	14,957	26,840	102,430	330,620	13,186	22,782	...	1,721	7,474	348,783	85,557	40,210	15,623	42,841	184,231	65,529	41,704	9,831	117,064	752,508	...	
Per cent of total cargo:																									
August, 1928.	6.3	1.0	0.8	1.9	3.6	13.6	40.4	1.8	3.0	...	0.2	1.0	46.4	11.3	5.3	2.1	5.7	24.4	8.8	5.5	1.3	15.6	...	100.0	
August, 1927.	10.0	1.0	1.0	3.6	1.0	16.6	42.7	3.7	1.4	...	1.1	1.3	50.2	9.6	4.6	2.7	0.2	17.1	8.8	7.3	...	16.1	...	100.0	
August, 1926.	1.5	1.2			9.1	11.8	38.4	3.7	0.9	...	0.5	44.6	6.8	3.4			13.1	23.3	9.1	0.3	0.9	20.3	...	100.0	

¹ General cargo not routed so as to allow segregation between definite ports. ² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, August, 1928.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.												Grand totals.	Per cent of total cargo.
	UNITED STATES.					NORTH AMERICA.					EUROPE.													
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	West Indies.	East coast of Central America.	Cristobal, C. Z.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ¹	Total, Europe.	East coast of South America.	Egypt.			South Africa.
SOUTH AMERICA:																								
Chile.....	132,297	12,524	3,531	148,352		342		209	148,903	28,059	5,786		2,584	20,851	1,764			925	1,024	93,803	154,796	100		
Colombia.....	421			421				3,408	3,829						10					10				
Ecuador.....	17,005			17,005				3,621	20,626	48	6		62	93	62				345	616	113			
Peru.....	30,022			30,022	52,158			2,161	84,341	29,016	1,737	698		1,610	11,545					41	606			
West coast So. Amer.	28			28				290	318					225					38	263				
Totals, So. America	179,773	12,524	3,531	195,828	52,158	342		9,689	258,017	57,123	7,529	698	2,646	22,779	13,381			925	1,369	93,841	200,291	213		
NORTH AMERICA:																								
West coast of Canada.....	28,884		848	29,732	10,490	2,757			42,979	60,016	2,000		3,962	2,705	7,570	127		500		38,073	114,953	1,466		
West coast Cen. Amer.....	4,206			4,206				2,606	7,401									100			103			
West coast of U. S.....	555,740	5,249	34,550	595,539		589		8,231	627,080	232,290	4,026	300	3,385	16,861	8,159	9,014	1,680		29,508	305,129	3,258			
Hawaii.....	1,845			1,845				8,231	1,845	1,294								125		1,419				
Totals, N. America.	590,675	5,249	35,398	631,322	10,490	18,749	7,907	10,837	679,306	293,510	6,026	300	7,347	19,566	15,725	9,141	2,408		67,581	421,604	4,724			
ASIA:																								
China.....	9,608			9,608				375	9,983															
Japan.....	1,970			1,970				18	1,988															
Philippines.....	35,321			35,321					36,035															
Far East.....	2,636			2,636					2,724	5,881										5,881				
Totals, Asia	49,535			49,535				393	50,730	5,881										5,881				
AUSTRALASIA:																								
Australia.....	3,479			3,479	6,004			18	9,501															
New Zealand.....	3,078			3,078	255				3,331	11,068														
Australasia.....	3,800			3,800					3,800	8,917					33	1,750		7,200		17,900				
Totals, Australasia.	10,357			10,357	6,257			18	16,632	19,985					33	1,750		7,200		28,968				
Grand totals	830,340	17,773	39,731	887,844	68,905	19,091	7,907	20,837	1,004,684	376,499	13,555	998	9,993	42,378	30,856	9,141	10,535	1,369	161,422	656,744	4,937			
Per cent of total cargo:																								
August, 1928.....	49.6	1.1	2.4	53.1	4.1	1.1	0.5	1.3	60.1	22.5	0.8	0.1	0.6	2.5	1.9	0.5	0.6	0.1	9.6	39.2	0.3			
August, 1927.....	58.3	6.5	1.4	66.2	1.8	1.6		2.9	72.5	13.3	0.6		1.1	1.3	0.3	0.4	0.3	0.5	7.1	24.9	0.8	1.3		
August, 1926.....	61.8	3.6	0.9	66.3	3.6	0.3		0.5	70.7	15.8	1.7	0.2	1.5	1.2	0.1		0.3	0.1	6.4	27.3	0.1	1.9		

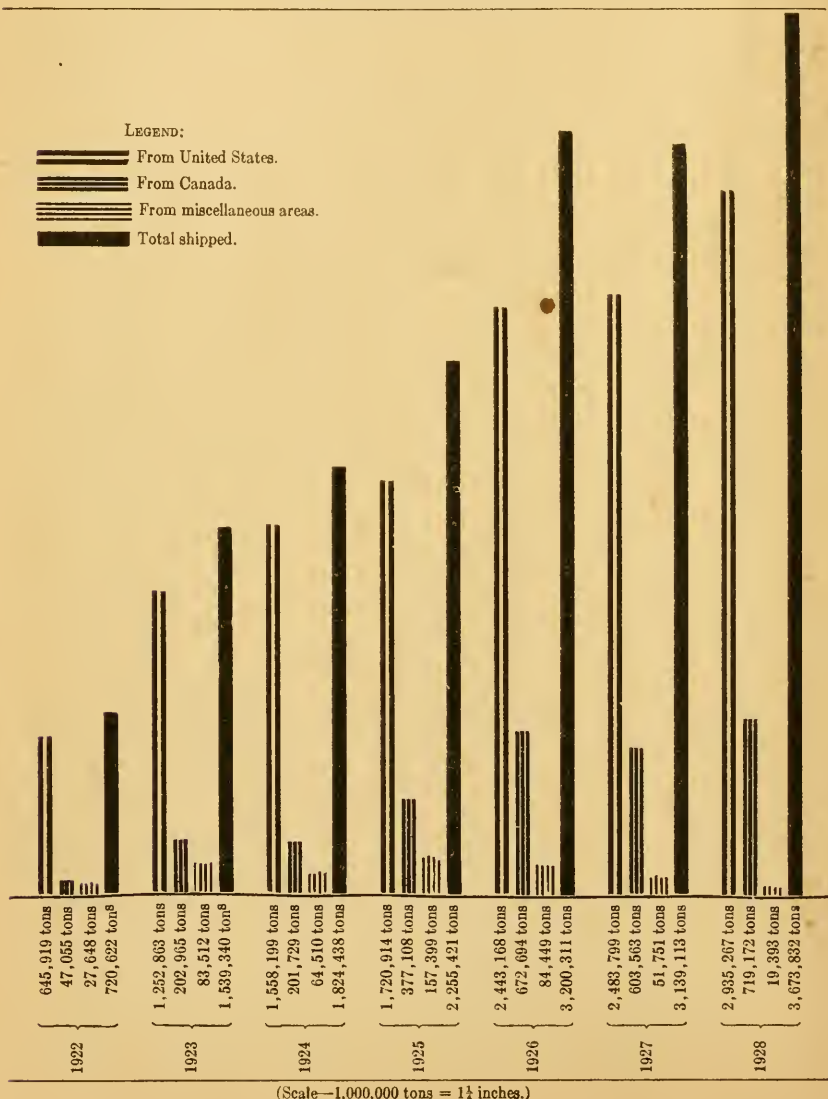
¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

Lumber Shipments Through Canal in Fiscal Year, 1928.

Lumber shipments routed through the Panama Canal during the fiscal year ending June 30, 1928, totaled 3,707,234 tons, comprised 12.5 per cent of the total cargo in transit through the Canal during the year, and ranked second in importance of the commodities passing through the Canal during the year. Mineral oils (6,336,156 tons) formed the commodity of greatest quantity.

Of the total lumber routed through the Canal during the year, 33,402 tons passed from the Atlantic to the Pacific, and 3,673,832 tons from the Pacific to the Atlantic. Of the cargo from the Pacific, **Origin of Lumber Passing Through Panama Canal from Pacific to Atlantic During Fiscal Years 1922 to 1928, Inclusive.**

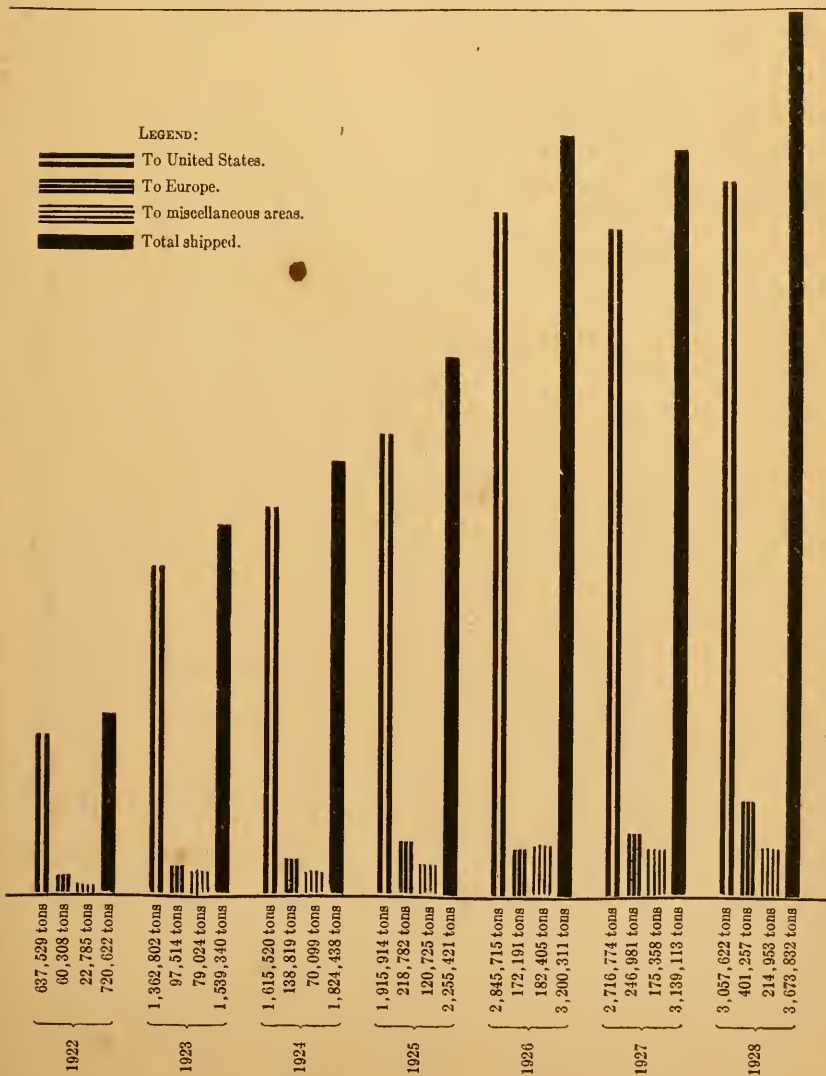


2,935,267 tons originated in the United States, 719,172 tons in Canada, and the balance of 19,393 tons consisted of small shipments from Central America, Australasia, Far East, and the Philippines.

Segregated according to destination, 3,057,622 tons of the Atlantic-bound lumber were shipped to the eastern seaboard of the United States, 401,257 tons to Europe, and the balance of 214,953 tons to the West Indies, South America, Central America, Africa, and Cristobal.

The graphs shown on pages 86 and 87 show by fiscal years since 1922, the total amount of this commodity routed through the Canal from the Pacific to the Atlantic and the important areas of origin and destination.

Destination of Lumber Passing Through Panama Canal from Pacific to Atlantic During Fiscal Years 1922 to 1928, inclusive.



(Scale—1,000,000 tons = $1\frac{1}{4}$ inches.)

Jacob's Ladders To Be in Proper Condition.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., *September 12, 1928.*

TO STEAMSHIP OWNERS AND AGENTS:

It has been brought to the attention of this office that on one occasion recently, on a vessel prepared to transit the Canal, due to the rotten condition of the rope in the Jacob's ladder, the ladder broke as the Custom Inspector was boarding the vessel, and only the fact that the boarding launch was close by prevented him from falling into the sea.

It is requested that all steamship companies take immediate steps to inspect their Jacob's ladders and see that they are in proper condition in order that safety of Canal pilots and other employees may be properly assured.

This circular is supplementary to Marine Superintendent's memorandum of November 7, 1927, regarding the proper rigging of Jacob's ladders.

C. H. WOODWARD,
Marine Superintendent.

Approved:
H. BURGESS,
Acting Governor.

Supplement No. 8.—Tariff No. 9

THE PANAMA CANAL, PANAMA RAILROAD COMPANY, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., *September 11, 1928.*

ITEM 22.—FUEL AND DIESEL OILS.

(Effective September 8, 1928.)

2. Diesel oil, per barrel of 42 gallons, delivered to vessels at Cristobal. \$1.80

H. BURGESS,
*Acting Governor, The Panama Canal,
2d Vice President, Panama Railroad Company.*

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., *September 17, 1928.*

No. 452.

PACIFIC OCEAN—PANAMA BAY.

"September 15, 1928, the characteristic of the South Frail Combination Gas and Whistling Buoy was changed, and the light is now flashing 1 second light, 3 seconds dark, a period of 4 seconds. No other change. (Signed) F. KARIGER, *Pilot in Charge, Lighthouse Subdivision.*"

H. BURGESS,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., *September 19, 1928.*

No. 457.

The following was received by the Hydrographic Office from the Lighthouse Subdivision, The Panama Canal:

CRISTOBAL HARBOR.

"Effective September 17, 1928, Spar Buoys "A" and "B," marking the western limits of the merchant ship anchorage in Cristobal Harbor, were permanently discontinued. (Signed) F. KARIGER, *Pilot in Charge.*"

H. BURGESS,
Acting Governor.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending September 8, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal.	Panama R. R. S. S. Line.		September 2..		3,175
Salvador.	Pacific Steam Navigation Co.		September 2..		1,193
Kastalia.	Donaldson S. S. Line.	September 2..	September 2..	(¹)	396
Ulua.	United Fruit Co.	September 2..	September 2..	14	193½
Mayari.	United Fruit Co.	September 2..	September 2..	(¹)	427
Annam.	Danish East Asiatic Co.	September 2..	September 3..	96	(²)
Macabi.	United Fruit Co.	September 2..	September 5..	1	757
War Nizam.	British Admiralty.	September 2..	September 7..	7,529	(²)
Baralt.	Royal Netherlands S. S. Co.	September 2..	September 8..	367	188
Aconagua.	Chilean Line.	September 3..	September 3..	10	4
Cartago.	United Fruit Co.		September 3..		23
Alaska.	French Line.	September 3..	September 4..	33	(²)
Tolosa.	United Fruit Co.	September 3..	September 5..	1,136	10
Linda S.	R. Feuillebois.	September 4..	September 4..	(¹)	43
Westfalen.	Colombian Transport Co.	September 4..		171	
Los Angeles.	Hamburg-American Line.	September 4..	September 5..	(¹)	217½
Iowa.	French Line.	September 4..	September 5..	381	16
Kinderdijk.	Holland-American Line.	September 4..	September 7..	690	232
Saramacca.	United Fruit Co.	September 5..	September 5..	890	40
Venezuela.	Royal Netherlands S. S. Co.	September 5..	September 5..	(¹)	6
William M.	R. Feuillebois.	September 5..	September 5..	(¹)	28
Volumnia.	DuPont & Co.	September 5..	September 5..	165	(²)
London Importer.	Furness, Withy & Co.	September 5..	September 6..	(¹)	105
Oroya.	Pacific Steam Navigation Co.	September 5..	September 6..	53	365
Santa Marta.	United Fruit Co.	September 5..	September 6..	811	422
Favorita.	American Fruit & S. S. Corp.	September 6..	September 6..	285	1
Suriname.	United Fruit Co.	September 6..	September 6..	122	22
Cali.	North German Lloyd.	September 6..	September 7..	233	(²)
Cerigo.	Hamburg-American Line.	September 6..		730	
Macaris.	French Line.	September 6..	September 8..	390	850
San Mateo.	United Fruit Co.	September 7..	September 8..	690	394
Itauri.	Hamburg-American Line.	September 7..	September 8..	321	72
City of San Francisco.	Panama Mail S. S. Co.	September 7..		1,022	
Venezuela.	Royal Netherlands S. S. Co.	September 7..	September 8..	14	202½
La Paz.	Pacific Steam Navigation Co.	September 8..	September 8..	(¹)	101
Knute Nelson.	Peter Olsen S. S. Line.	September 8..	September 8..	290	
Maravi.	United Fruit Co.	September 8..	September 8..	365	
Favorita.	American Fruit & S. S. Corp.	September 8..	September 8..	(¹)	407
Parissima.	United Fruit Co.	September 8..	September 8..	403	

* No cargo discharged.

* No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending September 16, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Knute Nelson.	Norway-Pacific Line.	September 9..	September 10..	610	
Leon XIII.	Spanish Line.	September 9..	September 10..	218	
Craftsman.	McArdle Contracting Co.	September 10..	September 10..		2
Guatemala.	Grace Line.	September 11..	September 12..	19	
Kako Maru.	Nippon Yusen Kaisha.	September 12..	September 12..	349	
Nitokris.	Hamburg-American Line.	September 12..	September 13..	428	4
Uribe.	Colombian Transportation Co.	September 12..	September 12..		50
U. S. Grant.	U. S. Army Transport Service.	September 12..	September 13..	65	13
Dilworth.	United States Shipping Board.	September 13..	September 14..	10,000	
Mojave.	Standard Transportation Co.	September 14..	September 15..	10,369	
Manchuria.	Panama-Pacific Line.	September 15..	September 15..		1
Kellerwald.	Hamburg-American Line.	September 16..	September 16..	75	
City of San Francisco.	Panama Mail S. S. Co.	September 16..	September 16..		108
Cauca.	National Navigation Co.	September 14..	September 15..	4	

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

United States Intercoastal Traffic by Commodities for August, 1928.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for August, 1928, and the totals for August, 1927, and 1926. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise but they are indicative of the kind and quantity of the cargo in transit through the Canal. The figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Aeroplanes.....	100		100
Agricultural implements.....	507	20	527
Alfalfa meal.....		942	942
Ammonia.....	117		117
Ammunition.....	17		17
Asbestos.....	459	140	599
Asphalt.....	403	500	903
Automobiles.....	558	111	669
Automobile accessories.....	384	86	470
Beans.....		3,724	3,724
Bones and bonemeal.....	72		72
Borax.....	109	1,547	1,656
Bricks.....	883		883
Burlap.....	227	361	588
Calcium carbide.....	26		26
Camphor.....		166	166
Canned goods:			
Fish.....	393	13,997	14,390
Fruit.....	357	28,198	28,555
Meat.....	84	357	441
Milk.....	45	1,147	1,192
Soup.....	256		256
Vegetables.....	1,414	3,756	5,170
Miscellaneous.....	2,427	4,525	6,952
Carbon black.....	15		15
Celite filtereel.....		817	817
Cement.....	1,008	29	1,029
Charcoal.....	51	40	91
Chemicals.....	1,405	1,045	2,450
China and fire clay.....	397	70	467
Coal.....	4,201		4,201
Cocoa.....	324	10	334
Coconuts.....		668	668
Coffee.....	257	100	357
Cold storage:			
Cheese.....	10	30	40
Eggs.....		85	85
Lard.....	520		520
Meat.....	24		24
Other.....	792		792
Confectionery.....	650		650
Cork.....	231		231
Corn.....	30		30
Cotton.....	62	1,512	1,574
Drugs.....	1,829	249	2,078
Earthenware.....	66	40	106
Eggs, dried.....		68	68
Explosives.....	10	5	15
Fertilizer.....	91		91
Fish meal.....		15	15
Flour.....	181	5,383	5,564
Fruit:			
Dried.....	56	7,802	7,858
Fresh.....		87	87
Furniture.....	320		320
General.....	56,093	11,556	67,649
Glass and glassware.....	1,945	240	2,185
Glue.....	41		41
Guano.....		350	350
Hair.....	23	58	81
Hard woods.....	65	194	259
Hats.....		30	30
Hay.....		1,092	1,092
Hemp.....	86	1,454	1,540
Honey.....		72	72
Infusorial earth.....		200	200

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Ink.....	48	.....	48
Jute.....	197	310	507
Linoleum.....	1,150	170	1,320
Liquors.....	162	.....	162
Lumber.....	3,642	232,134	235,776
Malt.....	120	.....	120
Manufactured goods:			
Iron and steel.....	100,418	1,581	101,999
Machinery.....	4,315	702	5,017
Railroad material.....	766	.....	766
Tinplate.....	7,621	.....	7,621
Textiles.....	2,149	184	2,333
Miscellaneous.....	8,580	2,053	10,633
Marble.....	294	.....	294
Matches.....	121	.....	121
Metals:			
Copper.....	35	9,951	9,986
Lead.....	120	35	155
Scrap.....	516	480	996
Tin.....	26	.....	26
Zinc.....	68	32	100
Other.....	18	.....	18
Milk, powdered.....	.....	451	451
Molasses.....	92	.....	92
Nitrates.....	.....	200	200
Nuts.....	.....	137	137
Oils:			
Coconut.....	.....	53	53
Cottonseed.....	188	.....	188
Crude.....	.....	33,205	33,205
Gas oil, fuel oil.....	64	8,527	8,591
Gasoline, benzine, naphtha.....	.....	184,500	184,500
Linseed.....	33	.....	33
Lubricating and greases.....	6,438	903	7,341
Olive.....	45	.....	45
Vegetable.....	71	135	206
Wood.....	17	182	199
Other.....	.....	155	155
Ores:			
Copper.....	.....	1,460	1,460
Magnesite.....	.....	2,079	2,079
Manganese.....	20	.....	20
Zinc.....	.....	17	17
Other.....	75	.....	75
Paint.....	807	97	904
Paper.....	5,941	4,279	10,220
Paper, pulp.....	54	1,001	1,055
Paper, roofing.....	95	.....	95
Peanuts.....	.....	191	191
Peas.....	.....	201	201
Phosphates.....	2,169	.....	2,169
Plaster.....	30	.....	30
Porcelain.....	240	983	1,223
Quicksilver.....	.....	5	5
Rags.....	61	1,200	1,261
Rice.....	67	555	622
Rope.....	107	80	187
Rosin.....	1,049	.....	1,049
Rubber:			
Manufactured.....	587	93	680
Raw.....	328	.....	328
Scrap.....	.....	166	166
Salt.....	366	132	498
Sand.....	1,350	.....	1,350
Seeds:			
Grass.....	.....	177	177
Other.....	.....	121	121
Shells.....	2,278	.....	2,278
Silk.....	.....	343	343
Skins and hides.....	.....	1,108	1,108
Slate.....	254	.....	254
Soap.....	3,305	185	3,490
Soda.....	339	.....	339
Soda ash.....	1,233	.....	1,233
Soda, bicarbonate.....	23	.....	23
Soda, caustic.....	962	.....	962
Starch.....	82	.....	82
Sugar.....	328	9,003	9,331
Sulphur.....	16	.....	16
Syrup.....	188	118	306
Talc.....	.....	143	143
Tallow.....	.....	165	165
Tar.....	47	.....	47
Tea.....	20	.....	20
Tobacco.....	2,969	59	3,028

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Toys.....	433	58	491
Turpentine.....	356	.....	356
Vegetables.....	15	.....	15
Waste.....	36	801	837
Wax.....	180	30	210
Wheat.....	.....	70	70
Wine.....	.....	263	263
Wool.....	.....	1,398	1,398
Zinc oxide.....	68	.....	68
Totals, August, 1928.....	243,405	595,539	838,944
Totals, August, 1927.....	227,472	821,643	1,049,115
Totals, August, 1926.....	202,875	755,927	958,802

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide the means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 13 years of operation.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Diesel oil is sold by The Panama Canal at Cristobal at \$1.80 per barrel.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.25 per barrel at Balboa and Cristobal. Diesel oil, Balboa only, \$1.80 per barrel.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers at \$8.00 per ton of 2,240 pounds at Cristobal, and \$11.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, \$8.00 per ton at Balboa. When coal is delivered from lighters in quantities of 50 tons or more, the price is \$9.00 per ton at Cristobal, \$12.00 at Balboa. If less than 50 tons is taken from lighters, prices are \$11.00 per ton at Cristobal and \$14.00 per ton at Balboa with minimum charge for 20 tons and maximum charge not to exceed that for 50 tons at \$9.00 Cristobal and \$12.00 Balboa. For furnishing lump coal for galley use, or run of mine coal, in sacks, \$6.00 additional per ton; but if vessels furnish sacks \$3.00 additional per ton.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

For trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, when requested, an additional charge of 90 cents per ton will be made for extra handling.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Official Circular.

Appointment.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 14, 1928.

To all concerned—Effective September 18, 1928, Mr. Roy R. Watson is appointed Chief Quartermaster, The Panama Canal, *vice* Mr. Robert K. Morris, resigned, and Mr. James H. K. Humphrey is appointed Superintendent, Supply Department, *vice* Mr. Roy R. Watson, promoted.

By direction of Governor M. L. WALKER.

H. BURGESS,
Acting Governor.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Transit and Harbor Regulations of The Panama Canal," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.

The Hydrographic Office at Cristobal maintain at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometric comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., September 26, 1928. No. 8.

CANAL WORK IN AUGUST, 1928.

The following is the report of the Acting Governor to the Secretary of War, of Canal work in August, 1928.

BALBOA HEIGHTS, C. Z., September 15, 1928.

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

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of August, 1928:

NUMBER OF TRANSITS.

During the month 526 commercial vessels passed through the Canal. In addition to these, 6 nonseagoing launches, measuring under 20 tons, and 24 vessels belonging to or chartered by the United States Government transited the Canal. There was also one transit of a Colombian Government vessel and 6 transits of vessels solely for repairs on which no tolls were collected, making a total of 563 transits for the month, or a daily average of 18.16.

Tolls on the 526 commercial vessels amounted to \$2,199,069.31, and on the launches to \$42.39, a total of \$2,199,111.70, or a daily average on all traffic of \$70,939.09.

The total numbers of craft of all kinds transiting the Canal during the month of August, 1928, as compared with the same month in 1927 and 1926, are shown in the following tabulation:

	August, 1928.	August, 1927.	August, 1926.
Commercial vessels.....	526	543	464
Noncommercial vessels (Army and Navy).....	24	34	26
Launches (under 20 tons measurement).....	6	17	7
Panaman Government vessels.....	.....	.....	1
Colombian Government vessels.....	1	.....	.....
Vessels for repairs.....	6	2	.....
Total vessels transiting Canal.....	563	596	498

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Total.
Gatun.....	6	10	16
Pedro Miguel.....	23	27	50
Miraflores.....	24	26	50
Totals.....	53	63	116

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year 1928 to the end of August, 1928, as compared with the same months in the preceding year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1927.	1928.	1927.	1928.	1927.	1928.	1927.	1928.
January...	443	540	2,121,631	2,422,770	2,241,765	2,372,061	\$1,984,760.71	\$2,212,752.50
February...	449	547	2,201,328	2,460,111	2,230,107	2,660,425	1,994,860.82	2,253,755.37
March.....	496	542	2,413,999	2,441,077	2,533,525	2,428,662	2,217,913.20	2,223,370.57
April.....	464	531	2,224,500	2,384,491	2,429,807	2,473,884	2,065,206.92	2,187,607.82
May.....	471	508	2,248,892	2,274,612	2,379,713	2,497,588	2,066,070.73	2,118,969.83
June.....	455	481	2,152,926	2,227,865	2,229,097	2,139,565	1,970,377.97	2,016,211.09
July.....	509	509	2,406,955	2,318,395	2,450,468	2,291,955	2,215,515.99	2,109,083.19
August....	543	526	2,513,614	2,437,246	2,429,947	2,425,336	2,274,040.55	2,199,069.31
Totals...	3,830	4,184	18,283,845	18,966,567	18,924,429	19,289,476	16,788,746.89	17,320,819.68

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States Government, including merchant vessels chartered by the Government, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for August, 1928, as compared with the corresponding month in 1927 and 1926, and the monthly averages for the fiscal year 1928:

	August, 1928.	August, 1927.	August, 1926.	Average per month for fiscal year 1928.
Number of vessels.....	526	543	464	538
Panama Canal net tonnage.....	2,437,246	2,513,614	2,230,905	2,454,886
United States net tonnage.....	1,856,567	1,957,705	1,752,102	1,905,316
Registered gross tonnage.....	3,057,245	3,188,317	2,866,120	3,100,239
Registered net tonnage.....	1,870,211	1,952,572	1,760,522	1,903,974
Tolls.....	\$2,199,069.31	\$2,274,040.55	\$2,065,041.91	\$2,245,374.98
Tons of cargo carried.....	2,425,336	2,429,947	2,321,697	2,469,225

The average daily number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year.
	August, 1928.	August, 1927.	August, 1926.	
Number of transits.....	16.97	17.52	14.96	17.63
Panama Canal net tonnage.....	78,621	81,084	71,294	80,488
Tolls.....	\$70,937.72	\$73,356.15	\$66,291.57	\$73,618.85
Tons of cargo carried.....	78,236	78,385	74,893	80,958

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of August, 1928, as compared with August, 1927 and 1926, are shown in the following tabulation:

	Average per vessel.		
	August, 1928.	August, 1927.	August, 1926.
Panama Canal net tonnage.....	4,633	4,629	4,808
United States net tonnage.....	3,530	3,605	3,776
Registered gross tonnage.....	5,812	5,872	6,177
Registered net tonnage.....	3,555	3,596	3,794
Tolls.....	\$4,180.74	\$4,187.92	\$4,428.96
Tons of cargo (including vessels in ballast).....	4,611	4,475	5,003
Tons of cargo (laden vessels only).....	5,525	6,000	6,174

TOLLS.

At present, tolls are collected at rates of \$1.20 per net ton for laden vessels and 72 cents per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per ton nor be less than 75 cents per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined both in accordance with the Panama Canal and the United States rules of measurement.

Due to this limiting proviso the tolls actually collected on laden vessels averaged \$0.937 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.721 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of August, 1928, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1.00 laden and \$0.60 ballast. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$3,582.72	\$2,985.60		\$597.12
British.....	621,661.80	655,255.40	\$33,593.60	
Chilean.....	12,915.00	14,049.00	1,134.00	
Colombian.....	3,328.93	2,842.40		486.53
Danish.....	33,169.31	39,392.20	3,222.89	
Danzig.....	17,673.29	16,251.00		1,422.20
Dutch.....	39,326.25	46,320.00	6,993.75	
Finnish.....	2,024.40	1,687.00		337.40
French.....	38,386.25	38,541.00	154.75	
German.....	101,798.04	112,823.20	11,025.16	
Italian.....	27,122.50	29,610.00	2,487.50	
Japanese.....	66,742.50	67,672.00	929.50	
Norwegian.....	98,887.00	104,870.00	5,983.00	
Panamanian.....	8,475.00	10,103.00	1,628.00	
Peruvian.....	4,307.30	6,339.00	2,031.70	
Spanish.....	7,471.25	7,573.00	101.75	
Swedish.....	39,945.81	42,464.80	2,518.99	
United States.....	1,057,179.55	1,071,312.80	14,133.25	
Yugoslav.....	12,072.50	11,629.00		443.50
Totals.....	2,199,069.31	2,281,720.40	85,937.84	3,286.75
Net increase for all traffic.....			82,651.09	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$15,950.28
United States foreign trade.....	90.25
United States-Canal Zone trade.....	* 1,916.28
Net increase.....	14,133.25

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in August, 1928, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
British.....	.82	1.47	1.19
Chilean.....	.50	.48	.49
Colombian.....	1.84	1.11	1.39
Danish.....	1.20	1.57	1.31
Danzig.....		1.85	1.85
Dutch.....	.66	1.38	1.20
Finnish.....		1.74	1.74
French.....	.54	1.70	.97
German.....	.76	1.35	1.11
Italian.....	.32	1.64	.80
Japanese.....	.119	1.28	1.23
Norwegian.....	1.22	1.70	1.47
Panamanian.....	1.13	.87	.94
Peruvian.....	.11	1.08	.71
Spanish.....	.10	.47	.29
Swedish.....	.95	2.20	1.57
United States.....	.83	1.41	1.16
Yugoslav.....	1.48	2.05	1.87
Averages, August, 1928.....	.85	1.45	1.18
Averages, August, 1927.....	.86	1.57	1.29
Averages, August, 1926.....	.93	1.55	1.29

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of August, 1928, is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden	3	14,819	\$14,378.75	48	260,010	\$267,637.50
Ballast	43	237,270	170,834.40	1	8,665	6,238.80
General cargo ships:						
Laden	189	877,692	802,184.80	200	895,821	\$34,492.05
Ballast	31	134,517	97,056.75	3	7,608	5,477.76
Noncargo-carrying ships:						
Tugs	1	90.	108.00	2	263	252.69
Yachts	4	471	342.81	1	20	15.00
Totals	271	1,264,859	1,084,905.51	255	1,172,387	1,114,163.80
Method of propulsion:						
Steam	209	987,987	864,271.60	212	963,551	916,352.32
Motor	59	276,429	220,271.51	42	207,149	195,787.08
Motor (schooner)	1	34	25.50			
Nonpropelled	2	409	336.90			
Sail				1	1,687	2,024.40
Totals	271	1,264,859	1,084,905.51	255	1,172,387	1,114,163.80

Of the 421 steam-driven vessels, 292 were oil burning, 127 coal burning, and 2 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of August, 1928. If tolls had been assessed against these vessels at commercial rates, the amount would have been approximately as indicated:

Class and Nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Ammunition ships	1	¹ 4,405	\$5,506.25			
Cruisers	2	¹ 11,350	5,675.00	2	¹ 11,350	\$5,575.00
Gunboats				1	¹ 1,575	787.50
Minesweepers	1	² 950	475.00	1	² 950	475.00
Submarines	4	² 3,082	1,541.00	3	² 2,562	1,281.00
Supply ships	1	³ 3,415	4,268.75			
Survey ships	1	² 2,600	1,300.00	1	² 2,600	1,300.00
Tankers	1	² 5,102	3,673.44			
Tugs	1	¹ 1,000	500.00	1	¹ 1,000	500.00
U. S. Army vessels:						
Launches	1	³ 10	7.50			
Transports	1	³ 3,908	4,885.00	1	³ 5,764	7,205.00
Totals, U. S. Government.	14		27,831.94	10		17,123.50
Colombian Government vessels:						
Supply ships	1	³ 427	533.75			
Vessels for repairs:						
Tankers	3	³ 3,882	2,911.50	3	³ 3,882	2,911.50
Grand totals	18		31,277.19	13		20,035.00

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of August, 1928, carried cargo as follows: Atlantic to Pacific, 7,255 tons; Pacific to Atlantic, 2,244 tons; total, 9,499 tons.

The following statement shows the number of launches transiting the Canal during the month of August, 1928. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	5	49	\$40. 14
Pacific to Atlantic.....	1	3	2. 25
Totals.....	6	52	42. 39

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of August, 1928, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	82,470	8,148	90,618
Local cargo shipped..... tons..	7,164	1,162	8,326
Transit cargo arriving..... tons..	2,428,407	2,443,258	4,871,665
Transit cargo clearing..... tons..	2,355,129	2,453,961	4,809,090
Cargo received for transshipment..... tons..	36,240	1,528	37,768
Cargo transshipped..... tons..	39,381	1,575	40,956
"Canal Zone for orders" cargo:			
Number of receipts issued.....	68	20	88
Number of withdrawals.....	405	159	564
Tons received.....	1,243	166	1,409
Tons withdrawn.....	1,830	190	2,020
Packages received.....	5,741	2,069	7,810
Packages withdrawn.....	8,109	2,190	10,299
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	67	9	76
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	19,683	52	19,735
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	53	99	152
U. S. Army, excepting vessels..... tons..	31		31
Individuals and companies..... tons..	155		155
Transferred to Navy..... tons..	151		151
Total sales and issues..... tons..	20,073	151	20,224
Coal on hand, August 1, 1928..... tons..	53,399		53,399
Coal on hand, September 1, 1928..... tons..	64,189		64,189
Coal received during month..... tons..	30,863		30,863
Coal received from Navy..... tons..		151	151
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls..	8,247.61	15,999.06	24,246.67
Panama Railroad Company..... bbls..	662.70		662.70
U. S. Army and Navy..... bbls..		86.68	86.68
Individuals and companies..... bbls..		134.53	134.53
Total sales and issues..... bbls..	8,910.31	16,220.27	25,130.58
Fuel oil on hand, September 1, 1928..... bbls..	83,591.76	29,842.45	113,434.21
Diesel oil sold during August, 1928..... bbls..	180.35	619.92	800.27
Diesel oil on hand, September 1, 1928..... bbls..	23,786.61	493.25	24,279.86
Miscellaneous transfers..... bbls..	558.19	710.36	1,268.55
Gasoline and kerosene pumped for The Panama Canal..... bbls..	4,548.67	8,222.50	12,771.17
Gasoline pumped for individuals and companies..... bbls..		5,383.62	5,383.62
Oil pumped for individuals and companies..... bbls..	485,366.39	228,064.54	713,430.93
Total fuel oil, gasoline, and kerosene handled..... bbls..	499,563.91	259,221.21	758,785.12
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	22	2	24
Measured for Panama Canal net tonnage.....	7	1	8
Remeasured for Panama Canal net tonnage.....	20	1	21
Panama Canal net tonnage corrected.....		6	6
U. S. equivalent tonnage corrected.....	7	13	20
Service of harbor equipment:			
Tugs, total operating hours.....	503½	305½	808½
Launches, total operating hours.....	1,367½	1,589½	2,957

* Includes inventory overage of 152.29 barrels at Cristobal, and 1,305.98 barrels at Balboa.

* Includes inventory overage of 2.31 barrels.

	Cristobal.	Balboa.	Total.
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$15,313.75	\$9,516.25	\$24,830.00
Pilotage.....	20,617.00	8,459.00	29,076.00
Seamen.....	12,448.00	11,704.00	24,152.00
Launch service.....	1,961.50	3,005.50	4,967.00
Wharfage.....	17,767.68	5,868.01	23,635.69
Ships measured.....	280.00	50.00	330.00
Miscellaneous.....	969.60	658.50	1,628.10
Ships repaired at Panama Canal shops:			
Commercial.....	60	17	77
U. S. Army and Navy.....	7	8	15
Panama Canal equipment.....	8	15	23
Totals.....	75	40	115
Vessels dry docked:			
Commercial.....	9	3	12
U. S. Army and Navy.....	1	4	5
Panama Canal equipment.....	2	5	7
Totals.....	12	12	24
Clearances issued.....	309	281	590
Bills of health issued.....	315	282	597

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.	596	3,382,766	2,061,919	542	3,130,169	1,918,575
Vessels entering port but not transiting Canal.	66	275,332	165,241	11	18,246	11,787
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	124	691,270	421,431	99	598,220	366,607
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.	599	3,399,810	2,070,213	548	3,168,780	1,948,179
Vessels clearing port but not transiting Canal.	67	279,579	166,481	15	34,025	26,262
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	129	713,423	435,229	100	613,662	375,915

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,448	830	2,278	92	326	418
From Pacific ports.....	250	102	352	254	250	504
Total disembarking.....	1,698	932	2,630	346	576	922
Embarking:						
For Atlantic ports.....	1,447	817	2,264	88	69	157
For Pacific ports.....	248	86	334	286	224	510
Total embarking.....	1,695	903	2,598	374	293	667
Remaining on board:						
From Atlantic to Pacific ports.....	1,442	3,108	4,550	1,334	2,458	3,792
From Pacific to Atlantic ports.....	1,582	1,409	2,991	1,690	1,234	2,924
From Atlantic to Atlantic ports.....	644	127	771			
From Pacific to Pacific ports.....				13	270	283
Total remaining on board.....	3,668	4,644	8,312	3,037	3,962	6,999
Total arriving.....	5,366	5,576	10,942	3,383	4,538	7,921
Total departing.....	5,363	5,547	10,910	3,411	4,255	7,666

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	271	47	17.3
Pacific to Atlantic.....	255	63	24.7
Totals.....	526	110	20.9

In addition to the aforesaid, 65 passenger-carrying vessels called at the port of Cristobal and 3 at the port of Balboa, without transiting the Canal, making a total of 178 passenger-carrying vessels calling at Canal ports during the month.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of August, 1928:

	Ice.	Groceries.	Cold Storage.	Laundry.	Miscellaneous.	Totals.
Sales at Cristobal to:						
Commercial vessels.....	\$3,143.81	\$13,298.56	\$29,424.77	\$121.85	\$6,212.38	\$52,201.37
Government vessels.....	189.23	121.58	6,617.28	46.73	359.11	7,333.93
Panama Railroad vessels.....	24.30	45.12	1,991.02	991.51	312.57	3,364.52
Total sales, August, 1928....	3,357.34	13,465.26	38,033.07	1,160.09	6,884.06	62,899.82
Total sales, August, 1927....	2,478.31	13,525.62	33,574.69	967.58	5,998.04	56,544.24
Total sales, August, 1926....	2,465.85	13,349.93	36,169.13	814.39	5,453.47	58,252.77
Sales at Balboa to:						
Commercial vessels.....	1,641.17	13,992.05	11,946.97	199.93	3,849.49	31,629.61
Government vessels.....	528.92	5,979.85	16,901.47	541.64	1,678.58	25,630.46
Total sales, August, 1928....	2,170.09	19,971.90	28,848.44	741.57	5,528.07	57,260.07
Total sales, August, 1927....	2,199.59	13,786.01	46,025.62	657.65	4,445.05	67,113.92
Total sales, August, 1926....	1,316.57	13,637.07	24,819.93	501.69	4,599.46	44,874.72

The aggregate sales to Government vessels during the month was \$32,964.39; to Panama Railroad vessels, \$3,364.52; and to other commercial vessels, \$83,830.98; making the total sales to all vessels, \$120,159.89.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of August, 1928, as compared with the corresponding month in 1927 and 1926:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial.					
	North.	South.	Total.	North.	South.	Total.	Aug., 1928.	Aug., 1927.	Aug., 1926.
Gatun.....	243	250	493	10	12	22	515	530	457
Pedro Miguel.....	246	256	502	12	21	33	535	560	491
Miraflores.....	246	256	502	13	21	34	536	549	478
Number of vessels put through locks.									
Gatun.....	253	271	524	30	33	63	587	624	523
Pedro Miguel.....	256	272	528	40	47	87	615	666	575
Miraflores.....	256	272	528	42	46	88	616	660	556

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	32	29	28
Panama Canal equipment.....	16	50	50
Launches (under 20 tons).....	8	1	3
Colombian Government vessels.....	1	1	1
Vessels for repairs.....	6	~	6

The total consumption of water for lockages and loss in leakage was as follows in August, 1928, as compared with the preceding month and the corresponding month in 1927:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	2,122,910,000	1,703,530,000	1,607,800,000
Leakage.....	20,000,000	30,000,000	20,000,000
Totals, August, 1928.....	2,142,910,000	1,733,530,000	1,627,800,000
Totals, July, 1928.....	2,074,850,000	1,744,930,000	1,567,360,000
Totals, August, 1927.....	2,130,840,000	1,789,270,000	1,689,670,000

HYDROGRAPHY.

In the following tabulation the hydrographic conditions in the Canal Zone and vicinity during the month of August, 1928, are shown in comparative form:

	August.		August—Years of record.		
	1928.	1927.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Chagres River at Alhajuela:					
Monthly mean discharge.....	3,410	3,686	4,724	1,579	3,028
Maximum momentary discharge.....	11,889	18,100	36,100		
Gatun Lake watershed:					
Total yield.....	9,862	9,855	11,656	5,084	8,268
Net yield.....	9,385	9,291	11,089	4,437	7,731
Draft on Gatun Lake for lockages.....	2,862	2,868	2,868	1,390	2,245

* August 21, 1911.

* Does not include August, 1914.

The total yield of the Gatun Lake watershed for the month of August was 19 per cent above the 15-year August average, or 9,862 c. f. s., compared with an average of 8,268 c. f. s. Maximum and minimum August total yields of record are 11,656 c. f. s. in 1917, and 5,084 c. f. s. in 1919, respectively. The lake varied in elevation from 85.39 feet on the 18th to 85.74 feet on the 9th, averaged 85.56 feet, and ended at elevation 85.52 feet. There was an increase in storage during the month of 365 million cubic feet, the equivalent of .08 foot on Gatun Lake. The net yield for the month amounted to 25.1 billion cubic feet.

Miraflores Lake varied in elevation from 53.35 feet on the 27th to 54.54 feet on the 8th, averaged 53.99 feet, and ended at elevation 54.11 feet. One hundred and sixty-eight c. f. s. were wasted over Miraflores spillway.

SEISMOLOGY.

One seismic disturbance was recorded during the month, on the 4th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 4,893,800 kilowatt hours, and the computed water consumption was 3,838,122,409 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had no generator output during the month. The fuel oil consumption at the latter plant was 18.71 barrels.

In addition to the usual operating and maintenance work performed, 91 work orders comprising 137 items of additions or repairs were completed on 52 vessels during the month. There were 411 work orders issued during the month, as compared with 350 for the previous month.

MECHANICAL DIVISION.

During the month miscellaneous repairs were made on 75 vessels at Cristobal and 40 at Balboa. Twelve vessels were drydocked at Cristobal and 12 at Balboa. The annual overhaul of the submarines O-7 and O-10 was continued during the month.

MUNICIPAL ENGINEERING DIVISION.

Work was performed on several improvements in the cities of Colon and Panama, and in the Canal Zone. The usual maintenance work was performed on roads, streets, and walks, and the sewer and water systems. The amount of water pumped during the month totaled 707,201,000 gallons.

DREDGING DIVISION.

A slide occurred on the morning of August 16 at Lirio curve. The top of the bank broke about 60 feet at elevation 138 feet, mean sea level. The material moved beyond the old prism line for a distance of 40 feet and resulted in a depth of 36 feet on the old prism line. The total amount of material involved was approximately 60,000 cubic yards. A dredge removed 30,050 cubic yards and by the end of the month the channel east of the new west prism line had been restored.

There were no other slides and no delays to shipping during the month.

The total excavation during August was 295,229 cubic yards, as follows:

Items.	Wet excavation.			Character of work.
	Earth.	Rock.	Total.	
Work excavation:				
Canal prism, Gaillard Cut—				
Project No. 2, Lirio curve.....	1,300	24,400	25,700	Maintenance.
Project No. 9, West Culebra basin.....	2,750	24,550	27,300	Maintenance.
Lirio slide.....	4,500	25,550	30,050	Maintenance.
Canal prism, Pacific entrance—				
Project No. 1.....	29,200	6,400	35,600	Maintenance.
Maintenance.....	39,000	5,700	44,700	Maintenance.
Balboa inner harbor—				
Project No. 1.....		7,600	7,600	Maintenance.
Maintenance.....	1,900		1,900	Maintenance.
Plant excavation:				
Naval Air Station fill, Coco Solo.....	118,000		118,000	Auxiliary.
Dredging sand at Chame.....	4,379		4,379	Auxiliary.
Totals.....	201,029	94,200	295,229	

The ferry crossing at the north end of Pedro Miguel locks operated 31 days during the month. Five hundred and twelve trips were made, and 81 Panama Canal, 19 U. S. Army, and 2,223 other vehicles, a total of 2,323, were ferried across the Canal.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on August 31, 1928, totaled 21,446, composed of 7,370 Americans, 2,648 of whom were men, 2,196 women, and 2,526 children; 209 Europeans, 98 of whom were men, 32 women, and 79 children; and 13,867 West Indians, 4,115 of whom were men, 2,581 women, and 7,171 children. The total number of persons in quarters on August 31, 1927, was 20,887.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of August 15, 1928, with a comparison of the working force for the preceding month and for August, 1927:

	As of August 15, 1928.			Total employees.	
	Gold.	Silver.	Total.	July, 1928.	Aug., 1927.
Operation and Maintenance:					
Office.....	42	58	100	101	80
Electrical.....	152	158	310	328	317
Municipal Engineering.....	81	683	764	750	641
Lock Operation.....	226	691	917	930	817
Dredging.....	179	905	1,084	1,107	1,094
Mechanical.....	462	836	1,298	1,281	1,302
Marine.....	211	713	924	922	819
Fortifications.....	24	348	372	399	184
Totals.....	1,377	4,392	5,769	5,818	5,254
Supply Department:					
Quartermaster.....	193	1,720	1,913	1,897	1,870
Subsistence.....	7	101	108	110	105
Commissary.....	223	1,168	1,391	1,374	1,290
Cattle Industry.....	5	128	133	139	228
Hotel Washington.....	10	95	105	100	104
Transportation.....	55	210	265	266	253
Totals.....	493	3,422	3,915	3,886	3,850
Accounting Department.....	196	8	204	203	208
Health Department.....	285	856	1,141	1,133	1,033
Executive Department.....	480	298	778	781	779
Totals.....	961	1,162	2,123	2,117	2,020
Panama Railroad Company:					
Superintendent.....	49	255	304	317	274
Transportation.....	66	120	186	183	180
Receiving and Forwarding Agency.....	85	1,246	1,331	1,162	1,858
Coaling stations.....	49	243	292	306	281
Totals.....	249	1,864	2,113	1,968	2,593
Grand totals, August, 1928.....	3,080	10,840	13,920		
Grand totals, July, 1928.....	3,068	10,721		13,789	
Grand totals, August, 1927.....	2,970	10,747			13,717

Additions to the gold force on the Isthmus in August were as follows: Employed in the United States, 9; reemployed in the United States, 5; employed on the Isthmus, 13; reemployed on the Isthmus, 13; total, 40. Separations from the gold force totaled 43, as follows: Resigned, 31; discharged, 11; died, 1. At the end of the month there were on file 131 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 194 deaths occurred during the month of August, 1928, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 17.98 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 46; tuberculosis (various organs), 26; nephritis (acute and chronic), 15; diarrhea and enteritis, 13; and syphilis, 8. There were 6 deaths from organic diseases of the heart, 5 from apoplexy, 4 from influenza, and 1 each from whooping cough, diphtheria, erysipelas, and anthrax. There were 29 deaths among nonresidents of the Isthmus. These are not included in the above statistics.

There were 348 live births, and 26 stillbirths, reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 34.65 per 1,000 population. Deaths among children under 1 year of age numbered 38, giving an infant mortality rate of 109.20.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during August was 150, of whom 29 were employees (8 white and 21 colored), 16 were members of employees' families (1 white and 15 colored), 26 were Canal Zone agriculturists, 37 were other civilian nonemployees, and 42 were Army and Navy personnel. Of the 45 employees and members of employees' families, 22 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There was one death from malaria among residents, an East Indian merchant, who died in Santo Tomas Hospital; no information was obtainable as to the probable place at which he received his infection.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions and received on the Isthmus during the month totaled \$486,455.04, of which \$448,775.83 was for the Department of Operation and Maintenance and \$37,679.21 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap and obsolete and second-hand material amounted to \$44,410.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of July, 1928, as compared with July, 1927.

It is impossible to submit figures for the month of August at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	July, 1928.	July, 1927.
Tolls.....	\$2,107,332.79	\$2,215,657.50
Other receipts.....	293,750.55	284,641.63
Total transit revenues.....	2,401,083.34	2,500,299.13
Total transit expenses.....	1,053,305.70	935,643.72
Net transit revenues.....	1,347,777.64	1,564,655.41
Three per cent capital charge.....	615,809.74	609,556.66
Transit surplus.....	731,967.90	955,098.75
Business revenues.....	1,275,026.00	1,291,105.97
Business expenses.....	1,193,523.82	1,200,566.74
Net business revenues.....	81,502.18	90,539.23
Three per cent capital charge.....	60,102.79	58,195.16
Business surplus.....	21,399.39	32,344.07
Combined revenues.....	3,676,109.34	3,791,405.10
Combined expenses.....	2,246,829.52	2,136,210.46
Net revenues.....	1,429,279.82	1,655,194.64
Three per cent capital charge.....	675,912.53	667,751.82
Combined surplus.....	753,367.29	987,442.82

Respectfully,

H. BURGESS,
Acting Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 22, 1928.

No. 459.

The following was received by the Hydrographic Office from the Pilot in Charge, Lighthouse Subdivision of The Panama Canal:

PANAMA CANAL—GATUN LAKE.

The following changes to aids to navigation have been made:

Buoy No. 62 has been changed from a spar to a gas buoy showing a fixed red light.

Buoy No. 72 has been changed from a spar to a gas buoy showing a fixed red light.

Buoy No. 75 has been changed from a spar to a gas buoy showing a fixed white light.

(Signed) F. KARIGER, *Pilot in Charge.*

H. BURGESS,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending September 15, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Stella.....	Panama Mail S. S. Co.....	.....	September 9..	.....	1,230
Maravi.....	United Fruit Co.....	.....	September 9..	.....	636
Knute Nelson.....	Peter Olsen S. S. Line.....	.....	September 9..	.....	231
Tolosa.....	United Fruit Co.....	September 9..	September 9..	13	225
Parismina.....	United Fruit Co.....	.....	September 10..	.....	136
Cerigo.....	Hamburg-American Line.....	.....	September 10..	.....	391
Santa Cruz.....	Grace Line.....	September 9..	September 10..	228	65
Santa Teresa.....	Grace Line.....	September 10..	September 10..	3	195
Buenaventura.....	Panama Railroad S. S. Line.....	September 10..	September 11..	274	91
Guatemala.....	Panama Mail S. S. Co.....	September 10..	September 11..	565	192
Baarn.....	Royal Netherlands S. S. Co.....	September 10..	September 11..	220	21
Indiana.....	French Line.....	September 10..	September 11..	99	(²)
Dakotan.....	Leyland Line.....	September 10..	September 11..	669	3
Uribe.....	United Fruit Co.....	.....	September 12..	.....	387
Calamares.....	United Fruit Co.....	September 10..	September 12..	648	65½
Leon XIII.....	Spanish Line.....	September 10..	September 12..	109	520
Arana.....	Pacific Steam Navigation Co.....	September 11..	September 11..	126	106
Nitokris.....	Hamburg-American Line.....	September 11..	September 12..	35	138
Teutonia.....	Hamburg-American Line.....	September 11..	September 12..	(²)	523
Mantaro.....	Peruvian Line.....	September 11..	September 15..	2,261	(²)
Coppename.....	United Fruit Co.....	September 12..	September 13..	862	64
Guayaquil.....	Panama Railroad S. S. Line.....	September 12..	September 13..	475	503
Metapan.....	United Fruit Co.....	September 12..	September 13..	283	373
Santos Maru.....	Osaka Shosen Kaisha.....	September 12..	September 13..	63	(²)
Kako Maru.....	Nippon Yusen Kaisha.....	September 12..	September 13..	452	(²)
Legazpi.....	Spanish Line.....	September 12..	September 14..	204	52
Duchessa D'Aosta.....	Nav. Libera-Triestina.....	September 13..	September 13..	18	(²)
Virginia.....	Amer. Fruit & S. S. Corp.....	September 13..	September 13..	284	4
Saramacca.....	United Fruit Co.....	September 13..	September 13..	79	108
Essequibo.....	Pacific Steam Navigation Co.....	September 13..	September 14..	50	17
Honduras.....	French Line.....	September 13..	September 14..	126	409
Esparta.....	United Fruit Co.....	September 13..	September 14..	434	197
Utacarbon.....	Union Oil Co.....	September 13..	September 14..	10,571	(²)
Ancon.....	Panama Railroad S. S. Line.....	September 13..	.....	3,028	.....
Hans Leonhardt.....	Colombian Transport Co.....	September 14..	September 15..	81	(²)
Perene.....	Peruvian Line.....	September 14..	.....	215	.....
Narenta.....	Pacific Steam Navigation Co.....	September 14..	September 15..	54	377
Parthenia.....	Donaldson Line.....	September 14..	September 15..	(²)	413
Cavina.....	Elders & Fyffes, Ltd.....	September 15..	September 15..	(²)	48½
Oropesa.....	Pacific Steam Navigation Co.....	September 15..	September 15..	(²)	.....
Cauca.....	National Navigation Co.....	September 15..	.....	185	.....
Jan Van Nassau.....	Royal Netherlands S. S. Co.....	September 15..	.....	440	.....
Heredia.....	United Fruit Co.....	September 15..	.....	543	.....
Virginia.....	American Fruit & S. S. Corp.....	September 15..	September 15..	(²)	452

¹ No cargo discharged.

² No cargo laded.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, September 22, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
City of San Francisco ²	7	15	21	16	6	10	16	13	13	Panama.	Panama Mail S. S. Co.	296.0	45.9	20.1	San Francisco, Cal.	General	2,503	3,848	2,606
West Montop	16	5	15	16	6	25	16	14	08	American	Calif. & East'n S. S. Co.	410.0	54.4	21.0	Seattle, Wash.	General	4,737	6,484	4,675
Cal.	14	9	00	16	7	35	16	14	55	German	North German Lloyd	228.0	33.0	13.0	Guayaquil, Ecuador	General	200	1,105	698
Canadian																			
Winnier	16	7	05	16	10	08	16	16	31	British	Can. Nat. Steamships	400.0	52.0	18.11	Montreal, Canada	General	3,399	5,885	4,773
Almagro	16	2	45	16	11	15	16	16	10	British	Pacific Steam Nav. Co.	303.4	43.0	17.6	Callao, Peru	General	1,025	2,826	1,070
Peru	14	23	20	16	11	35	16	13	28	Peruvian	Peruvian Line	284.0	59.0	17.3	Mollendo, Peru	General	1,631	2,168	1,529
Rimutaka	16	19	50	17	6	05	17	13	28	British	N. Z. Shipping Co.	457.0	58.0	27.6	London, England	General	4,741	9,201	6,961
Jason	16	3	40	17	6	12	17	14	33	Dutch	Royal Neth. S. S. Co.	347.0	48.3	22.5	Hamburg, Germany	General	3,670	4,321	3,120
City of New York ²	15	19	20	17	6	45	17	17	10	American	Richard E. Byrd	147.0	31.0	18.0	New York, N. Y.	Ballast		534	194
Esparta	17	3	10	17	7	15	17	14	41	American	United Fruit Co.	330.6	44.0	19.0	Port Limon, C. R.	Cocoa, bananas	990	3,673	2,367
Lionel ²	17	1	30	17	7	25	17	15	29	Norwegian	Alf. Mohr	375.0	52.0	26.7	Galveston, Texas	Subphur	8,130	6,067	4,386
Silverbeech ²	17	6	28	17	8	25	17	15	24	British	Kerr Line	425.0	58.3	21.8	Manila, P. I.	General	5,272	8,226	6,039
Cragpool	17	10	55	17	12	50	17	19	20	British	R. Roper	419.0	54.0	15.0	Newcastle-on-Tyne	Ballast	6,170	4,505	
Willwello	17	14	20	17	14	30	17	21	34	American	Williams S. S. Line	409.8	54.2	19.6	Norfolk, Va.	General	4,367	6,821	4,927
Kazembe	17	20	15	18	6	14	18	13	36	British	Ellerman & Bucknall	400.3	50.0	22.8	Dunedin, N. Z.	General, benzine	3,382	5,611	4,102
Australia	18	00	45	18	6	15	18	14	10	British	Amer. & Australian Line	482.0	64.2	25.6	Fredermde, Aust'lia	General	6,019	9,453	6,544
Mytic	18	3	30	18	7	10	18	14	29	American	Munson S. S. Line	400.7	52.4	22.6	Baltimore, Md.	General	4,805	6,623	4,668
Nagara	17	18	35	18	9	55	18	17	40	American	U. S. Navy	243.0	36.0	18.9	Cristobal, C. Z.	General	267	4,838	2,959
Manaro	17	17	45	18	10	10	18	17	40	Peruvian	Peruvian Line	360.0	46.0	19.4	Coyenas, Colombia	General	267	4,838	2,959
Dixie Arrow ¹	18	12	14	18	12	30	18	18	54	American	Standard Oil Co.	468.3	62.7	20.0	Marcus Hook, Pa.	General, cattle	267	9,734	7,140
Canadian																			
Runner	18	11	05	18	13	30	18	20	09	British	Can. Nat. Steamships	320.0	43.0	19.3	Montreal, Canada	General	2,026	3,169	2,022
King Edwin ²	18	17	25	18	19	35	19	10	02	British	Texas S. S. Co.	401.0	54.0	23.0	Port Arthur, Texas	General ⁽¹⁾	2,193	6,474	4,986
Dio	18	19	15	18	20	35	19	12	43	American	Redwood Line, Inc.	386.0	52.2	18.0	Mobile, Ala.	General	2,500	5,708	4,131
Doris ²	18			18	18	15	18	15	15	American	United Fruit Co.				Gatun, C. Z.	Ballast	9	7	
No. 3918 ⁶	18			18	18	15	18	15	15	American	United Fruit Co.				Gatun, C. Z.	Ballast	17	17	
No. 4470 ⁶	18			18	18	15	18	15	15	American	United Fruit Co.				Gatun, C. Z.	Ballast	15	15	
No. 4298 ⁶	18			18	18	15	18	15	15	American	United Fruit Co.				Gatun, C. Z.	Ballast	15	15	
Port Darwin	18	19	03	19	6	15	19	14	49	British	Can'th & Dom. Line.	480.0	60.5	28.6	Dunedin, N. Z.	General	5,600	10,468	7,916
Chepota	18	21	04	19	6	22	19	15	22	American	Charles Nelson & Co.	324.0	46.2	19.0	Seattle, Wash.	General	3,500	3,984	2,628
Italy Maru	18	23	10	19	7	25	19	16	10	American	Kawasaki Kisen Kaisha	385.0	51.7	27.0	Yawata, Japan	General	7,617	5,914	4,388
Silra ²	19	6	25	19	7	35	19	16	58	Japanese	Angle-Saxon Pet. Co.	441.0	57.6	17.0	Los Angeles, Calif.	Ballast	7,583	5,071	
San Eduardo ¹	19	7	15	19	8	40	19	16	27	Norwegian	Angle-Saxon Pet. Co.	430.0	54.6	19.0	San Francisco, Cal.	Ballast	6,391	4,382	
Graceland	19	6	10	19	9	35	19	17	23	British	Anglo-Mexican Pet. Co.	361.0	53.6	14.6	Vancouver, B. C.	Ballast	5,732	4,181	
Amerfield ²	19	10	00	19	10	10	19	17	52	British	E. J. Sutton	390.0	72.0	22.0	Cruz Grande, Chile	Ballast	15,500	4,496	

¹ Tanker.² Motor ship.³ Auxiliary bark.⁴ Survey ship.⁵ Launch.⁶ Barge.⁷ Case oil and products.⁸ Towing barges.⁹ Scrap iron and rails.

	19	10	30	19	10	55	19	18	33	20	1	54	Danzig		168	0	63	0	20	0	Rotterdam, Holland		Talara, Peru		9,336	6,338
Persephone	19	12	10	19	12	25	19	18	40	20	6	20	British	Baltic-Amer. Pet. Co.	480	0	60	0	25	6	London, England	Ballast	Lytleton, N. Z.	General	4,280	11,443
Ruabine	19	10	15	19	13	58	19	20	38	19	23	30	British	N. Z. Shipping Co.	406	5	54	0	24	0	Newcastle, England	General	Thio, N. Caledonia	Coal and coke	5,513	6,124
Dalbair	19	14	00	19	14	15	19	22	05	19	23	30	Yugoslav	United Steam Nav. Co.	409	0	55	2	24	0	Blyth, England	General	Antofagasta, Chile	General, coal	6,156	6,584
Gundlach	19	10	10	19	20	40	20	9	48	20	10	49	American	Babarizza & Co.	446	0	56	0	24	0	Boston, Mass	General	Tacoma, Wash	General	6,026	8,508
F. J. Lucken-	19	11	30	19	20	60	20	13	24	20	14	20	British	Luckenbach Line.	511	0	62	0	25	6	Liverpool, England	General	Valparaiso, Chile	General	4,088	12,417
bach	19	11	30	19	20	60	20	13	24	20	14	20	British	Pacific Steam Nav. Co.	511	0	62	0	25	6	W. Hardlepool, Eng.	General	Valparaiso, Chile	General	4,088	12,417
Oreona	19	21	30	19	20	60	20	13	24	20	14	20	British	Reardon Smith Line.	396	5	53	5	13	0	Portland, Ore	Ballast	Portland, Ore	Ballast	5,970	4,419
Orient City	19	20	40	19	20	60	20	13	24	20	14	20	American	Amer.-Hawaiian Line.	460	0	57	9	21	0	Boston, Mass	General	Portland, Ore	General	3,700	6,829
Neveadan	19	20	40	19	20	60	20	13	24	20	14	20	American	Com. Int. de Com. Ar't	409	0	52	0	18	0	Barry Docks, Eng.	General	Arica, Chile	General	6,617	4,792
Ant	19	23	35	20	8	40	21	11	30	21	14	15	Belgian	Wings & Co.	375	0	51	3	15	0	Amst dam, Holland	Ballast	Los Angeles, Calif	General	5,688	3,960
Tosca	20	6	55	20	8	43	20	10	34	20	17	55	Norwegian	Dodd, Thomson & Co.	400	0	53	0	13	11	S. Shields, England	Ballast	Vancouver, B. C.	General	6,052	4,212
King Robert	20	7	30	20	8	30	20	15	42	20	16	55	British	Grace Line	360	0	51	5	23	8	New York, N. Y.	General	Talcahuano, Chile	General	2,560	5,710
Santa Luisa	20	9	10	20	12	45	20	18	53	20	20	15	American	Dodd, Thomson & Co.	360	0	51	5	23	8	New York, N. Y.	General	Talcahuano, Chile	General	2,560	5,710
City of Ade-	20	8	05	20	13	37	20	22	06	20	23	41	British	Hull Line, Ltd.	443	0	57	4	27	8	Sydney, C. B.	General	Shanghai, China	General	7,686	8,547
laide	20	17	50	20	20	04	21	10	36	21	11	40	American	Transmarine Lines	334	0	46	0	22	0	Mobil, Ala.	General	Seattle, Wash	General	3,258	3,984
Guigneco.	20	17	50	20	20	04	21	10	36	21	11	40	American	Transmarine Lines	334	0	46	0	22	0	Mobil, Ala.	General	Seattle, Wash	General	3,258	3,984
Gen. Wm. M.	20	17	50	20	20	04	21	10	36	21	11	40	American	Transmarine Lines	334	0	46	0	22	0	Mobil, Ala.	General	Seattle, Wash	General	3,258	3,984
Graham	20	1	40	21	6	10	21	13	15	21	14	15	American	U. S. Army	156	0	32	0			Cristobal, C. Z	General	Balboa, C. Z	General	4,083	8,079
La Marcellaise	20	1	40	21	6	10	21	13	15	21	14	15	American	French Line	429	0	58	0	19	1	Havre, France	General	Vancouver, B. C.	General	4,882	4,607
Bantu	20	20	45	21	6	10	21	14	07	21	15	20	American	Norton, Lilly & Co.	360	0	47	0	25	0	Baltimore, Md	General	Tacoma, Wash	General	4,078	12,057
President	21	5	10	21	7	15	21	13	36	21	21	28	American	Dollar Line	502	1	62	2	26	0	Boston, Mass	General	Around the world	General	4,078	12,057
Adams	21	1	25	21	7	33	21	15	09	21	20	25	British	Imperial Oil Co.	510	2	68	2	23	0	Montreal, Canada	Ballast	Talara, Peru	Ballast	11,573	8,008
Vancollite	21	1	25	21	7	33	21	15	09	21	20	25	British	Imperial Oil Co.	510	2	68	2	23	0	Montreal, Canada	Ballast	Talara, Peru	Ballast	11,573	8,008
Plar de	21	8	35	21	8	45	21	15	46	21	19	57	British	Larrinaga S. S. Co.	445	0	58	0	19	6	N. Shields, Eng.	General	Astoria, Wash.	General	7,643	5,562
Larrinaga	21	8	35	21	8	45	21	15	46	21	19	57	British	Larrinaga S. S. Co.	445	0	58	0	19	6	N. Shields, Eng.	General	Astoria, Wash.	General	7,643	5,562
Canadian Ex-	21	5	35	21	10	39	21	17	25	21	19	00	British	Can. Nat. Steamships	400	0	52	0	19	3	Montreal, Canada	General	Brisbane, Australia	General	2,305	5,853
Explorer	21	5	35	21	10	39	21	17	25	21	19	00	British	Can. Nat. Steamships	400	0	52	0	19	3	Montreal, Canada	General	Brisbane, Australia	General	2,305	5,853
Emmanuel	21	5	35	21	10	39	21	17	25	21	19	00	British	Can. Nat. Steamships	400	0	52	0	19	3	Montreal, Canada	General	Brisbane, Australia	General	2,305	5,853
Stavroudis	21	10	20	21	12	45	21	17	20	21	20	24	Greek	Stavroudis S. S. Co.	398	5	48	5	15	5	Chania, Greece	Ballast	Arica, Chile	General	5,472	3,753
Wiegand	21	10	20	21	12	45	21	17	20	21	20	24	Greek	Stavroudis S. S. Co.	398	5	48	5	15	5	Chania, Greece	General	San Antonio, Chile	General	3,283	6,573
Harry Lucken-	21	18	08	21	19	10	22	9	06	22	10	00	American	Rolland Line	393	4	54	0	22	6	Hamburg, Germany	General	Seattle, Wash	General	3,436	9,262
bach	22	2	10	22	6	20	22	13	06	22	14	15	American	Luckenbach Line	418	9	60	2	22	0	Boston, Mass	General	Seattle, Wash	General	3,436	9,262
Canden	22	2	10	22	6	20	22	13	06	22	14	15	American	Luckenbach Line	418	9	60	2	22	0	Boston, Mass	General	Seattle, Wash	General	3,436	9,262
Moltrana	22	17	15	22	6	20	22	13	06	22	14	15	Colombian	United Fruit Co.	419	5	56	5	20	0	Tela, Honduras	Ballast	Los Angeles, Calif	General	6,977	4,959
Matran	22	17	15	22	6	20	22	13	06	22	14	15	Colombian	United Fruit Co.	419	5	56	5	20	0	Tela, Honduras	General	Buenaventura, Col	General	255	1,110
Nalra	22	2	45	22	6	20	22	13	06	22	14	15	American	Colombian Transp. Co.	150	0	27	2	8	0	Cristobal, C. Z	General	St. Rosalia, Mex.	General	4,385	4,171
Lebore	22	4	05	22	7	18	22	15	30	22	16	35	American	Mallory Transport Co.	333	8	48	0	22	6	Norfolk, Va.	General	Cruz Grande, Chile	General	14,225	4,655
Pacific Celar.	22	4	05	22	7	18	22	15	30	22	16	35	American	Ore S. S. Corp.	549	0	72	0	23	6	Baltimore, Md	General	Seattle, Wash	General	4,432	6,138
St. Michel	22	5	20	22	7	18	22	15	30	22	16	35	American	Dimon S. S. Corp	399	4	54	7	18	0	New York, N. Y.	General	Seattle, Wash	General	4,432	6,138
Wearpool	22	7	00	22	8	25	22	15	13	22	17	35	American	U. S. Army	436	9	58	0	23	5	New York, N. Y.	General	Balboa, C. Z	General	200	
Delaware Sun	22	7	00	22	8	25	22	15	13	22	17	35	American	U. S. Army	436	9	58	0	23	5	New York, N. Y.	General	Balboa, C. Z	General	200	
Pecten	22	8	15	22	9	40	22	17	16	22	18	28	British	Sir. R. Ropier	390	0	55	0	22	8	Antwerp, Belgium	General	Seattle, Wash	General	6,500	9,920
Impero	22	8	15	22	9	40	22	17	16	22	18	28	British	Sir. R. Ropier	390	0	55	0	22	8	Antwerp, Belgium	General	Seattle, Wash	General	6,500	9,920
Kuma Maru	22	6	35	22	11	05	22	18	00	22	20	05	Italian	Sun Oil Co.	480	0	60	0	20	8	Philadelphia, Pa.	General	Los Angeles, Calif	General	9,402	6,586
Orazio	22	6	35	22	11	05	22	18	00	22	20	05	Italian	Sun Oil Co.	480	0	60	0	20	8	Philadelphia, Pa.	General	Los Angeles, Calif	General	9,402	6,586
Acajutla	22	6	35	22	11	05	22	18	00	22	20	05	Italian	Sun Oil Co.	480	0	60	0	20	8	Philadelphia, Pa.	General	Los Angeles, Calif	General	9,402	6,586
Manizales	22	6	35	22	11	05	22	18	00	22	20	05	Italian	Sun Oil Co.	480	0	60	0	20	8	Philadelphia, Pa.	General	Los Angeles, Calif	General	9,402	6,586
Durazzo	22	19	40	22	12	07	22	19	20	23	2	42	Italian	Anglo-Saxon Pet. Co.	420	0	60	0	23	0	Tyne, England	General	Iquique, Chile	General	7,907	4,984
Sciota	22	19	40	22	12	07	22	19	20	23	2	42	Italian	Anglo-Saxon Pet. Co.	420	0	60	0	23	0	Tyne, England	General	Iquique, Chile	General	7,907	4,984
E. T. Bedford	22	16	55	22	17	20	23	9	19	23	10	44	American	Standard Shipping Co.	499	0	68	0	22	0	New York, N. Y.	General	Talara, Peru	General	10,994	7,893

Towing barge.

Tug.

Transport.

Motor schooner.

Mine planter.

Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.			Gross.	Net.			
Paul Shoup ¹ .	15	19	10	16	6	09	16	13	30	American.	Associated Oil Co.	421	4	58	2	26	5	8,747	7,333	5,182
Helen Olmsted ¹ .	15	22	10	16	7	12	16	15	05	American.	The Texas Co.	425	8	57	0	26	6	9,000	7,484	5,216
Noordwijk ¹ .	15	21	50	16	8	46	16	16	45	Dutch.	Holland-American Line.	470	0	38	0	29	9,388	8,888	6,612	
Canadian																				
Seigneur ¹ .	15	23	48	16	9	27	16	17	00	British.	Can. Nat. Steamships	400	6	52	3	23	6	6,064	5,983	4,183
Sudawonco ¹ .	16	1	20	16	10	30	16	17	38	American	Transmarine Lines	324	0	46	2	23	1	4,000	3,981	2,628
Portland ¹ .	16	1	20	16	11	38	16	17	57	German	Hamburg-American Line	402	0	61	2	26	9	7,052	6,139	4,668
Kellerwald ¹ .	16	3	00	16	13	05	16	20	40	German.	Hamburg-American Line	415	8	53	0	26	3	8,028	6,545	4,483
Crimus ¹ .	16	19	15	17	17	17	15	05	17	American.	Planet Line	410	0	54	2	23	6	6,730	6,585	4,791
Sommerstad ¹ .	16	21	40	17	7	25	17	16	25	Norwegian.	A. F. Klavness	381	0	55	2	26	3	7,771	5,994	3,876
Ebro ¹ .	17	1	00	17	8	12	17	16	10	British.	Pacific Steam Nav. Co.	450	3	56	9	25	0	3,037	2,921	2,301
Berengar ¹ .	17	3	00	17	8	24	17	17	55	British.	North German Lloyd.	381	0	55	2	25	6	7,128	6,520	4,596
Arato ¹ .	16	22	00	17	8	00	17	16	07	Colombian.	Colombian Transp. Co.	92	0	23	0	7	69	160	92	
Pont Montana ¹ .	17	3	30	17	9	46	17	18	22	American.	Swayne & Hoyt	324	0	46	2	23	0	3,807	2,984	2,612
Herman Falk ¹ .	17	5	30	17	9	54	17	18	50	American.	Oil Transport Co.	431	0	59	2	26	3	9,423	7,862	5,049
Niagra ¹ .	12	16	10	17	10	07	17	18	35	American.	U. S. Navy	243	0	36	3	18	9	513	1,133	741
Manizales ¹ .	17	8	30	17	10	17	17	19	45	German.	Roland Line	216	6	33	0	12	6	389	1,633	1,041
Durazzo ¹ .	17	9	40	17	10	33	17	20	00	German.	Hamburg-American Line	226	9	34	5	13	0	7,029	5,742	4,180
Astoria ¹ .	17	14	25	18	6	19	18	13	30	Danish.	Canadian Transp. Co.	379	6	53	3	25	5	7,150	5,742	4,180
Nitro ¹ .	17	19	45	18	6	45	18	14	45	Italian.	Soc. Anon. Com. Italia	406	8	48	8	26	6	10,457	10,011	7,278
Chief Skidgate.	18	5	30	18	7	20	18	15	35	British.	Can.-Amer. Steamships	483	6	56	0	30	6	8,900	8,785	6,567
Walter A. Duck-																				
entach ¹ .	17	21	05	18	7	33	18	16	30	American.	Lukenbach Line	446	5	56	1	29	0	10,408	7,348	5,164
Angola ¹ .	18	6	00	18	8	04	18	17	05	British.	McClay & McIntyre	352	0	50	0	22	9	6,000	4,340	3,202
Atlas ¹ .	17	21	15	18	8	35	18	17	50	American.	Standard Transp. Co.	430	0	58	2	26	3	10,408	7,348	5,164
Greylock ¹ .	18	8	15	18	9	28	18	18	13	American.	Seas Shipping Co.	430	7	54	3	27	6	7,350	7,946	5,698
Montana ¹ .	18	9	30	18	10	10	18	18	50	American.	Amer.-Hawaian Line	408	6	53	9	28	1	7,105	6,756	4,775
Hanbury Maru ¹ .	17	11	30	18	10	19	18	19	45	Japanese.	Oakea Shosen Kaisha...	400	0	54	5	18	0	3,605		
Oranjestad ¹ .	11	19	23	18	10	50	18	19	30	British.	Lago Shipping Co.	305	7	50	2	10	6			
Pacific																				
Pioneer ¹ .	18	10	00	18	10	52	18	20	00	British.	Furness, Withy & Co....	435	9	60	5	27	3	8,511	9,630	6,945
Port Huron ¹ .	18	2	23	18	13	45	18	20	55	British.	Com'lth & Dom. Line	477	0	63	3	24	3	5,216	10,720	7,692
France Maru ¹ .	18	16	00	18	16	48	19	11	50	Japanese.	Kokusai Kisen Kaisha.	385	0	51	0	27	6	7,846	6,209	4,658
Chloro ¹ .	18	20	30	19	6	35	19	16	20	American.	Ore S. S. Corp.	549	1	72	2	35	0	20,000	14,558	9,348
Acquila ¹ .	18	20	30	19	6	40	19	14	07	British.	Pacific Steam Nav. Co.	215	7	33	5	16	1	837	1,273	706
Georgian ¹ .	19	00	10	19	7	21	19	17	18	American.	Amer.-Hawaian Line	386	8	52	2	21	1	4,437	5,719	4,023
Edwin Christ-																				
enson ¹ .	19	3	00	19	8	27	19	18	20	American.	Arrow Line	410	0	54	2	22	8	6,500	6,003	4,932
Saint Louis ¹ .	19	4	30	19	8	46	19	19	20	French.	French Line	397	9	50	3	25	0	7,447	5,857	4,166

¹ Tanker.

² Motor ship.

³ Survey ship.

⁴ For drydocking only.

⁵ Coffee, silver, and general.

⁶ Coffee, sugar, and nitrates.

⁷ For orders.

⁸ Lumber, wheat, and general.

⁹ Kerosene distillate.

¹⁰ Rice, tea, and general.

¹ Tanker.¹² Motor ship.¹³ Survey ship.¹⁴ For drydocking only.¹⁵ For orders.¹⁶ Coffee, sugar, and general.¹⁷ For orders.¹⁸ Lumber, wheat, and general.¹⁹ Kerosene distillate.²⁰ Rice, tea, and general.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
September 16...	Calamares	United Fruit Co	Port Limon, Costa Rica.	September 16...	Calamares	United Fruit Co	New York via Habana.
September 17...	Pastores	United Fruit Co	New York via Habana.	September 17...	Jan Van Nassau	Royal Netherlands S. S. Co	Corpus Christi, Texas.
September 18...	Antillian	Leyland Line	Liverpool via wayports.	September 17...	Heredia	United Fruit Co	New Orleans via wayports.
September 19...	Suriname	United Fruit Co	New Orleans, La.	September 17...	Antoon	Panama R. R. S. S. Line	New York via Haiti.
September 19...	French Line	United Fruit Co	St. Nazaire via wayports.	September 19...	Antillian	Leyland Line	N. Orleans and Pt. Limon.
September 19...	Royal Netherlands S. S. Co	Royal Netherlands S. S. Co	Amsterdam via wayports.	September 19...	Pastores	United Fruit Co	Port Limon, Costa Rica.
September 19...	Colon, R. P.	Colon, R. P.	Colon, R. P.	September 19...	Van Rensselaer	Royal Netherlands S. S. Co	Port Limon, Costa Rica.
September 19...	Resolute ²⁶	D. L. Lynton	Colon, R. P.	September 19...	Van Rensselaer	D. L. Lynton	San Andres and Bluefields.
September 20...	Favorita	Amer. Fruit & S. S. Co	New Orleans, La.	September 19...	Resolute ²⁶	Suriname	Pto. Colombia and Bocas.
September 20...	Coppename	United Fruit Co	Port Limon, Costa Rica.	September 20...	Linda S. ²⁵	Suriname	Bluefields, Nicaragua.
September 20...	Sixola	United Fruit Co	New York via Kingstou.	September 20...	Linda S. ²⁵	Suriname	New Orleans, La.
September 21...	Manauqui	United Fruit Co	New York via wayports.	September 20...	Coppename	United Fruit Co	San Blas, R. P.
September 21...	Manauqui	United Fruit Co	Port Limon, Costa Rica.	September 21...	Favorita	American Fruit & S. S. Co	Havre via wayports.
September 21...	Favorita	American Fruit & S. S. Co	San Blas, R. P.	September 21...	Sixola	United Fruit Co	New York via wayports.
September 22...	Inapachuna ²⁷	United Fruit Co	Colon, R. P.	September 21...	Manauqui	United Fruit Co	New Orleans, La.
September 22...	Anachuna ²⁷	United Fruit Co	Colon, R. P.	September 22...	Manauqui	American Fruit & S. S. Co	New York via Kingstou.
September 22...	Commodore Rollins.	United Fruit Co	Perme, R. P.	September 22...	Manauqui	United Fruit Co	Mobile, Ala.

²³ Auxiliary fleet tug.

²⁴ Wheat, lumber, and general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.

* DEPARTURES.

* Other than ships passing through the Canal.

²⁵ Motor schooner.

²⁶ Schooner.

²⁷ Motor boat.

(Continued on next page, column 2.)

Official Circular.

Appointment—Assistant to the Governor.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 24, 1928.

To all concerned—Lieut. Colonel Julian L. Schley, having reported September 23, 1928, is hereby assigned to duty until October 15, 1928, as Assistant to the Governor, and will perform the duties of Engineer of Maintenance.

H. BURGESS,
Acting Governor.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Diesel oil is sold by The Panama Canal at Cristobal at \$1.80 per barrel.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.25 per barrel at Balboa and Cristobal. Diesel oil, Balboa only, \$1.80 per barrel.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers at \$8.00 per ton of 2,240 pounds at Cristobal, and \$11.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, \$8.00 per ton at Balboa. When coal is delivered from lighters in quantities of 50 tons or more, the price is \$9.00 per ton at Cristobal, \$12.00 at Balboa. If less than 50 tons is taken from lighters, prices are \$11.00 per ton at Cristobal and \$14.00 per ton at Balboa with minimum charge for 20 tons and maximum charge not to exceed that for 50 tons at \$9.00 Cristobal and \$12.00 Balboa. For furnishing lump coal for galley use, or run of mine coal, in sacks, \$6.00 additional per ton; but if vessels furnishes sacks \$3.00 additional per ton.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

For trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, when requested, an additional charge of 90 cents per ton will be made for extra handling.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Transit and Harbor Regulations of The Panama Canal," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.

The Hydrographic Office at Cristobal maintain at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometric comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 107.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
September 22.	Cartago.	United Fruit Co.	New Orleans via Habana.	September 22.	Van Rensselaer.	Royal Netherlands S. S. Co.	Amsterdam, via wayports.
September 22.	Grunewald	Hamburg-American Line	Hamburg, Germany.	September 22.	Grunewald	Hamburg-American Line	Hamburg via wayports.
				September 22.	Anaehueina ²⁷	United Fruit Co.	Colon, R. P.
				September 22.	Inajaquina ²⁷	United Fruit Co.	Colon, R. P.
²⁷ Motor boat.							
PORT OF BALBOA.							
September 15.	San Luis ²⁸	Chiriqui Land Co.	Pto. Armuelles, R. P.	September 16.	San Luis ²⁸	Chiriqui Land Co.	Pto. Armuelles, R. P.
September 16.	Tejon	General Petroleum Co.	Los Angeles, Calif.	September 18.	Tejon	General Petroleum Co.	Los Angeles, Calif.
September 17.	Craftsman ²⁹	M. J. Dady Contracting Co.	Buenaventura, Colombia.	September 18.	Craftsman ²⁹	M. J. Dady Contracting Co.	Buenaventura, Colombia.
September 18.	El Panquico ³⁰	Panama Government	Pto. Armuelles, R. P.	September 19.	A. B. de O'Barrio ²⁸	Pacific Fruit Co.	Bayano River, R. P.
September 18.	City of New York ³¹	High seas	High seas	September 19.	Dos Hermanos ²⁸	A. Valdez.	Bayano River, R. P.
September 19.	A. B. de O'Barrio ²⁸	Pacific Fruit Co.	Bayano River, R. P.	September 21.	El Panquico.	Panama Government	Pto. Armuelles, R. P.
September 19.	Dos Hermanos ²⁸	A. Valdez.	Bayano River, R. P.	September 21.	City of New York ³¹	Richard E. Byrd	Dunedin, New Zealand.
September 19.	Chiman ³²	Isthmian Land & Fruit Co.	El Real, R. P.	September 21.	Chiman ³²	Isthmian Land & Fruit Co.	El Real, R. P.
²⁸ Motor schooner. ²⁹ Tug. ³⁰ Revenue cutter. ³¹ Bark. ³² Motor ship. * Other than ships passing through the Canal.							

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal Record, Balboa Heights, Canal Zone, or

The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., October 3, 1928.

No. 9.

Canal Traffic During September.

During the month of September, 1928, 487 commercial vessels and 11 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,111,230.56, and on the launches, \$88.89, or a total tolls collection of \$2,111,319.45.

The daily average number of transits of seagoing vessels for the month was 16.23, and the daily average tolls collection, \$70,374.35. The average amount of tolls paid by each of the commercial transits was \$4,335.18, as compared with \$4,180.74 for the month of August.

Traffic for September decreased rather sharply as compared with the previous month, when 526 commercial vessels transited and \$2,199,069.31 were collected in tolls. As compared with September, 1927, traffic for the past month decreased by 53 transits and over \$183,000 in tolls. September, 1928, was the second month since June, 1927, in which the number of transits have been fewer than 500.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first nine months of the current calendar year, with the daily averages of transits and tolls:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	540	\$2,212,752.50	17.42	\$71,379.20
February.....	547	2,253,755.37	18.86	77,715.70
March.....	542	2,223,370.57	17.48	71,271.63
April.....	531	2,187,607.82	17.70	72,914.55
May.....	508	2,118,969.83	16.38	68,353.86
June.....	481	2,016,211.09	16.03	67,206.43
July.....	509	2,109,083.19	16.41	68,034.94
August.....	526	2,199,069.31	16.97	70,937.72
September.....	487	2,111,230.56	16.23	70,374.35
Totals.....	4,671	19,432,050.24	17.05	70,919.89

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 26, 1928.

No. 460.

The following was received by the Hydrographic Office through the Balboa radio:
SANTA ELENA LIGHT, ECUADOR.

"The S. S. *Buenaventura* reports that on the night of September 24, the Santa Elena Light in latitude 2° 11' 23" S. and longitude 81° 00' 07" W., was showing a steady fixed light instead of its described flashing character and visible the described distance. (Signed) DOUGHERTY."

NOTE.—See No. 450, dated September 17.

H. BURGESS,
Acting Governor.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, September 20, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Rio Azul.....	22	19 55	23	6 10	23	13 53	23	15 20	British.	Thompson S. S. Co.	383	0	53.2	15.0	Portland, Ore.	Ballast.		5,014	3,454
Csiris.....	23	1 30	23	6 25	23	13 03	23	15 50	German.	Hamburg-American Line	376	0	51.0	20.6	Portland, Ore.	General.	3,397	5,788	4,023
Pont Reyes.....	23	6 05	23	7 15	23	13 46	23	15 50	American.	Swayne & Hoyt	324	0	46.2	21.8	Tacoma, Wash.	Sulphur, general.	3,042	3,984	2,617
Iowan.....	23	8 05	23	8 15	23	15 36	23	16 45	American.	Amer-Hawaiian Line	407	7	53.6	21.0	Seattle, Wash.	General.	3,750	7,079	5,028
Hegira.....	23	9 25	23	9 40	23	17 30	23	20 30	American.	Norton, Lilly & Co.	440	0	56.0	29.0	Everett, Wash.	Steel.	10,242	8,353	6,113
Grootendijk.....	22	15 50	23	9 40	23	16 19	23	17 10	Dutch.	Holland-American Line.	450	0	58.0	18.8	Tacoma, Wash.	General.	2,022	8,730	5,890
Julia Luckenbach.....	23	10 20	23	11 18	23	17 46	23	18 50	American.	Luckenbach Line	436	0	57.0	24.8	Seattle, Wash.	General.	5,317	8,533	6,402
Trimountain.....	23	11 55	23	12 23	23	10 35	23	23 50	American.	B. L. Shipping Co.	416	9	56.2	25.6	San Francisco, Cal.	Crescote.	9,015	6,728	4,734
El Oro.....	23	9 30	23	13 25	23	20 25	23	23 30	British.	C. T. Bowring & Co.	440	0	57.6	20.8	New York, N. Y.	Ballast.	7,478	5,040	
Oyden.....	23	14 38	23	14 45	23	21 16	24	2 53	British.	British-Mex. Pet. Co.	420	3	54.6	18.0	Los Angeles, Calif.	Ballast.	6,337	4,358	
Rhodops.....	23	17 18	23	19 30	24	9 13	25	00 24	German.	Hamburg-American Line	435	0	53.0	22.10	Valparaiso, Chile.	General.	3,206	7,525	5,154
Wentworth.....	23	15 38	23	19 30	24	10 04	24	11 22	British.	R. S. Dalgleish, Ltd.	400	0	52.3	16.0	San Francisco, Cal.	Ballast.	1,629	5,721	4,058
Millnoeket.....	23	17 35	24	6 12	24	14 32	24	15 20	American.	N. O. & S. A. S. S. Line	317	0	44.2	15.10	Antofagasta, Chile.	(s)	639	4,033	2,562
La Perla.....	24	4 00	24	6 15	24	14 24	24	15 20	American.	United Fruit Co.	325	2	48.1	21.0	San Francisco, Cal.	Panama, coffee.	4,000	6,117	4,917
Atlantic.....	23	18 15	21	6 20	24	14 54	24	15 55	American.	Argonaut S. S. Line.	410	5	54.3	27.0	Tacoma, Wash.	Steel, general.	7,148	6,507	4,917
Mindoro.....	24	6 10	24	7 20	24	15 52	24	17 40	British.	Phoenix Navigation Co.	309	3	52.8	19.0	Los Angeles, Calif.	Sugar.	4,000	6,117	4,917
Parana.....	24	6 10	24	10 00	24	17 02	25	6 38	British.	Royal Mail S. P. Co.	375	3	48.3	16.0	Seattle, Wash.	Ballast.	4,717	3,359	
Therton.....	24	10 39	24	10 55	24	17 18	24	19 00	British.	R. Chapman & Son	400	0	52.3	17.0	Vancouver, B. C.	Ballast.	5,099	4,126	
Steel Inventor.....	24	20 50	24	21 10	25	9 44	25	14 55	American.	Isthmian S. S. Lines	424	0	56.0	26.0	Surabaya, Java.	General.	8,106	7,011	5,450
Limon.....	24	24	24	19 37	24	19 37	24	19 37	American.	J. J. Eckert					Gatun, C. Z.	(s)	2	2	2
El Lobo.....	25	9 35	25	9 45	25	15 49	25	16 55	British.	Atlantic Refining Co.	385	2	51.0	18.0	Gatun, C. Z.	Unknown.	2	2	2
Massar.....	25	11 15	25	11 30	25	18 20	25	19 30	American.	Calmor S. S. Co.	385	0	52.0	22.5	La Libertad, Te dor.	Ballast.	4,851	3,326	
Annie Johnson.....	25	11 00	26	6 05	26	13 27	26	16 40	Swedish.	Johnson Line.	392	2	52.0	25.0	Seattle, Wash.	Steel, general.	7,403	6,242	4,471
Loriga.....	24	23 35	26	6 05	26	14 21	26	18 15	British.	Pacific Steam Nav. Co.	406	0	54.2	19.0	Vancouver, B. C.	General.	4,381	6,450	4,919
Drechtduik.....	25	10 50	26	7 20	26	15 10	26	16 10	Dutch.	Holland-American Line.	485	0	62.0	20.0	Corral, Chile.	General.	4,042	7,331	5,091
Witram.....	26	4 45	26	7 20	26	15 56	26	18 29	German.	North German Lloyd	449	0	58.0	25.0	Vancouver, B. C.	General.	3,432	7,703	7,619
American Star.....	26	4 55	26	8 30	26	16 16	26	17 30	American.	Charles Nelson & Co.	386	8	52.2	19.4	San Francisco, Cal.	General.	4,811	7,820	5,661
Alaskan.....	26	7 28	26	8 45	26	17 03	26	18 00	American.	Amer-Hawaiian Line.	415	0	53.0	17.10	Seattle, Wash.	General.	3,893	5,699	4,167
Aconcagua.....	26	4 10	26	11 03	26	17 39	26	18 29	Chilean.	South American Line.	421	0	56.2	24.11	Tacoma, Wash.	General.	2,226	7,380	5,339
City of Birmingham.....	26	8 55	26	13 10	26	19 47	26	21 10	British.	Ellerman & Bucknall.	391	0	54.2	24.6	Valparaiso, Chile.	General.	2,485	7,764	4,705
Pacific Shipper.....	24	15 03	26	14 20	26	20 58	27	2 16	British.	Furness, Withy & Co.	420	0	58.0	16.7	Adelaide, Australia.	General, case oil.	4,418	6,702	5,017
Cape Conroy.....	26	14 15	26	14 30	26	21 50	26	23 28	British.	Lyle Shipping Co.	400	0	53.5	16.6	Vancouver, B. C.	General, bananas	1,273	7,896	5,858
Larry Doherty.....	26	15 20	27	6 15	27	12 48	27	14 00	American.	Tidewater Oil Co.	430	0	59.2	19.4	Vancouver, B. C.	Ballast.	6,246	4,946	4,499
Kendal Castle.....	26	15 30	27	6 22	27	14 02	27	15 15	British.	James Chambers & Co.	418	0	55.6	25.11	Los Angeles, Calif.	Ballast.	7,494	5,181	
Trojanstar.....	26	20 30	27	7 20	27	14 36	27	15 55	British.	Blue Star Line.	469	0	59.0	24.0	Darien, China.	General.	7,528	6,773	5,001
														River Tyne, Eng.	Ballast.		10,405	7,401	

* Tanker.

* Motor ship.

* Lumber.

* Lifeboat.

* Towing lifeboat Leda.

Canadian Challenger King City	26	26	21	50	27	7	17	27	15	27	16	35	British	Can. Nat. Steamships Reardon Smith Line	400	52	20	20	Montreal, Canada, Immingham, Eng.	Brisbane, Australia Vancouver, B. C.	General Ballast	3, 132	6, 142	4, 355
Robert Luck-ench.	26	21	20	27	8	50	27	16	43	27	17	50	American	Lukenbach Line	445	58	21	8	Boston, Mass.	Seattle, Wash.	General	4, 509	8, 695	6, 375
Japan Arrow	27	1	10	27	9	45	27	17	05	27	18	00	American	Standard Transp. Co.	468	62	20	0	Providence, R. I.	Los Angeles, Calif.	Ballast	10, 084	7, 426	7, 426
Atlanta City	27	1	15	27	9	50	27	17	35	27	18	44	American	Norfolk, Lilly & Co.	425	56	25	0	Mobile, Ala	Osaka, Japan.	Ballast (*)	7, 904	7, 951	5, 450
Elder Branch.	27	4	50	27	11	00	27	18	39	27	19	00	British	S. W. O. Ruson.	380	69	20	0	N. Shields, Eng	Corral, Chile.	General	4, 380	3, 592	3, 592
Sun	27	5	30	27	11	00	27	18	39	27	20	00	American	F. W. O. Co.	480	66	20	0	Chester, Pa.	Los Angeles, Calif	Ballast	9, 620	6, 424	6, 424
C. A. Larsen	27	7	05	27	11	55	27	19	02	27	20	00	Norwegian	Rasmussen & Konow.	527	66	23	1	Norfolk, Va.	Wellington, N. Z.	Byrd expedition	100	15	017
Willboro	27	8	05	27	12	20	27	19	02	27	21	19	American	Williams S. Know.	414	55	25	6	Philadelphia, Pa.	Seattle, Wash	General	7, 717	5, 763	5, 763
Thomas P. Beal	27	14	45	27	14	25	27	21	30	28	1	35	American	Isthmian S. S. Lines	394	55	27	0	Baltimore, Md	Vancouver, B. C.	Steel, general.	7, 906	7, 047	5, 100
Mineola	27	10	45	27	6	20	27	13	27	28	14	45	American	N. O. & A. S. S. Line	298	60	19	6	New Orleans, La	Corral, Chile.	General	1, 787	2, 805	1, 805
Santa Veronica.	27	17	35	27	6	20	27	13	33	28	15	20	American	U. S. Steel Products Co.	251	53	24	5	Baltimore, Md	Honolulu, T. H.	Ballast	2, 823	1, 747	1, 747
San Teodoro.	27	20	05	27	7	30	27	14	18	28	15	20	British	Anglo-Mexican Pet. Co.	412	53	19	9	Cardiff, England	Los Angeles, Calif.	Ballast	6, 006	4, 400	4, 400
Bradburn.	28	5	15	28	9	30	28	16	31	28	18	10	British	Sir. W. R. Smith & Sons	378	51	3	17	Chester, Pa.	Portland, Oreg.	Ballast	5, 297	3, 909	3, 909
Atlantic Sun	28	1	05	28	21	10	29	9	36	29	10	36	American.	Sun Oil Co.	429	52	18	0	Chester, Pa.	Los Angeles, Calif	Ballast	7, 508	5, 283	5, 283
Janania	28	15	35	29	6	20	29	13	48	29	15	08	British	Pacific Steam Nav. Co.	220	34	15	2	Cristobal, C. Z.	Champerico, Guat	General	839	1, 187	622
Borak.	28	20	22	29	6	05	29	13	45	29	14	50	Dutch.	Royal Nederl. S. S. Co.	200	33	12	10	Cristobal, C. Z.	Buenaventura, Col	General	172	1, 183	742
Edmore.	28	4	00	29	6	10	29	13	10	29	14	10	American	Ore S. S. Corp.	449	57	2	18	Norfolk, Va.	Cruz Grande, Chile	Ballast	7, 808	5, 139	5, 139
Mongolia	29	6	15	29	7	20	29	14	44	29	23	50	American	Panama-Pacific Line	600	65	3	27	New York, N. Y.	San Francisco, Calif	General	2, 462	17, 041	11, 426
Utacaron	29	9	00	29	7	02	29	15	12	29	16	24	American	Union Oil Co.	435	56	18	8	Baytown, Texas	Los Angeles, Calif	Ballast	7, 482	5, 209	5, 209
Karamca	28	23	25	29	9	10	29	15	50	30	1	12	British	Shaw, Savill & Albion.	483	64	26	0	Middlesboro, Eng.	Wellington, N. Z	General	6, 800	4, 082	
Neraskan.	29	13	45	29	14	00	29	21	07	29	22	20	American.	Amer.-Hawaiian Line	471	60	19	0	Boston, Mass	Portland, Oreg.	General	3, 940	9, 082	6, 655
Sir James Clark	29	16	00	29	17	25	30	9	00	30	13	55	Norwegian.	Rasmussen & Konow.	470	58	20	0	Norfolk, Va	Pt. Chalmers, N. Z.	Ballast	9, 094	6, 155	
Ross ?	29	18	20	29	18	20	30	11	53	30	12	55	Briti.	Strachen Shipping Co.	420	53	26	6	Tampa, Fla	Osaka, Japan.	Phosphate, cot'n	7, 763	7, 083	5, 002
Vanhook	29	18	20	29	18	20	30	11	53	30	12	55	Briti.	Strachen Shipping Co.	420	53	26	6	Tampa, Fla	Osaka, Japan.	Phosphate, cot'n	7, 763	7, 083	5, 002

Sulphate of ammonia, tinplate, and general.

Pig iron, cotton, and general.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Chaler.

Tanker.

22	17	00	23	6	17	23	24	1	30	American	Panama Mail S. S. Co.	380	0	48	7	21	0	San Francisco, Cal.	New York, N. Y.	General	2,505	6,015	4,281
22	17	45	23	6	36	23	24	00	04	American	Grace Line	408	0	55	2	12	0	Callao, Peru	New York, N. Y.	(*)	677	6,672	4,905
22	20	15	23	7	21	23	24	15	25	British	Pacific Steam Nav. Co.	220	0	40	3	12	0	Champeron, Guat	Cristobal, C. Z.	(*)	1,187	622	
22	22	20	23	7	21	23	24	15	25	British	Pacific Steam Nav. Co.	264	0	41	2	13	0	Callao, Peru	New York, N. Y.	General	369	2,746	1,626
22	19	30	23	8	33	23	24	17	48	British	Dodd, Thomson & Co.	400	7	54	8	22	9	Vancover, B. C.	Cape-town, So. Afr.	Lumber	7,350	6,329	4,345
22	5	05	23	8	52	23	24	16	45	American	U. S. Army, Q. M. Corps.	448	0	58	0	21	5	San Francisco, Cal.	New York, N. Y.	Army supplies.	134		
22	20	23	9	27	23	18	24	15	25	British	Imperial Oil Co. Ltd.	510	0	68	2	30	7	Talara, Peru	Halifax, N. S.	(*)	16,000	1,556	7,658
23	4	30	23	9	51	23	24	19	15	British	Anglo-Mexican Petr. Co.	401	0	54	2	23	9	Los Angeles, Calif	Lizard's Head Eng.	Gasoline	7,298	5,002	3,650
23	9	15	23	10	44	23	24	19	30	American	Huasteca Petroleum Co.	416	8	56	1	27	0	Los Angeles, Calif	Baltimore, Md.	Gasoline	9,000	6,751	4,795
23	7	30	23	11	57	23	24	20	05	Belgian	Sec. Anonymous D Arm't.	440	5	57	1	27	0	San Francisco, Cal.	Rotterdam, Holland	(*)	9,500	6,751	4,976
23	6	00	23	12	56	23	24	20	30	British	British Navy	442	0	46	5	16	0	San Francisco, Cal.	High seas		9,664	7,481	5,000
23	12	13	23	13	18	23	24	21	30	American	Standard Oil Co., Calif.	425	0	57	2	27	6	Santa Barbara, Cal.	Baltimore, Md.	Gasoline	9,664	7,481	4,973
23	16	20	23	17	02	24	11	15	24	Yugoslav	Babunizza & Co.	410	5	59	5	26	0	Liquique, Chile.	Gibraltar	Nitrates	7,800	5,086	4,188
23	23		23							U. S. Army	U. S. Army							Baia, C. Z.	Miraflores, C. Z.				
24	3	30	24	6	06	24	15	15	24	American	Ore S. S. Corp	550	3	72	2	34	6	Cruz Grande, Chile	New York, N. Y.	Iron ore	20,000	15,551	4,297
23	23	00	24	7	21	24	15	25	24	American	Calmar S. S. Corp	450	6	57	2	29	0	Gray sh'bor, Wash.	New York, N. Y.	Lumber	9,500		
24	4	55	24	8	33	24	16	26	24	American	Grace Line	360	2	51	7	24	6	Talcahuano, Chile.	New York, N. Y.	(*)	3,831	5,957	4,325

** U. S. Army transport. ** Motor ship. ** Launch. ** Coffee, cocoa, and balaam. ** Displacement. ** Crude and fuel oil. ** Gas and lubricating oil.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PANAMA TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Ballena	24	9 45	24	10 26	24	17 45	24	20 50	British.	Pacific Steam Nav. Co.	400 1	52 3	25 0	Talcahuano, Chile.	Liverpool, England	(22)	7,288	5,816
Axel Johnson	24	12 30	25	6 19	25	13 20	26	9 59	Swedish	Johnson Line	392 0	52 6	25 0	Seattle, Wash.	Stockholm, Sweden	(24)	5,651	6,642
Columbian	24	22 00	25	6 45	25	14 35	25	14 35	American	Amor-Hawaiian Line.	404 6	53 9	28 6	Portland, Ore.	Stockton, Mass.	Lumber, general.	5,671	6,761
California	24	11 35	25	7 12	25	15 30	25	15 35	American	Panama-Pacific Line	574 4	80 3	30 0	San Francisco, Cal.	New York, N. Y.	General.	8,200	24,506
Lena Luckenbach.	25	5 35	25	7 58	25	15 42	25	20 00	American	Luckenbach Line.	425 0	53 8	27 9	Portland, Ore.	Mobile, Ala.	General.	8,363	7,217
Paul Luckenbach.	25	7 30	25	9 09	25	16 20	25	16 20	American	Luckenbach Line.	471 1	59 2	26 6	Portland, Ore.	Boston, Mass.	Lumber, general.	8,352	9,027
West Cape.	24	18 20	25	9 00	25	17 00	25	17 00	American	Munson McCorkle Line.	409 5	54 2	24 0	Tacoma, Wash.	Baltimore, Md.	Lumber, general.	8,500	6,566
Cutter 29.	25	25	25	25	25	25	25	25	American	U. S. Army.	502 7	61 8	26 0	Balboa, C. Z.	Gatun Lake, C. Z.		4,612	12,041
Virgilio 19.	25	17 20	26	6 16	26	13 40	26	1 10	Italian.	Amor-Hawaiian Line.	456 7	59 7	26 8	Valparaiso, Chile.	Genoa, Italy	General.	10,800	8,102
Jane Maersk 18.	26	2 00	26	6 46	26	14 30	26	2 30	Danish.	Anglo-Saxon Pet. Co.	502 8	59 7	26 8	San Diego, Calif.	Land's End, Eng.	Gasoline.	10,800	8,102
Presidente	23	9 45	26	7 42	26	16 15	28	10 00	Argentinian.	Argentine Government.	299 0	44 0	19 0	Punta Arenas, C. R.	Pto. Barrios, Guat.		(a)	2,700
El Panquico 21.	25	6 36	26	7 40	26	15 38	26	15 38	Panaman.	Panaman Government.	125 6	23 5	...	Panama Bay, R. P.	Cristobal, C. Z.			
Northumber-	25	12 50	26	8 15	26	18 15	26	18 15	British.	Federal Steam Nav. Co.	530 0	63 0	23 0	Wellington, N. Z.	London, England	Frozen, general.	4,320	13,268
York City	26	4 00	26	8 51	26	18 15	26	21 20	British.	Sir W. R. Smith & Sons.	411 8	55 0	28 6	Vancouver, B. C.	London, England	Wheat, lumber.	9,179	7,038
Marsodak.	26	6 15	26	9 10	26	19 25	26	21 20	American.	Charles Nelson & Co.	324 0	46 2	20 6	San Francisco, Cal.	Baltimore, Md.	General.	3,218	3,984
Ucayali	26	6 10	26	9 45	26	19 35	30	6 20	Peruvian.	Peruvian Line.	374 7	46 3	22 0	Callao, Peru.	Covanas, Colombia	General.	2,054	4,466
St. Mihel 22.	22	15 13	26	10 18	26	18 15	27	11 05	American.	U. S. Army, Q. M. Corps.	418 0	58 0	25 6	Balboa, C. Z.	New York, N. Y.	General.	447	1,183
Barat.	26	9 40	26	10 38	26	20 22	29	6 05	Dutch.	Royal Neth. S. S. Co.	210 0	33 0	12 0	Guayaquil, Ecuador	Cristobal, C. Z.	Bulk wheat.	7,801	6,212
Hofuku Maru.	26	9 40	26	11 03	26	22 00	27	1 10	Japanese.	Kokusai Kisen Kaisha.	385 0	51 0	27 0	Portland, Ore.	Europe.	Lumber, general.	4,000	3,985
Buffalo Bridge.	26	10 45	26	11 51	26	20 25	26	20 25	American.	Charles Nelson & Co.	324 0	46 2	25 0	San Francisco, Cal.	Savannah, Ga.	Gasoline.	9,392	7,978
Pat Doherty 1.	26	12 30	26	13 30	26	22 30	27	6 15	American.	Richfield Oil Co.	430 0	59 0	26 0	Los Angeles, Calif.	Warrens, N. J.	General.	5,826	5,113
Point Breeze 1.	27	1 00	27	6 04	27	15 30	27	15 50	American.	Atlantic Refining Co.	364 0	51 0	22 6	San Francisco, Cal.	New York, N. Y.	(26)	5,826	5,113
Logician	20	16 25	27	7 00	27	16 55	27	22 55	British.	T. & J. Harrison.	420 3	54 5	25 3	Vancouver, B. C.	Liverpool, England	General.	7,507	6,652
Maliko	26	20 45	27	7 15	27	17 40	27	17 40	American.	Mason Navigation Co.	416 0	57 3	29 0	San Francisco, Cal.	Boston, Mass.	General.	7,160	7,072
Salvador	26	18 20	27	7 30	27	15 55	27	15 55	British.	Pacific Steam Nav. Co.	215 0	33 5	13 8	Champerico, Guat.	Cristobal, C. Z.	(27)	319	1,270
Apple Branch.	26	23 00	27	7 59	27	18 10	27	18 10	British.	F. & W. Ritson.	370 0	51 7	24 6	Valparaiso, Chile.	Liverpool, England	Nitrates, general.	9,576	5,112
Robin Adair	27	4 45	27	8 39	27	18 45	27	19 08	American.	Seas Shipping Co.	424 8	55 2	26 6	Portland, Ore.	Boston, Mass.	(28)	8,329	7,470
Canadian	27	5 00	27	9 06	27	19 20	28	1 53	British.	Can. Nat. Steamships.	430 0	56 0	16 0	Melbourne, Aust. ^a	Montreal, Canada	General.	1,014	7,080
Cruiser.	27	9 20	27	10 27	27	19 55	29	2 30	American.	United Fruit Co.	330 0	44 6	19 0	San Francisco, Cal.	Port Limon, C. R.	General.	735	3,670
San Jose.	27	1 21	27	10 53	27	21 00	29	16 37	American.	U. S. Navy.	390 0	54 3	20 0	Bremerton, Wash.	Naval stores	2,769		
Vega.	27	11 05	27	11 40	27	21 25	28	1 05	Danish.	East Asiatic Co.	410 0	55 2	29 0	Vancouver, B. C.	Norfolk, Va.	General.	9,321	9,068
Tongking 18.	27	9 30	27	13 24	27	22 35	28	13 55	Swedish.	Coleman S. S. Co.	273 7	41 0	13 6	Buenaventura, Col.	Copenhagen, Den.	Coffee.	385	2,472
Fin 18.	27	13 20	27	14 16	28	00 15	28	3 22	Belgian.	Cie. Inter-deCom.D'Arm	460 0	58 2	28 6	Tuapilla, Chile.	New York, N. Y.	Nitrates.	9,950	9,068
Van	27	21 30	28	6 17	28	14 05	28	20 00	British.	Pacific Steam Nav. Co.	550 3	57 3	30 2	Talcahuano, Chile.	Liverpool, England	(29)	6,805	16,844
Orbita.	27	21 30	28	6 17	28	14 05	28	20 00	British.	Pacific Steam Nav. Co.	550 3	57 3	30 2	Talcahuano, Chile.	Liverpool, England	(29)	6,805	16,844

1 Tanker.

18 Motor ship.

19 Launch.

20 Training ship.

21 Revenue cutter.

22 U. S. Army transport.

23 Copper, nitrates, and general.

24 Grain, fruit, and general.

25 Copper, ore, and cotton.

26 Lumber and magnesite.

27 Coffee, hides, and general.

28 Gasoline and lubricating oil.

29 Displacement.

30 Displacement.

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Persephone	27	20	15	28	6	33	28	14	35	28	14	35	Danzig	Baltic-Amer.	Pet. Co.	489	0	63	1	27	1	Talara, Peru	Rotterdam, Holland	Naptha	6,338	
K. R. Kingsbury	28	00	50	28	7	11	28	15	00	28	17	50	American	Standard Oil Co. of Cal.	440	0	55	2	28	6	28	6	Los Angeles, Calif.	Baltimore, Md.	Gasoline	9,700
Goodwood	28	7	15	28	8	12	28	16	10	28	15	00	British	Constantine S. S. Co.	441	0	58	0	23	0	23	0	Vancouver, B. C.	Rotterdam, Holland	Lumber, wheat	7,965
Santore	28	9	40	28	10	36	28	18	50	29	18	50	American	Ore S. S. Corp.	449	1	57	2	28	2	28	2	Cruz Grande, Chile	Baltimore, Md.	Iron ore	11,000
Ruspetu	28	20	00	29	6	12	29	13	40	29	19	25	British	N. Z. Shipping Co.	457	0	58	0	19	9	19	9	Wellington, N. Z.	London, England	Frozen, general	2,830
Point Sur	29	1	55	29	6	51	29	14	47	29	14	47	American	Swayne & Hoyt	434	0	46	2	20	6	20	6	Vancouver, B. C.	New Orleans, La.	General	3,785
Joseph Steep	28	22	30	29	7	18	29	15	55	29	15	55	American	Standard Shipping Co.	429	3	59	2	27	0	27	0	Los Angeles, Calif.	New York, N. Y.	Gasoline	10,913
Rudby	28	23	15	29	8	07	29	16	20	29	16	20	British	Sir. R. Roper & Co.	390	0	55	0	24	6	24	6	Portland, Oreg.	Naples, Italy	Wheat	7,733
Glammorshire	29	7	50	29	8	42	29	17	35	29	19	15	British	Royal Mail S. P. Co.	445	0	58	0	27	6	27	6	Vancouver, B. C.	Rotterdam, Holland	General	9,700
Manhattan	29	6	20	29	9	49	29	18	00	29	19	30	American	Redwood Line, Inc.	386	8	52	2	24	0	24	0	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,745
Island	28	19	39	29	10	29	18	40	29	18	40	British	Anglo-Amer. Oil Co., Ltd.	476	0	63	8	27	4	27	4	Los Angeles, Calif.	Ellesmere, Port, Eng	Gasoline	12,074	
Sehuykill	29	13	45	29	14	44	29	22	40	29	22	40	American	Hanley S. S. Co.	440	0	56	0	27	6	27	6	Everett, Wash.	Baltimore, Md.	Lumber	9,658
Hanley	29	13	45	29	14	44	29	22	40	29	22	40	American	Hanley S. S. Co.	440	0	56	0	27	6	27	6	Everett, Wash.	Baltimore, Md.	Lumber	9,658

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

: Tanker.

PORT OF CRISTOBAL.

* ARRIVALS.

Date.	Vessel.	Line.	From—
September 23.	Pastores	United Fruit Co.	Port Limon, Costa Rica.
September 24.	William M. ³⁰	G. I. Bryan	Colon, R. P.
September 25.	Una	United Fruit Co.	New York via Habana.
September 26.	Mayari	United Fruit Co.	New York via waypoints.
September 26.	Saramacca	United Fruit Co.	New Orleans, La.
September 27.	Inapaquina ³¹	United Fruit Co.	Colon, R. P.
September 27.	Suriname	United Fruit Co.	Port Limon, Costa Rica.
September 27.	Macabi	United Fruit Co.	New York, N. Y.
September 27.	Virginia	Standard Fruit & S. S. Co.	New Orleans, La.
September 27.	Bowden	United Fruit Co.	Mobile, Ala.
September 27.	Cristobal	Panama Railroad S. S. Line.	New York via Haiti.
September 27.	Zacapa	United Fruit Co.	New York via Kingston.
September 27.	Galicia	Hamburg-American Line.	Hamburg via waypoints.
September 29.	Virginia	Standard Fruit & S. S. Co.	San Blas, R. P.
September 29.	Bowden	United Fruit Co.	Avonmouth via waypoints.
September 29.	Arguani	Elders & Fyffes, Ltd.	Pernu, R. P.
September 29.	Linda S. ³²	Surgeon Brothers	Avonmouth via waypoints.
September 29.	Dakotan	Leyland Line	Liverpool via waypoints.
September 29.	Parimaina	United Fruit Co.	New Orleans via Habana.

PORT OF BALBOA.

³¹ Schooner. ³² Motor boat.

Date.	Vessel.	Line.	From—
September 23.	Martha ³³	Chr. Hannevig	Buenaventura, Colombia.
September 24.	Craftsman ³⁴	R. J. McArdle Contracting Co.	Buenaventura, Colombia.
September 25.	A. B. de Obarrio ³⁵	Pacific Fruit Co.	Bayano River, R. P.
September 25.	Dos Hermanos ³⁵	A. Valdez	Pto. Armuelles, R. P.
September 25.	Chiman ³²	Isthmian Land & Fruit Co.	Buenaventura, Colombia.
September 25.	San Luis ³⁵	Chiriqui Land Co.	Garcine, R. P.
September 28.	Bessy ³⁵	Isthmian Land & Fruit Co.	Pto. Armuelles, R. P.
September 28.	Cricamola ³⁶	Chiriqui Land Co.	Pto. Armuelles, R. P.

³³ Motor ship. ³⁴ Tug. ³⁵ Motor schooner. ³⁶ Motor yacht.

* Other than ships passing through the Canal.

* DEPARTURES.

Date.	Vessel.	Line.	To—
September 23.	Pastores	United Fruit Co.	New York via Habana.
September 24.	William M. ³⁰	G. I. Bryan	Bluefields, Nicaragua.
September 24.	Cartago	United Fruit Co.	New Orleans and waypoints.
September 26.	Una	United Fruit Co.	Port Limon, Costa Rica.
September 26.	Inapaquina ³¹	United Fruit Co.	Colon, R. P.
September 27.	Saramacca	United Fruit Co.	Bocas del Toro, R. P.
September 27.	Suriname	United Fruit Co.	New Orleans, La.
September 27.	Bowden	United Fruit Co.	Pernu, R. P.
September 27.	Mayari	United Fruit Co.	Puerto, Colombia.
September 28.	Virginia	Standard Fruit & S. S. Co.	San Blas, R. P.
September 28.	Zacapa	United Fruit Co.	New York via waypoints.
September 28.	Galicia	Hamburg-American Line.	Port Limon, Costa Rica.
September 29.	Arguani	Elders & Fyffes, Ltd.	Avonmouth via Kingston.
September 29.	Macabi	United Fruit Co.	New York via Kingston.
September 29.	Bowden	Standard Fruit & S. S. Co.	New Orleans, La.
September 29.	Linda S. ³²	United Fruit Co.	Mobile, Ala.
September 29.	Surgeon Brothers	Surgeon Brothers	Bluefields via Pt. Limon.

Date.	Vessel.	Line.	To—
September 25.	Craftsman ³⁴	R. J. McArdle Contracting Co.	Buenaventura, Colombia.
September 25.	A. B. de Obarrio ³⁵	Pacific Fruit Co.	Bayano River, R. P.
September 25.	Dos Hermanos ³⁵	A. Valdez	Pto. Armuelles, R. P.
September 25.	San Luis ³⁵	Chiriqui Land Co.	Buenaventura, Colombia.
September 27.	Martha ³³	Chr. Hannevig	Garcine, R. P.
September 28.	Bessy ³⁵	Isthmian Land & Fruit Co.	Pto. Armuelles, R. P.
September 29.	Cricamola ³⁶	Chiriqui Land Co.	Pto. Armuelles, R. P.

Non-Tolls-Paying Traffic Through Panama Canal.

During the fiscal year ended June 30, 1928, 503 nontolls-paying vessels transited the Canal. This figure included 450 vessels of the United States Government, 10 of the Panaman Government, 6 of the Colombian Government, and 37 transiting to Balboa solely for repairs. The vessels of the United States Government were practically all of the Navy and Army, with a few belonging to other departments of the Government such as the Bureau of Fisheries, etc.

Vessels transiting without payment of tolls amounted to 7.2 per cent of the total transits for the year. Their net tonnage, plus one-third of the displacement tonnage of those not measured for net tonnage, which is considered a fair equivalent in terms of net tonnage, amounted to about 2.6 per cent of the total of the aggregate net tonnage. The cargo carried by these vessels, principally coal, ordnance, and other military and naval supplies, amounted to 253,672 tons, or about 1 per cent of the total cargo through the Canal for the year. If tolls had been charged on these vessels at commercial rates, the amount would have been approximately \$937,776.31.

In the following tables are given the number of vessels, tonnage equivalent, tolls (which they would have paid if charged at commercial rates), and the amount of cargo carried, for each of the four classes of transits without tolls, and the aggregate, by fiscal years since the opening of the Canal:

Fiscal year.	No. of vessels.	Tonnage.		Equivalent tolls.	Tons of cargo.
		Displace- ment.	Panama Canal net.		
United States Government vessels:					
1915.....	16		72,276	\$78,667.66	48,895
1916.....	47	106,160	60,610	125,389.69	72,575
1917.....	103	168,603	161,320	247,866.70	150,230
1918.....	112	125,441	85,265	141,174.83	36,716
1919.....	179	120,427	97,064	164,306.32	98,349
1920.....	263	903,182	350,869	830,963.47	356,775
1921.....	425	1,038,206	404,606	936,699.21	427,494
1922.....	250	554,437	271,806	544,785.98	200,320
1923.....	401	944,794	394,171	852,420.19	212,314
1924.....	418	1,430,894	356,667	1,106,446.37	224,218
1925.....	378	746,924	310,594	722,674.06	211,401
1926.....	534	1,077,665	340,502	928,539.40	117,047
1927.....	563	1,502,116	470,485	1,275,849.81	228,722
1928.....	450	862,006	454,051	889,350.54	231,990
Totals.....	4,139	9,580,855	3,830,286	8,845,143.23	2,617,046
Panaman Government vessels:					
1915.....	1		56	\$40.32	
1916.....					
1917.....	2		112	80.64	
1918.....	1		56	40.32	
1919.....	2		66	52.32	
1920.....					
1921.....					
1922.....	5		120	86.40	
1923.....					
1924.....					
1925.....	2		202	145.44	
1926.....	5		409	294.48	
1927.....	11		1,122	810.00	
1928.....	10		550	406.20	
Totals.....	39		2,693	1,956.12	
Colombian Government vessels:					
1922.....	1		32	19.50	
1923.....					
1924.....					
1925.....					
1926.....	1	176		86.50	
1927.....	2	500		250.00	
1928.....	6	100	1,994	1,648.69	682
Totals.....	10	776	2,026	2,004.69	682

Fiscal year.	No. of vessels.	Tonnage.		Equivalent tolls.	Tons of cargo.
		Displace- ment.	Panama Canal net.		
Vessels transiting Canal solely for repairs:					
1923.....	1	.....	4,222	4,391.25	.....
1924.....	2	.....	14,785	9,779.20	.....
1925.....	6	.....	12,799	9,215.28	.....
1926.....	12	.....	34,628	24,788.16	.....
1927.....	21	.....	35,026	23,770.48	.....
1928.....	37	.....	60,108	46,370.88	.....
Totals.....	79	.....	161,568	118,315.25	.....
Total nontolls-paying vessels:					
1915.....	17	.....	72,332	78,707.98	48,895
1916.....	47	106,160	60,610	125,389.69	72,575
1917.....	105	168,603	161,432	247,947.34	150,230
1918.....	113	125,441	85,321	141,215.45	36,716
1919.....	181	120,427	97,130	164,358.64	98,349
1920.....	263	903,182	350,869	830,963.47	356,775
1921.....	425	1,038,206	404,606	936,699.21	427,494
1922.....	256	554,437	271,958	544,891.88	200,320
1923.....	402	944,794	398,393	856,820.44	312,314
1924.....	420	1,430,894	371,452	1,116,225.57	224,218
1925.....	386	746,924	323,595	732,034.78	211,401
1926.....	552	1,077,841	375,539	953,708.54	117,047
1927.....	597	1,502,616	506,633	1,300,680.29	228,722
1928.....	503	862,106	516,703	937,776.31	232,672
Totals.....	4,267	9,581,631	3,996,573	8,967,419.29	2,617,728

The aggregate number of commercial vessels which passed through the Canal from its opening until the end of the fiscal year 1928 was 46,833, paying tolls of \$193,307,727.83 and carrying cargo aggregating 215,286,199 tons. Comparison with the commercial traffic shows that the transits for which tolls were not paid were 9 per cent of the number of the commercial transits. The equivalent tolls which might have been collected were 4.6 per cent of the amount of the tolls paid by commercial vessels; and the cargo carried by the ships which did not pay tolls amounted to 1.2 per cent of the quantity carried by the commercial ships.

"Presidente Sarmiento" Visits Canal on World Cruise.

The Argentine Navy training ship *Presidente Sarmiento* arrived at Balboa on September 23, 1928, with a number of midshipmen on board on a cruise around the world. The vessel transited the Canal on September 26 and, after fueling at Cristobal, sailed on the 28th for Havana, New York, Southampton, Boulogne, and Seville, with plans to return to Buenos Aires, via Rio de Janeiro, on February 3, 1929. Before arriving at the Isthmus, the vessel made stops at Cape Town, Colombo, Singapore, Batavia, Fremantle, and Puntarenas.

The *Presidente Sarmiento* is a frigate of 2,700 displacement tons, 279 feet long, and 44 feet beam. She visited the Isthmus in 1915, 1922, and 1926 on similar training cruises.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending September 30, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Hamburg Maru.....	Nippon Yusen Kaisha.....	September 17..	September 18..	566	.....
Tejon.....	Standard Transportation Co.....	September 17..	September 18..	10,023	.....
Tatsuno Maru.....	Nippon Yusen Kaisha.....	September 22..	September 22..	62	.....
St. Mihiel.....	U. S. Army Transport Service.....	September 22..	September 26..	1,324	362
Chateau Thierry.....	U. S. Army Transport Service.....	September 22..	September 23..	1,030	.....
Colombia.....	Panama Mail S. S. Co.....	September 22..	September 22..	220	.....
Rhodopis.....	Hamburg-American Line.....	September 24..	September 24..	368	.....
Martha.....	Chr. Hannevig.....	September 25..	September 27..	13	641
Witram.....	Hamburg-American Line.....	September 26..	September 26..	.....	73
Borga.....	Fred Olsen.....	September 30..	September 30..	435	.....
Logician.....	T. & J. Harrison.....	September 20..	September 27..	97	97

Passenger Service on Fort Randolph Branch Discontinued.

Passenger service between Colon and Fort Randolph on the Panama Railroad was discontinued after the close of business on September 30, 1928. Car lot freight shipments destined to France Field, Coco Solo, or Fort Randolph will be switched out from Cristobal yards as occasion demands.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending September 22, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
City of San Francisco.	Panama Mail S. S. Co.		September 16.		2,491
Almagro.	Pacific Steam Nav. Co.	September 16.	September 16.	143	22
Perene.	Peruvian Line.		September 16.		211
Noorderdijk.	Holland-American Line.	September 16.	September 16.	(¹)	71
Calinares.	United Fruit Co.	September 16.	September 16.	14	532
Jason.	Royal Netherlands S. S. Co.	September 16.	September 17.	502	75
Aneon.	Panama R. R. S. S. Line.		September 17.		3,051
Heredia.	United Fruit Co.		September 17.		137
Berengar.	North German Lloyd.	September 17.	September 17.	(¹)	103
Ebro.	Pacific Steam Navigation Co.	September 17.	September 17.	1	(¹)
Mantaro.	Peruvian Line.	September 17.	September 18.	(¹)	179
Pastores.	United Fruit Co.	September 17.	September 19.	1,005	13
Durazzo.	Hamburg-American Line.	September 17.	September 22.	389	557
Manizales.	North German Lloyd.	September 17.	September 22.	513	133
Atrato.	Colombian Transport Line.	September 17.		69	
Port Huron.	Commonwealth & Dominion Line.	September 18.	September 18.	112	(¹)
Hamburg Maru.	Osaka Shosen Kaisha.	September 18.	September 18.	535	(¹)
Antillian.	Leyland Line.	September 18.	September 19.	445	105
Van Rensselaer.	Royal Netherlands S. S. Co.	September 19.	September 19.	1	(¹)
Resolute.	R. Feuillebois.	September 19.	September 19.	(¹)	53
Linda S.	R. Feuillebois.	September 19.	September 19.	(¹)	40
Suriname.	United Fruit Co.	September 19.	September 20.	734	509
Saint Louis.	French Line.	September 19.	September 20.	339	(¹)
Oreoma.	Pacific Steam Navigation Co.	September 19.	September 20.	87	78
La Marseillaise.	French Line.	September 19.	September 20.	18	62
Puerto Rico.	French Line.	September 19.	September 21.	196	1,054
Wiegand.	North German Lloyd.	September 19.	September 21.	1,622	120
Acajutla.	Pacific Steam Navigation Co.	September 19.	September 22.	837	1,145
Favorita.	Standard Fruit Co.	September 20.	September 20.	350	5
Santa Luisa.	Grace Line.	September 20.	September 20.	(¹)	8
Coppename.	United Fruit Co.	September 20.	September 20.	30	117
Sixola.	United Fruit Co.	September 20.	September 21.	1,013	352
La Perla.	United Fruit Co.	September 20.	September 21.	1,285	116
Van Rensselaer.	Royal Netherlands S. S. Co.	September 21.	September 22.	1	582
Orazio.	Italian Line.	September 21.	September 22.	446	(¹)
Manauqui.	United Fruit Co.	September 21.	September 22.	922	552
Favorita.	Standard Fruit Co.	September 22.	September 22.	(¹)	488
Commodore Rollins.	United Fruit Co.	September 22.	September 22.	6	582
Colombia.	Colombian S. S. Co.	September 22.		234	
Grootendijk.	Holland-American Line.	September 22.		357	
Cartago.	United Fruit Co.	September 22.		400	
Lippe.	North German Lloyd.	September 22.	September 22.	(¹)	176
Floreana.	Colombian Transport Line.		September 22.		317
Grunewald.	Hamburg-American Line.	September 22.	September 22.	(¹)	207
Tatsuno Maru.	Nippon Yusen Kaisha.	September 22.	September 22.	361	(¹)

¹ No cargo discharged.

² No cargo laded.

Official Circular.

Discontinuance of Passenger Train Service on Fort Randolph Branch Line.

PANAMA RAILROAD COMPANY AND
PANAMA RAILROAD S. S. LINE,

BALBOA HEIGHTS, C. Z., September 26, 1928.

To all concerned—In view of the Army and Navy having given notice of withdrawal from agreement regarding the passenger service on the Colon-Fort Randolph branch railroad after close of business September 30, 1928, please be advised that all passenger train service will be discontinued over this branch after that date.

W. F. FOSTER,
Acting Superintendent.

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m., 12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pan canal, Panama;" in the United States, "Pan canal, Washington."

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
PUBLISHED WEEKLY.



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at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., October 10, 1928.

No. 10.

"Santa Barbara" Transits Canal on Maiden Voyage.

The new Grace Line motor ship *Santa Barbara* arrived at Cristobal on October 4, on her maiden voyage in the New York-South American trade, via Habana and the Panama Canal. She transited the Canal on the same day and sailed for Valparaiso, Chile, via way ports in Peru and Chile. The *Santa Barbara*, a sister ship of the *Santa Maria* which was placed in this service last May, is 466 feet long by 64 feet beam, and of 8,055 gross tons. She carried 95 passengers and 3,391 tons of general cargo on her maiden voyage.

Following the addition of the *Santa Barbara* to the west coast service, the *Santa Luisa*, one of the Grace Line's original "Santa" passenger and cargo steamers in the South American trade, is to be renamed *El Salvador* and placed in the United States intercoastal service of the Panama Mail Steamship Line.

Classification of Cargo Passing Through the Panama Canal, Showing Origin and Destination During Fiscal Year Ending June 30, 1928.

A statement of all commodities passing through the Panama Canal, showing origin and destination, during the fiscal year ending June 30, 1928, is shown in Tables I and II on pages 124 to 134 of this issue. From the cargo declarations submitted by masters of vessels it has been possible to classify over 82 per cent of the cargo passing from the Atlantic to the Pacific during the year and over 98 per cent of that passing from the Pacific to the Atlantic.

PRINCIPAL COMMODITIES—ATLANTIC TO PACIFIC.

Commodities shipped to the Pacific which aggregated more than 100,000 tons in any of the fiscal years 1928, 1927, 1926, or 1925, are listed in the following tabulation:

Commodity.	Fiscal year ending June 30—			
	1928.	1927.	1926.	1925.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Manufactures of iron and steel.....	1,855,532	1,971,964	1,525,280	1,416,135
Mineral oils.....	717,080	649,379	721,817	948,451
Cement.....	280,032	222,817	283,328	359,831
Cotton.....	259,225	361,241	226,092	145,604
Machinery.....	215,334	172,150	134,411	133,024
Sulphur.....	207,257	211,625	188,889	165,925
Phosphates.....	198,826	183,521	162,254	67,206
Railroad materials.....	188,561	189,855	150,993	138,740
Paper.....	183,263	150,772	101,493	101,827
Coal.....	161,610	96,772	222,288	159,231
Tinplate.....	143,610	194,111	202,773	145,188
Textiles.....	124,658	91,967	78,770	94,132
Automobiles (exclusive of accessories).....	124,553	127,882	125,820	124,972
Ammonia.....	91,776	134,977	108,104	88,199
Sugar.....	44,951	282,912	158,997	91,461
All other.....	3,513,866	3,541,379	3,645,788	3,213,471
Totals.....	8,310,134	8,583,327	8,037,097	7,398,397

Total cargo passing through the Canal from the Atlantic to the Pacific during the year shows a decrease of 273,193 tons as compared with the fiscal year 1927. Of the 13 commodities shown in the foregoing tabulation as having a total of 100,000 tons or more through the Canal during the year, manufactures of iron and steel, cotton, and tinplate show decreases as compared with 1927. Totals for the other 10 were as great or greater than during the preceding fiscal year.

PRINCIPAL COMMODITIES—PACIFIC TO ATLANTIC.

Commodities shipped to the Atlantic which aggregated more than 100,000 tons in any of the fiscal years 1928, 1927, 1926, or 1925, are listed in the following tabulation:

Commodity.	Fiscal year ending June 30—			
	1928.	1927.	1926.	1925.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Mineral oils.....	5,619,076	7,143,165	5,930,716	5,989,622
Lumber.....	3,673,832	3,139,113	3,200,311	2,255,421
Wheat.....	3,035,884	1,477,376	1,187,384	1,078,844
Nitrates.....	2,565,572	1,174,384	1,878,050	2,155,814
Iron ore.....	1,400,490	1,403,737	1,334,408	1,045,383
Sugar.....	577,781	427,035	318,032	300,465
Copper (metal).....	443,381	357,456	319,045	211,168
Canned fruit.....	434,424	403,270	356,609	255,688
Food products in cold storage ¹	288,952	245,520	221,068	202,781
Dried fruit.....	272,644	200,433	150,229	135,832
Barley.....	237,262	344,341	313,535	236,115
Canned fish.....	178,245	209,491	168,701	165,071
Wool.....	167,931	129,906	146,092	91,586
Coffee.....	132,862	113,313	104,739	81,881
Beans.....	127,168	73,569	54,565	101,218
Flour.....	112,191	90,988	64,391	82,402
Cotton.....	95,724	107,311	65,850	75,358
All other.....	1,957,156	2,124,480	2,186,626	2,095,790
Totals.....	21,320,575	19,164,888	18,000,351	16,560,439

¹ Does not include fresh fruit.

The Pacific-to-Atlantic cargo movement during 1928 was larger than during the year preceding by 2,155,687 tons. Since shipments of mineral oils in this direction through the Canal declined as compared with the year preceding, approximately 1,500,000 tons, this means an increase in other commodities of over 3,600,000 tons. Most of the major commodities through the Canal from the Pacific to the Atlantic during the year show substantial increases. Shipments of nitrates and wheat were more than double those during the preceding year.

CARGO FROM ATLANTIC TO PACIFIC—ORIGIN AND DESTINATION.

During the fiscal year 1928 approximately 65 per cent of the cargo passing through the Canal Pacific-bound originated on the eastern and Gulf seaboard of the United States and 26 per cent in Europe. During the past four fiscal years these areas have contributed from 85 to 90 per cent of the cargo moving in this direction.

Four areas absorbed approximately 91 per cent of this cargo in 1928, as follows: West coast of the United States, 40 per cent; Far East, 21 per cent; Australasia, 16 per cent; and South America, 14 per cent. During the past four fiscal years over 90 per cent of the cargo Pacific-bound through the Canal has been destined to these areas with about 39 per cent going to the west coast of the United States. Following are the figures for the fiscal years 1925, 1926, 1927, and 1928:

	1925.	1926.	1927.	1928.
<i>Origin.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
East coast of United States	4,815,528	5,276,563	5,598,149	5,402,037
Europe, including British Isles	1,978,969	1,963,921	1,738,715	2,197,166
All other.....	603,900	796,613	1,246,463	710,931
Total for year	7,398,397	8,037,097	8,583,327	8,310,134
<i>Destination.</i>				
West coast of United States	2,913,887	3,160,966	3,520,156	3,287,624
Far East	1,215,680	1,502,246	1,545,206	1,718,819
Australasia	1,289,359	1,404,610	1,455,328	1,364,952
West coast of South America	1,338,150	1,281,691	1,065,822	1,218,094
All other.....	641,321	687,584	996,815	720,645
Total for year.....	7,398,397	8,037,097	8,583,327	8,310,134

CARGO FROM PACIFIC TO ATLANTIC—ORIGIN AND DESTINATION.

During the fiscal year 1928 four regions of origin furnished approximately 96 per cent of the cargo Atlantic-bound through the Canal as follows: West coast of United States, 54 per cent; west coast of South America, 26 per cent; west coast of Canada, 13 per cent; and Australasia, 3 per cent. During the past four fiscal years these four regions of origin have accounted for approximately 95 per cent of the total cargo moving in this direction.

Approximately 54 per cent of the cargo Atlantic-bound through the Canal in the fiscal year 1928 was destined to the eastern seaboard of the United States, and approximately 37 per cent was destined to Europe. These two regions of destination have absorbed over 90 per cent of the Atlantic-bound cargo during the past four fiscal years. Total figures are shown in the following tabulation:

	1925.	1926.	1927.	1928.
<i>Origin.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
West coast of United States	9,554,101	10,116,515	11,860,156	11,455,596
West coast of South America	4,714,243	4,861,436	4,234,767	5,586,618
West coast of Canada	1,082,282	1,650,855	1,520,666	2,845,675
Australasia	480,539	623,399	567,715	684,614
All other.....	729,274	748,146	981,584	748,072
Totals for year	16,560,439	18,000,351	19,164,888	21,320,575
<i>Destination.</i>				
East coast of United States	10,821,433	11,388,560	11,169,492	11,611,865
Europe, including British Isles	4,710,382	5,080,825	5,461,059	7,922,636
All other.....	1,028,624	1,530,966	2,534,337	1,786,074
Totals for year.....	16,560,439	18,000,351	19,164,888	21,320,575

TOTAL CARGO.

Total cargo in long tons through the Canal during the past four fiscal years has been: 1928, 29,630,709; 1927, 27,748,215; 1926, 26,037,448; and 1925, 23,958,836. The total amount of cargo tonnage passing through the Canal during the past fiscal year established a new high record over any previous calendar or fiscal year.

(Continued on page 124.)

"Karamea" Transits Canal on Maiden Voyage.

The motor ship *Karamea* of the Shaw, Savill & Albion Company, transited the Canal on her maiden voyage on September 29, 1928, en route from Middleboro, England, to Wellington, N. Z. The *Karamea* is the fourth of four new motor ships constructed for the Shaw, Savill & Albion Company for the United Kingdom-New Zealand trade, having been preceded by the *Zealandic*, the *Taranaki*, and the *Coptic*.

The *Karamea* is 483 feet long, 64 feet beam, and of 10,460 dead-weight tons. She is equipped with accommodations for 8 first-class passengers.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, October 6, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Salt Beam, water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.							Nature.	Tons.	Gross.	Net.
Gracia	29	4 00	30	6 10	30	13 37	British	Donaldson Brothers.	415 0	54 0	20 1	Vancouver, B. C.	General, bananas	1,046	6,809	4,842
Borga	30	00 05	30	6 20	30	14 04	Norwegian.	Fred Olsen & Co.	332 4	51 4	21 0	Vancouver, B. C.	General	5,450	5,242	3,706
Melpomene	30	00 30	30	7 20	30	14 17	French	Compagnie Aux. de Nav.	425 8	56 9	20 3	Seattle, France.	Ballast	7,085	5,050	
Telena	29	10 35	30	7 35	30	14 37	British	Anglo-Saxon Pet. Co.	440 0	59 2	19 0	Los Angeles, Calif.	Ballast	7,917	4,849	
August-Leonhardt	30	8 18	30	8 45	30	15 42	German	Colombian Maritime Co.	328 0	46 0	14 0	Buenaventura, Col.	General, cattle	469	3,724	2,817
Swived	30	8 25	30	9 00	30	15 46	American	Charles Nelson & Co.	324 0	46 2	19 0	Seattle, Wash.	General	2,987	3,983	2,629
Sutorpo.	30	8 55	30	9 10	30	16 15	American	Transmarine Lines	324 0	46 0	17 0	San Francisco, Cal.	General	708	3,984	2,612
Atlantic City	30	9 05	30	9 30	30	17 14	British	Reardon Smith Line	411 0	54 6	25 6	Yokohama, Japan	General	6,710	6,555	4,656
Kasama	30	00 10	30	10 10	30	18 05	British	Ellerman Bucknall Line	400 6	50 0	21 10	Dunedin, N. Z.	General	2,673	5,644	4,113
Chinese Prince	30	00 10	30	10 50	30	18 30	British	Princes Line, Ltd.	441 0	60 0	24 6	Shanghai, China	General	6,391	9,254	6,265
Dunstaffnage	30	11 55	30	12 05	30	19 13	British	Wessex Duval & Co.	384 0	52 0	19 0	New York, N. Y.	General	1,808	5,173	3,651
Hertford	30	13 00	30	13 20	30	20 15	British	Federal Steam Nav. Co.	520 0	64 0	26 0	N. Plymouth, N. Z.	General	9,711	12,933	9,264
Austerdam	30	5 55	10-1	6 10	10-1	13 14	Dutch	Royal Neth. S. S. Co.	474 0	65 0	21 0	Hamburg, Germany	General	4,428	11,638	7,744
San Jose	10-1	5 50	1	6 15	1	14 11	American	United Fruit Co.	330 0	44 6	19 6	Port Limon, C. R.	Coffee, bananas.	467	3,670	2,333
S-16	9-17	16 07	1	6 00	1	14 05	American	U. S. Navy	231 0	21 0		Balboa, C. Z.	General	160	160	92
Atrato	30	22 05	1	7 10	1	14 38	Colombian.	Colombian Transp. Co.	94 0	23 0	7 6	Buenaventura, Col.	Ballast	7,709	5,517	
Dean Emery	30	23 00	1	7 33	1	15 30	American	Huasteca Petroleum Co.	429 3	59 0	20 0	Los Angeles, Calif.	Asphalt	7,186	6,471	4,686
King Edgar	30	23 00	1	7 33	1	15 30	British	Anglo-Mexican Pet. Co.	400 0	54 0	23 3	N. Plymouth, N. Z.	General	3,487	6,755	4,887
Oran	10-1	2 30	1	8 20	1	15 57	American	Oriental Navigation Co.	408 0	54 0	18 6	Portland, Oreg.	General	4,587	6,693	4,915
Charles Christenson	1	3 30	1	8 35	1	16 25	American	Arrow Line	409 0	54 0	18 11	Portland, Oreg.	General	700	1,629	1,114
Profit	1	4 10	1	9 50	1	16 50	Norwegian.	Munson S. S. Line.	246 0	37 0	11 10	Corinto, Nicaragua	General	8,872	7,473	5,536
Robin Goodfellow	1	11 08	1	11 15	1	19 13	American	Isthmian S. S. Lines	424 8	55 0	27 0	Tacoma, Wash.	Steel, general	2,482	6,289	4,723
Hoyanger	1	12 10	1	12 25	1	19 31	Norwegian.	Westfal-Larsen & Co.	381 0	53 6	19 6	Vancouver, B. C.	General, coffee	2,494	3,644	2,566
Carolyn	9-30	14 50	1	12 35	1	20 12	American	Grace Line	333 0	46 0	18 2	Callao, Peru	General	5,753	3,857	
Counselor	30	14 43	1	13 25	1	20 40	British	T. & J. Harrison	395 0	52 0	17 6	Vancouver, B. C.	General	6,201	4,336	
Gold Shell	10-1	15 05	1	15 10	2	21 50	Dutch.	Nederl. Indische Tankboot Maat.	411 6	53 4	21 0	Los Angeles, Calif.	Ballast	2,800	6,173	4,418
Indian	1	16 15	1	19 10	2	9 30	Danish	Canadian Transp. Co.	390 0	53 0	18 0	Portland, Oreg.	Paper	15,551	4,297	
Marore	1	17 05	2	6 05	2	13 37	American	Ore S. S. Corp.	556 3	72 2	18 0	Cruz Grande, Chile	Ballast	7,860	5,101	
Francis E. Powell	2	5 25	2	6 20	2	14 10	American	Atlantic Refining Co.	431 0	59 2	18 6	Los Angeles, Calif.	Ballast	9,100	7,082	5,167
Charles R.	2	5 50	2	7 15	2	14 56	American	Munson-McCork Line	401 0	53 0	27 1	Seattle, Wash.	Steel, general	6,706	4,639	
McCormick	2	9 05	2	9 15	2	15 52	American	Cities Service Corp.	416 0	56 2	18 0	Los Angeles, Calif.	Ballast	6,279	8,214	6,183
Hadnot	2	11 40	2	11 45	2	19 51	American	American-Pioneer Line	410 0	56 0	27 6	Manila, P. I.	Ballast			
Volunteer	2	11 40	2	11 45	2	18 44	American	Motor ship.								

* Cotton, gasoline, and kerosene.

* Submarine.

* Motor ship.

* Tanker.

Chactine	2	11	45	2	12	05	2	19	30	2	20	34	Danish	A. P. Moller	378	0	50	2	24	8	Savannah, Ga.	Yokohama, Japan.	General	7,000	5,526	4,065
Marack	1	21	05	2	13	20	2	20	40	U. S. Navy	380	0	American	McCormick S. S. Line.	380	0	64	0	28	3	Cristobal, C. Z.	Balboa, C. Z.	General	1,903	6,588	5,049
Recher	2	13	20	2	13	20	2	20	40	U. S. Navy	380	0	American	McCormick S. S. Line.	380	0	64	0	15	9	Buenos Aires, Arg.	Vancouver, B. C.	General	1,903	5,466	3,841
West Mahwah	3	13	20	2	13	20	2	20	40	U. S. Navy	380	0	British	W. L. Conyn & Co.	380	0	52	8	14	0	Rotterdam, Holland	Los Angeles, Calif.	Ballast	1,318	7,744	5,621
General Smuts	4	13	20	2	13	20	2	20	40	U. S. Navy	380	0	British	W. L. Conyn & Co.	380	0	52	8	14	0	New York, N. Y.	San Francisco, Cal.	Ballast	2,626	7,744	5,621
Kenowis	5	13	20	2	13	20	2	20	40	U. S. Navy	380	0	British	Blue Star Line.	423	0	56	0	21	0	Amsterdam, Holland	Portland, Oreg.	General	15,476	6,065	4,354
Empirestar	6	13	20	2	13	20	2	20	40	U. S. Navy	407	7	British	Blue Star Line.	407	7	53	7	20	0	New York, N. Y.	Tacoma, Wash.	General	15,476	6,065	4,354
Panama	7	13	20	2	13	20	2	20	40	U. S. Navy	407	7	American	Amer-Hawain Line.	550	3	72	2	23	5	Norfolk, Va.	Cruz Grande, Chile	Ballast	15,476	6,065	4,354
Behore	8	13	20	2	13	20	2	20	40	U. S. Navy	407	7	American	Ore S. S. Corp.	550	3	72	2	23	5	Norfolk, Va.	Cruz Grande, Chile	Ballast	15,476	6,065	4,354
Lewis Lucken-	9	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6	Boston, Mass.	Seattle, Wash.	General	4,587	8,762	8,762
bach	10	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6	Boston, Mass.	Seattle, Wash.	General	4,587	8,762	8,762
Denmark Maru	11	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6	Boca Grande, Fla.	Dairen, China.	General	7,364	4,398	4,398
West Mingo	12	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6	Philadelphia, Pa.	Seattle, Wash.	General	2,285	4,682	4,682
Uyvali	13	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6	Calao, Peru.	Callao, Peru.	Cattle, general	3,161	4,466	4,466
Subotawan	14	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6	Covenas, Colombia	Callao, Peru.	Cattle, general	3,161	4,466	4,466
Paul Shoup	15	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6	Mobile, Ala.	San Francisco, Cal.	Steel, general	5,376	4,103	4,103
Luigen	16	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6	Philadelphia, Pa.	San Francisco, Cal.	Ballast	5,376	4,103	4,103
Madras City	17	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6	Newcastle-on-Tyne	Los Angeles, Calif.	Ballast	7,333	5,182	5,182
Domede	18	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6	Barry, England	Victoria, B. C.	Ballast	5,088	3,741	3,741
Ramon de	19	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6	Trinidad, B. W. I.	Los Angeles, Calif.	Ballast	5,913	4,377	4,377
Larrinaga	20	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	7,712	5,000	5,000
Henry D.	21	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	7,712	5,000	5,000
Whiton	22	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	5,367	2,925	2,925
Santa Barbara	23	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	3,403	6,500	6,500
Scida	24	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	7,918	4,797	4,797
Trocas	25	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	1,127	6,823	4,797
Salvador	26	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	672	2,715	1,678
Madriton	27	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	2,897	5,964	4,384
Beldis	28	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	5,794	8,691	6,637
Pensylvania	29	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	4,520	5,468	3,533
City of Windsor	30	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	4,508	7,139	4,640
Erfurt	31	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	11,070	7,931	7,931
Laguna	32	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	4,103	7,931	7,931
Raranga	33	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	4,103	7,931	7,931
Belnoira	34	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	4,103	7,931	7,931
Tules	35	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	4,103	7,931	7,931
Eleonor Boling	36	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	600	643	303
Geo. H. Jones	37	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	7,689	5,667	5,667
Chlore	38	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	14,598	9,348	9,348
Point Judith	39	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	2,266	2,902	1,962
Imlay	40	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	7,218	4,959	4,959
Pacific Spruce	41	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	4,593	6,624	4,757
Sutcliffland	42	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	3,595	5,654	4,125
Aachen	43	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	4,040	5,654	4,125
Slijstad	44	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	7,207	6,264	4,706
Patriek Henry	45	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	9,532	8,987	6,612
Cauca	46	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	238	238	163
Jersey City	47	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	6,952	5,005	5,005
Tudorstar	48	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	7,624	5,574	5,574
Henry S. Grove	49	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	7,845	6,755	4,688
Tanker	50	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	7,845	6,755	4,688
General	51	13	20	3	8	30	3	15	40	American	496	0	American	Luckenbach Line.	496	0	68	2	20	6			Ballast	7,845	6,755	4,688

12 Coal, iron, and general.

11 Phosphates, scrap rails, and cotton.

10 Military supplies.

9 Gunboat.

8 Tug.

7 Transport.

6 Cruiser.

5 Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Cities Service																	
Petrol	30	6 00	30	8 38	30	16 55	30	23 40	462 3	62 7	29 8	Los Angeles, Calif.	Philadelphia, Pa.	Crude oil	12,000	9,802	7,292
Beckenham	29	22 50	30	9 00	30	17 25	30	20 15	370 0	50 6	21 0	Viadivostok, Sibria	London, England	Lumber	4,288	5,979	3,452
Equatore	30	4 50	30	9 26	30	18 03	30	20 15	362 8	50 5	24 6	Valparaiso, Chile.	Genoa, Italy	Nitrates, copper	6,603	5,093	3,415
Vancollie	30	9 35	30	10 29	30	18 45	30	20 00	510 2	58 2	30 6	Talara, Peru	Montreal, Canada	Crude oil	15,737	11,573	8,008
Aden Maru	30	10 00	30	10 49	30	19 35	30	20 00	385 0	51 0	27 6	Portland, Ore.	Gibraltar	Wheat	7,763	6,203	4,672
Negada	30	14 15	30	15 10	30	22 25	30	20 00	410 9	50 7	26 5	Punta Arenas, Chile	Hamburg, Germany	General	6,928	6,402	4,463
Cleveland	25	13 04	10-1	6 28	10-1	14 25	10-3	6 00	292 0	44 0		Balboa, C. Z.	Cristobal, C. Z.	Lumber	3,950	3,984	2,628
Surico	30	17 30	1	6 38	1	15 25	1	15 25	324 0	42 6	25 0	Seattle, Wash.	Newark, N. J.	General	10,557	9,505	6,644
Alkmaar	30	22 20	1	8 12	1	17 00	2	1 30	466 0	62 6	28 3	Valparaiso, Chile.	Hamburg, Germany	Lumber	7,125	6,246	4,627
Fortbridge	1	1 15	1	8 45	1	18 15	1	19 55	380 8	54 2	25 0	Vancouver, B. C.	Boston, Mass.	Wheat, rye	6,279	5,684	4,070
Willaro	1	7 00	1	9 02	1	19 00	1	21 10	396 5	52 9	24 6	Bellingham, Wash.	New York, N. Y.	General	6,025	4,917	3,523
Palserbo	1	9 00	1	10 14	1	19 20	1	22 45	365 7	50 6	26 5	Portland, Ore.	Rotterdam, Holland	Wheat, rye	6,025	4,917	3,523
Rocheater	1	9 00	1	13 26	1	21 05	2	13 20	381 0	65 0		Balboa, C. Z.	Cristobal, C. Z.	Wool, hides	1,192	5,906	4,187
Canadian	1	16 30	1	17 07	2	11 40	2	13 15	400 3	52 2	16 6	Dundlin, N. Z.	Montreal, Canada	Crude oil	15,560	10,994	7,893
Scota	2	6 30	2	6 30	2	12 55	2	15 30	155 0	30 0		Balboa, C. Z.	Cristobal, C. Z.	Lumber, general	10,000	9,294	6,861
L. T. Bedford	2	3 43	2	6 45	2	15 30	2	15 30	499 2	68 1	29 6	Talara, Peru	New York, N. Y.	General	10,348	9,258	6,944
Dorothy Luckenbach	2	3 00	2	7 20	2	18 05	2	18 05	448 9	60 2	30 0	Portland, Ore.	Boston, Mass.	Crude oil	6,700	6,572	4,788
Mexican	2	6 45	2	8 13	2	18 50	2	18 50	472 3	57 2	28 9	Portland, Ore.	Boston, Mass.	Bulk wheat	7,720	6,621	4,916
Eleanor Christenson	2	7 30	2	8 24	2	19 15	2	19 15	410 5	54 3	24 0	Portland, Ore.	Baltimore, Md.	General	4,085	7,764	4,672
Skegnness	2	8 20	2	9 17	2	20 50	2	22 55	401 8	54 3	14 8	Portland, Ore.	Dublin, Ireland	Nitrates	7,678	5,286	3,999
Teno	2	9 30	2	10 44	2	17 55	2	22 25	422 8	56 2	25 0	Valparaiso, Chile.	Brooklyn, N. Y.	Lumber	3,918	3,984	2,612
Nikola Mihanovic	2	10 30	2	11 15	2	20 15	2	20 15	400 5	52 2	26 0	Tucupilla, Chile	Brixham, England	General	6,640	5,616	3,879
Sundeseo	2	12 00	2	13 14	2	21 45	2	23 10	324 0	46 2	23 0	Los Angeles, Calif.	Port Newark, N. J.	Wheat, lumber	7,520	5,650	4,071
Golden Gate	2	12 30	2	13 40	2	22 05	2	23 25	381 0	53 1	23 0	San Antonio, Chile.	Oslo, Norway	Iron ore	21,000	15,425	4,421
Cape Orizabal	2	13 55	2	14 42	2	23 30	3	00 50	403 0	52 4	24 7	Vancouver, B. C.	Antwerp, Belgium	Lumber	7,500	6,537	4,841
Svealand	2	11 50	2	16 37	3	12 30	3	13 45	561 3	72 2	33 0	Cruz Grande, Chile	Baltimore, Md.	Wheat	8,134	10,086	7,226
Pacific Redwood	2	19 30	3	6 09	3	14 10	3	14 10	409 5	54 2	24 0	Tacoma, Wash.	New York, N. Y.	General	9,815	6,811	4,810
Vancouver	2	23 00	3	7 25	3	15 45	3	18 45	375 0	52 6	25 0	Portland, Ore.	Lisaoes, Portugal	Lumber	7,800	7,935	5,841
Lancaster	3	4 30	3	8 17	3	17 05	3	17 05	434 0	57 7	27 0	Englewood, B. C.	New York, N. Y.	Wheat	8,134	10,086	7,226
Pacific President	2	20 15	3	10 17	3	17 30	3	17 30	450 4	60 8	28 6	Vancouver, B. C.	Glasgow, Scotland	General	8,134	10,086	7,226
Koranton	3	12 05	3	12 54	3	20 35	3	20 35	413 0	53 5	27 6	Vancouver, B. C.	Europe	Wheat	9,815	6,811	4,810

17 Towing barge No. 2.

16 For orders.

15 U. S. Navy tug.

14 Cruiser.

13 Motor ship.

12 Tanker.

Tugboats				New York, N. Y.				General			
City	3	16.50	3	17.39	4	11.40	4	11.40	American	4	11.40
Isosoglu	9-28	7.40	4	6.20	4	14.25	4	14.25	British	4	14.25
Minnesota	10-3	19.45	5	6.29	4	14.45	5	21.33	French	5	21.33
Myrtle	3	24.00	4	7.02	4	15.30	4	15.30	American	4	15.30
Steel Voyager	3	21.55	4	8.23	4	15.50	4	15.50	American	4	15.50
Oilshipper	4	7.10	4	8.39	4	16.50	4	20.35	British	4	20.35
Limon	4	2.19	4	9.03	4	17.15	4	17.20	American	4	17.20
Remera	4	3.00	4	13.10	4	19.40	4	19.40	British	4	19.40
King John	4	14.35	4	15.16	4	22.25	4	22.25	British	4	22.25
Vulcan City	4	16.35	4	17.20	5	10.50	5	12.25	British	5	12.25
El Lobo	4	16.55	5	6.29	5	13.45	5	13.45	British	5	13.45
Cherry Branch	5	4.40	5	7.08	5	16.10	5	17.45	British	5	17.45
William H.											
Doherty	5	7.45	5	8.30	5	16.45	5	16.45	American	5	16.45
Calif.	5	10.00	5	10.46	5	17.50	5	17.50	German	5	17.50
Cerigo	5	12.10	5	13.21	5	20.25	5	20.25	German	5	20.25
Despatch H.M.S.	6	16.05	6	16.16	6	12.50	6	14.40	British	6	14.40
Cape York	6	2.30	6	7.21	6	14.45	6	17.35	British	6	17.35
Edward Luck-											
entbach	6	8.06	6	8.06	6	18.30	6	18.30	American	6	18.30
Sutemoo	6	9.00	6	9.40	6	19.00	6	19.00	American	6	19.00
O-6	6	11.05	6	10.55	6	18.45	6	18.45	American	6	18.45
Castle Town	6	11.00	6	11.05	6	20.05	6	23.30	American	6	23.30
Emil Kordorf	6	12.45	6	13.27	6	21.15	6	23.45	German	6	23.45
Reedpool	6	13.10	6	14.14	6	23.00	7	1.00	British	7	1.00
West Katian	6	14.05	6	14.53	6	23.35	6	23.35	American	6	23.35

¹ Tanker.

² Submarine.

³ Lumber, wheat, and general.

⁴ Coffee, cocoa, hides, and ivory nuts.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
September 30	Sangro.	Anglo-Saxon Petroleum Co.	Curacao, D. W. I.	September 30	Dakotian	Leyland Line	Puerto Colombia.
September 30	Ulva	United Fruit Co.	Porto Limon, Costa Rica.	September 30	Ulva	United Fruit Co.	New York via Habana.
September 30	Polarland	Estrada G. Hermanos	Puerto Colombia.	October 1	Parisquina	United Fruit Co.	New Orleans via wayports.
October 1	Maravi	United Fruit Co.	New York via Habana.	October 1	Polarland	Estrada G. Hermanos	New York N. Y.
October 1	Tolva	United Fruit Co.	New York via Habana.	October 1	Gristobal	Panama Railroad S. Line.	New York via Haiti.
October 3	Flandre	French Line	Havre via wayports.	October 2	Maravi	United Fruit Co.	Puerto Colombia.
October 3	Coppetane	United Fruit Co.	New Orleans, La.	October 3	Tolva	United Fruit Co.	Porto Limon, Costa Rica.
October 3	Sannacua	United Fruit Co.	Bocas del Toro, R. P.	October 4	Coppetane	United Fruit Co.	Pro. Colombia and Bocas.
October 4	Favorita	Standard Fruit & S. S. Co.	Bocas del Toro, R. P.	October 4	Sangro	Anglo-Saxon Petroleum Co.	Curacao, D. W. I.
October 4	Oranian	Leyland Line	New Orleans, La.	October 4	Santa Marta	United Fruit Co.	New York via wayports.
October 4	Smagrad	United Fruit Co.	Liverpool via wayports.	October 4	Saramacca	United Fruit Co.	New Orleans, La.
October 4	Inapaquina	United Fruit Co.	Mobile, Ala.	October 4	Smagrad	United Fruit Co.	Perme, R. P.
October 4	William Green	Arrow Oil Co.	Colon, R. P.	October 4	Inapaquina	United Fruit Co.	Colon, R. P.
			Beaumont, Texas.	October 5	Flandre	French Line	Havre via wayports.

¹ Motor boat.

* Other than ships passing through the Canal.

(Continued on page 140.)

Table I.—Classification of Cargo Passing Through the Panama Canal Showing Origin and Destination, Fiscal Year Ending June 30, 1928.—Continued from page 119.

ATLANTIC TO PACIFIC.
(Figures represent tons of 2,240 pounds.)

Commodity.	East coast of United States to West Coast of United States.	East coast of United States to west coast of Canada.	East coast of United States to West Coast of Central America.	East coast of United States to west coast of South America.	East coast of United States to Australasia.	Cristobal, C. Z., to west coast of United States.	Cristobal, C. Z., to west coast of Central America.	Cristobal, C. Z., to west coast of South America.	East coast of Canada to Australasia.	Europe to west coast of United States.	Europe to west coast of Canada.	Europe to west coast of Central America.	Europe to west coast of South America.	Europe to Australasia.	West Indies to west coast of United States.	East coast of South America to west coast of United States.	Miscellaneous.	Totals.
Aeroplanes.....	148		122	115	15												2	402
Agricultural imple- ments.....	15,679		97	3,451	265												1,051	60,885
Ammonia.....	859			44	3,297		232	119	4,084	34	172						9,972	91,776
Ammunition.....	234																311	
Asbestos.....	626			20	422				935	16	25						2,176	4,232
Asphalt.....	1,299			1,100	582			51	18,508	100							438	82,350
Automobiles.....	9,421		786	11,791	1,541		394	615	577	54	18	28					236	124,553
Automobile accessories	7,896		124	2,788	477		67	577	6,778		10	5					224	49,052
Bananas.....																	24,498	44,616
Bark.....																		
Quebracho.....																		128
Quilay.....																		202
Barley.....	43			5				200										58
Beans.....	1,321			21	72		372	6	147	241	101	2	34	142		585	162	3,591
Blood and tankage.....	105									250	10					4,116		4,481
Bones and bone meal.....	813				136		124			4,209	114					5,758	2,214	13,368
Borax.....	495							29										1,032
Bricks.....	3,217			2,468	183				3,671	3,671	1,550	2	138	398			978	27,131
Burlap.....	847				10,918								2,562	1,574				851
Calcium carbide.....	1,051			585	50				682	52	100		291	123			605	3,851
Canned goods:																		
Fish.....	3,464	49	5	40	90			271	452	1,563	306	5	946	977			777	9,116
Fruit.....	2,316			192	107			50	83	136	96	16	186	223			620	4,462
Meat.....	1,240			265	69			40	22	26	40		90	523			1,312	7,639
Milk.....	309		2	1,874	36			149					109	139			377	2,878
Soup.....	17,378				43			29										17,451
Vegetables.....	13,474		92	72	440				8	196	26	4	143	66			238	15,383
Miscellaneous.....	20,205		87	521	334			648	3,186	728	81		40	600			506	30,207
Carbon black.....	511			133	307					122							125	3,655
Cement.....	15,178		137	17,493	171			982	5	28,028	4,184	28,539	100,694	6,588			14,122	280,032
Chalk.....										5,417			141					5,651
Charcoal.....	1,362			1,623						101	152							3,238
Chemicals.....	14,888		5	1,687	354			42	107	7,672	1,616	154	7,941	11,211			749	52,493

[illegible]

Table 1.—Classification of Cargo Passing Through the Panama Canal Showing Origin and Destination, Fiscal Year ending June 30, 1928.—Continued.

ATLANTIC TO PACIFIC.—Continued.

(Figures represent tons of 2,240 pounds.)

Commodity.	East coast of United States to west coast of United States.	East coast of United States to west coast of Canada.	East coast of United States to west coast of Central America.	East coast of United States to west coast of South America.	East coast of United States to Philippine Islands.	East coast of United States to Far East.	East coast of United States to Australasia.	Cristobal, C. Z., to west coast of United States.	Cristobal, C. Z., to west coast of Central America.	Cristobal, C. Z., to west coast of South America.	East coast of Canada to Australasia.	Europe to west coast of United States.	Europe to west coast of Canada.	Europe to west coast of Central America.	Europe to west coast of South America.	Europe to Australasia.	West Indies to west coast of United States.	East coast of South America to west coast of United States.	Miscellaneous.	Totals.
Liquors.....	330					121			1,562	208	10	401	12,184	25	2,923	10,944			2,919	31,643
Livestock.....	48					549	4	5		300		559	50		135	2			2,985	4,637
Lumber.....	18,941	110	4,183			3,090	1,909	8		203	918	1,003	1,131	16	324	1,040		146	290	33,402
Maize.....	50																	50	600	650
Mat.....	401			81					51	6			21		159	890				1,609
Manufactured goods:																				
Iron and steel.....	1,018,604	12,345	3,039	71,912	19,979	239,802	30,050	400	5,249	3,792	17,847	129,932	35,731	9,182	107,631	105,203			44,784	1,855,532
Machinery.....	71,508		826	29,678	4,643	29,335	17,624	47	1,474	640	266	1,218	2,673	372	26,591	26,599			1,740	215,334
Railroad material.....	27,058	500	4,199	37,976	1,892	64,307	2,010		843	943	230	4,758	2,357	2,249	29,611	10,655			600	188,561
Timber.....	48,475			1,437	1,390	20,606			65			1,680	2,357		951	519			12,256	89,606
Textiles.....	46,505		279	10,120	4,105	8,241	1,930	80	931	734	515	686	1,300	208	23,884	24,149			971	124,658
Miscellaneous.....	65,977	1,832	582	9,003	1,210	32,433	5,370	90	200	135	849	6,038	3,524		17,746	24,445	28		3,646	173,408
Marble.....	1,413			60					10	150		114	543		1,247	70			29	9,220
Meats:																			105	2,636
Copper.....	1,004			15		340	25					1,657			7	23				3,071
Gold and silver.....	231			2		1,401			4			4,819	5,736	7	7,704	5,402			2,132	1,638
Iron.....	4,731	140		432	71	8,243	445		221	26			27		229	435			50	40,109
Lead.....	243			71	20	550	178	2					340		3					1,805
Scrap.....	2,566			350		44,999							1,243		3					48,168
Tin.....	25,954	446		2,151	352	13,356					107				85	2,912			7,423	51,004
Zinc.....	401			497		3,436	154		200	22		40	199	2	1,701	400				7,537
Other.....	904			149		3				7		152								7,465
Milk, powdered.....	30																15,075		196	17,038
Molasses.....	1,363																			
Musical instruments.....	90			205							103								25	530
Nitrates.....	422						137	275				9,648	457	2,216	96	150			5,442	18,843
Nuts.....	348											32	47			23			56	863
Oats.....	650			138		135	7			42			4						10	980
Oil:																				
Coconut.....	20					15													100	135
Cottonseed.....	706	30		165					13											974
Crude.....	12,470			495		16,871	1,261			129			683			20			30,883	63,370
Gas and fuel.....	5,391					12,562	10,172			16						9			18	13,473

[illegible]

(Continued on page 134.)

Table II.—Classification of Cargo Passing Through the Panama Canal

PACIFIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	West coast of United States to east coast of United States.	West coast of United States to West Indies.	West coast of United States to Cristobal, C. Z.	West coast of United States to Europe.	West coast of United States to east coast of South America.	West coast of Canada to east coast of United States.	West coast of Canada to east coast of Canada.	West coast of Canada to Europe.
Aeroplanes.....			29					
Agricultural implements.....	418	6	5					
Alfalfa.....	1,667			35				
Alfalfa meal.....	3,243			175				
Asphalt.....	879	11	97	31,422	59			
Automobiles.....	792	4	50	58	9		3	5
Automobile accessories.....	611	3	20					
Balsam.....	65							
Bamboo.....	171							
Bananas.....								
Bark:								
Cascara.....	91			360				37
Peruvian.....				1				
Quillay.....								
Other.....	18							
Barley.....	309			183,543				
Beans.....	70,840	3,942	1,572	2	193			40
Beeswax.....	1							
Borax.....	15,571		9	50,830				
Bran.....	26			27				
Burlap.....	2,466		13	32				
Camphor.....	1,486							
Canned goods:								
Fish.....	118,549	789	917	12,219	82	460	4,436	18,194
Fruit.....	286,795	817	1,262	126,927	3,050	929	798	3,428
Meat.....	3,802		22	102				30
Milk.....	9,331	100	286	801	2			526
Vegetables.....	60,481	552	646	787	35		11	57
Miscellaneous.....	63,287	1,012	386	10,386	284	50	428	303
Carbon black.....	395			1				
Celite filtercel.....	7,431		30	1,277				
Cement.....	862				19			
Charcoal.....	1,145							
Chemicals.....	2,442	42	22	149				
China and fireclay.....	247			47				
Coal.....								
Cocoa.....	446		1	215				
Cocoa leaves.....								
Coconuts.....	4,066		56					
Coffee.....	1,042	40	211	519			8	
Cold storage:								
Beef.....	12							
Butter.....	80		29					
Cheese.....	201						7	20
Eggs.....	385		183	145	1,240			82
Fish.....				582				53
Lard.....	9		284					
Meat.....	292							
Mutton.....								
Other.....	513		202	893				1,210
Confectionary.....	10		6					
Copra.....	16			7,230				
Corn.....								1,592
Cotton.....	26,355		53	15,398				
Cottonseed oil cake.....				4,688				
Cottonseed meal.....				2,270				
Drugs.....	229							
Dyes.....								
Dyewoods.....				96				200
Earthenware.....	874	6					5	
Eggs, dried.....	157							
Explosives.....	287				482		3	
Fertilizer.....	65							
Fishmeal.....				1,858				4,197
Flour.....	63,531	396	1,304	25,866	979			10,688
Fruit:								
Dried.....	137,444	334	479	126,102	150			673
Fresh.....	4,526		111	65,786	228			3,227
Fuller's earth.....	21							
General.....	126,235	2,205	2,912	37,200	1,778		1,236	13,940
Glass and glassware.....	2,795		19	250	122			

Showing Origin and Destination, Fiscal Year Ending June 30, 1928.

ATLANTIC.

(Figures represent tons of 2,240 pounds.)

West coast of South America to east coast of United States.	West coast of South America to east coast of Canada.	West coast of South America to Cristobal, C. Z.	West coast of South America to Europe.	West coast of Central America to Cristobal, C. Z.	West coast of Central America to Europe.	Far East to east coast of United States.	Australasia to east coast of United States.	Australasia to Europe.	Philippine Islands to east coast of United States.	Miscellaneous.	Totals.
9		1	86				1				38
										12	517
			4								1,714
		1	5		2		2	26	13	17	3,418
7		1					5				32,472
		1									994
599		7		28	12	30				11	640
						1,711					732
4				1,368						8,780	1,882
											10,152
		14	2			279					783
19		6	126	3						1	156
286		14	2,704								3,004
31			147								196
			51,659				15	1,605		131	237,262
11,123	1,139		12,081	18	300	2,499		1,600		21,914	127,168
66	44		35								146
166	66		20,170							101	86,933
			20,209					100			20,362
											2,511
						521					2,007
						311		6		22,282	178,245
		25	79			30				10,274	434,424
			53			61		874		144	5,083
		6	215			107		9		47	11,093
	3							808		193	63,099
										2,897	79,844
											397
											8,738
27											908
											1,145
157			22			302				6	3,142
											294
			100					2			102
3,919	13,642	4,543	2			565	1,329				24,662
68	60	11									139
	252										4,374
10,515	44,652	3,873	33,912	34,856	28		826			2,380	132,862
							1,265	20,358		495	22,130
	4						839	60,570		1,081	62,603
		10					1,031	64,224			65,493
								61			2,096
											1,112
			4								293
							10	2,638		85	3,029
							812	121,980		314	123,106
							772	4,461		1,039	9,090
											16
9	2					6,230	3,140	40,499	25,987		83,143
		3,591				163				603	5,949
9,973	2,914	36,084	34	2	1,055			257		3,599	95,724
31	593	29,473								146	34,931
											2,270
		31				20					280
9		6			15	10	5				45
		14	964	1,103		174				2,933	5,484
											885
						85					242
						332	9			344	1,457
											65
				13		12	155	150		9,097	112,191
8		20								7,434	272,644
1,288		62				13		17,643		573	93,457
											21
2,255	5,820	11,556	966	2,458	40,168	4,756	10,342			16,916	280,743
					228		5			3	3,422

Table II.—Classification of Cargo Passing Through the Panama Canal

PACIFIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	West coast of United States to east coast of United States.	West coast of United States to West Indies.	West coast of United States to Cristobal, C. Z.	West coast of United States to Europe.	West coast of United States to east coast of South America.	West coast of Canada to east coast of United States.	West coast of Canada to east coast of Canada.	West coast of Canada to Europe.
Glue.....	199							
Graphite.....								
Guano.....	25			56				450
Gum:								
Kauri.....								
Yucca.....								
Other.....								
Hair.....	893			22				110
Hardwoods.....	1,042		52	358	86			941
Hats.....	25							
Hay.....	5,084		53	15				
Hemp.....	9,774			30				
Honey.....	930			2,127				
Hops.....	1,143		4				49	
Horns and hoofs.....				97				
Indigo.....			1					
Infusorial earth.....	131			895	79			
Ink.....	10							
Iodine.....								
Ivory nuts.....								
Jute.....	1,176							
Kapok.....	84							
Leather.....	238							
Linoleum.....	504							
Liquors.....	75			69				373
Livestock.....								
Lumber.....	2,572,373	32,739	2,061	286,819	20,076	472,637	100,178	107,490
Manufactured goods:								
Iron and steel.....	6,166	56	148	460	61			1,000
Machinery.....	6,487	425	149	610	1,421			57
Railroad material.....	720			5				
Textiles.....	2,581	123	130	9	26			
Miscellaneous.....	10,322	47	109	1,299	117			72
Marble.....	242							
Matches.....	94							
Metals:								
Antimony.....	350							
Copper.....	105,048			74,496				3,248
Gold and silver.....								
Iron.....	629							
Lead.....	1,932		15	5,090	50			67,219
Scrap.....	4,188			6,105				74
Tin.....	58			509				1,550
Zinc.....	788		10	2,720				33,021
Other.....	3,227			1,341				2,470
Milk, powdered.....	4,624			132				137
Molasses.....								
Nitrates.....	200							
Nuts.....	3,059	9	5	382				
Oats.....	21		33		4			6,250
Oil:								
Coconut.....	14		4					
Cottonseed.....	20							
Crude.....	1,167,277	32,834	103,030	25,907	7,000			
Gas and fuel.....	716,096	112,704	136,397	199,209	81,673			
Gasoline, benzine, and naphtha.....	1,615,633	37,889	34,130	572,210	18,982			
Kerosene.....	46,079		205		6,128			
Lubricating and grease.....	73,013		316	11,337	11			
Olive.....	2							
Vegetable.....	234	3		76				
Whale.....				2,800				105
Wood.....	432			257				
Other.....	824	2		959				
Ores:								
Antimony.....	175							
Chrome.....								
Copper.....	6,142			2,661				
Gold and silver.....								
Iron.....	49			500				
Lead.....								1,394

Showing Origin and Destination, Fiscal Year Ending June 30, 1928.—Continued.

ATLANTIC.—Continued.

(Figures represent tons of 2,240 pounds.)

West coast of South America to east coast of United States.	West coast of South America to east coast Canada.	West coast of South America to Cristobal, C. Z.	West coast of South America to Europe.	West coast Central America to Cristobal, C. Z.	West coast of Central America to Europe.	Far East to east coast of United States.	Australasia to east coast of United States.	Australasia to Europe.	Philippine Islands to east coast of United States.	Miscellaneous.	Totals.
20											219
3,300		5	6,160			1,060					1,060
											9,996
							1,550	1,181		50	2,781
							248				248
							199	55			254
							47				1,109
728		128	31	3,122	556	132	2,277	384	117	552	10,578
39		160	18			48		154		312	756
			286			120					5,558
			579	5		714	2,478	8,819	431	550	22,380
			1,440	58	77			614		60	5,306
											1,196
		12	283	20	9			6			427
				25							26
											1,105
											10
525		304	570								1,399
3,901		15,894	6,105								25,900
			20			166				67	1,429
142		15	4								245
		31	42			4	11	34			360
		4	66					1			504
2			4			18				2	590
89				174	130	755	500	882	2,151	74,778	3,673,832
											242
36		20	12	6		275		10		159	8,409
85		13	99	5	25		71	34		197	9,679
											725
				2		2,290				7	5,168
30		352	30	5		2,182	69			220	14,854
						12					106
			301			1,118		600			2,369
70,446		31,011	158,932				200				443,381
1,235		51	38	25	3						1,359
		14									12
4,438		14	1,212					5,855		128	85,953
677			232				15	786		73	12,150
4			22,579			200	377	978		85	26,340
			5,787				15	1,333		770	44,444
1,190		8	956				214	826			10,032
610								7,413			12,916
										8,106	8,106
1,021,744	7,900	74,050	1,290,809							170,869	2,565,572
173		100				335				4	4,067
1,300			53,384					1,243		2,153	64,388
		31				1,170			28,576	67	29,862
32		355	2,763							64	3,234
216,366	236,503		27,663			22				10,663	1,827,265
	6,503									62,446	1,315,028
			53,496			14					2,332,696
			160			355		124		6,359	58,771
											85,316
											2
1		107	819	9		7,054	30				8,373
			800				17,850	1,600			23,155
						2,211	66			461	3,427
197			720	3		12,712		7		203	15,627
603			1,446			699		2,500			5,423
								8,556			14,906
34,498		94	12,595			168	435				56,593
704		27	429	2	3					42	1,207
1,395,136		16	175				4,614				1,400,490
645		47	4,298					1			6,385

Table II.—Classification of Cargo Passing Through the Panama Canal

PACIFIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	West coast of United States to east coast of United States.	West coast of United States to West Indies.	West coast of United States to Cristobal, C. Z.	West coast of United States to Europe.	West coast of United States to east coast of South America.	West coast of Canada to east coast of United States.	West coast of Canada to east coast of Canada.	West coast of Canada to Europe.
Ores.—Continued:								
Magnesite.....	10,738							
Manganese.....	3,774							
Tin.....	140							
Zinc.....	75			4,338				7,270
Other.....	690			4,163				1,672
Paint.....	1,838		13	40				
Paper.....	38,333	1,376	326	133	1,258	4,269	28	
Paper, pulp.....	13,134					1,600		
Peanuts.....	2,719		28	356				
Peas.....	3,049	47	5	77			36	4
Phosphates.....	115			15				
Plaster.....	69							
Pollards.....								
Porcelain.....	4,730	20	38				229	
Quicksilver.....	29							
Rags.....	4,242			54				
Rice.....	2,123	1,588	73	1,033	383		735	115
Rope.....	1,093		46					
Rosin.....								
Rubber:								
Manufactured.....	430		10	134				4
Raw.....								
Scrap.....	2,275			1,763			3	156
Rye.....				1,999				4,443
Salt.....	651		48					
Sand.....				35				
Seeds:								
Cotton.....	44			344				
Grass.....	881							
Hemp.....	697							
Other.....	1,784			212				
Shells.....	211			175				
Silk.....	2,414	1	21					
Skins and hides.....	25,091		12	161		260		20
Soap.....	576		8					
Sugar.....	72,944				1,100			
Syrup.....	19							
Talc.....	1,981	10	30					
Tallow.....	5,211	44	79	45	1	6		
Tartar.....	66							
Tea.....	570		127				1,090	
Tobacco.....	669							
Toys.....	290		16		3			
Vegetables.....	993		707		14	26		
Waste.....	2,073							
Wax.....	67		197					
Wheat.....	7,849	136	100,873	1,015,160	570	1,452		1,876,105
Wine.....	1,360							
Wool.....	47,571			881				70
Totals.....	7,657,300	230,212	390,725	2,938,979	147,755	481,689	109,283	2,174,809

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average temperature. Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9).....	1018	1020	1013	84.0
Balboa (dock 18).....	1011	1021	1005	83.0

(NOTE.—The above is based on two months observations at Cristobal, and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Showing Origin and Destination, Fiscal Year Ending June 30, 1928.—Continued.

ATLANTIC.—Continued.

(Figures represent tons of 2,240 pounds.)

West coast of South America to east coast of United States.	West coast of South America to east coast Canada.	West coast of South America to Cristobal, C. Z.	West coast of South America to Europe.	West coast of Central America to Cristobal, C. Z.	West coast of Central America to Europe.	Far East to east coast of United States.	Australasia to east coast of United States.	Australasia to Europe.	Philippine Islands to east coast of United States.	Miscellaneous.	Totals.
5,200			500				9,500	130			10,738
10			57,214				7				19,104
			8,895					7,688			57,371
2,837		225	16,491			454	611	7,786			28,266
								32			34,929
						35				11	1,934
										3,899	49,657
						9					14,734
2,141		77	3,096		5,152	158	402	3,926		3	3,115
		6				13		15,350		1,853	20,023
			4,468								15,496
						5,714					66
											4,468
											10,731
											29
		99	13			1,131	2				5,429
			21			3,841		7,500		30,253	47,756
3							34			25	1,219
											3
357		529	17	11	2	8	7	31			624
							137	106		4	1,163
			808				86	25		26	4,335
						21					7,250
											730
											35
293		450	4,327					247			5,705
							119	1,144		55	2,199
		25	1,088			95	87				1,992
23		6	1,460			2,017	349	91		33	5,975
				77	23	36	916	1,107	3		2,548
			2		4	713		40			3,195
3,121		2,019	4,553	831	94	3,528	25,906	7,204		787	73,587
6			5								595
435	2,313	1,131	162,231	1,271	4,958	2	20		315,005	16,321	577,781
											19
						27	1,545	18,348		414	2,021
26			70								25,720
			3			7,815		14		2	162
5						211		1			9,621
						119					836
5,518		132	196			5				2,343	428
						713					9,934
35		34	18			472					2,786
		9	407			230		4,215		28,828	823
		28	3,589								3,035,884
3,405		315	6,794			7,320	15,998	83,405		52	4,969
										2,172	167,931
2,822,886	253,219	197,215	2,128,737	42,959	49,785	123,057	106,678	552,563	372,283	540,441	21,320,575

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

Postal Address of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

Table I.—Classification of Cargo Passing Through the Panama Canal Showing Origin and Destination, Fiscal Year Ending June 30, 1928.—Continued from page 127.
ATLANTIC TO PACIFIC.—Continued.
(Figures represent tons of 2,240 pounds.)

Commodity.	East coast of United States to west coast of United States.	East coast of United States to west coast of Canada.	East coast of United States to west coast of Central America.	East coast of United States to west coast of South America.	East coast of United States to Philippine Islands.	East coast of United States to Far East.	East coast of United States to Australasia.	East coast of United States to West Indies, C. Z., to west coast of Central America.	East coast of United States to West Indies, C. Z., to west coast of South America.	Europe to west coast of United States.	Europe to west coast of Canada.	Europe to west coast of Central America.	Europe to west coast of South America.	Europe to Australasia.	West Indies to west coast of United States.	East coast of South America to west coast of United States.	Miscellaneous.	Totals.
Soap.....	23,384			1	778	1,119	102			90	74		628	117			1,275	28,086
Soda.....	4,400			324	53	1,731				76	25		130	204			24	6,961
Soda ash.....	10,641		110			955					80		2,388					14,224
Soda bicarbonate.....	696					612												1,363
Soda, caustic.....	5,614			32	100	12,514	73	13					83	35			100	19,069
Starch.....	1,082			137	382	36	10	115	16								285	4,141
Sugar.....	3,465			2,819	100	382		150	117	2,618	200		520	51	25,068			44,951
Sulphur.....	80,588	19,412		169		8,805	95,869	22			331						12,698	207,257
Syrup.....	1,296			21		158	215			55							1,541	1,745
Tallow.....	11							15										26
Tar.....	8,435			15						18			11					8,483
Tartar.....										834								834
Ten.....	964			8			1			298	356		1,878	89			340	3,347
Tobacco.....	19,524		18	107	812	41,279	13,338	8	50		12		141	1,624	451		925	78,943
Toys.....	455									610	110							1,175
Turpentine.....	1,469	30		230		143	2,332						3	300				4,222
Vegetables.....	201			11		84	60	1		43	36							592
Waste.....	1,014			77		13,876	6	194	1,433		188		1,228	93			7	1,239
Wax.....	1,473	22		6,867				75	75				15					25,387
Wheat.....	12			226				19	429	85	2,399		272	2,645				344
Wines.....	216					25					6		247				197	10,562
Wool.....	269									38	56						2	549
Zinc oxide.....	338																	432
Totals.....	2,576,399	44,420	28,347	356,929	68,187	1,613,898	637,703	36,513	77,233	577,133	148,171	90,157	761,567	549,959	41,841	112,824	408,742	8,310,134

Tanker Traffic Through the Panama Canal in September, 1928.

During the month of September, 1928, 89 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 295,720, on which tolls of \$439,354.98 were collected. Cargo amounted to 491,645 tons. In point of net tonnage, tanker traffic for the past month showed a decrease of 34 per cent under the same traffic for the corresponding month a year ago, while cargo tonnage decreased 30 per cent under the cargo tonnage of September, 1927.

Tank ships comprised 18.2 per cent of the total commercial transits through the Canal during the month; made up 21.6 per cent of the total Panama Canal net tonnage; were the source of 20.8 per cent of the tolls collected; and carried 20.7 per cent of the total cargo in transits through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of September, 1928, segregated by direction of transit and nationality of vessels, are shown in the following tabulations, with comparative totals for the two preceding months and for September, 1927:

Nationality.	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	17	93,328	\$67,196.16	.....
Danzig.....	1	6,338	4,563.36	.....
French.....	1	5,050	3,636.00	.....
German.....	1	4,340	3,124.80	.....
Norwegian.....	1	5,071	3,651.12	.....
United States.....	20	121,666	89,122.29	9,015
Totals, September, 1928.....	41	235,793	171,293.73	9,015
Totals, August, 1928.....	46	252,089	185,213.15	21,702
Totals, July, 1928.....	49	264,688	195,784.18	18,521
Totals, September, 1927.....	69	389,602	286,693.74	34,202
<i>Pacific to Atlantic.</i>				
Belgian.....	1	4,976	5,710.00	9,500
British.....	10	54,168	56,923.75	104,073
Danish.....	1	5,623	5,837.50	10,800
Danzig.....	2	12,648	13,227.50	23,114
German.....	2	8,914	9,492.50	17,082
Norwegian.....	2	8,065	8,648.75	15,372
Swedish.....	1	4,497	4,792.50	8,141
United States.....	29	161,036	163,428.75	294,548
Totals, September, 1928.....	48	259,927	268,061.25	482,630
Totals, August, 1928.....	49	268,675	273,926.30	474,011
Totals, July, 1928.....	46	241,854	246,324.35	443,962
Totals, September, 1927.....	62	360,338	368,348.52	662,840

Of the tanker traffic shown above, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for September, 1927:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles:</i>				
September, 1928.....	28	161,006	115,924.32	.....
August, 1928.....	34	187,964	135,334.08	.....
July, 1928.....	33	176,648	129,046.42	5,331
September, 1927.....	56	325,760	235,356.06	.....
<i>From Los Angeles:</i>				
September, 1928.....	35	187,938	191,746.25	345,357
August, 1928.....	32	170,030	173,221.25	301,968
July, 1928.....	39	209,472	212,735.30	384,358
September, 1927.....	54	311,510	319,036.25	579,228

Traffic by Nationality for September, 1928.

The following tabulation shows the commercial traffic through the Canal during the month of September, 1928, classified according to nationality of vessel by direction of transit, and the combined traffic in both directions, with corresponding totals for September, 1927, and 1926:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	1	4,792	4,142	6,512	4,038	\$3,450.24	.....
British	90	459,044	349,495	571,534	351,737	391,150.35	235,682
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	2,485
Colombian	3	2,476	2,118	3,563	2,186	2,638.40	2,399
Danish	1	5,286	4,207	6,636	4,236	5,258.75	2,049
Danzig	1	6,338	5,236	8,956	5,041	4,563.36	.....
Dutch	7	29,949	21,996	35,912	21,696	27,495.00	15,475
French	4	19,796	15,560	25,343	15,222	17,641.00	6,984
German	15	52,844	38,446	63,946	38,754	46,479.80	35,315
Greek	3	11,369	9,949	13,373	8,419	8,276.04	.....
Italian	3	19,774	14,159	26,132	15,702	15,877.53	1,515
Japanese	6	28,901	25,756	37,488	25,663	31,657.00	38,330
Norwegian	12	57,038	44,584	71,073	43,591	52,861.97	25,814
Panaman	1	2,606	1,384	3,644	2,594	1,730.00	2,503
Peruvian	2	4,488	2,998	6,772	3,596	3,728.55	1,898
Spanish	1	2,827	2,459	4,349	2,565	3,073.75	379
Swedish	4	15,349	11,671	37,236	13,481	11,651.49	4,755
United States	97	453,481	372,214	603,214	371,142	425,286.40	327,915
Yugoslav	1	4,570	3,271	5,271	3,296	4,088.75	6,156
Totals, September, 1928	253	1,215,633	933,111	1,548,631	936,935	1,061,240.88	709,654
Totals, September, 1927	295	1,402,155	1,092,315	1,774,119	1,090,285	1,183,757.81	594,949
Totals, September, 1926	236	1,149,723	892,415	1,445,142	892,143	1,005,180.19	650,259

* Includes naval vessel of 10,355 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Argentinian	* 1	(*)	(*)	(*)	(*)	\$1,274.50	.....
Belgian	2	11,187	9,090	14,268	8,001	11,362.50	19,450
British	* 57	281,076	215,783	350,676	217,145	272,113.20	366,482
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	5,244
Colombian	4	2,068	1,746	2,846	1,793	2,022.10	493
Danish	5	24,601	18,712	30,581	19,243	23,390.00	42,440
Danzig	2	12,648	10,582	17,896	10,091	13,227.50	23,114
Dutch	5	17,857	11,436	19,179	11,699	14,295.00	24,275
Finnish	2	4,023	3,996	4,357	3,783	4,827.60	7,300
French	5	24,428	18,896	29,383	18,098	23,620.00	34,419
German	19	58,153	42,761	71,502	42,789	53,299.60	82,626
Italian	5	26,940	20,260	34,134	20,740	25,325.00	33,126
Japanese	7	33,816	29,115	42,091	28,417	36,393.75	44,612
Norwegian	6	21,794	16,659	27,952	16,582	20,657.88	39,772
Panaman	2	2,639	1,417	2,494	1,417	1,769.60	1,022
Peruvian	2	5,364	2,504	7,922	3,941	3,130.00	4,315
Spanish	1	3,729	2,960	5,087	3,000	3,700.00	1,750
Swedish	4	15,366	11,665	28,191	13,851	14,581.25	35,679
United States	101	515,601	406,399	658,576	405,022	507,496.45	811,665
Yugoslav	3	13,425	10,537	16,733	10,601	13,171.25	25,573
Totals, September, 1928	234	1,079,420	837,984	1,371,178	840,189	1,049,989.68	1,603,357
Totals, September, 1927	245	1,130,787	892,102	1,450,542	888,536	1,110,674.53	1,802,804
Totals, September, 1926	210	1,037,081	814,010	1,325,836	815,892	1,014,446.23	1,589,288

* Naval vessel of 2,549 displacement tons.

* Includes naval vessel of 5,000 displacement tons.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Argentinian	1	(¹)	(¹)	(¹)	(¹)	\$1,274.50	
Belgian	3	15,979	13,232	20,780	12,039	14,812.74	19,450
British	147	740,120	565,278	922,210	468,882	683,263.55	602,164
Chilean	2	9,410	6,932	14,620	7,952	8,665.00	7,729
Colombian	7	4,544	3,864	6,409	3,979	4,660.50	2,892
Danish	6	29,887	22,919	37,217	23,479	28,648.75	44,489
Danzig	3	18,986	15,818	26,852	15,132	17,790.86	23,114
Dutch	12	47,806	33,432	55,091	33,395	41,790.00	39,750
Finnish	2	4,023	3,996	4,357	3,783	4,827.60	7,300
French	9	44,224	34,456	54,726	33,320	41,261.00	41,403
German	34	110,997	81,207	135,443	81,543	99,779.40	117,941
Greek	3	11,369	9,949	13,373	8,419	8,276.04	
Italian	8	46,714	34,419	60,266	36,442	41,202.53	34,641
Japanese	13	62,717	54,871	79,579	54,080	68,050.75	82,942
Norwegian	18	78,832	61,243	99,025	60,173	73,519.85	65,586
Panaman	3	5,245	2,801	6,138	4,011	3,499.60	3,525
Peruvian	4	9,852	5,502	14,694	7,537	6,858.55	6,213
Spanish	2	6,556	5,419	9,436	5,565	6,773.75	2,129
Swedish	8	30,715	23,336	65,427	27,332	26,232.74	40,434
United States	198	999,082	778,613	1,261,892	776,164	932,782.85	1,139,589
Yugoslav	4	17,995	13,808	22,004	13,897	17,260.00	31,729
Totals, September, 1928..	487	2,295,053	1,771,095	2,909,454	1,777,124	2,111,230.56	2,313,011
Totals, September, 1927..	540	2,532,942	1,984,417	3,224,661	1,978,821	2,294,432.34	2,397,753
Totals, September, 1926..	446	2,186,804	1,706,425	2,770,978	1,708,035	2,019,626.42	2,239,547

¹ Naval vessel of 2,549 displacement tons. ² Includes 2 naval vessels having a total of 15,355 displacement tons.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending October 6, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Grootendijk	Holland-American Line	September 23..	September 23..		20
Pastores	United Fruit Co.	September 23..	September 23..	11	268 $\frac{1}{2}$
Rhodopis	Hamburg-American Line	September 23..	September 23..	28 $\frac{1}{2}$	45
Osiris	Hamburg-American Line	September 23..	September 23..		(²)
Santa Cecilia	Grace Line	September 23..	September 23..	23	(²)
Cartago	United Fruit Co.	September 23..	September 24..		322
Colombia	Panama Mail S. S. Co.	September 23..	September 24..	609	220
Cid	Pacific Steam Navigation Co.	September 23..	September 24..	199	50
Jamaica	Pacific Steam Navigation Co.	September 23..	September 29..	151	869
Santa Elisa	Grace Line	September 24..	September 24..	(¹)	200
William M.	R. Feuillebois	September 24..	September 24..	(¹)	25
Pacific Shipper	Furness, Withy & Co.	September 24..	September 26..	(¹)	318
Lorigo	Pacific Steam Navigation Co.	September 24..	September 26..	58	147 $\frac{1}{2}$
Axel Johnson	Johnson Line	September 25..	September 25..	(¹)	560
Annie Johnson	Johnson Line	September 25..	September 26..	307	26
Drechtijk	Holland-American Line	September 25..	September 26..	199 $\frac{1}{2}$	117
Ulua	United Fruit Co.	September 25..	September 27..	747	81 $\frac{1}{2}$
Mayari	United Fruit Co.	September 25..	September 27..	838	1,293
Virgilio	Italian Line	September 26..	September 28..	13	741
Saramacca	United Fruit Co.	September 26..	September 27..	793	126
Baralt	Royal Netherlands S. S. Co.	September 26..	September 29..	447	172
Ucayali	Peruvian Line	September 26..	September 30..	2,054	(²)
Suriname	United Fruit Co.	September 27..	September 27..	57	74
Cristobal	Panama Railroad S. S. Line	September 27..	September 27..	5,000	
Bowden	United Fruit Co.	September 27..	September 27..	3	(²)
Zacapa	United Fruit Co.	September 27..	September 23..	743	308
San Jose	United Fruit Co.	September 27..	September 29..	1,164	57
Finn	Colombian Transport Co.	September 27..	September 28..	35	(²)
Mineola	N. O. & S. A. S. S. Co.	September 27..	September 28..	64	178
Galicia	Hamburg-American Line	September 27..	September 28..	203	145
Virginia	Standard Fruit Co.	September 27..	September 28..	313	5
Salvador	Pacific Steam Navigation Co.	September 27..	September 27..	319	
Macabi	United Fruit Co.	September 27..	September 23..	$\frac{1}{2}$	444
Orbita	Pacific Steam Navigation Co.	September 28..	September 28..	10	34 $\frac{1}{2}$
Utacarbon	Union Oil Co.	September 28..	September 29..	11,000	(²)
Parissima	United Fruit Co.	September 29..	September 29..	398	
Bowden	United Fruit Co.	September 29..	September 29..	(¹)	334

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Linda S.	R. Feuillebois	September 29.	September 29.	(¹)	50
Virginia	Standard Fruit Co.	September 29.	September 29.	(¹)	523
Dakotian	Leyland Line	September 29.	September 29.	(¹)	150
Gracia	Donaldson S. S. Line	September 29.	September 30.	(¹)	323
Counsello	T. & J. Harrison	September 30.		680	
Ulua	United Fruit Co.	September 30.	September 30.	15	354
Polarland	Estrada G. Hermanos	September 30.		2	
Amsterdam	Royal Netherlands S. S. Co.	September 30.		355	
Sangro	Anglo-Saxon Petroleum Co.	September 30.		7,343	
Equatore	Italian Line	September 30.		117	
Negada	Hamburg-American Line	September 30.		178	
Carolyn	Grace Line	September 30.		1	
Cristobal	Panama Railroad S. S. Line		October 1.		3,305
Parismina	United Fruit Co.		October 1.		229
Carolyn	Grace Line		October 1.		233
Atrato	Colombian Transport Co.		October 1.		87
Amsterdam	Royal Netherlands S. S. Co.		October 1.		110
Negada	Hamburg-American Line		October 1.		178
Equatore	Italian Line		October 1.		303
Maravi	United Fruit Co.	October 1.	October 2.	1,366	112
Alkmaar	Royal Netherlands S. S. Co.	October 1.	October 2.	55	178
Tolca	United Fruit Co.	October 1.	October 3.	6 ³	57
Teno	Chilean Line	October 2.	October 2.	10	(²)
Golden Gate	Scandinavian So.-Pacific S. S. Co.	October 2.	October 2.	(¹)	11
West Mahwah	McCormick S. S. Line	October 2.	October 2.	143	(²)
Ucayali	Peruvian Line	October 2.	October 3.	(¹)	230
Coppename	United Fruit Co.	October 3.	October 4.	774	53
Santa Marta	United Fruit Co.	October 3.	October 4.	714	460
Flandre	French Line	October 3.	October 5.	376	547
Pensylvanie	French Line	October 3.	October 5.	159	261
Saramacca	United Fruit Co.	October 4.	October 4.	45	109
Santa Barbara	Grace Line	October 4.	October 4.	(¹)	14
Laguna	Pacific Steam Navigation Co.	October 4.	October 5.	(¹)	196
Oranian	Leyland Line	October 4.	October 5.	909	(¹)
Salvador	Pacific Steam Navigation Co.		October 5.		1,128
Erfurt	North German Lloyd	October 4.	October 5.	100	1,314
Favorita	Standard Fruit Co.	October 4.	October 5.	632	
Minnesota	French Line	October 4.	October 5.	750	(¹)
Limon	United Fruit Co.	October 4.	October 5.	915	49
William Green	Huasteca Petroleum Co.	October 4.	October 6.	10,900	(¹)
Aachen	North German Lloyd	October 5.	October 6.	18	(¹)
Agwidale	Mallory & Co.	October 5.		600	
Cerigo	Hamburg-American Line	October 5.		833	
Cali	North German Lloyd	October 5.		219	
Heredia	United Fruit Co.	October 6.		445	
Favorita	Standard Fruit Co.	October 6.	October 6.	(¹)	546
Alvarado	Pacific Steam Navigation Co.	October 6.		175	
Smaragd	United Fruit Co.	October 6.	October 6.	(¹)	546
Cauca	National Navigation Co.	October 6.	October 6.		466

¹ No cargo discharged.² No cargo laded.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storerooms carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 13 years of operation.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

New Motor Ships for Westfal-Larsen Line.

It is reported that the Westfal-Larsen Line, which is operating a service between the west coast of North America and the east coast of South America, with transits through the Canal approximately once a month of vessels on the northward voyage, has ordered the construction of three motor ships, to be placed in this service.

The new ships are to be 14-knot speed, 9,000 tons capacity, and equipped with space for 1,500 measurement tons of refrigerated cargo in each vessel. They are to be ready for service in August, October, and November in 1929, and will replace the steamers *Evanger*, *Hardanger*, and *Leikanger*. Accommodations are to be arranged for about 10 or 12 passengers.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors. An illustrated pamphlet explaining in detail the arrangement may be had upon application to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

On general merchandise the rates are as follows:

(a) For handling cargo from ship's side to storage place, the customary inward local charge of \$1 per ton.

(b) For delivery or reforwarding, customary outward local charge of \$1 per ton. (Total of 20 cents per ton more than regular transfer charge.)

(c) For storage, 3 cents per ton per day, except that no charge will be made for the first 35 days.

The Panama Railroad Company stores this cargo in four fireproof warehouses, 160 feet by 850 feet, at Cristobal, and in one of the same dimensions at Balboa.

Cargo stored for orders can be reforwarded from the Isthmus—each carrier to collect its proportion of the through rate instead of the local. This means that should a shipment move from New York to the Canal Zone, it will of course pay regular local rate to Balboa or Colon, as the case may be—but should owner wish to reforward to, say, "Guayaquil," he can do so by paying the oncarrier's proportion of the through rate. Upon evidence that the shipment or any part of it moved beyond the Canal Zone, the initial carrier will refund the difference between the through and local rate.

Cargo intended for warehousing at Cristobal or Balboa should be so indicated on the bill of lading, thus "Cristobal for orders" or "Balboa for orders." When so consigned it is not necessary for shippers to secure consular papers at original point of shipment, nor to have bills of lading consulated. Cargo consigned to Canal Zone for orders may be delivered in the Republic of Panama in which case it is necessary to prepare an invoice on which duties can be paid. When evidence of payment of duty is presented to the Canal Zone customs officers they will issue the necessary release and delivery can be taken in the usual way. For those on the Canal Zone who are allowed to import goods duty free the Panama Canal customs release is all that is necessary. For reshipment from storage to a foreign country the shipper takes out bill of lading, consular invoice and sobordo if necessary and cargo is forwarded as regular outward local.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," are shown in the pamphlet referred to above.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 123.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 6.....	Favorita	Standard Fruit & S. S. Co.	San Blas, R. P.	October 5.....	Oranien	Leyland Line	Port Limon, Costa Rica.
October 6.....	Heredia	United Fruit Co.	New Orleans via Habana.	October 5.....	Favorita	Standard Fruit & S. S. Co.	San Blas, R. P.
October 6.....	Shiraga	United Fruit Co.	Perme, R. P.	October 6.....	William Green	Arrow Oil Co.	Aruba, D. W. I.
October 6.....	Anaehucina ²¹	United Fruit Co.	Colon, R. P.	October 6.....	Anaehucina ²¹	United Fruit Co.	Colon, R. P.
October 6.....	Inapaquima ²¹	United Fruit Co.	Colon, R. P.	October 6.....	Inapaquima ²¹	United Fruit Co.	Colon, R. P.
PORT OF BALBOA.							
22 Motor boat.							
September 30.....	Epoca ²²	Grace Line	Buenaventura, Colombia.	October 1.....	Epoca ²²	Grace Line	Talara, Peru.
October 2.....	San Luis ²³	Chiriqui Land Co.	Pto. Armuelles, R. P.	October 3.....	A. B. de O'barrio ²³	Pacific Fruit Co.	Bayano River, R. P.
October 3.....	A. B. de O'barrio ²³	Pacific Fruit Co.	Bayano River, R. P.	October 3.....	Almirante ²³	Isthmian Land & Fruit Co.	El Real, R. P.
October 3.....	Bessy ²³	Isthmian Land & Fruit Co.	El Real, R. P.	October 3.....	Dos Hermanos ²³	A. Valdez	Bayano River, R. P.
October 3.....	Almirante ²³	Isthmian Land & Fruit Co.	Bayano River, R. P.	October 5.....	Dixie ²³	Amador Juan Diaz	Panama Bay, R. P.
September 3.....	Dos Hermanos ²⁴	A. Valdez	Panama Bay, R. P.	October 5.....	Cricamola ²⁵	Chiriqui Land Co.	Pto. Armuelles, R. P.
October 3.....	Romulus	Latin American Line	Seattle, Wash.	October 6.....	Romulus	Latin American Line	Antofagasta, Chile.
October 4.....	Cricamola ²⁶	Chiriqui Land Co.	Pto. Armuelles, R. P.	October 6.....	Deroche	Union Oil Co. of California	Los Angeles, Calif.
October 5.....	Deroche	Union Oil Co. of California	Los Angeles, Calif.				
October 5.....	Craftsman ²⁷	R. J. McARDLE Contracting Co.	Buenaventura, Colombia.				
October 6.....							
23 Motor schooner.				25 Launch and barge.			
24 Motor ship.				26 Motor yacht.			
				27 Tug.			

* Other than ships passing through the Canal.

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at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., October 17, 1928.

No. 11.

New Governor of Panama Canal.

Col. Harry Burgess, Engineer Corps, United States Army, was sworn into the office of Governor of The Panama Canal in the morning of October 16, 1928, his appointment having been made by the President of the United States, subject to confirmation by the Senate, to succeed Brig. Gen. M. L. Walker, upon the expiration of General Walker's term of four years. Colonel Burgess is the fifth Governor, and, as has been the case with all Governors except General Goethals, the first, who was previously Chairman and Chief Engineer of the Isthmian Canal Commission, has served four years as Engineer of Maintenance before succeeding to the Governorship.

The retiring Governor, General Walker, issued the following statement under date of October 16, addressed to all employees of The Panama Canal and Panama Railroad:

I am to-day severing my connection with The Panama Canal and the Panama Railroad Company. I desire to express to you my sincere appreciation of the loyal and efficient work you have done during my administration. Whatever success I may have to my credit as head of these two Governmental enterprises has been mainly due to your intelligent and faithful efforts. You have fully and enthusiastically met every emergency, and have not let your interest flag during times of routine operation. I am deeply grateful to you.

I shall always look back upon the years spent upon the Isthmus and the pleasant associations formed as a very happy period of my life, and you will always have my friendship and best wishes.

I bespeak for Colonel Burgess, my able successor in office, the same wholehearted cooperation which you have given me.

Very sincerely yours,

M. L. WALKER.

Revision of Telephone Directory.

The copy for a revised telephone directory, to be issued as of January 1, 1929, will go to the printer November 8, 1928. All changes or corrections in the present directory should be forwarded to the Telephone Supervisor, Balboa Heights, not later than November 1, 1928. Proof corrections will be made to December 1, 1928.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 16, 1928.

No. 466.

The following was received by the Hydrographic Office from the Pilot in Charge, Lighthouse Subdivision of The Panama Canal:

Red Light on Coco Solo mole permanently discontinued.

Established: Three vertical fixed green lights, placed two feet apart, upper light on same focal plane as discontinued red light.

Illuminant: Electricity.

Each light: 100 watts.

Visibility: 7 miles.

(Signed) F. KARIGER, Pilot in Charge.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, October 13, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From —	For —	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Arwidale	5	14	20	7	6	00	7	22	45	American	Panama Mail S. S. Co.	370	0	18	7	New York, N. Y.	General	3,000	5,625	4,248
Alvarado	6	11	20	7	6	05	7	15	19	British	Pacific Steam Nav. Co	303	0	43	0	New York, N. Y.	General	793½	2,844	1,748
Hellenic	6	12	35	7	6	05	7	13	40	Swedish	Com'lth & Dom. Line.	380	0	52	0	New York, N. Y.	General	3,481	5,504	3,972
President Garfield	7	5	15	7	7	10	7	14	25	American	Dollar Line	502	0	62	0	New York, N. Y.	General	3,508	12,037	8,509
Sunol	6	14	05	7	7	15	7	15	00	American	Sun Oil Co	450	6	55	0	Philadelphia, Pa.	Ballast	9,610	6,396	
Canadian Constructor	6	20	55	7	8	50	7	15	25	British	Can. Nat. Steamships	430	0	56	0	Montreal, Canada	General	2,898	7,680	5,494
Olohu	7	6	35	7	8	55	7	16	57	American	Amer-Hawaiian Line.	407	7	53	0	Boston, Mass.	General	3,400	7,103	4,901
Atuna Mendi	7	6	50	7	9	35	7	16	48	Spanish	Sota and Aznar	400	0	53	0	Portland, Oreg.	General	6,282	4,517	
Lowther Castle	7	3	40	7	10	15	7	18	18	British	Barber S. S. Line	409	0	51	0	Arica, Chile	Ballast	6,370	5,800	4,340
Arkansas	7	5	30	7	11	00	7	19	15	French	French Line	418	0	53	0	Chinwangtao, China	(*)	2,408	7,678	5,563
Ileña	7	11	55	7	12	10	7	19	11	Norwegian	Strachan Shipping Co.	377	8	52	2	Vancouver, B. C.	General	4,130	5,764	4,322
Cerigo	5	20	25	7	19	57	8	9	05	German	Hamburg-American Line	227	0	34	0	Oakaka, Japan	Cotton	328	1,572	1,011
Helen Olmsted	7	21	25	8	6	08	8	10	41	Venezuelan	Texas S. S. Co.	425	8	51	0	Buenaventura, Col.	General	7,484	5,216	
Bolivar	7	21	25	8	6	15	8	14	45	Venezuelan	Venezuela Gulf Oil Co.	307	0	51	0	San Francisco, Cal.	Ballast	541½	3,675	2,229
Limón	8	5	10	8	6	20	8	14	47	American	United Fruit Co.	330	6	44	0	Balboa, C. Z.	Ballast	3,974	5,680	4,080
Willolo	7	21	35	8	7	08	8	15	51	American	Williams S. S. Line	385	8	52	2	Tacoma, Wash.	General	4,886	8,139	5,389
Aladin	8	00	25	8	7	25	8	15	02	American	Standard Transp. Co.	435	0	56	2	Los Angeles, Calif.	Ballast	1,807	2,874	1,944
Asuka Maru	8	4	20	8	8	15	8	15	55	Japanese	Nippon Yusen Kaisha	440	0	57	0	Los Angeles, Calif.	(*)	6,018	5,451	3,820
Sydlund	8	8	15	8	9	45	8	16	29	Swedish	Axel Breckner & Son	431	1	52	0	Kobe, Japan	Ballast	5,612	8,568	6,548
Guyaquil	7	16	35	8	10	05	8	16	38	American	Panama R.R. S.S. Line	251	0	43	6	Vancouver, B. C.	General	7,321	7,611	5,450
Polana	8	12	25	8	12	40	8	19	40	Norwegian	Standard Oil Co.	369	0	52	0	Los Angeles, Calif.	Ballast	7,481	4,975	
Swan	8	6	20	8	6	20	8	12	14	American	U. S. Navy	180	0	35	6	Corral, Chile	(*)	897	10,086	7,226
Pacific Grove	4	6	00	8	16	32	9	11	33	British	Furness, Withy & Co	450	0	61	0	Buenaventura, B. C.	General	7,321	7,611	5,450
Memphis City	8	20	30	8	20	40	9	12	02	American	U. S. Steel Products Co.	425	0	56	0	Singapore, M. Pen.	General	7,321	7,611	5,450
S. C. T. Dodd	8	20	55	9	6	20	9	14	17	American	Standard Oil Co	425	0	57	2	Los Angeles, Calif.	Ballast	7,481	4,975	
Edgar F. Luckenbach	9	9	30	9	9	45	9	16	16	American	Luckenbach Line	425	0	57	3	Tacoma, Wash.	General	5,612	8,568	6,548
Dextra	9	13	12	9	15	05	9	22	50	Dutch	Anglo-Saxon Pet. Co.	400	3	52	0	Los Angeles, Calif.	Fuel oil	7,124	5,912	3,657
Minnetonka	9	17	20	9	17	40	10	8	50	American	Amer-Hawaiian Line	407	0	53	7	Seattle, Wash.	General	3,648	7,150	5,024
Hefron	9	16	40	10	6	05	10	13	30	American	Norton, Lilly & Co.	449	0	55	0	Vancouver, B. C.	Steel, general	10,288	8,312	6,097
J. L. Luckenbach	10	3	35	10	7	05	10	14	07	American	Luckenbach Line	448	9	60	2	Seattle, Wash.	General	7,000	9,294	6,861
Laurel	10	6	27	10	8	25	10	15	38	American	Forrest Transp. Corp.	410	0	54	0	Portland, Oreg.	(*)	3,713	6,756	4,874
Gilda Souderi	7	13	05	11	6	15	11	15	40	American	Seider Motor Co.	251	0	43	0	Kobe, Japan	Scrap, iron	2,742	2,258	1,386
Suereco	11	2	40	11	6	15	11	15	40	American	Transmarine Lines	324	0	46	0	Bremerton, Wash.	General	3,257	3,984	2,612
Suvero	10	21	25	11	6	20	11	14	21	British	Andrew Weir & Co.	460	0	55	1	Oakaka, Japan	General	8,369	8,271	6,249
Tanker.															* Tanker.					
														* Motor ship.						
														* Mine sweeper.						
														* Cast oil and general.						
														* Cotton, rosin, and tinsplate.						
														* Cement, explosives, and general.						
														* Panasteel, tobacco, and general.						

* Tanker.

* Motor ship.

* Mine sweeper.

* Case oil and general.

* Cotton, resin, and tinplate.

* Cement, explosives, and general.

* Paper, steel, tobacco, and general.

Franklin K.	10	21	45	11	7	25	11	15	40	11	16	40	American	Huasteca Petroleum Co.	435	0	56	2	19	0	Providence, R. I.	Los Angeles, Calif	Ballast.	7,405	5,131
Lane	10	23	30	11	7	35	11	16	34	13	11	40	Norwegian.	Anglo-Saxon Pet. Co.	400	0	52	4	25	0	Quincy, D. W. I.	Balboa, C. Z.	Oil	6,922	3,613
Litona	11	00	45	11	8	30	11	16	20	11	17	15	British.	Ellerman Bucknall Line	434	0	54	7	26	0	Sydney, C. B.	Shanghai, China.	General	6,939	8,124
Cleiton.	11	3	45	11	8	30	11	17	18	11	18	15	British.	R. Chapman & Son	400	0	52	3	17	0	Algiers, Algeria.	San Francisco, Cal.	Ballast.	3,710	4,164
Carnegie	11	3	35	11	10	45	11	18	40		13	45	American	The Carnegie Institute	135	6	32	2	14	0	Washington, D. C.	Callao, Peru.	Ballast.	328	180
Mataroa	11	1	05	11	11	30	11	17	46	12	13	45	British.	Shaw, Savill & Albion.	500	4	63	0	27	6	London, England	Timaru, N. Z.	General	6,000	13,599
Wille de Verdun	11	7	25	11	12	25	11	19	29	11	20	30	French	Messageries Maritimes	409	0	53	5	23	5	Dunkirk, France.	Noumea, N. Caled	General	2,020	7,603
Naples Maru.	11	12	00	11	13	00	11	20	24	11	21	50	Japanese	Kokusa Kaizen Kaisha	385	0	51	0	27	0	Houston, Texas.	Yokohama, Japan.	General	7,181	6,670
Reimond	11	15	25	11	18	05	12	9	16				American	R. J. Mc Ardle & Co.	137	0	27	6	15	0	Pensacola, Fla.	Buenaventura, Col.	Ballast.	426	90
No. 102	11	13	25	11	18	05	12	9	16				American	R. J. Mc Ardle & Co.	137	0	27	6	15	0	Pensacola, Fla.	Buenaventura, Col.	Ballast.	426	90
Ebro.	11	13	25	11	18	05	12	9	16				British.	Pacific Steam Nav. Co.	150	0	30	0			New York, N. Y.	Talcahuano, Chile.	General	4,615	9,201
Edgemont	11	21	20	12	6	00	12	13	53	12	15	00	British.	Pacific Steam Nav. Co.	480	0	57	0	26	10	New York, N. Y.	Talcahuano, Chile.	General	4,615	9,201
California.	12	6	15	12	7	15	12	14	55	14	18	00	American	Rosovelt S. S. Co., S. B.	409	0	54	0	23	0	New York, N. Y.	Darien, China.	General	6,533	7,448
Oakmar	11	21	50	12	7	35	12	15	47	12	17	05	American	Panama Pacific Line	574	4	80	3	23	0	New York, N. Y.	San Francisco, Cal.	Lumber, general.	3,104	24,506
British Star	11	22	15	12	8	45	12	15	56	12	17	05	British.	Calmar S. S. Corp	384	4	51	2	27	0	Philadelphia, Pa.	Seattle, Wash.	Steel, general.	8,103	6,327
Gothic star	12	6	04	12	9	10	12	16	25	12	17	35	British.	British Admiralty	429	0	57	0	17	0	Houston, Texas.	Los Angeles, Calif	Ballast.	7,174	4,964
Bradley	12	6	35	12	10	10	12	17	01	12	18	28	British.	Blue Star Line	420	5	53	0	13	6	Newcastle-on-Tyne	Vancouver, B. C.	Ballast.	7,521	5,852
Tongare	12	6	07	12	10	15	12	17	48	12	19	03	British.	Canadian Wheat Pool	399	6	54	0	19	0	Barry, England	Vancouver, B. C.	Ballast.	6,883	4,118
Brighton	12	7	00	12	11	08	12	18	29	12	19	38	British.	Andrew Weir & Co.	380	3	51	0	22	6	Galveston, Texas	Auckland, N. Z.	Sulphur	5,225	5,294
San Manuel	12	9	30	12	11	40	12	18	56	13	00	30	British.	Can-Amor. Ship. Co.	409	6	54	0	16	9	Genoa, Italy	San Francisco, Cal.	Ballast	5,718	4,091
Canadian	12	9	30	12	11	40	12	18	56	13	00	30	British.	Eagle Oil Transp. Co.	407	0	52	3	17	0	Graindon, England.	Los Angeles, Calif.	Ballast	6,183	4,343
Highlander	12	5	35	12	13	42	12	20	35	12	21	45	British.	Can. Nat. Steamships	400	0	52	0	21	3	Montreal, Canada.	Dunedin, N. Z.	General	4,507	6,192
Cal	5	17	50	12	14	15	12	22	05	13	2	27	German	North German Lloyd	228	0	33	0	13	10	Cristobal, C. Z.	Guayaquil, Ecuador	General	340	1,105
Garfield	11	20	25	12	14	24	12	21	10	13	13	15	American	N. O. & S. A. S. S. Line	299	4	45	0	18	3	New Orleans, La.	Talcahuano, Chile.	General	1,378	3,256
Stearns	12	9	40	12	14	58	13	9	48	13	11	08	American	Ore S. S. Corp	550	3	72	2	25	3	New York, N. Y.	Cruz Grande, Chile	Ballast.	15,551	4,297
Jefferson	12	20	00	13	6	25	13	14	15	13	15	50	American	Arrow Line	440	0	56	0	18	0	Baltimore, Md	Portland, Oreg	General	2,970	8,300
Myers	12	20	15	13	6	25	13	15	12	13	16	40	American	W. K. Friedman & Co.	375	0	52	3	22	0	Norfolk, Va.	Mojito, Japan.	General	6,019	
Elias Krummer	13	6	47	13	7	10	13	15	26	13	16	40	Norwegian.	Kokusa Kaizen Kaisha.	385	0	51	0	26	6	Galveston, Texas	Yokohama, Japan.	General	7,123	6,213
Kofuku Maru.	13	6	47	13	7	10	13	15	26	13	16	40	Japanese	Kokusa Kaizen Kaisha.	385	0	51	0	26	6	Galveston, Texas	Yokohama, Japan.	General	7,123	6,213
Wiral	13	6	45	13	8	20	13	15	35	13	17	35	British.	N. Z. Shipping Co.	385	0	52	0	19	3	Montreal, Canada	Auckland, N. Z.	General	3,581	3,664
Woonsofrect	13	6	25	13	9	55	13	16	53	13	20	25	Dutch.	Phs. Van Om. Ship. Co.	370	0	53	0	18	0	Grangemouth, Eng	Los Angeles, Calif	Ballast.	3,581	3,664
Geo. W.	13	7	55	13	10	27	13	17	24	13	18	25	American	Huasteca Petroleum Co.	416	8	56	1	21	4	New Orleans, La.	Los Angeles, Calif	Ballast.	6,763	4,759
Stearns	11	3	15	11	14	30	11	13	18	47	14	15	Greek	Kuhkunda	440	0	54	0	13	0	Antwerp, Belgium	Iquique, Chile.	Ballast.	6,221	4,482
Atlantico	13	12	05	13	12	30	13	19	15	13	20	25	American	Amor-Havasion Line	491	5	58	3	22	0	Boston, Mass	Portland, Oreg	General	3,300	10,491
Virginian	12	9	05	13	12	40	13	19	50	13	21	03	Spanish	Com. Trans. de Barcelona.	410	0	48	0	21	10	Barcelona, Spain.	Valparaiso, Chile.	General	153	5,624
Stearns	12	9	05	13	12	40	13	19	50	13	21	03	Spanish	Com. Trans. de Barcelona.	410	0	48	0	21	10	Barcelona, Spain.	Valparaiso, Chile.	General	153	5,624
King Cad-	13	12	55	13	13	15	13	21	17	13	23	06	British	Anglo-Saxon Pet. Co.	400	0	52	2	24	0	Tampico, Mexico.	Fremantle, Aust'lia	Asphalt	5,601	6,091
wallon.	13	12	55	13	13	15	13	21	17	13	23	06	British	Anglo-Saxon Pet. Co.	400	0	52	2	24	0	Tampico, Mexico.	Fremantle, Aust'lia	Asphalt	5,601	6,091
Dintel	11	22	05	13	14	43	13	21	53	13	23	06	Dutch.	Holland-American Line.	485	0	62	0	22	2	Rotterdam, Holland	Vancouver, B. C.	General	3,248	10,786
Chimian	11	22	25	13	14	43	13	21	53	13	23	06	Panaman.	National Nav. Co.	116	0	21	0	9	6	Cristobal, C. Z.	Buenaventura, Col.	General	317	211
Hope	12	12	00	13	12	00	13	19	55				American	J. R. Powell	37	0	10	8			Cristobal, C. Z.	Balboa, C. Z.	Unknown.	11	11
Tanker.																									

15 Phosphates, cotton, rosin, and ammonia.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Nitro ²⁶	5	21.00	7	6.19	7	14.18	7	22.00	American	U. S. Navy	484.0	60.8	22.0	Mare Island, Calif	Hampton Roads, Va	Navy general	291		
Salle ²⁷	7	00.10	7	7.39	7	15.33	8	1.05	German	North German Lloyd	471.9	61.0	27.0	Vancouver, B. C.	Hamburg, Germany	General	8,595	9,335	6,844
Point Arena ²⁷	7	9.15	7	9.53	7	17.15	8	1.05	American	Gulf-Pacific Line	324.0	46.2	23.0	Seattle, Wash	New Orleans, La	Lumber, general	3,717	3,984	2,612
Santa Maria ²⁷	7	12.53	8	6.53	8	13.05	8	16.00	American	Grace Line	466.6	64.0	25.0	Arica, Chile	New York, N. Y.	Copper, nitrates	5,329	10,350	6,382
Americaland ²⁷	8	5.50	8	6.54	8	16.10	8	17.40	Swedish	Ore S. S. Corp	561.0	72.2	34.6	Cruz Grande, Chile	Baltimore, Md	Iron ore	21,500	15,560	4,490
Chinaia	8	1.00	8	8.37	8	16.10	8	16.10	American	Planet Line	403.0	52.3		Portland, Ore	Providence, R. I.	Lumber	5,500	6,872	4,973
Radnorshire	8	5.30	8	9.08	8	16.45	8	16.45	British	Royal Mail S. P. Co	412.5	55.5	27.0	Vancouver, B. C.	Antwerp, Belgium	General	8,825	6,898	4,888
Niagara ²⁸			8	10.19	8	17.40			American	U. S. Navy	245.0	36.3	18.9	Balboa, C. Z.	Cristobal, C. Z.				
No. 6 ²⁹			8	6.58	8				American	U. S. Navy				Balboa, C. Z.	Cristobal, C. Z.				
6.58			8	6.58	8				American	U. S. Navy				Balboa, C. Z.	Cristobal, C. Z.				
Mary Ellen									American	U. S. Navy				Balboa, C. Z.	Cristobal, C. Z.				
Barbo ²⁷	8	22.05	9	6.16	9	14.15	9	14.15	Swedish	The Texas Co.	509.0	70.0	30.6	Honolulu, T. H.	Baltimore, Md	Bulk gasoline	17,000	12,425	8,338
Storviken	9	15.00	9	7.14	9	15.43	9	21.49	Norwegian	Johnson Line	440.0	56.0	26.0	Chemainus, Wash	Stockholm, Sweden	General	7,184	7,480	5,533
Corinto	8	21.28	9	9.36	9	16.28	9	17.45	American	Wallen & Co	380.0	53.2	23.6	San Francisco, Cal	Liverpool, England	Lumber	5,921	5,342	3,826
Calcutta Maru	8	23.40	9	10.56	9	18.14	9	23.45	Japanese	Nippon Yusen Kaisha	400.0	54.6	16.6	Hongkong, China	Cristobal, C. Z.	General	891	2,352	1,549
Alness	9	10.40	9	11.36	9	19.35	9	19.35	British	Sir W. R. Smith & Sons	346.7	51.0	23.0	Queensland, Ire.	Boston, Mass	Wheat	4,105	5,790	4,178
Dakotan	9	11.00	9	11.46	9	18.55	9	18.55	American	Amer-Hawaiian Line	407.7	53.7	29.0	Portland, Ore	Boston, Mass	General	6,059	4,852	3,544
Planet	9	15.00	9	16.03	10	11.30	10	15.45	German	Hamburg-American Line	450.8	57.2	25.0	Punta Arenas, Chile	Hamburg, Germany	General	8,661	7,156	5,094
Manchuria	9	15.07	10	5.41	10	13.15	10	13.50	American	Panama-Pacific Line	600.0	65.3	33.0	San Francisco, Cal	New York, N. Y.	General	4,708	7,400	5,234
Katrina Luck-									American	Panama-Pacific Line				San Francisco, Cal	New York, N. Y.	General	8,960	17,044	11,488
enbach									American	Panama-Pacific Line				San Francisco, Cal	New York, N. Y.	General	8,960	17,044	11,488
Lordo ²⁷	9	18.15	10	7.02	10	14.30	10	14.30	American	Lukenbach Line	446.0	56.1	29.6	Portland, Ore	Boston, Mass	General	6,349	8,508	6,179
Stella	10	6.40	10	8.46	10	16.32	10	17.11	British	Pacific Steam Nav. Co.	404.6	54.2	26.6	Tacahuanco, Chile	Hull, England	General, nitrates	7,935	7,334	5,037
Agayuda	10	2.30	10	9.29	10	16.35	10	17.11	Norwegian	Panama Mail S. S. Co.	195.1	32.9	12.6	Champerco, Guat	Cristobal, C. Z.	Coffee, logs	325	985	606
Urbe	10	10.50	10	11.16	10	17.45	10	17.45	British	Karros Steam Nav. Co.	375.0	51.0	25.0	Tocopilla, Chile	Azores ²⁵	Nitrates	7,260	5,495	4,137
Solana ²⁷	11	5.15	11	6.53	11	14.45	11	17.00	Colombian	Pacific Steam Nav. Co.	210.7	33.5	14.0	Champerco, Guat	Cristobal, C. Z.	(²¹)	183	1,273	706
Buenaventura	11	3.35	11	7.07	11	16.05	11	17.00	American	Esdrada G. Hermanos	227.4	31.7	12.6	Buenaventura, Col	Cristobal, C. Z.	(²²)	525	1,154	663
Wido	11	7.10	11	8.37	11	17.05	12	13.05	American	Associated Oil Co	419.5	56.5	26.0	Guayaquil, Ecuador	New York, N. Y.	Gasoline	9,000	7,060	5,025
San Mateo	11	7.25	11	9.52	11	17.10	12	16.10	German	Panama R.R. S.S. Line	251.0	43.0	15.6	Valparaiso, Chile	New York, N. Y.	(²³)	1,297	8,573	1,776
Absaroka	11	12.40	11	13.28	11	22.20	11	22.20	American	United Fruit Co	393.4	54.3	26.8	San Francisco, Cal	Hamburg, Germany	Nitrates, general	8,004	6,585	4,631
Swainby	10-25		11	15.13	11	22.25	13	13.45	Panamanian	McCormick S. S. Co.	409.6	54.1	27.3	San Francisco, Cal	Port Limon, C. R.	General	3,776	3,496	2,141
Glan Ogilvy	11	8.40	11	17.15	12	13.05	12	13.05	British	Isth. Land & Fruit Co	116.0	21.0	7.0	Balboa, C. Z.	Philadelphia, Pa	General, lumber	7,601	6,627	4,993
Levant Arrow	11	15.10	11	17.59	12	13.15	12	13.15	British	Sir R. Roper & Co	390.0	55.6	24.6	Port Limon, C. R.	Naples, Italy	Wheat	7,700	5,930	4,282
Yankee Arrow	12	1.00	12	6.50	12	14.35	12	14.35	American	Standard Transp. Co.	408.0	62.7	27.6	Batle N' Co, Cal	Europe	(²⁴)	7,593	6,879	4,931
Voliver ²⁶	8	14.45	8	14.45	8	14.45	8	14.45	American	Standard Transp. Co.	408.0	62.7	27.6	Los Angeles, Calif	New York, N. Y.	Gasoline	11,291	9,744	7,039
Willzipo	12	2.00	12	8.05	12	18.05	12	18.35	Venezuelan	Venezuela Gulf Oil Co.	305.0	50.0	13.2	Seattle, Wash	Maracaibo, Venez	Ballast	11,275	9,841	6,946
									American	Williams S. S. Line	415.0	55.7	28.0	Seattle, Wash	Baltimore, Md	(²⁵)	7,500	7,731	5,805

²⁶ U. S. Navy transport. ²⁷ Motor ship. ²⁸ U. S. survey ship. ²⁹ Launch.³⁰ Coffee, cocoa, tagua, and cottonseeds.³¹ Chrome ore and copra.³² For orders.³³ Coffee, wood, and hides.³⁴ Lumber and canned goods.

Ship	12	6	0	0	12	8	30	12	21	10	British	Ben Line Steamers, Ltd.	400	51	8	24	0	San Francisco, Cal.	Leith, Scotland	Barley	7,055	5,410	3,995
Bemalder	12	6	55	12	9	13	12	19	45	13	00	55	T. & J. Harrison	410	52	3	00	Vancouver, B. C.	Liverpool, England	General	6,753	6,202	4,154
Clydebank	12	9	25	12	10	09	12	19	40	12	00	35	Andrew Weir & Co.	420	53	9	00	Tocopilla, Chile	Pensacola, Fla.	Nitrates	8,403	7,101	5,018
Dixie Arrow	12	10	40	12	11	22	12	20	30	12	20	30	Standard Transp. Co.	468	62	7	24	Los Angeles, Calif.	New York, N. Y.	Gasoline	11,277	9,744	7,140
Lebore	12	3	00	13	6	04	13	18	10	13	18	10	Ore S. S. Corp.	550	0	22	34	Cruz Grande, Chile	Baltimore, Md.	Iron ore	20,000	14,325	4,635
Knute Nelson	12	15	00	13	7	07	13	18	48	14	2	25	Peter Olsen	435	9	56	2	Portland, Oreg.	Osgo, Norway	General	8,362	8,016	5,854
Robin Gray	12	18	11	13	7	14	13	19	05	13	19	05	Seas Shipping Co.	424	8	55	2	Everett, Wash.	Baltimore, Md.	Lumber	8,979	7,472	5,342
Oroya	12	7	10	13	8	30	13	16	45	13	22	55	Pacific Steam Nav. Co.	535	3	62	8	Talcahuano, Chile	Liverpool, England	General	8,264	13,137	9,067
Netheroy	12	19	50	13	8	57	13	19	30	13	19	30	Royal Mail S. P. Co.	430	2	58	4	Vancouver, B. C.	Kortland, Holland	General	7,253	8,874	6,558
Laleham	12	23	00	13	9	15	13	21	05	13	21	05	Watts & Co.	351	5	53	1	Tocopilla, Chile	Norfolk, Va.	Nitrates	6,712	5,007	3,370
Kansan	13	8	15	13	10	12	13	21	40	13	21	40	Amer-Hawayan Line.	404	6	53	9	Seattle, Wash.	Boston, Mass.	General	8,094	6,779	4,927
Mantaro	13	00	30	13	9	09	13	20	50	13	20	50	Peruvian Line	367	3	46	0	Callao, Peru	Cristobal, C. Z.	Copper, general	2,002	4,838	2,959
Tolima	13	10	55	13	11	32	13	22	40	14	1	15	Grace Line	417	8	54	4	Punta Arenas, Chile	Boston, Mass.	(*)	9,754	7,176	5,219
Durazzo	13	11	50	13	12	29	13	21	05	15	12	20	Hamburg-American Line	227	5	34	7	Guayaquil, Ecuador	Cristobal, C. Z.	General	453	1,683	1,041
Martha	13	14	20	13	14	57	13	23	05	15	12	35	Chr. Hannevig	183	3	30	0	Buenaventura, Col.	Cristobal, C. Z.	Ballast	1,629	1,114	
Profit	13	14	50	13	15	40	13	11	00	14	12	35	Munson S. S. Line	246	2	37	9	Corinto, Nicaragua	Manzanillo, Cuba.	(*)			
Doris	13	31	02	3	13	13	13	13	13	13	13	13	United Fruit Co.	38	0	15	0	Balboa, C. Z.	Gatun Lake, C. Z.	(*)			
No. 31023	13	13	13	13	13	13	13	13	13	13	13	13	United Fruit Co.					Balboa, C. Z.	Gatun Lake, C. Z.	(*)			
No. 31050	13	13	13	13	13	13	13	13	13	13	13	13	United Fruit Co.					Balboa, C. Z.	Gatun Lake, C. Z.	(*)			
No. 31060	13	13	13	13	13	13	13	13	13	13	13	13	United Fruit Co.					Balboa, C. Z.	Gatun Lake, C. Z.	(*)			

* Tanker.

* Launch.

* Barge.

* Nitrates, copper, skins, and manganese ore.

* Towing barges.

* Towed by launch Doris.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 7.	Tolima	United Fruit Co.	Port Limon, Costa Rica.	October 7.	Snaraga	United Fruit Co.	Mobile, Ala.
October 7.	Coppaname	United Fruit Co.	Bocca del Toro, R. P.	October 7.	Favorita	Standard Fruit & S. S. Co.	New Orleans, La.
October 8.	Calamares	United Fruit Co.	New York via Habana.	October 7.	Tolima	United Fruit Co.	New York via Habana.
October 8.	Galeia	Hamburg-American Line	Puerto Barrios, Colombia.	October 8.	Heredia	United Fruit Co.	New Orleans and wayports.
October 9.	Mayari	United Fruit Co.	New York via wayports.	October 8.	Coppaname	United Fruit Co.	New Orleans and wayports.
October 9.	Simon Bolivar	Royal Netherlands S. S. Co.	Amsterdam via wayports.	October 9.	Galeia	Hamburg-American Line	Hamburg and wayports.
October 10.	Ancon	Panama Railroad S. S. Line.	New York via Haiti.	October 9.	Mayari	United Fruit Co.	New York via Kingston.
October 10.	Wauna	Standard Fruit & S. S. Co.	New York via Kingston.	October 10.	Simon Bolivar	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
October 10.	Bowden	United Fruit Co.	Pinto Cabezas.	October 10.	Calamares	United Fruit Co.	Port Limon, Costa Rica.
October 11.	Kyphissia	Hamburg-American Line	Mobile, Ala.	October 11.	Tivives	United Fruit Co.	New York via wayports.
October 12.	Gatun	Standard Fruit & S. S. Co.	Hamburg via wayports.	October 11.	Bowden	United Fruit Co.	New York via wayports.
October 12.	Simon Bolivar	Standard Fruit & S. S. Co.	New Orleans, La.	October 11.	Wauna	United Fruit Co.	Perme, R. P.
October 12.	William M.	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	October 12.	Kyphissia	Standard Fruit & S. S. Co.	San Blas, R. P.
October 12.	G. I. Bryan	Elders & Ryffels, Ltd.	Colon, R. P.	October 12.	William M.	Hamburg-American Line	Port Limon, Costa Rica.
October 13.	Carare	Standard Fruit & S. S. Co.	Ammonmouth via wayports.	October 12.	Carare	Elders & Ryffels, Ltd.	Bluefields, Nicaragua.
October 13.	Wauna	United Fruit Co.	San Blas, R. P.	October 13.	Simon Bolivar	Royal Netherlands S. S. Co.	Amsterdam and wayports.
October 13.	Bowden	United Fruit Co.	Perme, R. P.	October 13.	Wauna	Standard Fruit & S. S. Co.	Puerto Cabezas.
October 13.	Suriname	United Fruit Co.	New Orleans, La.	October 13.	Gatun	Standard Fruit & S. S. Co.	New Orleans and wayports.
October 13.	Carfago	United Fruit Co.	Colombian ports.	October 13.	Suriname	United Fruit Co.	Port Limon via Bocas del Toro, R. P.
October 13.	Anachucuna	United Fruit Co.	New Orleans via Habana.	October 13.	Suriname	United Fruit Co.	

* Schooner.

* Motor boat.

* Other than ships passing through the Canal.

(Continued on page 156, column 2.)

Canal Traffic During First Fifteen Days of October, 1928.

During the first 15 days of October, 259 commercial vessels and 4 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,031,136.02, and on the launches \$56.70, or a total tolls collection of \$1,031,192.72.

The daily average of transits of commercial vessels was 17.27 and the daily average tolls collection \$68,742.40. The average amount of tolls paid by each of the commercial transits was \$3,981.22, as compared with \$4,381.01 for the first 15 days of September. Traffic for the first 15 days of October was higher by 27 transits and \$14,741 in tolls than the traffic for the first 15 days of September, 1928.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 9½ months of the current calendar year, with the daily averages of transits and tolls:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January	540	\$2,212,752.50	17.42	\$71,379.20
February	547	2,253,755.37	18.86	77,715.70
March	542	2,223,370.57	17.48	71,271.63
April	531	2,187,607.82	17.70	72,914.55
May	508	2,118,969.83	16.38	68,353.86
June	481	2,016,211.09	16.03	67,206.43
July	509	2,109,083.19	16.41	68,034.94
August	526	2,199,069.31	16.97	70,937.72
September	487	2,111,230.56	16.23	70,374.35
October (first 15 days)	259	1,031,136.02	17.27	68,742.40
Totals	4,930	20,463,186.26	17.06	70,806.94

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
For steamships, including warships of all nations when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pound.....	11.00	14.00

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 12 cents per pound and forequarters at 9½ cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Commercial Traffic Through the Panama Canal in September, 1928, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of September, 1928, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for September, 1927, and 1926. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	64	336,082	256,210	412,760	255,498	\$295,732.46	224,458
Europe to west coast United States:							
British	20	92,404	74,198	121,098	74,262	68,088.54	10,661
French	1	5,050	4,356	7,011	3,989	3,636.00	
German	3	15,439	10,201	16,629	10,240	12,751.25	13,180
Norwegian	4	18,561	15,087	24,730	15,129	15,990.72	6,395
Swedish	1	4,919	2,878	4,960	3,665	3,597.50	4,381
United States	2	12,647	10,012	16,222	9,950	10,628.61	9,015
Totals	31	149,020	116,732	190,650	117,235	114,692.62	43,632
East coast of United States to west coast of South America:							
British	6	23,104	18,146	30,416	18,809	21,487.22	19,556
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	2,485
German	2	3,726	2,234	3,907	2,207	2,792.50	654
Peruvian	1	1,529	1,483	2,155	1,169	1,834.80	1,631
Swedish	3	10,430	8,793	32,276	9,816	8,053.99	374
United States	11	48,700	40,085	68,968	40,132	38,308.40	10,063
Totals	24	92,194	74,207	145,032	76,109	76,809.41	34,763
Europe to west coast Canada:							
British	14	73,402	54,101	87,224	54,166	61,134.44	11,947
Danish	1	5,286	4,207	6,636	4,236	5,258.75	2,049
Dutch	3	19,539	15,826	25,354	15,772	19,782.50	8,263
French	2	10,434	7,461	12,429	7,490	9,326.25	5,391
German	1	6,344	3,826	6,780	4,057	4,782.50	7,415
Italian	1	5,552	4,686	7,714	4,662	5,857.50	498
Totals	22	120,557	90,107	146,137	90,383	106,141.94	35,563
Europe to west coast of South America:							
Belgian	1	4,792	4,142	6,512	4,038	3,450.24	
British	6	35,015	28,386	46,341	28,628	35,482.50	21,972
Danzig	1	6,338	5,236	8,956	5,041	4,563.36	
Dutch	2	8,926	5,582	8,998	5,278	6,977.50	6,835
French	1	4,312	3,743	5,903	3,743	4,678.75	1,593
German	5	23,844	19,925	32,283	19,916	23,328.55	12,616
Greek	2	7,890	7,194	9,082	5,642	5,771.16	
Italian	1	9,373	5,223	11,669	6,779	6,528.75	1,017
Spanish	1	2,827	2,459	4,349	2,565	3,073.75	379
Yugoslav	1	4,570	3,271	5,271	3,296	4,088.75	6,156
Totals	21	107,887	85,161	139,364	84,926	97,943.31	50,568
East coast of United States to Far East:							
British	5	26,121	17,620	28,917	17,446	22,025.00	36,178
Japanese	5	23,080	21,586	30,221	21,276	26,444.50	35,045
Norwegian	1	4,534	2,465	4,114	2,453	3,081.25	6,905
United States	4	21,013	14,271	23,329	14,274	17,838.75	31,067
Totals	15	74,748	55,942	86,581	55,449	69,389.50	109,195
East coast of United States to Australasia:							
British	8	44,156	30,813	47,716	39,049	38,516.25	38,681
Norwegian	3	20,870	17,939	27,123	17,977	22,423.75	8,230
United States	2	5,075	3,570	5,931	3,613	4,364.50	3,000
Totals	13	70,101	52,322	80,770	51,639	65,304.50	49,911

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to Philippine Islands:							
British.....	2	12,191	6,735	12,045	6,752	\$8,418.75	12,185
United States.....	1	6,078	4,857	7,589	4,857	6,071.25	8,492
Totals.....	3	18,269	11,592	19,634	11,609	14,490.00	20,677
Europe to Australasia:							
British.....	8	54,506	39,927	64,596	40,306	55,086.25	46,244
Cristobal, C. Z., to west coast of South America:							
Colombian.....	2	970	919	1,508	935	1,139.65	1,149
Dutch.....	2	1,484	588	1,560	646	735.00	377
German.....	3	2,793	1,642	3,324	1,718	2,052.50	1,250
Norwegian.....	1	606	485	855	482	606.25	1,238
Totals.....	8	5,853	3,634	7,247	3,781	4,533.40	4,014
East coast of Central America to west coast United States:							
United States.....	5	13,957	12,510	20,130	12,367	13,968.68	3,424
East coast of Canada to Aus- tralasia:							
British.....	5	21,878	18,180	28,782	18,565	22,574.80	15,359
South American intercoastal:							
Colombian.....	1	1,506	1,199	2,055	1,251	1,498.75	1,250
German.....	1	698	618	1,023	616	772.50	200
Norwegian.....	1	504	423	732	391	528.75	155
Peruvian.....	1	2,959	1,515	4,617	2,427	1,893.75	267
Totals.....	4	5,667	3,755	8,427	4,685	4,693.75	1,872
East coast of Canada to west coast South America:							
British.....	4	28,660	24,179	41,326	24,646	20,635.20	.....
East coast of United States to west coast of Canada:							
British.....	1	5,815	4,921	7,900	4,880	4,186.80	.....
United States.....	3	11,745	8,990	14,117	8,821	11,237.50	17,633
Totals.....	4	17,560	13,911	22,017	13,701	15,424.30	17,633
Foreign vessels in ballast— U. S. intercoastal:							
British.....	3	18,379	15,606	27,791	16,561	* 13,232.88	.....
Norwegian.....	1	7,609	5,753	9,516	4,676	7,191.25	.....
Totals.....	4	25,988	21,359	37,307	21,237	20,424.13	.....
Cristobal, C. Z., to west coast of Central America:							
British.....	3	2,063	1,900	3,436	1,906	2,353.90	3,176
Around the world:							
United States.....	3	23,617	17,974	28,019	17,943	22,467.50	13,321
Africa to west coast of South America:							
Greek.....	1	3,479	2,755	4,291	2,777	2,504.88	.....
Italian.....	1	4,849	4,250	6,749	4,261	3,491.28	.....
Totals.....	2	8,328	7,005	11,040	7,038	5,996.16	.....
Africa to east coast of Canada:							
British.....	1	4,181	2,849	4,631	2,852	3,010.32	.....
West Indies to west coast of United States:							
British.....	1	4,423	2,774	4,532	2,751	3,467.50	4,000
Cristobal, C. Z., to west coast of United States:							
Panama.....	1	2,606	1,384	3,644	2,594	1,730.00	2,503
East coast of South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	3,285
East coast of South America to west coast Canada:							
Norwegian.....	1	4,354	2,432	4,003	2,483	3,040.00	2,891
East coast of Central America to Australasia:							
British.....	1	4,078	3,166	5,103	3,168	3,957.50	6,001

* Naval vessel of 10,355 displacement tons, paying tolls of \$5,177.50 included in number of ships and tolls collected; tonnage not included.

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast Canada to Far East:							
British.....	1	6,646	4,155	6,589	4,178	\$5,193.75	7,696
Canadian intercoastal:							
British.....	1	2,022	1,839	3,091	1,812	2,298.75	2,026
East coast of United States to Hawaiian Islands:							
United States.....	1	1,740	1,542	2,647	1,542	1,927.50	3,057
East coast of United States to west coast of Central America:							
United States.....	1	2,827	2,193	3,514	2,145	2,741.25	4,385
Grand totals, September, 1928.	253	1,215,633	933,111	1,538,276	936,935	1,061,240.88	709,654
Grand totals, September, 1927.	295	1,402,155	1,092,315	1,774,119	1,090,285	1,183,757.81	594,949
Grand totals, September, 1926.	236	1,149,723	892,415	1,445,142	892,143	1,005,180.19	650,259

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	73	398,747	309,387	497,861	308,187	\$386,733.75	595,611
West coast of United States to Europe:							
Belgian.....	1	4,976	4,568	7,138	3,988	5,710.00	9,500
British.....	12	52,515	41,599	68,561	41,491	51,998.75	96,714
Danish.....	1	5,623	4,670	7,691	4,710	5,837.50	10,800
Danzig.....	1	6,310	5,346	8,940	5,050	6,682.50	11,666
German.....	2	11,240	7,826	13,490	7,825	9,782.50	15,609
Japanese.....	4	18,744	17,229	23,339	16,975	21,536.25	31,267
Norwegian.....	2	8,065	6,919	11,963	6,855	8,648.75	15,372
Swedish.....	2	9,357	6,615	11,254	8,412	8,268.75	13,793
United States.....	2	13,706	11,817	17,428	11,783	14,587.40	23,752
Totals.....	27	130,536	106,589	169,804	107,089	133,052.40	228,473
West coast of South America to Europe:							
British.....	6	38,778	30,064	50,578	30,986	37,580.00	43,398
Danzig.....	1	6,338	5,236	8,956	5,041	6,545.00	11,448
Dutch.....	2	9,761	5,445	9,235	5,616	6,806.25	13,485
Finnish.....	1	1,835	1,828	1,979	1,709	2,202.00	3,200
French.....	2	9,186	7,511	12,205	7,577	9,388.75	15,533
German.....	5	23,134	17,217	27,977	17,384	21,521.25	36,446
Italian.....	3	16,924	11,837	21,584	13,010	14,796.25	18,263
Spanish.....	1	3,729	2,960	5,087	3,000	3,700.00	1,750
United States.....	1	5,049	4,399	7,246	4,399	5,498.75	9,423
Yugoslav.....	2	8,889	6,990	11,098	7,064	8,737.50	17,100
Totals.....	24	123,623	93,487	155,945	95,786	116,775.75	170,046
West coast of South America to east coast United States:							
British.....	5	16,231	12,279	21,477	12,864	15,348.75	15,638
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	5,244
Danish.....	1	4,519	3,595	5,886	3,658	4,493.75	8,700
Finnish.....	1	2,183	2,168	2,378	2,074	2,625.60	4,100
Swedish.....	2	6,009	5,050	16,937	5,439	6,312.50	21,886
United States.....	13	55,013	47,031	81,453	47,007	58,523.35	127,667
Totals.....	23	88,665	73,589	135,441	75,018	91,636.45	183,235
West coast Canada to Europe:							
British.....	9	52,116	36,853	59,299	36,800	46,066.25	75,164
Danish.....	2	9,900	6,870	11,099	7,238	8,587.50	16,346
Dutch.....	1	6,612	5,403	8,384	5,437	6,753.75	9,989
French.....	2	9,770	6,608	11,141	6,774	8,260.00	15,699
German.....	2	12,829	9,105	15,218	9,225	11,381.25	17,117
Italian.....	2	10,016	8,423	12,550	7,730	10,528.75	14,863
Norwegian.....	1	4,230	2,717	4,341	2,723	3,396.25	6,600
Totals.....	19	105,473	75,979	122,032	75,927	94,973.75	155,778
West coast of South America to Cristobal, C. Z.:							
Colombian.....	2	253	245	386	234	296.85	259
Dutch.....	2	1,484	588	1,560	646	735.00	801
German.....	5	4,205	2,840	5,256	2,715	3,517.35	1,947
Totals.....	9	5,944	3,673	7,202	3,595	4,549.20	3,007

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Australasia to Europe:							
British.....	7	53,458	40,304	63,703	40,560	\$50,285.55	36,140
French.....	1	5,472	4,777	6,037	3,747	5,971.25	3,187
Totals.....	8	58,930	45,081	69,740	44,307	56,256.80	39,327
West coast of Canada to east coast United States:							
British.....	1	5,365	2,897	4,740	2,872	3,621.25	7,500
Danish.....	1	4,559	3,577	5,905	3,637	4,471.25	6,594
United States.....	3	7,836	6,054	9,821	6,031	7,567.50	11,276
Totals.....	5	17,760	12,528	20,466	12,540	15,660.00	25,370
South American intercoastal:							
Colombian.....	1	1,506	1,199	2,055	1,251	1,498.75	234
German.....	2	5,038	4,380	7,393	4,274	5,475.00	8,775
Peruvian.....	2	5,364	2,504	7,922	3,941	3,130.00	4,315
Totals.....	5	11,908	8,083	17,370	9,466	10,103.75	13,324
West coast of United States to east coast of Central America:							
United States.....	4	9,122	8,353	13,520	8,242	10,388.20	2,402
West coast of Central America to Cristobal, C. Z.:							
British.....	3	2,063	1,900	3,436	1,906	2,353.90	1,307
Colombian.....	1	307	302	405	308	226.50	.....
Totals.....	4	2,370	2,202	3,841	2,214	2,580.40	1,307
West coast of South America to east coast Canada:							
British.....	3	23,744	19,882	34,123	20,264	24,852.50	48,137
Norwegian.....	1	4,730	4,105	6,583	4,119	5,131.25	10,450
Totals.....	4	28,474	23,987	40,706	24,383	29,983.75	58,587
Philippine Islands to east coast United States:							
Japanese.....	2	10,771	8,418	13,532	8,283	10,522.50	11,251
United States.....	2	11,567	8,506	13,489	8,505	10,632.50	17,227
Totals.....	4	22,338	16,924	27,021	16,788	21,155.00	28,478
Canadian intercoastal:							
British.....	3	11,513	9,093	14,749	9,108	11,366.25	15,416
Balboa, C. Z., to Cristobal, C. Z.:							
German.....	2	238	238	238	238	178.50	.....
Norwegian.....	1	504	423	732	391	362.88	.....
Totals.....	3	742	661	970	629	541.38	.....
West coast of United States to Cristobal, C. Z.:							
Panaman.....	1	2,606	1,384	2,461	1,384	1,730.00	1,022
United States.....	1	5,209	4,327	7,076	4,359	5,408.75	9,869
Totals.....	2	7,815	5,711	9,537	5,743	7,138.75	10,891
West coast of United States to West Indies:							
British.....	2	3,537	2,985	4,870	2,944	6,231.25	5,932
Australasia to east coast of United States:							
United States.....	2	9,352	6,525	10,682	6,509	8,156.25	14,438
Australasia to east coast of Canada:							
British.....	2	9,632	7,696	9,670	7,755	9,620.00	2,276
Far East to West Indies:							
British.....	1	2,948	2,349	3,672	2,358	2,936.25	5,210
Norwegian.....	1	4,265	2,495	4,333	2,494	3,118.75	7,350
Totals.....	2	7,213	4,844	8,005	4,852	6,055.00	12,560
West coast Canada to Africa:							
British.....		4,345	3,181	5,274	3,171	3,976.25	7,350

* Includes naval vessel of 5,000 displacement tons.

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of Central America to east coast United States:							
British.....	1	1,379	1,209	1,955	1,191	\$1,511.25	2,000
West coast of Central America to Europe:							
German.....	1	1,469	1,155	1,930	1,128	1,443.75	2,732
West coast of South America to east coast Central America:							
Argentine.....	1					1,274.50	
West coast of South America to Egypt:							
Belgian.....	1	6,211	4,522	7,130	4,013	5,652.50	9,950
Yugoslav.....	1	4,536	3,547	5,635	3,537	4,433.75	8,473
Totals.....	2	10,747	8,069	12,765	7,550	10,086.25	18,423
Balboa, C. Z., to Gatun Lake:							
Panama.....	1	33	33	33	33	39.60	
Far East to east coast United States:							
Japanese.....	1	4,301	3,468	5,220	3,159	4,335.00	2,094
Far East to Europe:							
British.....	1	3,452	3,492	4,569	2,375	4,365.00	4,300
Grand totals, September, 1928	234	1,079,420	837,984	1,371,178	840,189	1,049,989.68	1,603,357
Grand totals, September, 1927.	245	1,130,787	892,102	1,450,542	888,536	1,110,674.53	1,802,840
Grand totals, September, 1926.	210	1,037,081	814,010	1,325,836	815,892	1,014,446.23	1,589,238

* Naval vessel of 2,549 displacement tons.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending October 14, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
U. S. A. T. Kenowis..	U. S. Army, Q. M. Corps.....	October 3.....	October 5.....	916	4
Romulus.....	Weil & Ammundsen.....	October 4.....	October 6.....	1,019	
Erfurt.....	Roland Line.....	October 5.....	October 5.....	23	
Bessie.....	Pacific Fruit Co.....	October 3.....	October 3.....	39	
A. B. de O'barrio.....	Pacific Fruit Co.....	October 3.....	October 3.....	10	
Dos Hermanos and barge.....	A. Valdez.....	October 3.....	October 3.....	113	
Cauca.....	Colombian Transport Co.....	October 6.....	October 6.....		8
Deroche.....	Union Oil Co.....	October 6.....	October 6.....	3,485	
Aachen.....	Hamburg-American Line.....	October 6.....	October 6.....	23	
Agwidale.....	Grace Line.....	October 7.....	October 7.....	38	79
President Garfield.....	Dollar Line.....	October 7.....	October 7.....		1
Santa Maria.....	Grace Line.....	October 7.....	October 8.....		6
Corinto.....	Panama Mail S. S. Co.....	October 8.....	October 9.....	26	
Calcutta Maru.....	Nippon Yusen Kaisha.....	October 9.....	October 9.....	85	
Anyo Maru.....	Nippon Yusen Kaisha.....	October 10.....	October 10.....	28	
Litiopa.....	Movadls Rederi.....	October 11.....	October 13.....	6,923	
California.....	Panama-Pacific Line.....	October 12.....	October 12.....		237
Cali.....	North German Lloyd.....	October 12.....	October 12.....		5
Havre Maru.....	Nippon Yusen Kaisha.....	October 14.....	October 15.....	63	
Garfield.....	Grace Line.....	October 12.....	October 13.....	65	15
Albinga.....	Hamburg-American Line.....	October 14.....	October 15.....		

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

United States Intercoastal Traffic by Commodities for September, 1928.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for September, 1928, and the totals for September, 1927, and 1926. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise but they are indicative of the kind and quantity of the cargo in transit through the Canal. The figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only.

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Agricultural implements.....	1,215		1,215
Alfalfa.....		444	444
Alfalfa meal.....		594	594
Ammonia.....	24		24
Ammunition.....	33		33
Asbestos.....	178		178
Asphalt.....	338	44	382
Automobiles.....	981	50	1,031
Automobile accessories.....	191	25	216
Balsam.....	52		52
Bark.....		60	60
Beans.....	55	4,735	4,790
Bones and bonemeal.....	55		55
Borax.....		969	969
Bricks.....	94		94
Burlap.....	132	132	264
Camphor.....		116	116
Canned goods:			
Fish.....	187	17,086	17,273
Fruit.....	274	33,116	33,390
Meat.....	76		76
Milk.....	55	780	835
Soup.....	2,260		2,260
Vegetables.....	578	7,133	7,711
Miscellaneous.....	2,885	5,985	8,870
Carbon black.....	43		43
Celite filtercel.....		495	495
Cement.....	1,181		1,181
Charcoal.....	224	103	327
Chemicals.....	2,270	297	2,567
China and fire clay.....	306		306
Coal.....	1,391		1,391
Cocoa.....	92		92
Coconuts.....		93	93
Coffee.....	58	200	258
Cold storage:			
Cheese.....	58		58
Eggs.....		210	210
Lard.....	439		439
Meat.....	71		71
Other.....	279		279
Confectionery.....	711		711
Copra.....	25	6	31
Cork.....	55		55
Cotton.....	80	1,080	1,160
Drugs.....	1,208	50	1,258
Dyewoods.....		38	38
Earthenware.....	72		72
Eggs, dried.....		188	188
Explosives.....		155	155
Fertilizer.....	21		21
Fish meal.....		550	550
Flour.....	223	7,217	7,440
Fruit, dried.....	96	12,927	13,023
Furniture.....	388		388
General.....	38,061	19,089	57,150
Glass and glassware.....	1,456	60	1,516
Granite.....	50		50
Guano.....		30	30
Gum.....	86		86
Hair.....	37	43	80
Hardwoods.....	187		187
Hay.....	100	782	882
Hemp.....	11	343	354
Honey.....		199	199
Ink.....	18		18

Commodity.	Atlantic to Pacifie.	Pacific to Atlantic.	Totals.
Jute.....	25	30	55
Linoleum.....	1,584	27	1,611
Liquors.....	92	24	116
Lumber.....	3,770	179,273	183,043
Malt.....	37		37
Manufactured goods:			
Iron and steel.....	124,288	245	124,533
Machinery.....	3,749	526	4,275
Railroad material.....	815	350	1,165
Tinplate.....	6,128		6,128
Textiles.....	3,897	57	3,954
Miscellaneous.....	7,265	3,320	10,585
Marble.....	69	16	85
Matches.....	161		161
Metals:			
Copper.....	71	7,460	7,531
Iron.....	250		250
Lead.....	357	225	582
Scrap.....		555	555
Zinc.....	50		50
Other.....	27		27
Milk, powdered.....	25	945	970
Molasses.....	211	18	229
Nuts.....		611	611
Oats.....	15		15
Oils:			
Coconut.....		20	20
Cottonseed.....	141		141
Crude.....		23,500	23,500
Gas oil and fuel oil.....		9,500	9,500
Gasoline, benzine, and naphtha.....		202,637	202,637
Kerosene.....	37	22,723	22,760
Linseed.....	40		40
Lubricating and greases.....	3,549	3,129	6,678
Vegetable.....	112	70	182
Wood.....	71	189	260
Ores:			
Magnesite.....		957	957
Manganese.....	117		117
Paint.....	718		718
Paper.....	4,686	3,205	7,891
Paper pulp.....	12	3,102	3,114
Peanuts.....		423	423
Peas.....		264	264
Phosphates.....	712		712
Porcelain.....	72	428	500
Quicksilver.....		7	7
Rags.....	241	402	643
Rice.....	199	345	544
Rope.....	540	10	550
Rosin.....	206		206
Rubber:			
Manufactured.....	1,378	88	1,466
Raw.....	231		231
Scrap.....		20	20
Salt.....	123		123
Sand.....	1,003		1,003
Seeds:			
Canary.....	15		15
Grass.....		421	421
Hemp.....		27	27
Other.....		462	462
Shells.....	778	46	824
Silk.....	20	62	82
Skins and hides.....	10	2,283	2,293
Slate.....	1,069		1,069
Soap.....	2,652	51	2,703
Soda.....	707		707
Soda ash.....	1,521		1,521
Soda, bicarbonate.....	26		26
Soda, caustic.....	888		888
Starch.....	35		35
Sugar.....	143	18,572	18,715
Sulphur.....	6,408		6,408
Syrup.....	134		134
Talc.....		30	30
Tallow.....		93	93
Tar.....	26		26
Tea.....	18	33	51
Tobacco.....	2,007	9	2,016
Toys.....	119	1	120
Turpentine.....	70		70
Vegetables.....	42	86	128
Waste.....	12	86	98

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Wax.....	116	.....	116
Wheat.....	.....	643	643
Wine.....	80	86	166
Wool.....	22	730	752
Totals, September, 1928.....	242,952	603,846	846,798
Totals, September, 1927.....	169,537	803,180	972,717
Totals, September, 1926.....	200,296	754,572	954,868

Notaries Public in the Canal Zone.

The following is a list of notaries public commissioned in the Canal Zone as of August 27, 1927. The list gives, by towns, the name, where stationed, and the date of expiration of commission:

ANCON.

Bowen, Vollie S., Land Office, February 27, 1930.
 Boyd, Oscar S., Municipal Division, July 30, 1928.
 French, A. W., Ancon Hospital, May 14, 1929.
 Ohlson, Elmer F., Ancon Hospital, December 3, 1930.
 Russell, C. V., Ancon Hospital, April 29, 1930.
 Shaeffer, L. E., Office of District Attorney, April 6, 1929.
 Sheibley, F. H., District Court, October 27, 1929.
BALBOA.
 Hyde, W. H., Port Captain's Office, March 6, 1930.
 Kalar, J. D., Port Captain's Office, April 13, 1929.
 Kelley, Thomas H., Mechanical Division, August 18, 1930.
 Lefever, John E., Fort Amador, February 28, 1931.
 Prager, J. F., Balboa storehouse, December 13, 1929.
 Smith, Walter R., Balboa storehouse, September 4, 1928.
 Stillwell, J. L., Fort Amador, April 20, 1931.

BALBOA HEIGHTS.

Attaway, E. F., Administration Building, room 343, October 28, 1930.
 Boggs, W. B., Administration Building, room 316, August 4, 1928.
 Buehler, G. H., Administration Building, room 205, August 17, 1928.
 Fenton, John A., Administration Building, room 203, July 28, 1930.
 Gallagher, A. J., Administration Building, room 204, December 13, 1929.
 Illwitzer, P. G., Administration Building, room 270, October 12, 1929.
 Schecker, C. A., Administration Building, room 244, January 19, 1930.
 Sims, Walter H., Quarry Heights, December 1, 1930.
 Taylor, R. G., Administration Building, room 318, April 30, 1930.
 Ungar, J., Administration Building, room 301, February 2, 1929.
 Wang, Frank H., Administration Building, room 305, April 29, 1929.

COROZAL.

Grimm, G. L., Corozal Hospital, October 6, 1929.
 Johnson, Mrs. Anna O., Panama Ordnance Depot, February 26, 1930.

CRISTOBAL.

Atwood, H. E., Commissary Division, April 8, 1930.
 Campbell, J. S., District Court, January 28, 1929.
 Clarke, V. J., Commissary Division, January 14, 1929.
 Concklin, A. W., Commissary Division, April 27, 1929.
 Cotton, Charles, Coaling Plant, March 20, 1929.
 Daly, E. J., United Fruit Co., May 26, 1929.
 Flood, Arthur, Custom's office, November 15, 1928.
 Hargy, F. F., Port Captain's office, May 28, 1930.
 MacSparran, E. S., Receiving & Forwarding Agency, December 1, 1930.
 Murray, P. E., Magistrate, October 13, 1929.
 Scarborough, W. W., clubhouse, January 21, 1930.
 Slocum, E. L., Chase National Bank, August 10, 1929.
 Walsh, W. H., Customs Office, August 5, 1929.
 Ellis, Edward E., Coaling Plant, May 24, 1930.

GATUN.

McGahhey, J. T., clubhouse, August 12, 1930.

MOUNT HOPE.

Latimer, J. G., Cristobal storehouse, April 30, 1930.

PARAISO.

Holzappel, A. F., Dredging Division, August 10, 1929.

PEDRO MIGUEL.

Norris, R. N., Municipal Division, August 11, 1930.
 Rader, T. C., Pacific Locks, January 21, 1930.
 Wright, A. M., Dredging Division, January 21, 1930.
 Cauthers, R. A., Municipal Division, June 16, 1930.

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average temperature, Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9).....	1018	1020	1013	84.0
Balboa (dock 18).....	1011	1021	1005	83.0

(NOTE—The above is based on two months observations at Cristobal, and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, White male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat....	Tuesdays, Thursdays, and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m.; Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Section "B:"	
Ward 5, Male, private rooms, American boys.....	Daily, 9.30 to 11 a. m.; 2.00 to 4.30 p. m.;
Ward 6, Foreign, male and female, private rooms, American girls.....	6.30 to 8.00 p. m.
Ward 7, White female, private rooms.....	(No visitors permitted in nursery.)
Ward 8, Obstetrical department, white females (Nursery).....	
Section "C:"	
Ward 9, White foreign, male.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p.m.
Ward 11, Colored, male, surgical.....	
Ward 12, Colored, male, medical, eye and ear.....	
Ward 13, Colored, male, G. U.....	
Ward 14, American, male, G. U.....	
Section "D:"	
Ward 15, American, male, surgical.....	{ Tuesdays, Thursdays, and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m.
Ward 16, American, male, medical, eye and ear.....	{ Sundays and holidays, 9.30 to 11 a. m.; 2.00 to 4.00 p. m.
Ward 17, Colored children.....	{ Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p.m.
Ward 18, White children.....	Daily, 9.30 to 11 a. m.; 2 to 4 p. m.
Ward 19, Colored, female, medical.....	{ Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p.m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation.....	No visitors permitted except to visit tuberculosis patients, Thursdays, Sundays, and holidays, 1.30 to 3 p. m.

Permission to visit outside of visiting hours will be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

Official Circulars.

Appointments.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 16, 1928.

To all concerned.—Having been appointed as Governor of The Panama Canal, and having duly qualified this date, the undersigned hereby assumes his duties as such.

H. BURGESS.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 16, 1928.

To all concerned.—Col. Julian L. Schley, U. S. Army, is hereby appointed Engineer of Maintenance, effective this date.

H. BURGESS,
Governor.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Diesel oil is sold by The Panama Canal at Cristobal at \$1.80 per barrel.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.25 per barrel at Balboa and Cristobal. Diesel oil, Balboa only, \$1.80 per barrel.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers at \$8.00 per ton of 2,240 pounds at Cristobal, and \$11.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, \$8.00 per ton at Balboa. When coal is delivered from lighters in quantities of 50 tons or more, the price is \$9.00 per ton at Cristobal, \$12.00 at Balboa. If less than 50 tons is taken from lighters, prices are \$11.00 per ton at Cristobal and \$14.00 per ton at Balboa with minimum charge for 20 tons and maximum charge not to exceed that for 50 tons at \$9.00 Cristobal and \$12.00 Balboa. For furnishing lump coal for galley use, or run of mine coal, in sacks, \$6.00 additional per ton; but if vessels furnish sacks \$3.00 additional per ton.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

For trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, when requested, an additional charge of 90 cents per ton will be made for extra handling.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m., 12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 145.

PORT OF BALBOA.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 10.	Anyo Maru	Nippon Yusen Kaisha	Hongkong, China.	October 9.	Craftsman ³⁵	R. J. McArdle Contracting Co.	Buenaventura, Colombia.
October 10.	Chiriqui ³⁴	Nippon Yusen Kaisha	Valparaiso, Chile.	October 10.	Anyo Maru	Nippon Yusen Kaisha	Valparaiso, Chile.
October 12.	El Colon ³⁴	Chiriqui Land Co	Pro. Armuelltes, R. P.	October 10.	Ginyo Maru	Nippon Yusen Kaisha	Hongkong, China.
October 12.	Bessy	H. Elliot	El Real, R. P.	October 12.	El Colon	Chiriqui Land Co.	Porto Armuelltes, R. P.
October 12.	Dos Hermanos ³⁴	H. Elliot	El Real, R. P.	October 12.	Bessy	H. Elliot	El Real, R. P.
October 12.	A. B. de O'barrio ³⁴	A. Valdez	Bayano River, R. P.	October 12.	Dos Hermanos ³⁴	A. Valdez	Bayano River, R. P.
October 12.	Motor schooner.	Pacific Fruit Co	Bayano River, R. P.	October 12.	A. B. de O'barrio ³⁴	Pacific Fruit Co.	Bayano River, R. P.
				October 12.	Andugoya	Colombian Government.	Buenaventura, Colombia.

* Other than ships passing through the Canal.

³⁵ Tug.

³⁴ Motor schooner.

THE PANAMA CANAL RECORD

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Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., October 24, 1928.

No. 12.

Panama-Pacific Line Disposes of "Manchuria."

The steamship *Manchuria* of the Panama-Pacific Line transited the Canal on October 10, 1928, en route from California to New York, via Habana, on her last voyage with the Panama-Pacific Line. It is reported that the ship has been sold to the Dollar Line for delivery after her arrival in New York on October 16.

The *Manchuria* entered the intercoastal service of the Panama-Pacific Line in 1923 with the *Kroonland* and the *Finland*, and has made a total of 68 transits in this trade. During that period she carried 267,427 tons of cargo and 22,257 passengers through the Canal. The total tolls charges against this vessel aggregated \$792,625.

The *Manchuria* was built in 1904 by the New York Shipbuilding Corporation of Camden, N. J., and, prior to her entrance in the intercoastal trade, was engaged in the trans-Atlantic service. She is 600 feet long, 65 feet beam, and of 15,445 registered gross tons. She will be replaced in this trade by the new turbo-electric liner *Virginia* which leaves New York on its maiden voyage in December.

Executive Order.

By virtue of the authority conferred upon the President of the United States by Section 4 of the so-called Panama Canal Act, of August 24, 1912, "to complete, govern, and operate the Panama Canal and govern the Canal Zone, or cause them to be completed, governed, and operated, through a governor of the Panama Canal and such other persons as he may deem competent to discharge the various duties connected with the completion, care, maintenance, sanitation, operation, government, and protection of the canal and Canal Zone," I designate the Secretary of State to receive and pass upon all applications for the privilege of operating commercial aircraft between the Canal Zone and foreign countries, and to prescribe the conditions under which permission may be given for such operation, having due regard for the provisions of statutory law on this subject, the rules prescribed thereunder by competent authority in this country, and the applicable rules and regulations of the Panama Canal.

Before final decision shall be reached in a given case, the Secretary of State will consult with the heads of the other interested Executive Departments.

CALVIN COOLIDGE

THE WHITE HOUSE,
September 28, 1928.

[No. 4971]

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference. It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

CANAL WORK IN SEPTEMBER, 1928.

The following is the report of the Governor to the Secretary of War, of Canal work in September, 1928.

BALBOA HEIGHTS, C. Z., October 16, 1928.

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

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of September, 1928:

NUMBER OF TRANSITS.

During the month 487 commercial vessels passed through the Canal. In addition to these, 11 nonseagoing launches, measuring under 20 tons, and 17 vessels belonging to or chartered by the United States Government transited the Canal. There were also two transits of a Panaman Government vessel, one transit of a Colombian Government vessel, and three transits of vessels solely for repairs on which no tolls were collected, making a total of 521 transits for the month, or a daily average of 17.36.

Tolls on the 487 commercial vessels amounted to \$2,111,230.56, and on the launches to \$88.89, a total of \$2,111,319.45, or a daily average on all traffic of \$70,377.31.

Commercial traffic for September was the lowest since June, 1928, and the second month since June, 1927, in which the number of transits was lower than 500. Continued depression of the mineral oil traffic, together with light shipments of lumber and wheat, contributed largely to this decrease.

The total numbers of craft of all kinds transiting the Canal during the month of September, 1928, as compared with the same month in 1927 and 1926, are shown in the following tabulation:

	September, 1928.	September, 1927.	September, 1926.
Commercial vessels	487	540	446
Noncommercial vessels (Army and Navy).....	17	28	22
Launches (under 20 tons).....	11	9	11
Panaman Government vessels	2	1	.....
Colombian Government vessels.....	1	1	.....
Vessels for repairs.....	3	2	2
Totals.....	521	581	481

In addition to the vessels listed above, Panama Canal equipment, consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun	9	10	19
Pedro Miguel.....	28	28	56
Miraflores.....	27	23	50
Totals.....	64	61	125

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year 1928, to the end of September, 1928, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1927.	1928.	1927.	1928.	1927.	1928.	1927.	1928.
January...	443	540	2,121,631	2,422,770	2,241,765	2,372,061	\$1,984,760.71	\$2,212,752.50
February...	449	547	2,201,328	2,460,111	2,230,107	2,660,425	1,994,860.82	2,253,755.37
March.....	496	542	2,413,999	2,441,077	2,533,525	2,428,662	2,217,913.20	2,223,370.57
April.....	464	531	2,224,500	2,384,491	2,429,807	2,473,884	2,065,206.92	2,187,607.82
May.....	471	508	2,248,892	2,274,612	2,379,713	2,497,588	2,066,070.73	2,118,969.83
June.....	455	481	2,152,926	2,227,865	2,229,097	2,139,565	1,970,377.97	2,016,211.09
July.....	509	509	2,406,955	2,318,395	2,450,468	2,291,955	2,215,515.99	2,109,083.19
August....	543	526	2,513,614	2,437,246	2,429,947	2,425,336	2,274,040.55	2,199,069.31
September.	540	487	2,532,942	2,295,053	2,397,753	2,313,011	2,294,432.34	2,111,230.56
Totals...	4,370	4,671	20,816,787	21,261,620	21,322,182	21,602,487	19,083,179.23	19,432,050.24

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States Government, including merchant vessels chartered by the Government, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for September, 1928, as compared with the corresponding month in 1927 and 1926, and the monthly averages for the fiscal year 1928:

	September, 1928.	September, 1927.	September, 1926.	Average per month for fiscal year 1928.
Number of vessels.....	487	540	446	538
Panama Canal net tonnage.....	2,295,053	2,532,942	2,186,804	2,454,886
United States net tonnage.....	1,771,095	1,984,417	1,706,425	1,905,316
Registered gross tonnage.....	2,909,454	3,224,661	2,770,978	3,100,239
Registered net tonnage.....	1,777,124	1,978,821	1,708,035	1,903,974
Tolls.....	\$2,111,230.56	\$2,294,432.34	\$2,019,626.42	\$2,245,374.98
Tons of cargo carried.....	2,313,011	2,397,753	2,239,547	2,469,225

The daily average number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year.
	September, 1928.	September, 1927.	September, 1926.	
Number of transits.....	16.23	18.00	14.87	17.63
Panama Canal net tonnage.....	76,502	84,431	72,893	80,488
Tolls.....	\$70,374.35	\$76,481.08	\$67,320.88	\$73,618.85
Tons of cargo carried.....	77,101	79,925	74,652	80,958

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of September, 1928, as compared with September, 1927 and 1926, are shown in the following tabulation:

	Average per vessel.		
	September, 1928.	September, 1927.	September, 1926.
Panama Canal net tonnage.....	4,712	4,691	4,903
United States net tonnage.....	3,636	3,675	3,826
Registered gross tonnage.....	5,974	5,972	6,213
Registered net tonnage.....	3,650	3,664	3,991
Tolls.....	\$4,335.18	\$4,428.95	\$4,528.31
Tons of cargo (including vessels in ballast).....	4,750	4,440	5,021
Tons of cargo (laden vessels only).....	5,683	5,920	6,114

TOLLS.

At present, tolls are collected at rates of \$1.20 per net ton for laden vessels and 72 cents per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per ton nor be less than 75 cents per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined both in accordance with the Panama Canal and the United States rules of measurement.

Due to this limiting proviso the tolls actually collected on laden vessels averaged \$0.954 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.72 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of September, 1928, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Argentinian.....	\$1,274.50	\$1,274.50		
Belgian.....	14,812.74	14,062.20		\$750.54
British.....	663,263.55	676,331.10	\$13,067.55	
Chilean.....	8,665.00	9,410.00	745.00	
Colombian.....	4,660.50	4,421.20		239.30
Danish.....	28,648.75	29,887.00	1,238.25	
Danzig.....	17,790.86	16,450.80		1,340.06
Dutch.....	41,790.00	47,806.00	6,016.00	
Finnish.....	4,827.60	4,023.00		804.60
French.....	41,261.00	42,204.00	943.00	
German.....	99,779.40	109,165.80	9,386.40	
Greek.....	8,276.04	6,821.40		1,454.64
Italian.....	41,202.53	44,774.40	3,571.87	
Japanese.....	68,050.75	62,717.00		5,333.75
Norwegian.....	73,519.85	75,030.00	1,510.15	
Panaman.....	3,499.60	5,245.00	1,745.40	
Peruvian.....	6,858.55	9,852.00	2,993.45	
Spanish.....	6,773.75	6,556.00		217.75
Swedish.....	26,232.74	27,148.20	915.46	
United States.....	932,782.85	944,547.60	11,764.75	
Yugoslav.....	17,260.00	17,995.00	735.00	
Totals.....	2,111,230.56	2,155,722.20	54,632.28	10,140.64
Net increase for all traffic.....			44,491.64	

* Naval vessel paying 50 cents per displacement ton. * Includes \$7,677.50 collected for naval vessels at 50 cents per displacement ton.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States interoceanic trade.....	\$15,915.59
United States foreign trade.....	\$4,036.84
United States-Canal Zone trade.....	\$114.00
Net increase.....	11,764.75

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in September, 1928, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Belgian.....		1.74	1.74
British.....	.84	1.30	1.07
Chilean.....	.53	1.11	.82
Colombian.....	.96	.28	.68
Danish.....	.39	1.72	1.49
Danzig.....		1.83	1.83
Dutch.....	.52	1.36	.83
Finnish.....		1.82	1.82
French.....	.47	1.41	1.06
German.....	.73	1.43	1.11
Italian.....	.10	1.23	.83
Japanese.....	1.32	1.32	1.32
Norwegian.....	.75	1.87	.95
Panaman.....	.96	.39	.67
Peruvian.....	.42	.81	.63
Spanish.....	.13	.47	.32
Swedish.....	.74	2.32	1.85
United States.....	.95	1.57	1.32
Yugoslav.....	1.35	1.91	1.76
Averages, September, 1928.....	.85	1.49	1.20
Averages, September, 1927.....	.76	1.61	1.26
Averages, September, 1926.....	.85	1.54	1.25

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of September, 1928, is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	1	4,734	\$4,931.25	48	259,927	\$268,061.25
Ballast.....	40	231,059	166,362.48			
General cargo ships:						
Laden.....	180	841,241	785,267.10	180	918,444	777,386.05
Ballast.....	31	138,599	99,502.55	4	1,049	767.88
Noncargo-carrying ships:						
Naval vessels.....	1		5,177.50	2		3,774.50
Totals.....	253	1,215,633	1,061,240.88	234	1,079,420	1,049,989.68
Method of propulsion:						
Steam.....	196	915,140	824,239.31	179	830,854	812,030.10
Motor.....	56	300,299	236,854.57	51	244,305	232,953.48
Motor (schooner).....	1	194	147.00			
Nonpropelled.....				2	238	178.50
Sail.....				2	4,023	4,827.60
Totals.....	253	1,215,633	1,061,240.88	234	1,079,420	1,049,989.68

Of the 375 steam-driven vessels, 237 were oil burning, 133 coal burning, and 5 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of September, 1928. If tolls had been assessed against these vessels at commercial rates, the amount would have been approximately as indicated:

Class and Nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Cruisers.....	2	¹ 12,100	\$6,050.00			
Launches.....	1	² 5	3.75			
Submarines.....				3	¹ 1,455	\$727.50
Supply ships.....				1	³ 3,434	4,292.50
Survey ships.....	1	¹ 2,200	1,100.00	1	² 2,200	1,100.00
Tugs.....	1	¹ 1,000	500.00	2	² 2,000	1,000.00
U. S. Army vessels:						
Transports.....	2	³ 9,672	12,090.00	2	³ 7,816	9,770.00
Tugs.....	1	¹ 1,208	604.00			
Totals, U. S. Government.....	8		20,347.75	9		16,890.00
Panaman Government vessels:						
Transports.....	1	² 101	72.72	1	² 101	72.72
Colombian Government vessels:						
Supply ships.....				1	³ 727	545.25
Vessels for repairs:						
Tankers.....	1	³ 1,242	931.50	2	³ 2,484	1,863.00
Grand totals.....	10		21,351.97	13		19,370.97

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of September, 1928, carried cargo as follows: Atlantic to Pacific, 703 tons; Pacific to Atlantic, 2,832 tons; total, 3,535 tons.

LAUNCHES UNDER 20 TONS.

The following statement shows the number of launches under 20 tons transiting the Canal during the month of September, 1928. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	8	74	\$59.37
Pacific to Atlantic.....	3	27	29.52
Totals.....	11	101	88.89

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of September, 1928, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons	23,811	61,170	84,981
Local cargo shipped..... tons	8,753	1,559	10,312
Transit cargo arriving..... tons	2,357,508	2,333,004	4,690,512
Transit cargo clearing..... tons	2,341,842	2,311,843	4,653,685
Cargo received for transshipment..... tons	37,735	1,722	39,457
Cargo transhipped..... tons	33,682	1,681	35,363
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	80	34	114
Number of withdrawals.....	403	140	543
Tons received.....	1,688	248	1,936
Tons withdrawn.....	1,011	193	1,204
Packages received.....	10,577	4,067	14,644
Packages withdrawn.....	8,146	1,707	9,853
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	59	6	65
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons	19,682	118	19,800
Coal issued, miscellaneous:			
Panama Canal departments..... tons	61	55	116
U. S. Army, including vessels..... tons	55		55
Individuals and companies..... tons	111		111
Panama Railroad Company..... tons	10	2	12
Transferred to U. S. Navy..... tons	10,175		10,175
Total sales and issues..... tons	30,094	175	30,269
Coal on hand, September 1, 1928..... tons	64,189		64,189
Coal on hand, October 1, 1928..... tons	45,050		45,050
Coal received during month..... tons	10,955		10,955
Coal received from U. S. Navy..... tons		175	175
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls	8,103.54	13,719.25	21,822.79
Panama Railroad Company..... bbls	139.00		139.00
U. S. Army and Navy..... bbls		746.79	746.79
Individuals and companies..... bbls		164.41	164.41
Total sales and issues..... bbls	8,242.54	14,630.45	22,872.99
Fuel oil received during September, 1928..... bbls		61,549.40	61,549.40
Fuel oil on hand, October 1, 1928..... bbls	75,349.22	76,623.17	151,972.39
Diesel oil sold during September, 1928..... bbls	115.11	399.00	514.11
Diesel oil received during September, 1928..... bbls		399.00	399.00
Diesel oil on hand, October 1, 1928..... bbls	23,671.50	493.25	24,164.75
Miscellaneous transfers..... bbls	157.87	233.69	391.56
Gasoline and kerosene pumped for The Panama Canal..... bbls	1,814.79	2,924.29	4,739.08
Gasoline pumped for individuals and companies..... bbls		4,949.57	4,949.57
Oil pumped for individuals and companies..... bbls	445,021.26	625,662.51	1,070,683.77
Oil pumped for U. S. Navy..... bbls		4,483.00	4,483.00
Total fuel oil, gasoline, and kerosene handled..... bbls	455,351.57	714,831.91	1,170,183.48
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	14	1	15
Measured for Panama Canal net tonnage.....	6		6
Remeasured for Panama Canal net tonnage.....	15		15
Panama Canal net tonnage corrected.....	4	2	6
U. S. equivalent tonnage corrected.....	14	2	16
Services of harbor equipment:			
Tugs, total operating hours.....	432½	397	829½
Launches, total operating hours.....	1,328	1,559	2,887

	Cristobal.	Balboa.	Total.
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$13,177.50	\$12,710.00	\$25,887.50
Pilotage.....	17,944.00	7,877.00	25,821.00
Seamen.....	11,920.00	10,888.00	22,808.00
Launch service.....	2,042.00	3,000.50	5,042.50
Wharfage.....	14,310.41	5,294.05	19,604.46
Ships measured.....	160.00	50.00	210.00
Miscellaneous.....	1,036.99	1,005.50	2,042.49
Ships repaired at Panama Canal shops:			
Commercial.....	63	17	80
U. S. Army and Navy.....	5	9	15
Panama Canal equipment.....	8	14	22
Totals.....	76	40	116
Vessels dry docked:			
Commercial.....		6	6
U. S. Army and Navy.....	2	4	6
Panama Canal equipment.....	1	2	3
Totals.....	3	12	15
Clearances issued.....	286	263	549
Bills of health issued.....	291	262	553

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	561	3,299,170	2,016,573	525	3,076,147	1,893,727
Vessels entering port but not transiting Canal.	70	290,435	175,000	22	58,782	42,476
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	108	646,261	390,052	100	569,638	347,891
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	557	3,276,658	2,003,165	517	3,042,855	1,866,863
Vessels clearing port but not transiting Canal.	67	277,767	167,473	18	54,611	39,021
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	104	629,408	379,192	98	568,392	347,200

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,588	1,085	2,673	200	702	902
From Pacific ports.....	166	179	345	293	175	468
Total disembarking.....	1,754	1,264	3,018	493	877	1,370
Embarking:						
For Atlantic ports.....	1,481	658	2,139	196	188	384
For Pacific ports.....	293	116	409	236	275	511
Total embarking.....	1,774	774	2,548	432	463	895
Remaining on board:						
From Atlantic to Pacific ports.....	1,351	3,083	4,434	1,259	2,627	3,886
From Pacific to Atlantic ports.....	1,101	1,427	2,528	1,156	1,382	2,538
From Atlantic to Atlantic ports.....	517	144	661			
From Pacific to Pacific ports.....				8	130	138
Total remaining on board.....	2,969	4,654	7,623	2,423	4,139	6,562
Total arriving.....	4,723	5,918	10,641	2,916	5,016	7,932
Total departing.....	4,743	5,428	10,171	2,855	4,602	7,457

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	253	53	20.9
Pacific to Atlantic.....	234	66	28.2
Totals.....	487	119	24.4

In addition to the aforesaid, 62 passenger-carrying vessels called at the port of Cristobal and 1 at the port of Balboa, without transiting the Canal, making a total of 182 passenger-carrying vessels calling at Canal ports during the month.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of September, 1928:

	Ice.	Groceries.	Cold Storage.	Laundry.	Miscellaneous.	Totals.
Sales at Cristobal to:						
Commercial vessels.....	\$2,493.97	\$11,543.83	\$27,658.36	\$60.79	\$5,851.66	\$47,608.61
Government vessels.....	127.50	112.24	4,336.03	26.59	501.20	5,103.56
Panama Railroad vessels.....		97.06	28,878.04	904.30	519.94	4,399.34
Total sales, September, 1928.	2,621.47	11,753.13	34,872.43	991.68	6,872.80	57,111.51
Total sales, September, 1927.	2,517.59	10,636.49	29,208.69	1,367.43	5,295.76	49,025.96
Total sales, September, 1926.	2,217.44	9,000.16	23,901.19	897.17	6,190.85	42,206.81
Sales at Balboa to:						
Commercial vessels.....	1,283.70	9,981.77	23,694.36	559.81	4,808.83	40,328.47
Government vessels.....	235.10	1,911.57	13,831.18	743.55	1,108.47	17,829.87
Panama Railroad vessels.....			8.60	38.97	.42	47.99
Total sales, September, 1928.	1,518.80	11,893.34	37,534.14	1,342.33	5,917.72	58,206.33
Total sales, September, 1927.	2,056.47	12,880.50	33,180.92	864.95	4,238.62	53,221.46
Total sales, September, 1926.	823.84	9,736.89	12,930.07	847.61	2,463.71	26,802.12

The aggregate sales to Government vessels during the month was \$22,933.43; to Panama Railroad vessels, \$4,447.33; and to other commercial vessels, \$87,937.08, making the total sales to all vessels, \$115,317.84.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of September, 1928, as compared with the corresponding month in 1927 and 1926:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Nonecommercial.			Sept., 1928.	Sept., 1927.	Sept., 1926.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	221	243	464	6	5	11	475	536	439
Pedro Miguel.....	223	248	476	10	13	23	499	558	468
Miraflores.....	230	246	476	8	9	17	493	551	461
Number of vessels put through locks.									
Gatun.....	233	253	486	28	29	57	543	623	505
Pedro Miguel.....	233	256	489	48	42	90	579	631	581
Miraflores.....	233	256	489	47	41	88	577	628	561

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	22	22	22
Panama Canal equipment.....	19	52	50
Launches (under 20 tons).....	10	10	10
Panaman Government vessels.....	2	2	2
Colombian Government vessels.....	1	1	1
Vessels for repairs.....	3	3	3

The total consumption of water for lockages, and loss in leakage was as follows in September, 1928, as compared with the preceding month and the corresponding month in 1927:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,897,410,000	1,557,400,000	1,504,900,000
Leakage.....	20,000,000	30,000,000	20,000,000
Totals, September, 1928.....	1,917,410,000	1,587,400,000	1,524,900,000
Totals, August, 1928.....	2,142,910,000	1,733,530,000	1,627,800,000
Totals, September, 1927.....	2,136,840,000	1,809,910,000	1,706,350,000

HYDROGRAPHY.

In the following tabulation the hydrographic conditions in the Canal Zone and vicinity during the month of September, 1928, are shown in comparative form:

	September.		September—Years of record.		
	1928.	1927.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Chagres River at Alhajuela:					
Monthly mean discharge.....	3,416	5,022	5,022	1,722	3,215
Maximum momentary discharge.....	18,906	26,150	33,600		
Gatun Lake watershed:					
Total yield.....	8,949	10,845	11,946	6,684	9,138
Net yield.....	8,365	10,254	11,238	6,072	8,555
Draft on Gatun Lake for lockages and power.....	2,752	2,863	2,863	1,322	2,246

¹ September 6, 1917.

² Not including September, 1914.

The total yield of the Gatun Lake watershed for the month of September was 2 per cent below the 15-year September average, or 8,949 c. f. s. compared with an average of 9,138 c. f. s. Maximum and minimum September total yields of record are 11,946 c. f. s. in 1917, and 6,684 c. f. s. in 1920, respectively. The lake varied in elevation from 85.40 feet on the 5th to 85.92 feet on the 30th, averaged 85.59 feet, and ended at elevation 85.90 feet. There was an increase in storage during the month of 1,734 million cubic feet, the equivalent of .38 foot on Gatun Lake. The net yield for the month amounted to 21.7 billion cubic feet.

Miraflores Lake varied in elevation from 53.28 feet on the 30th to 54.50 feet on the 15th, average 53.98 feet, and ended at elevation 53.42 feet. Two hundred and twenty-six c. f. s. were wasted over Miraflores spillway.

SEISMOLOGY.

Two seismic disturbances were recorded during the month, on the 26th and 28th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 4,698,000 kilowatt hours, and the computed water consumption was 3,678,166,574 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 1,600 kilowatt hours, with a fuel oil consumption of 18.71 barrels.

In addition to the usual operating and maintenance work performed, 62 work orders, comprising 106 items of additions or repairs, were completed on 30 vessels during the month. There were 349 work orders issued during the month, as compared with 411 for the previous month.

MECHANICAL DIVISION.

During the month miscellaneous repairs were made on 76 vessels at Cristobal and 40 at Balboa. Three vessels were dry-docked at Cristobal and 12 at Balboa. The annual overhaul of the submarines *O-7* and *O-10* was continued during the month at Cristobal, and the work on the *O-7* was advanced to about 95 per cent of completion. At Balboa the annual overhaul of the U. S. Navy tug *Sciota* and of the submarines *O-6*, *O-8*, and *O-9* was continued during the month.

MUNICIPAL ENGINEERING DIVISION.

Work was performed on several improvements in the cities of Colon and Panama, and in the Canal Zone. The usual maintenance work was performed on roads, streets, and walks, and the sewer and water systems. The amount of water pumped during the month totaled 683,434,250 gallons.

DREDGING DIVISION.

East and West Culebra slides showed a slight movement toward the Canal during the month. There were no other slides and no delays to shipping during the month.

The total excavation during September was 284,750 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gaillard Cut—			
Project No. 2, Lirio curve	2,600	23,350	25,950
Project No. 9, West Culebra basin	5,650	50,950	56,600
Maintenance	2,800	2,800	5,600
Balboa inner harbor—			
Project No. 1		58,800	58,800
Maintenance	17,200		17,200
Plant excavation:			
Naval Air Station fill, Coco Solo	120,600		120,600
Totals	148,850	135,900	284,750

The ferry crossing at the north end of Pedro Miguel lock operated 30 days during the month. Four hundred and eighty-four trips were made, and 93 Panama Canal, 81 U. S. Army, and 2,401 other vehicles, a total of 2,575, were ferried across the Canal.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on September 30, 1928, totaled 21,656, composed of 7,392 Americans, 2,643 of whom were men, 2,218 women, and 2,531 children; 211 Europeans, 100 of whom were men, 32 women, and 79 children; and 14,053 West Indians, 4,159 of whom were men, 2,606 women, and 7,288 children. The total number of persons in quarters on September 30, 1927, was 21,051.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of September 19, 1928, with a comparison of the working force for the preceding month and for September, 1927:

	As of September 19, 1928.			Total employees.	
	Gold.	Silver.	Total.	August, 1928.	September, 1927.
Operation and Maintenance:					
Office	40	58	98	100	80
Electrical	153	160	313	310	314
Municipal Engineering	82	694	776	764	642
Lock Operation	226	684	910	917	852
Dredging	178	907	1,085	1,084	1,088
Mechanical	476	839	1,315	1,298	1,296
Marine	208	729	937	924	911
Fortifications	24	350	374	372	230
Totals	1,387	4,421	5,808	5,769	5,413
Supply Department:					
Quartermaster	199	1,786	1,985	1,913	1,905
Subsistence	8	101	109	108	105
Commissary	218	1,174	1,392	1,391	1,309
Cattle Industry	4	127	131	133	224
Hotel Washington	9	93	102	105	106
Transportation	53	210	263	265	254
Totals	491	3,491	3,982	3,915	3,903
Accounting Department	194	8	202	204	210
Health Department	282	872	1,154	1,141	1,045
Executive Department	484	298	782	778	780
Totals	960	1,178	2,138	2,123	2,035
Panama Railroad Company:					
Superintendent	49	270	319	304	261
Transportation	67	117	184	186	174
Receiving & Forwarding Agency	88	1,359	1,447	1,331	1,488
Coaling stations	48	265	313	292	323
Totals	252	2,011	2,263	2,113	2,246
Grand totals, September, 1928	3,090	11,101	14,191		
Grand totals, August, 1928	3,080	10,840		13,920	
Grand totals, September, 1927	2,976	10,621			13,597

Additions to the gold force on the Isthmus in September were as follows: Employed in the United States, 4; reemployed in the United States, 4; employed on the Isthmus, 24; reemployed on the Isthmus, 14; total, 46. Separations from the gold force totaled 36, as follows: Resigned, 28; discharged, 4; retired, 2; died, 2. At the end of the month there were on file 117 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 224 deaths occurred during the month of September, 1928, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 20.75 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 45; tuberculosis (various organs), 31; nephritis (acute and chronic), 22; organic diseases of the heart, 14; and diarrhea and enteritis, 13. There were 4 deaths from apoplexy, 3 from influenza, and 1 each from typhoid fever, diphtheria, amebic dysentery, and tetanus. There were 23 deaths among nonresidents. These are not included in the above statistics.

There were 344 live births, and 13 stillbirths, reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 33.08 per 1,000 population. Deaths among children under 1 year of age numbered 56, giving an infant mortality rate of 162.79.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during September was 112, of whom 13 were employees (5 white and 8 colored), 15 were members of employees' families (2 white and 13 colored), 10 were Canal Zone agriculturists, 33 were other civilian nonemployees, and 41 were Army and Navy personnel. Of the 28 employees and members of employees' families, 19 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There was 1 death from malaria, a nonresident child.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions and received on the Isthmus during the month totaled \$407,101.75, of which \$377,379.14 was for the Department of Operation and Maintenance and \$29,722.61 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap and obsolete and second-hand material amounted to \$35,907.51.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of August, 1928, as compared with August, 1927, with the figures for the first two months of the current fiscal year as compared with the same period in the fiscal year 1928.

It is impossible to submit figures for the month of September at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	August, 1928.	August, 1927.	To end of August.	
			This year.	Last year.
Tolls	\$2,199,111.70	\$2,274,110.06	\$4,306,444.49	\$4,489,767.56
Other receipts	325,592.53	287,013.30	619,343.08	571,654.93
Total transit revenues	2,524,704.23	2,561,123.36	4,925,787.57	5,061,422.49
Total transit expenses	1,059,646.07	973,374.93	2,112,951.77	1,909,018.65
Net transit revenues	1,465,058.16	1,587,748.43	2,812,835.80	3,152,403.84
Three per cent capital charge	614,967.80	609,617.18	1,230,777.54	1,219,173.84
Transit surplus	850,090.36	978,131.25	1,582,058.26	1,933,230.00
Business revenues	1,227,998.87	1,253,927.54	2,508,024.87	2,545,033.51
Business expenses	1,199,666.83	1,188,775.34	2,393,190.65	2,389,342.08
Net business revenues	28,332.04	65,152.20	109,834.22	155,691.43
Three per cent capital charge	60,191.87	59,762.25	120,294.66	118,857.41
Business surplus or deficit	\$ 31,859.83	5,389.95	\$ 10,460.44	36,834.02
Combined revenues	3,762,703.10	3,815,050.90	7,428,812.44	7,606,456.00
Combined expenses	2,259,312.90	2,162,150.27	4,506,142.42	4,298,360.73
Net revenue	1,493,390.20	1,652,900.63	2,922,670.02	3,308,095.27
Three per cent capital charge	675,159.67	669,379.43	1,351,072.20	1,338,031.25
Combined surplus	818,230.53	983,521.20	1,571,597.82	1,970,064.02

* Indicates deficit.

Respectfully,

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, October 20, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Boskoop	13	7 47	14	6 10	14	13 10	Dutch	Royal Nath. S. S. Co.	400 0	58 0	21 5	Hamburg, Germany	Corral, Chile	General	3,974	7,817	6,097
Canadian Im-	13	19 15	14	6 10	14	13 20	British	Can. Nat. Steamships	400 0	52 0	17 0	Montreal, Canada	Vancouver, B. C.	General	2,500	5,891	4,186
porter	13	19 15	14	6 10	14	13 20	British	N. Z. Shipping Co.	520 0	64 0	25 0	Middlesboro, Eng.	Wellington, N. Z.	General	8,584	12,963	9,291
Norfolk	14	2 40	14	7 20	14	14 06	British	Silver Line, Ltd.	425 0	58 0	22 0	New York, N. Y.	Manila, P. I.	General	4,721	8,216	6,037
Silvermaple	14	4 25	14	7 20	14	14 25	British	Rosevelt S. S. Co., S. B.	410 0	54 0	20 0	New York, N. Y.	Cebu, India	General	4,973	6,736	4,881
West Honaker	14	2 50	14	9 00	14	15 46	American	U. S. Navy	461 0	60 0	20 0	Hampton Roads, Va.	Los Angeles, Calif.	General	1,976	5,534	3,868
Sapelo	13	23 10	14	9 35	14	16 06	American	Grace Line	394 0	50 2	16 2	New York, N. Y.	Callao, Peru	General	7,600	6,624	4,885
Santa Cruz	13	23 14	14	10 10	14	16 55	American	G. J. H. Siemers & Co.	407 5	54 0	26 0	Port Arthur, Texas	Hongkong, China	(*)	2,042	5,894	4,193
Karrifanger	14	8 55	14	10 10	14	18 47	German	Can. Nat. Steamships	399 0	52 0	19 11	Montreal, Canada	Geelong, Australia	General	9,033	5,938	
Canadian	14	8 40	14	12 23	14	19 25	British	Standard Oil Co.	440 0	58 2	22 0	Baltimore, Md.	Los Angeles, Calif.	Ballast	5,676	4,200	
Traveler	14	18 35	14	18 55	15	11 39	American	Charlton S. S. Co.	395 0	52 7	17 0	Leghorn, Italy	Vancouver, B. C.	Ballast	2,108	5,892	4,122
K. R. Kings-	14	19 20	14	20 55	15	12 34	British	French Line	399 0	52 0	16 6	Havre, France	Talcahuano, Chile	General	2,252	2,352	1,549
Hazelside	14	8 23	15	6 00	15	13 28	French	Panama Mail S. S. Co.	261 0	40 0	17 7	Cristobal, C. Z.	San Francisco, Cal.	General	1,500	3,984	2,628
Vermont	9	16 28	15	6 05	15	14 38	American	Transmarine Lines	324 0	46 0	17 8	Newark, N. J.	Los Angeles, Calif.	General	497		
Corinto	15	00 40	15	6 15	15	14 15	American	U. S. Army	437 0	58 0	24 0	New York, N. Y.	Honolulu, T. H.	Army supplies	813	3,496	2,141
Sudawonco.	15	50 20	15	7 33	15	14 58	American	United Fruit Co.	315 2	44 2	18 10	Port Limon, C. R.	San Francisco, Cal.	Bananas, coffee	2,871	3,984	2,617
Chateau	15	5 20	15	7 10	15	15 56	American	Swayne & Hoyt	324 0	46 2	20 0	Houston, Texas	Vancouver, B. C.	General	8,201	7,611	5,450
Thierry	15	5 15	15	7 10	15	15 56	American	Isthmian S. S. Lines	425 0	56 0	25 9	Baltimore, Md.	Tacoma, Wash.	Steel, general	4,750	9,392	7,039
San Mateo	15	4 55	15	7 33	15	16 03	American	Ellerman & Bucknall	462 9	58 5	23 5	New York, N. Y.	Adelaide, Australia	General	6,360	11,216	7,884
Point Fernin	15	7 15	15	8 28	15	16 39	American	Shaw, Savill & Albion	477 0	63 0	29 5	Glasgow, England	Dunedin, N. Z.	General	1,633	1,041	
Knoxville City	15	1 10	15	9 35	15	17 14	British	Hamburg-American Line	226 5	34 0	14 0	Cristobal, C. Z.	Buenaventura, Col.	Passengers	3,409	5,279	4,034
City of Brisbane	15	3 35	15	11 10	15	19 50	British	Hamburg-American Line	385 9	52 7	21 6	Hamburg, Germany	Valparaiso, Chile	General	7,181	7,082	5,167
Matakana	13	23 15	14	12 20	15	20 50	German	Munson, McCork'k Line	401 0	53 0	26 0	Baltimore, Md.	Tacoma, Wash.	General, steel	5,786	3,627	
Darazzo	13	23 15	14	12 20	15	20 50	German	Gen. Petroleum Corp.	385 0	55 0	28 0	Liverpool, England	San Francisco, Cal.	Ballast	4,430	6,538	4,769
Paraguay	12	13 45	15	12 30	15	20 20	German	Osaka Shosen Kaisha	407 0	51 0	22 0	Philadelphia, Pa.	Shanghai, China	General	8,201	5,822	
Sidney M.	15	14 05	15	14 20	15	21 15	American	Westfal, Larsen & Co	458 0	59 8	18 0	Havre, France	Talcahuano, Chile	Ballast	3,100	4,927	3,597
Lincoln Ellis-	15	19 10	16	6 10	16	12 52	Norwegian	F. & W. Risdon	390 5	51 0	20 0	Newcastle-on-Tyne	Platzen, R.P.	General	1,056	780	504
worth	15	6 45	16	8 25	16	15 16	Norwegian	H. C. Stevenson	181 0	30 0	13 9	Wardens, N. J.	Los Angeles, Calif.	Ballast	7,978	5,840	
Havana Maru.	16	4 45	16	9 38	16	16 32	British	Richfield Oil Co.	430 2	59 2	18 0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,709	5,562	
Orkaner	16	4 45	16	9 38	16	16 32	British	Sun Oil Co.	429 3	59 2	16 0	New York, N. Y.	Los Angeles, Calif.	Ballast	5,127	3,718	
Cedar Branch	16	4 45	16	9 38	16	16 32	British	Louis Dreyfus	384 0	52 3	15 0	Oran, Algeria	Vancouver, B. C.	General	3,413	6,777	4,761
Martha	13	23 10	16	12 55	16	21 46	Norwegian	Amer-Hawaiian Line	404 6	54 0	19 6	Boston, Mass.	Tacoma, Wash.	(*) Case oil, kerosene, and gasoline.			
Pat Doneny	18	13 40	16	18 05	17	10 57	American										
Sunbeam	16	17 50	16	18 05	17	10 57	American										
Homestead	17	6 40	17	6 20	17	12 34	British										
American	16	22 55	17	6 25	17	13 03	British										

* Motor ship.

* Tanker.

* U. S. Army transport.

K. I. Luckenbach	17	5, 05	17	7, 20	17	13, 50	17	18, 23	American	Luckenbach Line	446.0	56.0	26.0	Boston, Mass	Seattle, Wash	General	5,785	8,552	6,236
Stella	17	16, 22	17	11, 00	17	18, 05	17	20, 40	Norwegian	Panama Mail S. S. Co.	185.0	32.0	16.8	Cristobal, C. Z.	Champerico, Guat	General	1,265	985	606
Collegian	16	16, 10	17	11, 45	17	18, 44	17	19, 10	British	T. & J. Harrison	455.4	56.0	19.10	Liverpool, England	Vancouver, B. C.	Ballast	7,712	5,437	
Colombia	16	2, 50	17	14, 12	17	20, 50	18	13, 45	American	Panama Mail S. S. Co.	380.0	48.7	25.9	New York, N. Y.	San Francisco, Cal.	General	3,304	6,015	4,281
Lio	17	16, 00	17	16, 15	18	17, 08	18	18, 31	American	Standard Transp. Co.	331.0	59.2	19.0	New York, N. Y.	Los Angeles, Calif	Ballast	7,846	5,112	
Santa Teresa	17	20, 35	18	6, 10	18	13, 20	18	17, 24	American	Grace Line	360.2	51.6	23.9	New York, N. Y.	Talcahuano, Chile	General	2,281	5,726	4,086
Niobe	17	20, 30	18	6, 15	18	14, 02			Danzig	Standard Shipping Co.	476.8	62.3	17.0	Rio de Janeiro, Br	Talara, Peru	Ballast	8,914	6,674	
San Francisco	17	5, 40	18	6, 08	18	14, 38	18	15, 35	German	Hamburg-Germany	432.0	59.0	25.0	Hamburg, Germany	Portland, Ore	General, bananas	5,592	8,454	6,344
W. S. Rheem	17	23, 50	18	7, 15	18	15, 11	18	22, 35	American	Standard Oil Co.	500.0	68.2	20.5	London, England	Los Angeles, Calif	Ballast	11,224	7,895	
Chifun Maru	18	00, 10	18	8, 25	18	15, 32	18	16, 50	Japanese	Kokusai Kisen Kaisha	385.0	51.0	20.0	Norfolk, Va.	Shanghai, China	Tobacco, autos	2,154	5,919	4,400
Carlton	18	2, 05	18	9, 35	18	16, 10	18	20, 22	British	R. Chapman & Son	390.0	53.2	16.0	Pto. Ferrato, Italy	Vancouver, B. C.	Ballast	5,612	4,119	
Doonet	18	5, 00	18	9, 45	18	17, 54	18	19, 07	American	Redwood Line	386.8	52.2	20.6	Mobile, Ala	San Francisco, Cal.	General	5,680	5,706	4,167
Santa Eulalia	18	9, 45	18	10, 05	18	17, 27	18	23, 15	American	Amer. & Cuban Line	251.0	63.0	23.0	Baltimore, Md	Hilo, T. H.	(9)	2,741	2,823	1,730
Standard Arrow	18	7, 00	18	11, 40	18	20, 31	18	20, 00	American	Standard Transp. Co.	467.6	62.7	21.0	Boston, Mass	Los Angeles, Calif	Ballast	9,698	6,783	
Pella	18	6, 00	18	13, 10	18	18, 50	18	22, 00	Italian	Nav. Libera-Tristina	430.9	55.0	16.0	Trieste, Italy	Vancouver, B. C.	General	2,197	7,781	5,863
George Washington	18	17, 25	19	6, 00	19	13, 24	20	20, 55	Norwegian	Fred Olsen & Co.	425.5	55.0	20.6	Antwerp, Belgium	Vancouver, B. C.	General	5,347	7,505	5,627
Cathwood	18	00, 20	19	6, 10	19	14, 23	19	15, 25	American	Union Oil Co.	435.0	56.0	19.0	Cristobal, C. Z.	Los Angeles, Calif	Ballast	7,481	5,143	
President Harrison	19	4, 20	19	7, 20	19	14, 11	19	21, 20	American	Dollar Line	502.1	62.2	25.0	New York, N. Y.	Around the world	General	5,175	12,031	8,495
Mantaro	13	20, 50	19	7, 05	19	15, 12	19	16, 30	Peruvian	Peruvian Line	360.0	46.0	17.2	Cristobal, C. Z.	Callao, Peru	General	356	4,838	2,959
East Indian	19	6, 15	19	8, 30	19	15, 55	19	17, 15	American	Ford Motor Co.	445.0	58.0	27.6	Baltimore, Md	Vancouver, B. C.	General	8,020	8,787	6,275
Preradovic	19	7, 48	19	9, 20	19	16, 17	19	17, 55	Yugoslav	Yugoslav-Am. Nav. Co.	420.5	54.5	25.0	Cardiff, England	Antofagasta, Chile	(7)	6,849	6,362	4,722
Hollywood	19	4, 35	19	9, 35	19	16, 43	19	17, 55	American	C. R. McGork S. S. Co.	410.0	54.0	17.0	Buenos Aires, Arg	Vancouver, B. C.	General	1,888	6,584	5,030
Marsdak	19	8, 25	19	10, 20	19	17, 11	19	23, 13	American	Charles Nelson & Co.	321.0	46.2	19.0	Baltimore, Md	Los Angeles, Calif	General, steel	2,880	3,984	2,628
Motrix	19	8, 35	19	13, 35	19	20, 12	20	00, 15	French	Cia. de Nav. Mixte	422.5	57.6	22.0	Rouen, France	San Francisco, Cal.	Ballast	4,080	9,165	7,056
Moerdijk	18	15, 35	19	13, 04	19	22, 02	19	23, 13	Dutch	Holland-American Line	473.0	61.0	20.9	Rotterdam, Holland	Vancouver, B. C.	General, bananas	8,131	1,154	663
Uribe	10	16, 10	20	6, 10	20	13, 40	20	15, 00	German	Estrada G. Hermanos	227.4	31.7	12.2	Cristobal, C. Z.	Buenaventura, Col.	General	130	1,183	742
Baralt	15	16, 40	20	6, 00	20	13, 20	20	14, 40	Dutch	Royal Neth. S. S. Co.	200.0	33.0	12.5	Cristobal, C. Z.	Buenaventura, Col.	General	130	1,183	742
Apure	19	20, 30	20	6, 08	20	13, 12			Venezuelan	Venezuela Gulf Oil Co.	325.0	55.0	12.0	Maracaibo, Venez.	Balboa, C. Z.	Ballast			
Pacific Re- lance	19	13, 03	20	7, 13	20	14, 22	20	15, 15	British	Furness, Withy & Co.	435.9	60.0	18.4	Glasgow-England	Vancouver, B. C.	General, bananas	1,275	9,644	6,967
A. L. Kent	19	20, 50	20	7, 13	20	15, 30	20	16, 41	American	Norton, Lilly & Co.	394.1	55.1	28.3	Baltimore, Md	Los Angeles, Calif	Steel, general	8,160	7,047	5,132
Greystoke Castle	19	21, 15	20	8, 15	20	16, 15	20	17, 03	British	Barber S. S. Line	428.0	56.1	21.0	New York, N. Y.	Shanghai, China	General	4,569	7,596	5,179
King Malcolm	19	21, 35	20	8, 47	20	16, 21	20	19, 55	British	Empire Shipping Co.	400.3	59.0	17.0	Hull, England	Vancouver B. C.	Ballast	133	1,132	741
Manizales	19	16, 05	20	9, 48	20	17, 20	20	19, 25	French	North German Lloyd	216.0	32.0	13.3	Cristobal, C. Z.	Guayaquil, Ecuador	General	3,849	6,394	4,464
Sonora	19	16, 30	20	10, 00	20	17, 16	20	18, 24	French	French Line	388.0	54.2	21.8	Havre, France	Yaguajay, Pinar del Rio	General, iron	1,163	1,273	706
Acajuta	10	17, 45	20	10, 35	20	18, 05	20	20, 30	British	Pacific Steam Nav. Co.	215.7	33.5	17.0	Cristobal, C. Z.	Champerico, Guat	General	1,919	1,919	875
All America	16	19, 00	20	12, 30	20	20, 00			American	All America Cable Co.	270.0	33.0	16.0	High seas	Balboa, C. Z.	Cable equipment	4,650	5,455	3,902
Orinoco	16	19, 00	20	12, 15	20	19, 37	20	20, 55	American	Quaker Line	381.0	52.3	20.0	Norfolk, Va.	Seattle, Wash	General	6,757	6,112	4,265
Ferribank	20	13, 25	20	13, 35	20	20, 35	21	00, 30	Norwegian	Fern Line	382.0	53.3	25.0	Tampa, Florida	Shanghai, China	(8)			
Sinnington Court	20	12, 13	20	14, 30	20	22, 45	21	00, 30	British	Heatley & Co.	420.0	56.2	15.0	Tyne, England	Vancouver, B. C.	Ballast			

s Phosphates and cotton.

7 Coal and patent fuel.

6 Timpale, sulphate, ammonia, and general.

s Cable ship.

r Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.			Gross.	Net.			
U. S. S. Swan ²	13	23	14	7	15	14	13	10	American	U. S. Navy	188	35	6	San Francisco, Cal.	Cristobal, C. Z.	Copper, general	1,350	3,983	2,631	
Plow City	13	20	14	7	15	14	14	35	American	Charles Nelson & Co.	324	46	2	San Francisco, Cal.	Baltimore, Md.					
August Leonhart	13	23	14	7	19	14	14	37	German	Cia. Mar. Colombiana.	345	46	0	Buenaventura, Col.	New York, N. Y.	Coffee, general	337	3,724	2,817	
Herakles	13	23	14	8	14	14	15	55	Norwegian	Brinsgaard & Co.	380	54	1	Los Angeles, Calif.	Rotterdam, Holland	General	7,400	3,680	4,221	
Vindland ¹⁰	14	9	14	8	20	14	16	40	Norwegian	Scand.-So. Pacific Co.	368	53	7	Iquique, Chile	Europe ¹²	Nitrates	7,232	3,423	3,965	
Santa Isabel	14	9	14	10	48	14	17	40	American	Island S. S. Lines	251	0	24	Honolulu, T. H.	New York, N. Y.	Canned fruits	1,165	3,823	1,740	
K. K. Kistiakis	14	17	15	14	18	05	15	12	Greek	K. Kistiakis	385	49	3	Tucupilla, Chile	Azores ¹²	Nitrates	7,117	4,885	3,479	
Havre Maru	14	13	15	6	36	15	13	50	Japanese	Osaka Shosen Kaisha	407	50	8	Hongkong, China	Boston, Mass.	General	2,618	6,539	4,773	
Sunewarke ¹⁰	14	21	15	6	36	15	14	35	American	Transmarine Lines	324	46	2	Bellingham, Wash.	New York, N. Y.	Lumber	3,750	3,984	2,628	
Ferrellif ¹⁰	15	00	15	7	21	15	15	17	Norwegian	Fearnley & Eger	382	8	13	New York, N. Y.	Habana, Cuba	Rice in bags	7,648	3,984	2,284	
Barak	15	6	15	7	51	15	16	40	Dutch	Royal Neth. S. S. Co.	210	33	0	Saigon, China	Cristobal, C. Z.	General	2,041	1,183	742	
Esequibo	15	1	15	8	10	15	16	03	British	Pacific Steam Nav. Co.	450	57	8	Guayaquil, Ecuador	Cristobal, C. Z.	General	3,200	9,037	6,176	
City of Panama ¹⁰	15	8	15	9	05	15	17	00	Panaman.	Panama Mail S. S. Co.	296	45	9	Talcahuano, Chile	New York, N. Y.	General	443	3,848	2,603	
Elax ¹⁰	15	8	15	12	56	15	19	45	British	Anglo-Saxon Post Co.	440	59	5	San Francisco, Cal.	Alexandria, Egypt	Bulk kerosene	9,100	7,897	4,778	
Legazpi	14	23	15	13	19	15	21	10	Spanish	Cia. Transatlantica	375	6	18	Valparaiso, Chile	Barcelona, Spain	General	507	4,506	2,822	
Tottori Maru	15	14	15	14	58	15	22	05	Japanese	Nippon Yusen Kaisha	422	55	6	Yokohama, Japan	London, England	Salmon	6,420	6,434	4,667	
Venezuela	15	3	15	6	28	15	13	12	American	Panama Mail S. S. Co.	380	48	7	San Francisco, Cal.	New York, N. Y.	General	2,025	6,033	4,353	
Montreal ¹⁰	15	3	15	6	39	15	14	25	British	Imperial Oil S. Co., Ltd.	510	68	3	Talara, Peru	Montreal, Canada	Crude oil	15,265	11,555	7,639	
Canadian Miller	15	18	16	7	00	16	15	50	British	Can. Nat. Steamships	400	63	29	Vancouver, B. C.	Montreal, Canada	Lumber, general	5,604	5,892	4,186	
Calmar	16	1	16	8	26	16	16	40	American	Amer-Hawaiian Line	381	51	2	San Francisco, Cal.	Philadelphia, Pa.	General	6,482	6,347	4,453	
Supportco	16	1	16	8	56	16	17	55	American	Transmarine Lines	324	46	2	Tacoma, Wash.	Newark, N. J.	Lumber	4,200	3,984	2,612	
Ani	16	00	16	9	25	16	18	50	Belgian	Cia. Inter. D'Conn. et D'Armement	400	52	1	Iquique, Chile	Azores ¹²	Nitrates	8,160	6,617	4,792	
Harbridge	16	4	16	9	43	16	19	05	British	Crosby-Magee & Co.	390	55	0	Vancouver, B. C.	Boston, Mass.	Lumber	7,400	6,179	4,521	
Adolf Von Baeyer	16	8	16	10	15	16	19	35	German	Hamburg-American Line	409	53	9	Antofagasta, Chile.	Hamburg, Germany	General	6,273	7,173	5,514	
Manizales	16	4	16	10	42	16	19	05	German	Roland Line	210	33	0	Guayaquil, Ecuador	Cristobal, C. Z.	General	442	1,132	741	
Texas	16	10	16	11	40	16	20	05	French	French Line	409	52	6	Vancouver, B. C.	Havre, France	General	6,955	6,824	4,885	
Horace Lockenbach	16	14	16	15	09	16	21	45	American	Lockenbach Line	445	58	0	Portland, Oreg.	Boston, Mass.	General	10,458	8,699	6,363	
Kensington Court	16	20	17	7	02	17	14	35	British	Haldin & Co.	396	53	2	Portland, Oreg.	Valencia, Spain	Wheat	7,100	5,524	3,754	
Richmond ¹¹	17	2	17	7	16	17	14	45	American	Aikin Towboat Co.	135	27	5	Buenaventura, Col.	Habana, Cuba	General	7,100	5,524	324	
Pacific Enterprise ¹⁰	17	1	17	7	50	17	15	15	British	Furness, Withy & Co.	435	60	2	Vancouver, B. C.	Glasgow-Scotland	General	7,904	9,641	6,989	
Apurimac	3	6	15	17	12	41	17	21	Peruvian	Peruvian Line	382	48	2	Callao, Peru	Göteborg-Sweden	Sugar	5,430	4,867	3,544	
Californian ¹⁰	17	12	17	13	14	17	20	10	American	Amer-Hawaiian Line	445	59	8	Portland, Oreg.	Boston, Mass.	General	10,641	8,507	6,020	
											Motor ship.								or orders.	
											Minisweeper.									

¹² For orders.¹¹ Tug.¹⁰ Motor ship.⁹ Minesweeper.⁸ Tanker.

Invisible	17	13	45	17	14	30	17	22	25	American	Amer.-Pioneer Line	440.0	56	0	27	0	Manila, P. I.	Boston, Mass.	(13)	9,880	8,329	6,157
Cathwood	17	8	45	17	14	41	17	22	25	American	Union Oil Co. of Calif.	435	56	0	29	6	Los Angeles, Calif.	Cristobal, C. Z.	Fuel oil	10,000	7,482	5,143
Santa Fe	17	15	20	17	16	08	18	14	18	American	N. O. & S. A. S. Co.	508	60	0	23	0	New Orleans, La.	Nitrates, ores	3,500	2,832	1,803	
Corinth	17	17	15	18	6	18	18	14	18	British	Shaw, Savill & Albion	500	63	6	24	0	Wellington, N. Z.	London, England	Frozen, general	4,079	12,821	9,507
Abron	17	18	40	18	6	28	18	15	15	American	Redwood Line	386	8	52	24	9	San Francisco, Cal.	Mobile, Ala.	(17)	6,300	5,732	4,131
Galle	17	23	02	18	7	09	18	14	50	British	White Star Line	436	58	6	27	9	Auckland, N. Z.	Glasgow-Scotland	Frozen, general	3,458	8,278	5,304
Delaware Sun	17	00	30	18	7	45	18	16	35	American	Sun Oil Co.	480	5	66	0	28	Los Angeles, Calif.	New York, N. Y.	Gas oil	13,031	9,402	6,586
Oriele	18	3	40	18	8	21	18	16	55	American	Quaker Line	410	5	54	2	26	Portland, Oreg.	Philadelphia, Pa.	Lumber, wheat	7,000	6,755	4,873
Bessy	17	1	00	18	8	21	18	16	55	Panama	H. Elliot	47	0	15	0		San Francisco, Cal.	London, England	Ballast	8,406	7,384	4,769
Breda	18	5	00	18	8	36	18	17	35	Dutch	Royal Neth. S. S. Co.	402	6	58	3	27	Valparaiso, Chile	Hamburg, Germany	General	9,078	6,977	4,959
Camden	18	5	46	18	9	08	18	17	55	American	United Fruit Co.	419	5	66	0	26	Port Limon, C. R.	Port Limon, C. R.	Fuel oil	11,365	9,346	6,063
Leda	18	6	00	18	9	37	18	18	45	Danzig	Standard Shipping Co.	489	0	63	0	26	Talara, Peru	Hallifax, N. S.	Crude oil	697	3,673	2,367
Esparita	18	8	45	18	9	57	18	19	25	American	United Fruit Co.	330	6	44	6	17	San Francisco, Cal.	Port Limon, C. R.	General	4,250	3,984	2,628
Tashmoo	13	3	05	18	10	22	18	20	18	20	American	Charles Nelson & Co.	324	0	46	2	24	Baltimore, Md.	Lumber, general	13,000	7,218	5,025
Inlay	18	13	40	18	14	42	18	22	20	American	C. D. Mallory & Co.	425	3	57	0	29	La Libertad, Eadl.	Philadelphia, Pa.	Crude oil	7,850	7,004	4,849
Impero	18	19	50	19	6	56	19	14	25	Italian	Soc. Anonima Com.	442	1	52	7	26	Iquique, Chile.	Europe	Nitrates	7,850	7,004	4,849
Almagro	19	8	50	19	9	50	19	17	12	British	Pacific Steam Nav. Co.	303	0	43	0	14	Callao, Peru	New York, N. Y.	General	722	2,628	1,770
Birmingham	19	11	00	19	11	40	19	18	55	American	Isthmian S. S. Lines	395	5	55	0	27	Vancouver, B. C.	Avonmouth, Eng.	General	7,929	7,304	5,188
City	19	6	13	20	6	13	20	13	10	American	U. S. Navy	231	0	20	0		Balboa, C. Z.	Cristobal, C. Z.	General	3,500	3,984	2,617
S-16	20	3	00	20	7	15	20	15	35	American	Swaync & Hoyt	324	0	46	2	21	Portland, Oreg.	New Orleans, La.	General			
Point Bonita	20	7	24	20	7	24	20	15	30	American	U. S. Army	162	0	30	2		Balboa, C. Z.	Cristobal, C. Z.	Wheat	8,107		
Gen. Wm. M. Graham	20	6	30	20	8	02	20	16	35	British	R. Chapman & Son	409	0	54	0	26	Portland, Oreg.	Queenstown, Ire.	Nitrates	8,099	6,609	4,973
Riverton	20	7	15	20	8	40	20	18	10	American	Chile S. S. Corp	411	5	54	0	24	Tocopilla, Chile	Savannah, Ga.	General	199	410	307
Florence	20	11	50	20	12	54	20	22	30	Colombian	Colombian Transp. Co.	150	0	51	2	8	Buenaventura, Col.	Cristobal, C. Z.	Nitrates	5,471	6,224	4,465
Pennmar	20	12	40	20	13	20	20	21	10	American	Calmar S. S. Corp	385	0	51	2	24	Seattle, Wash.	New York, N. Y.	Lumber	7,852	6,219	4,511
Belgium Maru	20	14	50	20	15	41	20	23	30	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	Portland, Oreg.	Queenstown, Ire.	Wheat	7,852	6,219	4,511
Willesden	20	16	00	20	17	01	21	11	35	British	Britain S. S. Co., Ltd.	400	0	52	3	27	Tocopilla, Chile	Alexandria, Egypt	Nitrates	7,311	6,363	4,669
C. O. Stillman	20	16	35	20	17	18	21	13	00	British	Inter. Petroleum, Ltd.	565	7	75	6	34	Talara, Peru	New York, N. Y.	Crude oil	21,115	16,780	9,885

16 Motor schooner.

15 Submarine.

16 Mine planter.

Lumber and canned goods.

1 Tanker.

13 Sugar, coconut oil, capra, pineapples, and fuel oil.

14 Motor schooner.

15 Submarine.

16 Mine planter.

17 Lumber and canned goods.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 14.	Calameres	United Fruit Co.	Port Limon, Costa Rica.	October 14.	Anachucuna	United Fruit Co.	Colon, R. P.
October 14.	El Atrato	The Atrato Co.	Cartagena, Colombia.	October 14.	Bowden	United Fruit Co.	Mobile, Ala.
October 15.	Pastores	United Fruit Co.	New York via Habana.	October 14.	Calameres	United Fruit Co.	New York via Habana.
October 16.	Perou	French Line	St. Nazaire via wayports.	October 14.	Maravi	United Fruit Co.	New York via Kingston.
October 16.	U. S. S. Cleveland	U. S. Navy	Bluefields, Nicaragua.	October 15.	Cariego	United Fruit Co.	New Orleans and wayports.
October 16.	Linda S.	Surgeon Brothers	Colon, R. P.	October 15.	Ancon	Patana R. R. S. S. Line.	New York via Haiti.
October 17.	Granada	Standard Fruit, S. S. Co.	New Orleans, La.	October 16.	Linda S.	Surgeon Brothers	Bluefields, Nicaragua.
October 17.	Sixola	United Fruit Co.	New York via Kingston.	October 17.	Endurance	D. L. Lynton	San Andres, Colombia.
October 17.	Saramacca	United Fruit Co.	New Orleans, La.	October 17.	Peron	French Line.	St. Nazaire and wayports.

18 Motor ship.

19 Motor schooner.

20 Motor boat.

21 Other than ships passing through the Canal.

(Continued on page 180.)

Cargo Through Canal During September, 1928.

On pages 176 and 177 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in September, 1928. This cargo, segregated according to direction, as compared with September, 1927, and the differences, are shown in the following tabulation:

	September, 1928.	September, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	709,654	594,949	+114,705
Pacific to Atlantic.....	1,603,357	1,802,894	-199,447
Totals.....	2,313,011	2,397,753	-84,742

As will be noted above, tonnage from the Atlantic to the Pacific increased 114,705 tons over that in September, 1927. This was due primarily to the increased shipments of manufactured iron and steel, automobiles, railroad material, and metals.

The decreased tonnage from the Pacific to the Atlantic continues from the depressed condition of mineral oil traffic, although there were also rather heavy decreases in wheat and lumber. These shipments began to decline in the early part of the current calendar year owing to activities in regions on the Atlantic coast. The reduction in Atlantic-bound mineral oil cargo for the first nine months of the current calendar year as compared with the first nine months of the calendar year 1927 has averaged almost 200,000 tons per month. The movement of wheat through the Canal during September, 1928, fell below the tonnage of this commodity passing through in September last year to the extent of some 70,000 tons. A recent shipping publication states that the inactivity in grain is attributed to disparity in prices between America and Europe, that the world's wheat crop seems to be one of the largest in history, and foreign buyers are holding off for lower prices.

Lumber also showed a decrease under September of last year in the amount of 68,000 tons.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Over 67 per cent of the cargo moving from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States and 24.8 per cent in Europe. Cargo originating in the United States was 128,500 tons, or almost 37 per cent, greater than the amount coming from that area in September, 1927. The total amount coming from the United States also showed a relative increase, the amount coming from that area in September last year representing 58 per cent of the total. Cargo from Europe showed a relative as well as a small actual decrease under that of September, 1927, the actual decrease amounting to about 10,000 tons.

Destination.—Almost 45 per cent of the Pacific-bound cargo was destined to the United States; 20.7 per cent to Asia (including the Philippines); 16.6 per cent to Australasia; and 12.3 per cent to South America. Cargo tonnage to the United States, Asia, and Australasia, showed relative as well as actual increases over the corresponding month a year ago, the actual increases to these areas amounting to 67,175 tons, or 26.6 per cent; 44,410 tons, or 43.3 per cent, and 23,105 tons, or 24.4 per cent, respectively. Cargo to South America was relatively lower than in September, 1927, although the actual tonnage was about the same.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 60.2 per cent originated on the west coast of the United States; 27.9 per cent in South America; 5.6 per cent in Canada; 3.0 per cent in Australasia; and 2.9 per cent in Asia. Cargo from the United States showed a decrease under September, 1927, of 294,195 tons, or 23.4 per cent. The percentage of the total from the United States in September last year was 69.7 per cent as compared with 60.2 per cent of the total in September this year. Cargo tonnage from South America, Canada, Australasia, and Asia, showed relative as well as actual increases over September, 1927, the actual increases amounted to 56,509 tons, or 14.5 per cent; 15,914 tons, or 21.3 per cent; 10,121 tons, or 27 per cent, and 23,870 tons, or 106 per cent, respectively. Decrease in shipments of mineral oils, wheat, and lumber, contributed largely to the heavy loss in tonnage from the United States.

Destination.—Segregated according to destination, 53 per cent of the cargo in this direction went to the United States, and 37 per cent to Europe. Tonnage to the United States decreased 212,048 tons, or 20 per cent, as well as a relative decrease in its proportion of all cargo from the Pacific, as compared with September last year, while that to Europe increased 47,575 tons, or 8.7 per cent, under September, 1927, together with a rather heavy relative increase in proportion of all cargo. The heavy decrease of cargo tonnage to the United States was due to light mineral oil shipments to that area.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify almost 85 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 15 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic-to-Pacific-bound commodities which aggregated more than 10,000 tons for September, 1928, or September, 1927, are listed in the following tabulation, showing differences:

Commodity.	September, 1928.	September, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Automobiles	24,303	10,987	+13,316
Cement	12,798	22,347	-9,549
Coal and coke	27,527	18,238	+9,289
Cotton	19,026	11,817	+7,209
Cresote	9,040	17,250	-8,210
Manufactured goods:			
Iron and steel	191,900	112,026	+79,874
Machinery	13,823	14,529	-706
Railroad material	44,924	5,894	+39,030
Tinplate	14,454	8,652	+5,802
Textiles	13,066	7,144	+5,922
Miscellaneous	10,436	2,378	+8,058
Metals, various	18,031	4,357	+13,674
Oils, mineral	39,148	68,631	-29,483
Paper	12,904	14,008	-1,104
Phosphates	9,206	12,451	-3,245
Sulphur	15,613	10,275	+5,338
Tobacco	12,521	4,383	+8,138

The above 17 commodity groups comprise approximately 68 per cent of the cargo moving from the Atlantic to the Pacific during September, 1928. It will be noted that 11 of these items show increases and 6 decreases. The heaviest increases were in iron and steel, while mineral oils showed the heaviest decrease.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify almost 99 per cent of all cargo moving from the Pacific to the Atlantic during the month of September, 1928. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month a year ago are listed below, showing differences:

Commodity.	September, 1928.	September, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley	23,205	30,502	-7,297
Beans	10,128	5,581	+4,547
Canned goods (fish, fruit, vegetables, etc.)	87,610	79,051	+8,559
Cold storage (food products) ¹	22,178	13,649	+8,529
Fruit, dried	27,383	17,057	+10,326
Lumber	263,609	331,208	-67,599
Metals, various	51,664	45,883	+5,781
Oils, mineral	455,509	663,410	-207,901
Ores (principally iron)	148,441	121,225	+27,216
Rice	15,298	4,130	+11,168
Sugar	49,391	24,476	+24,915
Wheat	137,592	207,226	-69,634

¹ Does not include fresh fruit.

The above 12 commodity groups comprise over 89 per cent of the cargo moving from the Pacific to the Atlantic during September, 1928. Eight of the items show increases and 4 decreases. The heaviest increase was in sugar, which showed a gain of 24,915 tons over September, 1927. Mineral oils, wheat, and lumber decreased heavily.

(Continued on page 176.)

Cruise of the "Carnegie."

The yacht *Carnegie*, which is owned by the Department of Terrestrial Magnetism of the Carnegie Institution of Washington, D. C., and engaged in a magnetic survey of the oceans, transited the Canal from the Atlantic on October 11, 1928, and is scheduled to sail from Balboa on October 25. She sailed from Washington on May 1, 1928, and visited England, Germany, Iceland, and the West Indies before reaching the Canal.

The purpose of the present cruise of the *Carnegie* is to find out what changes have taken place in the magnetic elements over the various ocean areas since the six previous cruises of the vessel made from 1909 to 1921. This information bears on unsolved problems and is to supply the values needed to keep up to date the navigation charts used by navigators of the air as well as of the sea. Among the unsolved problems are the origin of the earth's magnetic field, the causes of the daily and seasonal changes in this field, the close relation between magnetic storms and the occurrence of polar lights and changes in the condition of the sun, and why there are 11-year periods in magnetic changes coincident with the 11-year periods in sunspot activity. To obtain the maximum of data regarding these changes, it has been planned to retrace to a large extent the tracks of former cruises. The second important investigation will consist of a continuation of the study of the earth's electric field. The importance of investigations such as this has increased in recent years because of the variations in atmospheric electricity and variations in magnetic conditions. New theories regarding the nature of electricity and the constitution of matter and rapid advances made in radio transmission have emphasized the need of observations.

The northern winter months are to be spent in the South Pacific, the yacht visiting the Society Islands, Easter Island, and Peru, and going north to Japan and California next summer; and so on around the world, following the sun in order to avoid storms and delays due to wintry weather and to improve the conditions for investigations. Among the places to be visited after California are Honolulu, Samoa, New Zealand, Cape Horn, South Georgia, South Africa, Ceylon, India, Western Australia; across the South Pacific again and around the Horn to Buenos Aires, Argentina, St. Helena, Azores, Maderia, and back to Washington in September, 1931.

In her previous six voyages on magnetic surveys the *Carnegie* covered over 290,000 miles. The vessel made three prior transits of the Canal, in 1915, 1918, and 1921. During the period intervening between 1921 and the beginning of her present cruise she was out of commission. Accounts of the work of the *Carnegie* appeared in THE PANAMA CANAL RECORD of April 14, 1915, and October 12, 1921, at the time of two of her previous transits of the Canal.

The yacht is 135.6 feet long, 32.2 feet beam, and of 324 gross tons. Capt. J. P. Ault, the commander and chief of the scientific staff, has been in command of the *Carnegie* on three previous cruises, each of the two latter lasting two years. On her present cruise four American youths of the Canal Zone signed on from Balboa as members of the crew.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 22, 1928.

No. 470.

The following appeared in Notice to Mariners, Washington, D. C., October 13:

Colombia, Puerto Colombia. Lafayette Rock gas buoy reestablished. The master of the Norwegian motor ship *Knute Nelson* reports that Lafayette Rock gas buoy has been reestablished 482 yards 273° from the pier head. Approximate position: 11° 00' 15" N., 74° 59' 20" W.

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending October 21, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Albingia.....	Hamburg-American Line.....	October 15.....	October 15.....	17	
Booskoop.....	Dutch Line.....	October 14.....	October 14.....	200	
Havre Maru.....	Nippon Yusen Kaisha.....	October 14.....	October 15.....	63	
U. S. S. Sapelo.....	U. S. Navy.....	October 14.....	October 15.....	1	
Venezuela.....	Panama Mail S. S. Co.....	October 15.....	October 16.....	405	28
Shabonee.....	Standard Transportation Co.....	October 15.....	October 17.....	6,830	
Chateau Thierry.....	U. S. Army.....	October 15.....	October 16.....		
City of Panama.....	Panama Mail S. S. Co.....	October 15.....	October 15.....	46	
Legazpi.....	Spanish Line.....	October 15.....	October 15.....	145	
Manizales.....	Hamburg-American Line.....	October 16.....	October 16.....	50	
Cathwood.....	Union Oil Co.....	October 17.....	October 17.....	170	
A. B. de O'Barrio.....	Pacific Fruit Co.....	October 17.....	October 17.....	25	
Bessie.....	Pacific Fruit Co.....	October 17.....	October 18.....	14	
Colombia.....	Panama Mail S. S. Co.....	October 17.....	October 18.....	55	
H. M. Storey.....	Standard Oil Co. of California.....	October 18.....	October 19.....	14,720	
President Harrison.....	Dollar Line.....	October 19.....	October 19.....	10	3
George Washington.....	Fred Olsen & Co.....	October 20.....	October 20.....	1,196	
Albert Vogler.....	Hamburg-American Line.....	October 21.....	October 21.....		
Dos Hermanos.....	A. Valdez.....	October 17.....	October 17.....	43	

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, September, 1928.—Continued from page 174.
(Figures represent tons of 2,240 pounds.)

From—	SOUTH AMERICA.					NORTH AMERICA.								ASIA.					AUSTRALASIA.			Grand totals.	Per cent of total cargo.	
	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America. ¹	West coast of United States.	West coast of Canada.	West coast of Central America.	West coast of North America. ²	Balboa, C. Z. ³	Hawaii.	Total, North America.	Japan.	China.	Philippines.	Far East. ¹	Total, Asia.	Australia.	New Zealand.	Australasia. ¹			Total, Australasia.
NORTH AMERICA:																								
UNITED STATES—																								
North Atlantic ports	11,397	2,312	169	4,297	9,918	28,093	208,017	1,259	7,798		2,515	222,591	30,371	25,564	10,001	19,400	85,336	26,215	2,673	100	28,988	365,008	51.5	
South Atlantic ports							727	2,375				3,102	1,958				1,958				3,060	0.7		
Gulf ports.	1,697	164	204	436	734	3,235	34,208	1,000				552	35,760	48,249	1,740	2,536	52,525				15,323	106,843	15.0	
Totals, U. S.	13,094	2,476	373	4,733	10,652	31,328	242,952	4,634	7,798			2,607	261,453	80,578	27,304	12,537	19,400	139,819	26,215	2,673	15,423	44,311	476,911	67.2
CRISTOBAL, C. Z. ²													8,728	23			23						14,392	2.0
East coast of Canada.	669	2,260	1,954	642	116	5,641	4,239		4,489				2,103	307			2,580	2,887	7,964	7,395		15,359	20,439	2.9
West Indies.							4,020						4,020										4,020	0.6
E. coast of Mexico and Central America.							2,798						2,798	3,323				3,323	6,001			6,001	12,122	1.7
Totals, N. America.	13,763	4,736	2,327	5,375	10,768	36,969	254,009	6,827	12,287			2,607	279,192	84,231	27,304	12,537	21,980	146,052	40,180	10,068	15,423	65,671	527,884	74.4
EUROPE:																								
British Isles	13,993	80	258	3,760	7,970	26,061	6,675	5,070					11,745									51,790	89,596	12.6
Belgium	2,497	47	503	681	1,281	5,009	30,406	1,698			190		32,294									37,303	5.3	
Denmark							16	17					33										33	
France.			51	57	87	195	2,268	1,160					3,428									3,623	0.5	
Germany	2,298	1,027	480	1,822	1,610	3,905	19				825		4,749									11,966	1.7	
Holland	1,011	165	93	904	7,217	11,030	1,048						12,078									14,251	2.0	
Italy	12			14	703	729	651	116	47				814									1,543	0.2	
Norway and Sweden.	146			83	821	1,050	2,254	376	1,967		1,454		6,051									6,051	0.9	
Spain and Portugal.	315	5	27	37	5,503	5,887	4,498						4,498									1,050	0.1	
Europe ¹	20,272	1,324	1,392	7,358	17,975	48,321	61,703	9,504	2,014		2,469		75,690									10,385	1.5	
Totals, Europe.																								
E. coast of S. America.		1,733				1,733	3,369	3					3,372	864					864				5,969	0.8
Grand totals.	34,035	7,793	3,719	12,733	28,743	87,023	319,081	16,344	14,301		2,471	6,067	358,254	85,095	27,304	12,537	21,980	146,916	40,180	56,345	20,936	117,461	709,854	
Per cent of total cargo:																								
September, 1928.	4.8	0.1	0.6	1.8	4.0	12.3	44.9	2.3	2.0		0.3	0.9	50.4	12.0	3.8	1.8	3.1	20.7	5.7	7.9	3.0	16.6	100.0	
September, 1927.	5.7	1.1	0.5	2.8	4.8	14.9	42.3	3.3	3.0	1.5	1.6	0.4	52.1	8.3	7.1	1.4	0.3	17.1	6.5	9.4	1.1	15.9	100.0	
September, 1926.	1.4	0.4		0.7	10.1	12.6	41.2	5.1	1.5	3.1			50.9	2.2	8.5	0.4	7.6	18.7	8.7	8.0	1.1	17.8	100.0	

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, September, 1928.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.												Grand totals.	Per cent of total cargo.		
	UNITED STATES.					CENTRAL AMERICA.					EUROPE.															
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	West Indies.	East coast of Central America.	Cristobal, C. Z. ²	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ¹	Total, Europe.	East coast of South America.	Egypt.			South Africa.	
SOUTH AMERICA:																										
Chile.....	152,439	6,000	7,194	165,633	10,450	556		14,176,653	15,814	528		7,076	9,437	1,503	105,117	3,350	71,568	119,793		40,18,423				314,909	19.7	
Colombia.....	120			120				2,021	2,141															2,141	0.1	
Ecuador.....	6,990			6,990				2,784	9,774	26														10,940	0.7	
Peru.....	4,544	4,100		8,644	48,137			4,343	61,124	21,583,200			25	845	316	16	9,423		12,045	47,453	8,537			117,114	7.3	
W. coast S. Amer..				296				296	296	115			75			122			717	1,029				1,325	0.1	
Totals, S. America.	164,093	10,100	7,194	181,387	58,587	556		9,458	249,988	37,538,3728			7,404	10,282	1,819	11,005	9,423	786	84,440	169,425	8,593	18,423		446,429	27.9	
NORTH AMERICA:																										
West coast Canada	14,661			14,661	15,416	1,831		13	31,921	26,509,301			47	1,074	3,698	13,847			5,989	54,465	399			3,730	90,515	5.6
W. coast Cen. Amer.	2,006			2,006		3		1,401	3,720						100				319	3,151				6,871	0.4	
W. coast of U. S.	559,250	13,637	30,959	603,846		9,087	3,246	12,968	629,147	195,553	686	1,431	13,271	18,698	11,082	8,518	2,022		77,988	329,249	533			962,349	60.2	
Hawaii.....	2,448			2,448				2,924	2,924															2,924	0.2	
Balboa.....	195			195					195															195		
Totals, N. Amer.	578,560	13,637	31,435	623,632	15,416	10,921	3,556	14,382	667,907	222,062,398	1,478	14,345	22,496	24,929	8,518	2,022	2,732		84,296	380,865	932			7,350	1,063,054	66.4
ASIA:																										
China.....	4,284			4,284		5,210		364	9,858																9,858	0.6
Japan.....	1,779			1,779					1,779																1,779	0.1
Philippines.....	11,287			11,287					20,923																20,923	1.3
Far East.....	2,758			2,758		7,350			10,108	3,584										3,584				13,692	0.9	
Totals, Asia.....	20,108			20,108		12,560		364	42,668	3,584										3,584				46,252	2.9	
AUSTRALASIA:																										
Australia.....	1,709			1,709	567				2,276																2,276	0.1
New Zealand.....	6,900			6,900				85	6,985	20,864										20,864				27,849	1.8	
Australasia.....	6,110			6,110					6,110				3,187				8,200			11,387				17,497	1.1	
Totals, Australasia.....	14,719			14,719	567			85	15,371	20,864			3,187				8,200			32,251				47,622	3.0	
Grand totals.....	777,480	23,737	465,849	1,266,066	74,570	24,037	3,556	24,289	975,934	284,048	715	14,782	24,936	32,778	26,748	19,523	19,645	6,518	168,736	592,125	9,525	18,423	1,603,357			
Per cent of total cargo:																										
September, 1928.....	48.5	1.5	3.0	53.0	4.6	1.5	0.2	1.5	60.8	17.7	0.5	0.1	1.6	2.0	1.7	1.2	1.2	0.4	10.6	37.0	0.6	1.1	0.5		100.0	
September, 1927.....	52.6	3.7	2.5	58.8	1.4	1.0	0.7	5.6	67.5	12.3	1.9	...	0.2	2.7	1.7	0.9	0.4	0.1	10.0	30.2	1.6	0.7		100.0		
September, 1926.....	58.0	1.0	2.7	61.7	6.8	0.8	0.1	3.2	72.6	13.3	0.3	...	0.3	2.1	0.3	0.6	0.5	0.2	9.2	26.0	0.1	0.5		100.0		

¹ General cargo not routed so as to allow segregation between definite ports.² Includes both local and transit cargo.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
For steamships, including warships of all nations when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.....	11.00	14.00

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending October 13, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Tolosa.....	United Fruit Co.	October 7.....	October 7.....	8	490
Agwidale.....	Mallory S. S. Line.....	October 7.....	October 7.....		490
Cerigo.....	Hamburg-American Line.....	October 7.....	October 7.....		338
Alvarado.....	Pacific Steam Navigation Co.	October 7.....	October 7.....		5
Arkansas.....	French Line.....	October 7.....	October 7.....	39	40
Saale.....	North German Lloyd.....	October 7.....	October 8.....	(¹)	325
Heredia.....	United Fruit Co.	October 7.....	October 8.....		207
Guayaquil.....	Panama Railroad S. S. Line.....	October 7.....	October 8.....	439	4
Coppename.....	United Fruit Co.	October 7.....	October 8.....	(¹)	323
Calamares.....	United Fruit Co.	October 8.....	October 10.....	1,150	30
Galicia.....	Hamburg-American Line.....	October 9.....	October 9.....	7	275
Corinto.....	Panama Mail S. S. Line.....	October 9.....	October 9.....	890	
Pacific Grove.....	Furness, Withy & Co.	October 9.....	October 9.....		49
Balboa.....	Johnson S. S. Line.....	October 9.....	October 9.....	(¹)	139
Mayari.....	United Fruit Co.	October 9.....	October 9.....	15	692
Calcutta Maru.....	Nippon Yusen Kaisha.....	October 9.....	October 9.....	316	(²)
Loreto.....	Pacific Steam Navigation Co.	October 10.....	October 10.....	(¹)	72½
Acajutla.....	Pacific Steam Navigation Co.	October 10.....	October 10.....	183	
Uribe.....	Estrada G. Hermanos.....	October 10.....	October 10.....	525	
Simon Bolivar.....	Royal Netherlands S. S. Co.	October 10.....	October 10.....	20	(²)
Planet.....	Hamburg-American Line.....	October 10.....	October 10.....	45	(¹)
Waunta.....	Standard Fruit S. S. Co.	October 10.....	October 11.....	(¹)	2
Stella.....	Panama Mail S. S. Co.	October 10.....	October 10.....	357	
Tivives.....	United Fruit Co.	October 10.....	October 11.....	354	393
Ancon.....	Panama Railroad S. S. Line.....	October 10.....	October 10.....	4,359	
Garfield.....	N. O. & S. A. S. S. Co.	October 11.....	October 12.....	82	209
Buenaventura.....	Panama Railroad S. S. Line.....	October 11.....	October 12.....	587	391
San Mateo.....	United Fruit Co.	October 11.....	October 12.....	537	124
Wido.....	North German Lloyd.....	October 11.....	October 12.....	120	50
Kyphissia.....	Hamburg-American Line.....	October 11.....	October 12.....	127	(²)
Chiman.....	Isthmian Land & Fruit Co.	October 11.....	October 13.....	(¹)	317
Ebro.....	Pacific Steam Navigation Co.	October 11.....	October 12.....	3	(²)
William M.....	R. Feuillebois.....	October 12.....	October 12.....	(¹)	26
Dinteldijk.....	Holland-American Line.....	October 12.....	October 13.....	12	402
Cali.....	North German Lloyd.....	October 12.....	October 12.....		359
Simon Bolivar.....	Royal Netherlands S. S. Co.	October 12.....	October 13.....	50	521
Gatun.....	Standard Fruit Co.	October 12.....	October 13.....	320	683
Buenos Aires.....	Spanish Line.....	October 12.....	October 13.....	229	(²)
Paraguay.....	Hamburg-American Line.....	October 12.....	October 13.....	811	
Oroya.....	Pacific Steam Navigation Co.	October 13.....	October 13.....	(¹)	14½
Mantaro.....	Peruvian Line.....	October 13.....	October 13.....	2,002	
Maravi.....	United Fruit Co.	October 13.....	October 13.....	22	
Durazzo.....	Hamburg-American Line.....	October 13.....	October 13.....	532	
Bowden.....	United Fruit Co.	October 13.....	October 13.....	(¹)	540
Waunta.....	Standard Fruit S. S. Co.	October 13.....	October 13.....	135	(²)
Boskoop.....	Royal Netherlands S. S. Co.	October 13.....	October 13.....	246	
Santa Cruz.....	Grace Line.....	October 13.....	October 13.....	26	
Cartago.....	United Fruit Co.	October 13.....	October 13.....	550	
Suriname.....	United Fruit Co.	October 13.....	October 13.....	519	38

* No cargo discharged.

* No cargo laded.

* One case.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1928, of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the passenger steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	Leave New York 3 p. m.	Leave Port-au-Prince p. m.	Arrive Cristobal a. m.	Leave Cristobal 3 p. m.	Leave Port-au-Prince p. m.	Arrive New York a. m.
<i>Cristobal</i>	October 16....	October 21....	October 24....	October 28....	October 31....	November 5.
<i>Ancon</i>	October 30....	November 4....	November 7....	November 11..	November 14..	November 19.
<i>Cristobal</i>	November 13..	November 18..	November 21..	November 25..	November 28..	December 3.
<i>Ancon</i>	November 27..	December 2....	December 5....	December 9....	December 12..	December 17.
<i>Cristobal</i>	December 11..	December 16..	December 19..	December 23..	December 26..	December 31.
<i>Ancon</i>	December 24..	December 29..	January 1....	January 6....	January 9....	January 14.

Steamers sail at 3 p. m. from Pier 65, North River, foot of West 25th St., New York.

Both steamers call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of steamers at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

West coast freight service.—In addition, a regular freight service is maintained from New York, with occasional calls at Haiti and to Cristobal, Buenaventura and Ecuadorian ports. Particulars upon application to the Panama Railroad Co., 24 State Street, New York, or Balboa Heights, Canal Zone.

Tolls Charges for Transit of The Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity..... \$1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity..... .72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton..... .50
4. 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
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton.
6. Vessels returning from Gatun Lake to original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 13 years of operation.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 171.

PORT OF CRISTOBAL.—Continued.				* DEPARTURES.			
* ARRIVALS.		From—		Date.	Vessel.	Line.	For—
Date.	Vessel.	Line.					
October 17.	Manaquí	United Fruit Co.	New York via wayports.	October 17.	Pastores	United Fruit Co.	Port Limon, Costa Rica.
October 17.	Endurance ²⁰	D. L. Lynton	Colon, R. P.	October 17.	Inapaquina ²¹	United Fruit Co.	Colon, R. P.
October 17.	Inapaquina ²¹	United Fruit Co.	Colon, R. P.	October 18.	Anachucuna ²¹	United Fruit Co.	Colon, R. P.
October 17.	Pearl Marie ¹⁹	R. Feuillebois	Colon, R. P.	October 18.	Granada	Standard Fruit S. S. Co.	San Blas, R. P.
October 18.	Suriname	United Fruit Co.	Port Limon, Costa Rica.	October 18.	Saramacca	United Fruit Co.	Porto Colombia and Bocas.
October 18.	Anachucuna ²²	United Fruit Co.	Colon, R. P.	October 18.	Sixola	United Fruit Co.	New York via wayports.
October 19.	Granada	Standard Fruit S. S. Co.	San Blas, R. P.	October 18.	Manaquí	United Fruit Co.	Colombian ports.
October 19.	Anachucuna ²¹	United Fruit Co.	Colon, R. P.	October 18.	Suriname	United Fruit Co.	New Orleans, La.
October 19.	Inapaquina ²¹	United Fruit Co.	Colon, R. P.	October 18.	U. S. S. Cleveland	U. S. Navy.	Nicaraguan ports.
October 19.	Ville Riestra ²¹	Costa Rican Government	Colon, R. P.	October 19.	Anachucuna ²¹	United Fruit Co.	Colon, R. P.
October 20.	Parismina	United Fruit Co.	New Orleans via Habana.	October 19.	Inapaquina ²¹	United Fruit Co.	Colon, R. P.
October 20.	Kiel	Hamburg-American Line.	Tampico, Mexico.	October 19.	Granada	Standard Fruit S. S. Co.	New Orleans and Puerto Cabezas.
PORT OF BALBOA.							
* Motor schooner. ²³ Schooner. ²² Motor boat.							
October 14.	Albion	Hamburg-American Line	Champerico, Guatemala.	October 15.	Albion	Hamburg-American Line.	Antofagasta, Chile
October 15.	Shabonee	Standard Transportation Co.	Los Angeles, Calif.	October 17.	Shabonee	Standard Transportation Co.	Los Angeles, Calif.
October 17.	A. B. de O'barrio ²²	Pacific Fruit Co.	Bayano River, R. P.	October 17.	Dos Hermanos ²²	A. Valdez	Bayano River, R. P.
October 17.	Dos Hermanos ²³	A. Valdez	Bayano River, R. P.	October 17.	A. B. de O'barrio ²²	Pacific Fruit Co.	Bayano River, R. P.
October 18.	H. M. Storey	Standard Oil Co. of California.	Los Angeles, Calif.	October 20.	Craftsman ²⁴	R. J. McArdle Contracting Co.	Buenaventura, Colombia.
October 18.	Craftsman ²⁴	R. J. McArdle Contracting Co.	Buenaventura, Colombia.				
October 18.	David	National Navigation Co.	Panama, R. P.				

²² Motor schooner.²³ Motor schooner and barge.²⁴ Tug.

* Other than ships passing through the Canal.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., October 31, 1928. No. 13.

Panama Mail Liners to Call at Puerto Armuelles, Panama.

The motor ships *City of Panama* and *City of San Francisco*, and the steamer *Corinto*, combination cargo and passenger vessels, operating between Cristobal and San Francisco, via wayports in Central America and Mexico, have added Puerto Armuelles, Province of Chiriqui, Panama, as a port of call. At present this section of Panama is virtually isolated from the rest of the Republic in that only at irregular intervals are there vessels available to and from Puerto Amuelles, Pedregal, and other Chiriqui ports. The vessels have sailings from Cristobal approximately every 22 days, and will make the run to Puerto Armuelles in about 26 hours, or about half the time it takes the small vessels now engaged in this trade. The *City of Panama*, which sailed from Cristobal on October 30, 1928, is to be the first of the two vessels to stop at this new port.

The three vessels are owned and operated by the Panama Mail Steamship Line and fly the Panaman flag. The "City" ships are 300 feet long, 46 feet beam, and of 3,150 deadweight tons, and the *Corinto* is slightly smaller.

New Hamburg-American Line Service.

The *Phoenicia*, a new vessel belonging to the Hamburg-American Line, transited the Canal from the Atlantic to the Pacific on her maiden voyage on October 21, 1928. She is 373 feet long, 53.7 feet beam, and of 4,124 gross tons. This is the first of four new 13-knot motor ships which the company is placing in service to secure quicker delivery of coffee from the west coast of Central America to Europe. The new service will bring coffee from Salvador to Amsterdam and Hamburg in about 21 days, and from Nicaragua in about 19 days. The new ships to follow the *Phoenicia* are the *Palatia*, *Phrygia*, and *Patricia*.

New Johnson Liner Transits Canal.

The *Margaret Johnson*, owned and operated by the Johnson Line, transited the Canal from the Atlantic to the Pacific on October 26, 1928, on her maiden voyage in the European-west coast North America trade of this line. She carried 43 passengers and 4,290 tons of cargo on her maiden trip.

A description of this vessel appeared in THE PANAMA CANAL RECORD of June 20, 1928.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, October 27, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.		Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Phoenicia ¹	19	21 45	21	6 07	21	13 30	21	German.	Hamburg-American Line	373	9	Hamburg, Germany	Champerico, Guat.	General	4,239	5,435	2,508
Albert Vogler	19	23 35	21	6 08	21	14 25	22	German.	Hamburg-American Line	424	0	Hamburg, Germany	Valparaiso, Chile.	General	4,568	7,173	3,554
Rigi ¹	20	23 25	21	7 15	22	13 00	22	Norwegian.	Camillo Fitzen & Co.	400	0	Rotterdam, Holland	Los Angeles, Calif.	Ballast	6,332	4,069	6,332
San Ugon ¹	21	6 15	21	7 15	21	15 06	21	British.	Anglo-Mexican Pet. Co.	413	0	Portland, Mass.	Portland, Ore.	General	3,616	8,567	6,020
Missouri	20	22 55	21	8 15	21	15 57	21	American.	Amer-Hawaiian Line	445	0	Boston, Mass.	Fremantle, Aust'lia.	General	7,700	6,778	4,837
Bosworth ¹	21	2 15	21	9 27	21	17 44	21	British.	H. M. Thompson	415	0	Port Arthur, Texas	Tacoma, Wash.	General	7,634	7,473	5,034
Vacuum ¹	21	7 15	21	10 45	21	18 05	21	American.	Vacuum Oil Co.	425	0	Pasadena, Cal.	San Francisco, Cal.	General	6,567	6,205	4,339
Ipewich ¹	21	8 40	21	12 05	21	19 55	22	American.	Argonaut S. S. Co.	400	0	Baltimore, Md.	Tacoma, Wash.	General	3,454	6,103	4,610
Beholm ¹	21	11 15	21	13 20	21	20 25	21	British.	Oriel S. S. Co.	407	0	New York, N. Y.	Dunedin, N. Z.	General	6,567	6,205	4,339
Manatwary ¹	21	14 35	21	14 55	21	21 55	22	American.	Bernuth Lembcke Co.	390	0	Middlesboro, Eng.	Seattle, Wash.	General	4,516	6,928	5,103
Elbeek ¹	21	19 35	22	6 07	22	13 49	22	American.	Rosevelt S. S. Co., S. B.	401	0	New York, N. Y.	Brisbane, Australia	General	3,800	6,572	4,900
West Keats	22	1 05	22	6 20	22	13 56	22	American.	Calif. & East'n S. S. Co.	410	5	Port Limon, C. R.	Seattle, Wash.	General	7,900	6,673	2,367
Isparia ¹	22	4 30	22	7 00	22	14 35	22	American.	United Fruit Co.	330	6	Baltimore, Md.	Seattle, Wash.	General	7,330	7,933	5,882
Wilbilo ¹	22	5 40	22	7 00	22	14 51	22	American.	Williams S. S. Line	434	3	Baltimore, Md.	Seattle, Wash.	General	8,188	4,400	3,090
Chokasaw City	22	7 38	22	8 30	22	15 45	22	American.	Isthmian S. S. Lines	395	5	Las Palmas, Can. I.	Chile	General	3,474	6,243	4,581
Chokasaw	22	7 38	22	8 30	22	15 45	22	American.	Williams S. S. Lines	395	5	New York, N. Y.	Fremantle, Aust'lia.	General	3,514	10,075	7,292
Chokasaw	22	8 05	22	8 55	22	15 50	22	Spanish.	Naviera Vascongada.	358	0	Buenos Aires, Arg.	Yokohama, Japan.	Ballast	7,406	5,111	
Urbino	22	6 35	22	9 50	22	16 30	22	British.	Ellerman Wilson Line	400	0	Buenos Aires, Arg.	Yokohama, Japan.	Ballast	2,354	478	
Manila Maru	22	13 35	22	13 45	22	20 30	22	Japanese.	Osaka Shosen Kaisha	475	0	Buenos Aires, Arg.	Yokohama, Japan.	Ballast	15,425	4,421	
William H.	22	3 50	22	19 15	23	9 41	23	American.	Huasteca Petroleum Co.	435	0	Baltimore, Md.	Los Angeles, Calif.	Ballast	4,675	6,264	4,681
Doheny ¹	22	3 50	22	19 15	23	9 41	23	American.	H. K. Smoot	298	0	Baltimore, Md.	Los Angeles, Calif.	Ballast	6,454	7,989	5,856
Caribbean	23	3 30	23	6 30	23	15 56	23	Swedish.	Ore S. S. Corp.	561	0	Galveston, Texas	Kobe, Japan.	General	3,615	5,719	4,023
Fernlane ²	23	3 35	23	6 30	23	15 56	23	Norwegian.	Fearnley and Eger	375	0	Galveston, Texas	Seattle, Wash.	General	5,600	9,294	6,865
Takaoka Maru	23	3 35	23	7 50	23	13 39	23	Japanese.	Nippon Yusen Kaisha	445	0	Baltimore, Md.	Seattle, Wash.	General	3,426	6,756	4,775
Georgian	23	8 35	23	8 40	23	16 32	23	American.	Amer-Hawaiian Line	387	0	New York, N. Y.	Tacoma, Wash.	General	4,528	7,217	5,295
Tadoma ¹	23	16 55	23	17 25	24	9 15	24	Danish.	Canadian Transp. Co.	380	0	Boston, Mass.	Seattle, Wash.	General	7,453	8,204	6,219
Lillian Luck	23	19 15	23	20 15	23	11 25	23	American.	Lukenbach Line	448	0	Boston, Mass.	Seattle, Wash.	General	5,411	7,933	5,799
enbach	23	19 15	23	20 15	23	11 25	23	American.	American Panama Corp.	448	0	Boston, Mass.	Seattle, Wash.	General	4,528	7,217	5,295
Mariposa ³	23	20 15	23	20 15	23	11 25	23	American.	American Panama Corp.	448	0	Boston, Mass.	Seattle, Wash.	General	7,453	8,204	6,219
No. 21 ⁴	23	20 15	23	20 15	23	11 25	23	American.	American Panama Corp.	448	0	Boston, Mass.	Seattle, Wash.	General	5,411	7,933	5,799
No. 22 ⁴	23	20 15	23	20 15	23	11 25	23	American.	American Panama Corp.	448	0	Boston, Mass.	Seattle, Wash.	General	4,528	7,217	5,295
No. 23 ⁴	23	20 15	23	20 15	23	11 25	23	American.	American Panama Corp.	448	0	Boston, Mass.	Seattle, Wash.	General	7,453	8,204	6,219
Inapaquana ⁵	23	9 45	23	9 45	23	12 03		American.	United Fruit Co.	105	0	Boston, Mass.	Seattle, Wash.	General	3,426	6,756	4,775
Montanan	23	21 10	24	6 10	24	13 17	24	American.	Amer-Hawaiian Line	407	0	Boston, Mass.	Tacoma, Wash.	General	4,528	7,217	5,295
Lena Lucken-	23	21 10	24	6 10	24	13 17	24	American.	Amer-Hawaiian Line	407	0	Boston, Mass.	Tacoma, Wash.	General	7,453	8,204	6,219
bach	23	21 10	24	6 10	24	13 17	24	American.	Amer-Hawaiian Line	407	0	Boston, Mass.	Tacoma, Wash.	General	5,411	7,933	5,799
Liberator	24	00 05	24	6 15	24	14 15	24	American.	Lukenbach Line	425	0	New Orleans, La.	Seattle, Wash.	General	4,528	7,217	5,295
El Lobo ¹	24	5 20	24	7 05	24	14 58	27	British.	Tama Intercoastal Co.	410	0	New Orleans, La.	Cebu, Philippines	General	7,453	8,204	6,219
Justin ¹	24	6 10	24	8 10	24	15 57	24	German.	Atlantic Refining Co.	385	2	Philadelphia, Pa.	La Libertad, Eccl'r.	Ballast	4,581	3,326	
	24	6 10	24	8 10	24	15 57	24	German.	North German Lloyd	469	8	Hamburg, Germany	Portland, Ore.	General	5,411	7,933	5,799

¹ Tanker. ² Motor ship. ³ Launch. ⁴ Barge. ⁵ Kerosene and petroleum products. ⁶ Cotton, case oil, and general. ⁷ Cotton, lubricating oil, wax, quebracho, and bones.

Penelope ¹	7.35	24	8.10	24	16.45	24	22.49	Danzig	Baltic-Amer. Pet. Co.	Hamburg, Germany	Talara, Peru	Ballast	9.302
Lobo ²	21.52	24	9.25	24	16.23	24	17.25	Chilean	South American Line	New York, N. Y.	Valparaiso, Chile	General	2,571
Tobos ²	23.21	24	9.25	24	19.55	25	1.07	British	Pacific Steam Nav. Co.	Hull, England	Corral, Chile	General	3,236
Scota ¹	24	24	11.15	24	17.58			American	U. S. Navy	Cristobal, C. Z.	Balboa, C. Z.	(*)	1,365
Tuamoa	4.50	25	6.25	25	13.10	25	14.10	Italian	Navy Gen. Italiana	Genoa, Italy	Valparaiso, Chile	General	9,760
Pacific Fir	24.20	25	6.19	25	13.57	25	15.05	American	Dimon S. S. Corp.	New York, N. Y.	Seattle, Wash.	General	6,622
Amerikaland ¹	24.21	25	7.10	25	14.50	25	22.40	Swedish	Ore S. S. Corp.	Baltimore, Md.	Cruz Grande, Chile	Ballast	5,444
El Paracuaco ¹	25.71	25	7.10	25	15.39			Panamanian	Panamanian Government	Cristobal, C. Z.	Panama, R. P.	Ballast	15,560
Sally Maersk ²	25.61	25	7.25	25	15.45	25	16.50	Danish	Isbrandtsen Moller Co.	New York, N. Y.	Shanghai, China	General	2,135
Orduna	24.15	25	8.20	25	16.50	25	17.45	British	Pacific Steam Nav. Co.	Liverpool, Eng.	Talcahuano, Chile	General	4,446
Texmar	25.11	25	8.20	25	17.14	25	19.12	American	Calmar S. S. Corp.	Baltimore, Md.	Seattle, Wash.	Steel, general	8,100
Steel Ranger	25.13	25	8.20	25	20.30	26	2.00	American	Isthmian S. S. Lines	Mobile, Ala.	Shanghai, China	(*)	8,301
Herman Frisch	24.14	25	13.55	25	21.26	26	14.50	German	North German Lloyd	Hamburg, Germany	San Antonio, Chile	General	4,945
Nyhaug ²	26.12	26	6.15	26	14.55	26	16.05	American	Texas Gulf Sulphur Co.	Galveston, Texas	Woodfibre, B. C.	Sulphur	6,300
Bessener City	25.21	26	6.30	26	14.58	26	19.32	Norwegian	Scand.-So. Pacific Co.	Gothenburg, Sweden	Buenaventura, Col.	General	5,349
Camden ¹	26.15	26	6.10	26	14.20	26	15.25	American	Isthmian S. S. Lines	Baltimore, Md.	Surabaya, Java	General	6,040
Valle Riestra ²	26.80	26	7.30	26	15.49	26	16.55	American	United Fruit Co.	Port Limon, C. R.	Los Angeles, Calif.	General	7,698
Turicum ¹	26.80	26	8.05	26	14.16	26	16.55	Costa Rican	Costa Rican Governm't.	Cristobal, C. Z.	Puntarenas, C. R.	Ballast	6,977
Mary Ellen	26.63	26	10.45	26	17.15	26	22.05	Norwegian	Camillo Eitzen & Co.	Amst dam, Holland	Los Angeles, Calif.	Ballast	84
O'Neill ¹	26.10	26	11.00	26	18.08	26	19.05	American	The Texas Co.	Baltimore, Md.	Los Angeles, Calif.	Ballast	12,425
Durazzo	24.23	26	12.14	26	19.15	26	21.00	German	Hamburg-American Line	Cristobal, C. Z.	Buenaventura, Col.	General	235
Margaret	25.22	26	13.55	26	20.15	27	1.47	Swedish	Johnson Line	Gothenburg, Sweden	Vancouver, B. C.	General	4,312
Loekkatrine ¹	25.00	26	15.13	26	21.30	26	22.33	British	Royal Mail S. P. Co.	Rotterdam, Holland	Vancouver, B. C.	General, bananas	2,389
Gaelicstar	26.22	26	6.20	27	14.13	28	1.35	British	Blue Star Line	Antwerp, Belgium	Vancouver, B. C.	Ballast	6,014
Albionstar	27.7.05	27	7.25	27	14.20	27	15.40	British	Blue Star Line	Newcastle-on-Tyne	Vancouver, B. C.	Ballast	8,317
8-17 ¹	27.6.20	27	6.20	27	13.40			American	U. S. Navy	Cristobal, C. Z.	Balboa, C. Z.	Ballast	5,531
8-17 ¹	27.6.20	27	6.20	27	13.40			American	U. S. Navy	Cristobal, C. Z.	Balboa, C. Z.	Ballast	5,531
Bretagne ²	27.00	27	8.55	27	15.17	27	16.40	Danish	Danish French S. S. Co.	New York, N. Y.	Shanghai, China	General	3,902
Aracuan	27.6.03	27	9.25	27	16.46	27	21.40	British	Com'ith & Dom. Line	Philadelphia, Pa.	Freunhaite, Aust'lia	General	3,278
Santa Cecilia	26.20	27	11.05	27	17.34	27	20.38	American	Grace Line	New York, N. Y.	Valparaiso, Chile	General	2,516
Edwin Christ-	27.12	27	12.40	27	19.42	28	00.40	American	Arrow Line	Baltimore, Md.	Seattle, Wash.	General	4,173
Lumen ¹	27.17	27	18.50	28	00.46	28	03.20	British	H. E. Moss & Co.	Rio de Janeiro, Br	Los Angeles, Calif.	Ballast	6,603
Phonias	27.14	27	19.40	28	11.54	28	14.30	Greek	Kassos Steam Nav. Co.	Cardiff, England	Arica, Chile	Ballast	6,645

* Tanker.

** Tug.

** Transport.

** Submarine.

** Towing barge No. 2.

** Steel, cotton, iron, and general.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Oregonian	21	3.00	21	6.45	21	14.25	21	14.25	American	Amer.-Hawaiian Line	Seattle, Wash.	General	5,700
Jamaca	21	5.30	21	7.10	21	15.46			British	Pacific Steam Nav. Co.	Champerico, Guat.	Specie, general	250
Ivo Kaele	21	8.45	21	9.30	21	17.30			Yugoslav	Altaniska Plovdba	Antofagasta, Chile	Nitrates	6,000
Archangelos	21	9.00	21	9.50	21	18.20			Greek	Lvanos & Co.	Junin, Chile	Nitrates	8,445
Anton G.	21	11.10	21	12.01	21	20.00			Greek	S. & P. A. Lenos	Antofagasta, Chile	Nitrates	7,440
Wilkeno	21	6.00	21	12.09	21	20.15			American	Williams S. S. Line	San Francisco, Cal.	Lumber, general	7,521
Izabran	21	11.40	21	12.28	21	21.15			Yugoslav	Atlantiska Plovdba	Taltal, Chile	Nitrate	7,156
Australian ¹	21	11.50	21	12.54	21	22.00			Danish	East Asiatic Co.	Vaneuver, B. C.	Barley, general	9,218

* For orders.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Hope ¹⁷	21	19.50	21	6.23	21	14.15	22	19.30	American	J. R. Powell	37.0	10.8		Balboa, C. Z.	Cristobal, C. Z.	Ballast.		11
Oxyerle ¹⁸	22	6.07	22	6.27	22	13.40	22	19.30	British	Andrew War & Co.	420.3	54.5	26.6	Los Angeles, Calif.	Manchester, Eng.	Gasoline.	8,547	6,397
Socia ¹⁹	22	6.07	22	6.27	22	13.40	22	19.30	American	U. S. Navy	155.0	30.0		Balboa, C. Z.	Cristobal, C. Z.	Gasoline.	9,859	7,616
Spangler ¹⁹	21	16.00	22	7.03	22	14.25	22	17.50	Norwegian	Wesfal, Larsen & Co.	441.6	57.5	27.0	Los Angeles, Calif.	London, England	Crude oil	2,200	7,555
El Aleto ¹⁹	21	22.05	22	7.13	22	14.35	22	17.50	British	C. T. Bowring & Co.	440.8	57.5	27.0	Talara, Peru	Halifax, N. S.	Crude oil	4,137	5,710
Grosholm ¹⁹	22	00.30	22	7.47	22	15.45	22	16.00	Norwegian	W. B. Marcussen	287.2	40.2	21.6	Seattle, Wash.	Havana, Cuba	Lumber	3,558	5,517
Santa Luisa.	22	00.30	22	9.11	22	17.05	22	19.20	American	Grace Line	360.2	51.6	23.7	Talcahuano, Chile	New York, N. Y.	Nitrates, general	3,642	5,202
Ellston	22	04.35	22	11.22	22	18.15	22	20.45	British	Blue Star Line	415.6	56.3	24.6	Valparaiso, B. C.	Boston, Mass.	Fruits, general	8,389	7,849
Normanstar.	22	17.30	22	17.38	22	18.20	22	20.45	British	Canadian Transp. Co.	347.0	50.0	24.0	Vancouver, B. C.	Hamburg, Germany	Nitrates, general	20,000	15,351
Bennetcom.	22	17.30	22	18.23	22	20.20	22	23.37	British	Royal Neth. S. S. Co.	420.0	54.5	26.6	Valparaiso, Chile	Baltimore, Md.	Crude oil	8,221	6,390
Marore.	23	00.05	23	6.06	23	15.20	23	15.30	American	Ore S. S. Corp.	550.3	72.2	35.0	Cruz Grande, Chile	United Kingdom	Gasoline.	11,365	10,084
San Eduardo	22	19.35	23	6.59	23	15.45	23	15.45	British	Anglo-Mexican Pet. Co.	420.0	54.5	26.6	San Francisco, Calif.	New York, N. Y.	Gasoline.	11,365	10,084
Japan Arrow	23	3.35	23	7.15	23	16.25	23	16.25	American	Standard Transp. Co.	408.3	62.7	27.6	Los Angeles, Calif.	Providence, R. I.	Gasoline.	11,365	10,084
India Arrow	23	5.20	23	8.10	23	16.55	23	16.55	American	Standard Oil Co. of Cal.	408.3	62.7	27.0	Los Angeles, Calif.	Providence, R. I.	Gasoline.	11,365	10,084
Jane Christenson	23	00.22	23	8.42	23	17.30	23	17.30	American	Arrow Line	407.5	52.4	24.0	Portland, Oreg.	New York, N. Y.	Lumber.	6,400	6,015
Feltore	23	00.22	23	9.32	23	18.45	23	18.45	American	Ore S. S. Corp.	449.1	57.2	30.6	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	11,000	7,808
Pacific Hemlock	23	7.00	23	9.48	23	19.10	23	19.10	American	Dimon S. S. Corp.	409.7	54.2	23.8	Seattle, Wash.	New York, N. Y.	Lumber.	8,185	6,630
Los Angeles	23	8.10	23	10.27	23	17.45	24	00.15	German	Hamburg-American Line	432.3	59.4	27.0	Vancouver, B. C.	Hamburg, Germany	General	7,076	8,454
Legarto	23	8.00	23	10.27	23	20.18	24	11.11	British	Pacific Steam Nav. Co.	385.1	52.0	25.4	Magallanes, Chile	Glasgow, Scotland	General	6,371	5,656
Mongolia	23	16.22	24	6.24	24	13.30	24	14.00	American	Panama-Pacific Line	600.0	65.3	32.6	San Francisco, Calif.	New York, N. Y.	General	9,250	17,041
Srius	23	10.20	24	6.46	24	14.55	25	6.15	American	U. S. Navy	401.0	54.0	18.9	Brenerton, Wash.	Boston, Mass.	Navy cargo	259	238
Canea	23	22.00	24	7.00	24	17.07	25	7.20	Colombian	National Navigation Co.	107.2	22.9	10.8	Buenaventura, Col.	Cristobal, C. Z.	Coffee, hides	6,999	5,487
Fishpool	24	00.20	24	8.02	24	17.15	24	22.25	British	Sir. R. Ropner & Co.	379.0	56.0	23.0	Namaino, B. C.	New York, N. Y.	Lumber.	9,009	7,478
El Oso	24	8.15	24	9.04	24	18.35	25	5.15	British	C. T. Bowring & Co.	440.5	57.5	26.6	San Francisco, Calif.	United Kingdom	Gasoline.	7,920	6,583
Rapet	24	8.55	24	10.05	24	19.20	25	1.50	German	Roland Line	383.4	54.3		Valparaiso, Chile	Hamburg, Germany	General	7,920	6,583
Andrea F.	24	9.15	24	10.24	24	21.33	24	20.20	American	Lukenbach Line	496.0	68.2	31.0	Portland, Oreg.	Boston, Mass.	Lumber, general	12,973	11,487
Sun	24	9.20	24	11.12	24	21.35	24	21.35	American	Sun Oil Co.	480.0	66.0	29.0	Los Angeles, Calif.	Chester, Pa.	Gasoline.	13,506	9,620
Orazio	24	11.00	24	11.55	24	19.55	26	21.10	Italian	Nav. Gen. Italiana	505.9	61.8	25.6	Valparaiso, Chile	Genoa, Italy	General	4,422	12,977
Durazo	24	14.35	24	15.25	24	23.08	16	12.14	German	Hamburg-American Line	227.5	34.4	14.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee.	546	1,633
Atlantic	25	2.15	25	5.58	25	13.40	25	13.40	American	Sun Oil Co.	429.3	59.2	26.0	Los Angeles, Calif.	Miami, Fla.	Gasoline.	9,220	7,568
Westmoor	24	17.20	25	6.37	25	14.25	25	15.30	British	W. Runciman & Co.	375.0	52.2	25.0	Portland, Oreg.	Dublin, Ireland	Wheat.	7,400	6,039
Bennyamoch	24	20.15	25	6.54	25	15.15	25	18.10	British	W. Thomson & Co.	400.0	52.0	24.0	Portland, Oreg.	Birkenhead, Eng.	Wheat.	8,000	6,583
Baychino	24	22.25	25	7.26	25	15.50	25	20.15	British	The Hudson Bay Co.	229.2	36.0	14.0	Valparaiso, Chile	United Kingdom	Wheat.	1,030	1,362
La Pella	25	2.55	25	8.31	25	15.25	26	19.15	American	United Fruit Co.	325.2	48.1	19.6	San Francisco, Calif.	Port Limon, C. R.	Fruit, vegetables	4,408	4,033
New Britain	24	23.55	25	7.11	25	16.55	26	16.55	American	Calif. & East'n S. S. Co.	386.8	52.2	24.4	Port Townsend	Philadelphia, Pa.	Lumber, general	6,434	5,684
Munaires	24	23.30	25	8.45	25	18.00	26	18.45	American	Munson S. S. Line	385.0	53.1	24.6	Seattle, Wash.	Baltimore, Md.	Lumber, general	6,282	5,577
Rialto	25	00.20	25	9.00	25	18.42	26	23.30	Italian	Nav. Libera-Trustedina	436.5	55.4	27.9	Vancouver, B. C.	Trieste, Italy	General	8,900	7,789

¹⁷ Motor ship.¹⁸ U. S. Navy tug.¹⁹ Launch.²⁰ Tanker.²¹ Auxiliary cargo ship.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Notice to Mariners.

Continuation of the relocation of buoys in Corinto Harbor, Nicaragua.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 29, 1928.

No. 473.

The Hydrographic Office received the following information through the Marine Superintendent, The Panama Canal:

CORINTO, NICARAGUA, October 17, 1928.

From: Commanding Officer.

To: Commander, Special Service Squadron.

1. The *Galveston* has relocated buoy No. 6 (10th edition, Chart No. 2604) in the following position: Bearing 116° 30" true from Cardon Island lighthouse, distance 1,500 yards, in 30 feet of water at mean low water.

2. The black can buoy No. 3 has been removed. This can buoy has been relocated to occupy position of No. 1 buoy (10th edition, Chart No. 2604). This was done because of the shape of the buoy in question.

3. No. 1 buoy mentioned above, has been overhauled and repainted red and located bearing 129° true from Cardon Island lighthouse, distance 420 yards.

4. In order to further improve the harbor of Corinto, Nicaragua, having in mind the necessity of maneuvering merchant vessels in the immediate vicinity of the commercial dock in a very limited space owing to the shoals directly opposite the dock, it is suggested six spar buoys with the necessary anchors and chains be purchased for working the edge of these shoals and the northern limits of navigable waters. These buoys can be planted by the *Galveston* on some future visit to Corinto.

(Signed) R. P. CRAFT.

NOTE.—See Notice to Mariners No. 461, dated September 28, 1928.

H. BURGESS,
Governor.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
For steamships, including warships of all nations when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.....	11.00	14.00

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending October 20, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Maravi	United Fruit Co.		October 14.		442½
Boskoop	Royal Netherlands S. S. Line.		October 14.		90
Knute Kelson	Norway-Pacific Line.		October 14.		350
Calamares	United Fruit Co.	October 14.	October 14.	20	58
Vermont	French Line	October 14.	October 14.	70	7
August Leonhardt	Colombian Transport Co.	October 14.	October 14.	42	(²)
Corinto	Panama Mail S. S. Co.		October 15.		2,247
Ancon	Panama Railroad S. S. Line.		October 15.		2,638
Paraguay	Hamburg-American Line.		October 15.		344
Cartago	United Fruit Co.		October 15.		144
City of Panama	Panama Mail S. S. Line.	October 15.		443	
Hayre Maru	Osaka Shosen Kaisha	October 15.	October 15.	117	(²)
Baralt	Royal Netherlands S. S. Co.	October 15.	October 20.	267	130
Essequibo	Pacific Steam Nav. Co.	October 15.	October 15.	24	42
Legazpi	Spanish Line.	October 15.	October 16.	56	406
Pastores	United Fruit Co.	October 15.	October 17.	1,044	71
Linda S.	R. Feuillebois	October 16.	October 16.	(²)	41
Martha	Chr. Hannevig.		October 16.		1,056
Perou	French Line	October 16.	October 17.	91	658
Collegian	Harrison Line	October 16.	October 17.	607	(²)
Manizales	North German Lloyd	October 16.	October 20.	515	133
Adolf von Baeyer	Hamburg-American Line.	October 16.	October 17.	266	339
Colombia	Panama Mail S. S. Co.	October 16.	October 17.	651	290
Venezuela	Panama Mail S. S. Co.	October 16.	October 17.	123	743
Stella	Panama Mail S. S. Co.		October 17.		1,221
Texas	French Line	October 16.	October 18.	511	278
Saramacca	United Fruit Co.	October 17.	October 18.	623	16
Sixaola	United Fruit Co.	October 17.	October 18.	1,958	545
San Francisco	Hamburg-American Line.	October 17.	October 18.	(¹)	316½
Granada	Standard Fruit Co.	October 17.	October 18.	648	3
Manahui	United Fruit Co.	October 17.	October 18.	(¹)	259
Cathwood	Union Oil Co.	October 17.	October 19.	10,000	(²)
Mantaro	Peruvian Line		October 19.		258
Fella	Nav. Libera-Tricstina.	October 18.	October 18.	141	(²)
Suriname	United Fruit Co.	October 18.	October 18.	102	231
Moerdijk	Holland-American Line.	October 18.	October 19.	607	236
George Washington	Norway-Pacific Line	October 18.	October 19.	350	3
Esparta	United Fruit Co.	October 18.	October 19.	961	32
President Harrison	Dollar Line	October 19.	October 19.	10	(²)
Hollywood	C. R. McCormick S. S. Co.	October 19.	October 19.	33	(²)
Granada	Standard Fruit Co.	October 19.	October 19.	38	49
Phoenixia	Hamburg-American Line.	October 19.		145	
Albert Voegler	Hamburg-American Line.	October 19.		15	
Sonora	French Line	October 19.	October 20.	55	7
Almagro	Pacific Steam Navigation Co.	October 19.	October 20.	399	(²)
Pacific Reliance	Furness, Withy & Co.	October 19.	October 20.	(¹)	267
Acajutla	Pacific Steam Nav. Co.		October 20.		1,163½
Uribe	Estrada G. Hermanos		October 20.		819
Floreana	Colombian Transport Co.	October 20.		199	
Kiel	Hamburg-American Line.	October 20.		6	
Parismina	United Fruit Co.	October 20.		467	

¹ No cargo discharged.² No cargo laded

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending October 27, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Chateau Thierry	U. S. Government.	October 15.	October 16.	167	38
Albert Vogler	Hamburg-American Line.	October 21.	October 22.	393	
Frost	Hans Ericson	October 22.	October 26.	400	
Sirius	U. S. Government.	October 23.	October 24.	2	
Lobos	Pacific Steam Navigation Co.	October 24.	October 25.		50
Targis	North German Lloyd	October 25.	October 26.	355	2
Santa Cecilia	Grace Line	October 27.	October 27.		15

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., November 7, 1928. No. 14.

Canal Traffic During October.

During the month of October, 1928, 557 commercial vessels and 10 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,274,945.30, and on the launches, \$94.50, or a total tolls collection of \$2,275,039.80.

The daily average number of transits of seagoing vessels for the month was 17.97, and the daily average tolls collection, \$73,385.33. The average amount of tolls paid by each of the commercial transits was \$4,084.28, as compared with \$4,335.18 for the month of September.

Commercial traffic for October was the heaviest of any month in the current calendar year, and exceeded that of the previous month by 70 transits and almost \$164,000 in tolls.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 10 months of the current calendar year, with the daily averages of transits and tolls:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	540	\$2,212,752.50	17.42	\$71,379.20
February.....	547	2,253,755.37	18.86	77,715.70
March.....	542	2,223,360.57	17.48	71,271.63
April.....	531	2,187,607.82	17.70	72,914.55
May.....	508	2,118,969.83	16.38	68,353.86
June.....	481	2,016,211.09	16.03	67,206.43
July.....	509	2,109,083.19	16.41	68,034.94
August.....	526	2,199,069.31	16.97	70,937.72
September.....	487	2,111,230.56	16.23	70,374.35
October.....	557	2,274,945.30	17.97	73,385.33
Totals.....	5,228	21,705,995.54	17.14	71,170.47

Tanker Traffic Through the Panama Canal in October, 1928.

During the month of October, 1928, 82 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 444,517, on which tolls of \$382,224.89 were collected. Cargo amounted to 390,126 tons. In point of net tonnage, tanker traffic for the past month showed a decrease of 26.5 per cent under the same traffic for the corresponding month a year ago, while cargo tonnage decreased 33.6 per cent under the cargo tonnage of October, 1927.

Tank ships comprised 14.7 per cent of the total commercial transits through the Canal during the month; made up 17.6 per cent of the total Panama Canal net tonnage; were the source of 16.8 per cent of the tolls collected; and carried 15.1 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of October, 1928, segregated by direction of transit and nationality of vessels, are shown in the following tabulations, with comparative totals for the two preceding months and for October, 1927:

Nationality.	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	8	34,295	\$24,725.19	.....
Danzig.....	2	12,801	9,216.72	.....
Dutch.....	4	15,403	12,404.62	7,124
French.....	1	4,545	3,272.40	.....
Norwegian.....	3	14,876	12,111.33	6,922
United States.....	30	164,490	120,153.73	18,004
Totals, October, 1928.....	48	246,410	181,883.99	32,050
Totals, September, 1928.....	41	235,793	171,293.73	9,015
Totals, August, 1928.....	46	252,089	185,213.15	21,702
Totals, October, 1927.....	51	292,974	211,450.14	6,734
<i>Pacific to Atlantic.</i>				
British.....	11	57,666	60,994.65	103,043
Danzig.....	1	6,063	6,495.00	11,365
Dutch.....	1	4,336	4,386.25	7,448
French.....	1	5,050	5,445.00	8,778
Norwegian.....	1	5,268	5,611.25	9,860
United States.....	19	119,724	117,408.75	217,582
Totals, October, 1928.....	34	198,107	200,340.90	358,076
Totals, September, 1928.....	48	259,927	268,061.25	482,630
Totals, August, 1928.....	49	268,675	273,926.30	474,011
Totals, October, 1927.....	54	312,085	313,971.25	581,325

Of the tanker traffic shown above, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for October, 1927:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
October, 1928.....	36	186,866	\$135,890.77	7,124
September, 1928.....	28	161,006	115,924.32	.....
August, 1928.....	34	187,964	135,344.08	.....
October, 1927.....	39	227,302	163,657.44	.....
<i>From Los Angeles.</i>				
October, 1928.....	23	134,002	131,918.40	232,617
September, 1928.....	35	187,938	191,746.25	345,357
August, 1928.....	32	170,030	173,221.25	301,968
October, 1927.....	44	257,473	260,191.25	483,074

Notice to Mariners.

Explosive Anchorage—Pacific Entrance.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 1, 1928.

No. 479.

Panama Canal Rules and Regulations define as follows the Explosive Anchorage at the Pacific entrance:

Area south of Naos Island bounded on the east by a line drawn south (true) from entrance gas buoy No. 1; on the south by a line drawn east (true) from Tortolita Island and on the north and west by the curve of 30 foot depth.

Attention is invited to the fact that the dumping ground of the Dredging Division is within this area and is marked by three red gas buoys "X," "Y," and "Z" which are *subject to change in position without notice.*

In using this anchorage ships should keep to the south of buoys "X," "Y," and "Z," as found, and not as shown on H. O. charts Nos. 5001 and 5002 and Coast and Geodetic Survey Charts Nos. 952 and 953. Upon approaching this anchorage at night vessels should take cross-bearings on Commission Rock Gas Buoy (red occulting light), recently established, and Flamenco Light in order to clear Tortolita Island safely.

H. BURGESS,
Governor.

Tug "Porto Bello" Offered for Sale.

At the foot of this page is an advertisement of the proposed sale of the tug *Porto Bello*. This tug, formerly the *Robert H. Smith*, was built in 1906 by the Spedden Shipbuilding Co., and was purchased by the Isthmian Canal Commission from the American Towing and Lightering Co. in 1907, arriving at Cristobal on November 17, 1907. She was employed in the Atlantic Division, largely in towing rock from Porto Bello and sand from Nombre de Dios, until May 1, 1913, when the Sixth Division took over the dredging and towing work of the Atlantic Division. Subsequently the *Porto Bello* was employed by the Dredging Division, successor to the Sixth Division, and transferred to the Marine Division on June 27, 1914, to assist in the handling of vessels at the terminal ports.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending October 27, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Pnoencia	Hamburg-American Line		October 21.		86
Albert Voegler	Hamburg-American Line		October 21.		330
Kiel	Hamburg-American Line		October 21.		334
Pastores	United Fruit Co.	October 21.	October 21.	21	963
Atlas	Royal Netherlands S. S. Co.	October 21.		9,950	
Jamaica	Pacific Steam Navigation Co.	October 21.		250	
Eelbeck	Roosevelt S. S. Co.	October 21.	October 22.	$\frac{1}{2}$	(¹)
Parlmina	United Fruit Co.		October 22.		151
Oranian	Leyland Line	October 22.	October 23.	(¹)	571
Santa Luisa	Grace Line	October 22.	October 23.	4	(²)
Ulua	United Fruit Co.	October 22.	October 24.	17	76
Beunekom	Royal Netherlands S. S. Co.	October 23.	October 23.	76	(²)
Macabi	United Fruit Co.	October 23.	October 24.	784	35
Teno	Chilean Line	October 23.	October 24.	(¹)	1
Crijnsen	Royal Netherlands S. S. Co.	October 23.	October 24.	3 $\frac{1}{2}$	1
Lagarto	Pacific Steam Navigation Co.	October 23.	October 24.	73	252
Lobos	Pacific Steam Navigation Co.	October 23.	October 24.	39 $\frac{1}{2}$	259
Cavina	Elders & Fyffes, Ltd	October 24.	October 24.	$\frac{1}{2}$	(¹)
Rugia	Hamburg-American Line	October 24.	October 24.	180	77
Linda S.	R. Feuillebois	October 24.	October 24.	(¹)	31
Gatun	Standard Fruit Co.	October 24.	October 24.	243	7
Zacapa	United Fruit Co.	October 24.	October 25.	810	138
Taormina	Italian Line	October 24.	October 25.	300	36
Targia	North German Lloyd	October 24.	October 25.	299	254
Rapot	North German Lloyd	October 24.	October 25.	73	172
Orduna	Pacific Steam Navigation Co.	October 24.	October 25.	204	(²)
Durazzo	Hamburg-American Line	October 24.	October 26.	502	235
Orazio	Italian Line	October 24.	October 26.	119	758
Cauca	National Navigation Co.	October 24.		286	
Saramacca	United Fruit Co.	October 25.	October 25.	289	258
Cristobal	Panama Railroad S. S. Line	October 25.		4,402	
La Perla	United Fruit Co.	October 25.	October 26.	626	178
Margaret Johnson	Johnson Line	October 25.	October 26.	312	53
Lochkatrine	Pacific Steam Navigation Co.	October 25.	October 26.	30	383 $\frac{1}{2}$
Novian	Leyland Line	October 25.	October 26.	752	20
Gatun	Standard Fruit Co.	October 26.	October 26.	(¹)	594
Oreoma	Pacific Steam Navigation Co.	October 26.	October 27.	3	31
Crijnsen	Royal Netherlands S. S. Co.	October 26.	October 27.	26	376
Santa Cecilia	Grace Line	October 26.	October 27.	15	253
Salvador	Pacific Steam Navigation Co.	October 27.		129	
War Sirdar	Anglo-Saxon Petroleum Co.	October 27.		7,410	
Peru	Danish East Asiatic Co.	October 27.		91	
Bowden	United Fruit Co.	October 27.	October 27.	2	352 $\frac{1}{2}$
Coppename	United Fruit Co.	October 27.		776	
Ecuador	Panama Mail S. S. Co.	October 27.		354	
Heredia	United Fruit Co.	October 27.		651	
Orient	Oriental Navigation Co.	October 27.		568	

¹ No cargo discharged.² No cargo laded.³ Four packages.

Official Circular.

Sale of Tugboat.

The Panama Canal offers for sale to the highest bidder the tug boat *Porto Bello*, a seagoing, single screw, steel hull, steam, oil-burning vessel, length 126 feet, beam 23.42 feet; depth, 11.75 feet;

gross tonnage, 227. Sealed bids will be received in the offices of the General Purchasing Officer, The Panama Canal, Washington, D. C., and the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., not later than 10.30 o'clock a. m., December 19, 1928. Forms of proposal, Circular No. 1913, with full particulars, may be had upon application to the above-mentioned offices.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, November 3, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Tainui	27	8.45	28	6.05	28	13.12	28	14.30	British	Shaw, Savill & Albion	479.8	61.1	26.6	London, England.	Bluff, N. Z.	General	5,000	10,657	7,617	
Seattle 2	27	1.40	28	6.15	28	13.48	28	15.15	German	Hamburg-American Line	480.0	61.0	25.0	Hamburg, Germany	Vancouver, B. C.	General, bananas	6,151	9,267	6,834	
B-3 1	24	21.20	28	7.20	28	14.00	30	15.00	Peruvian	Peruvian Government	180.0	18.0	14.0	N. London, Conn.	Callao, Peru	Ballast				
R-4 1	24	21.20	28	7.20	28	14.00	30	15.00	Peruvian	Peruvian Government	180.0	18.0	14.0	N. London, Conn.	Callao, Peru	Ballast				
Cauca 2	24	17.05	28	7.20	28	14.52	28	20.38	Colombian	National Navigation Co.	107.2	22.0	10.3	Cristobal, C. Z.	Buenaventura, Col.	General	395	238	163	
Peru 2	27	19.00	28	7.08	28	14.40	29	1.49	Danish	East Asiatic Co.	425.0	55.1	24.10	Antwerp, Belgium	Vancouver, B. C.	General	7,206	7,407	5,660	
Bradlyne	27	23.35	28	8.30	28	16.34	28	18.02	British	Standard Oil Co.	400.2	54.2	24.0	Philadelphia, Pa.	Nagasaki, Japan.	Case oil	7,700	6,961	5,365	
Malayan	28	8.05	28	9.25	28	15.26	28	16.15	British	Prince Line, Ltd	441.7	60.3	25.0	New York, N. Y.	Manila, Philippines	General	6,979	9,209	6,245	
Prinze 2	27	14.10	28	9.30	28	17.15	29	16.40	American	Panama Mail S. S. Co.	380.6	48.7	23.3	New York, N. Y.	San Francisco, Cal.	General	2,693	5,926	4,178	
Peninsular	28	3.40	28	9.56	28	17.35	28	18.31	American	Amer.-Hawaiian Line	407.7	53.7	21.0	Boston, Mass.	Portland, Oreg	General	4,292	7,107	5,041	
Waller D.	28	11.35	28	12.30	28	19.02	28	23.50	American	Munson S. S. Line.	368.2	48.3	22.0	New York, N. Y.	Tacoma, Wash.	General	4,907	4,606	3,271	
Charles H.	28	14.00	28	14.15	28	21.21	28	22.46	American	Isthmian S. S. Lines	404.6	53.9	27.6	Baltimore, Md.	Seattle, Wash.	Steel, general	7,533	6,755	4,750	
Cramp	28	14.20	28	14.45	28	22.01	29	2.30	American	Cities Service/Trans. Co.	416.9	56.2	21.0	New York, N. Y.	Los Angeles, Calif	Ballast		6,717	4,778	
Navy launch	28	15.20	28	19.20	29	9.03	29	10.11	American	U. S. Navy	411.0	53.0	21.6	Cristobal, C. Z.	Gatun, C. Z.	Ballast				
Silver Shell	28	21.40	29	6.08	29	13.52	29	15.15	American	Anglo-Saxon Pet. Co.	324.0	46.2	18.6	Rotterdam, Holland	Los Angeles, Calif	General	6,213	4,343		
Suspecco	28	22.40	29	6.15	29	13.55	29	16.00	American	Transmarine Lines	324.0	46.2	16.0	Pensacola, Fla.	San Francisco, Calif	General	2,218	3,984	2,612	
Sundelisco	29	00.50	29	6.23	29	13.00	29	14.30	American	Tidewater Oil Co.	419.5	56.5	23.0	Newark, N. J.	San Francisco, Cal.	Ballast	1,515	3,984	2,612	
Solana 1	29	00.50	29	6.23	29	13.00	29	14.30	American	United Fruit Co.	325.3	48.1	21.0	New York, N. Y.	San Francisco, Cal.	Ballast	7,060	5,025		
La Perla	29	3.40	29	7.22	29	14.15	29	15.25	American	Axel Brostrom & Son	430.2	57.2	17.0	Port Limon, C. R.	San Francisco, Cal.	Bananas, coffee	785	7,060	5,014	
Sagoland	29	4.45	29	7.22	29	15.13	29	16.20	Swedish	Williams S. S. Line	434.0	57.5	21.6	Rotterdam, Holland	Vancouver, B. C.	Ballast	4,489	7,983	5,882	
Willolo	29	7.30	29	8.10	29	16.13	29	17.40	American	Com'lth & Dom. Line	470.0	60.0	29.2	Baltimore, Md.	Seattle, Wash.	General	7,066	10,381	7,518	
Port Wellington	29	6.05	29	12.58	29	20.32	29	21.42	British	Yugoslav-Amer. Line	400.0	52.0	16.0	London, England	Tocopilla, Chile	General	2,107	6,016	4,178	
Voivoda Putnik	29	13.50	29	14.05	29	21.31	30	00.45	Yugoslav	Yugoslav-Amer. Line	399.1	52.0	17.3	Alexandria, Egypt	Corral, Chile	Ballast		6,759	4,840	
Lautaro 2	29	7.15	29	14.05	29	21.50	30	2.25	British	Pacific Steam Nav. Co.	375.0	48.3	17.0	Glasgow-England	Seattle, Wash.	General		4,906	3,565	
Pardo	29	13.00	29	15.00	29	22.20	29	23.24	British	Royal Mail S. P. Co.				Newport, England		Ballast				
Gen. Wm. M.									American	U. S. Army	156.0	32.0		Cristobal, C. Z.	Bahoa, C. Z.	Steel	10,432	8,324	6,036	
Graham	29	14.50	29	20.25	30	11.04	30	12.05	American	Norton, Lilly & Co.	440.0	56.0	28.1	Mobile, Ala.	Seattle, Wash.	Steel				
Pomona	29	14.50	29	20.25	30	11.04	30	12.05	American	Norton, Lilly & Co.	440.0	56.0	28.1	Mobile, Ala.	Seattle, Wash.	Steel				
City of	29	14.50	29	20.25	30	11.04	30	12.05	American	Norton, Lilly & Co.	440.0	56.0	28.1	Mobile, Ala.	Seattle, Wash.	Steel				
Panama 2	15	17.00	30	6.17	30	13.58	30	16.30	Panamanian	Panama Mail S. S. Co.	296.0	46.0	21.3	Cristobal, C. Z.	San Francisco, Cal	General	2,802	3,848	2,603	
Chelatos	29	17.50	30	6.20	30	14.20	30	15.10	Greek	Kassos Steam Nav. Co.	359.9	51.9	13.6	Cardiff, England	Arica, Chile	Ballast	4,715	2,384		
Dixie Arrow	29	19.15	30	6.40	30	14.30	30	15.35	American	Standard Oil Co.	468.3	62.7	20.6	New York, N. Y.	Los Angeles, Calif	Ballast		9,744	7,140	
West Lynn 2	29	21.30	30	7.25	30	14.50	30	15.55	British	Oakwyn S. S. Co.	401.0	54.0	17.0	Greenock, England	Vancouver, B. C.	Ballast		6,752	5,161	
Broad Arrow	29	22.40	30	7.25	30	16.20	30	17.35	American	Standard Oil Co.	467.6	62.7	25.4	Beaumont, Texas	Far East.	Ballast		11,437	9,700	6,842
Hedgehope	30	00.30	30	8.20	30	17.24	30	18.31	British	Flood Brothers	385.0	52.8	22.6	Tyne, England	San Francisco, Cal	Kerosene		6,160	5,590	4,055
										Motor ship.						General				
										Gen. Wm. M.						Mine planter.				

* Motor ship.

† Tanker.

‡ Submarine.

§ Mine planter.

Hans Leon- hardt ²	30	6.25	30	8.35	30	17.45	30	21.00	German	Colombian Mar. Co.	230.8	36.8	14.0	New York, N. Y.	Buenaventura, Col.	General, cattle	350	1,568	909
Somerset	30	9.45	30	11.05	30	18.04	31	3.48	British	Federal Steam Nav. Co.	460.0	62.6	28.0	Newport, England.	Auckland, N. Z.	General	8,152	10,550	7,993
Florence	20	22.30	30	9.55	30	20.15	31	1.10	Colombian	Colombian Transp. Co.	150.0	27.2	9.0	Cristobal, C. Z.	Buenaventura, Col.	General	250	410	307
San Quirino	30	11.30	30	14.00	30	18.31	30	23.08	British	Anglo-Mexican Pet. Co.	407.0	52.4	20.0	Newcastle-on-Tyne	Los Angeles, Calif.	Ballast	6,156	4,212	
Brielle	29	11.20	30	14.00	30	21.35	31	1.30	Dutch	Royal Neth. S. S. Co.	403.0	58.0	26.0	Hamburg, Germany	Valparaiso, Chile	(*)	5,082	4,798	
Columbian	30	14.38	30	15.20	30	22.06	30	23.08	American	Amer.-Hawaiian Line	404.6	54.0	19.5	Boston, Mass.	Seattle, Wash.	General	2,875	6,760	4,450
Walter A. Luck- entach.	30	16.55	30	17.20	31	10.30	31	11.40	American	Luckenbach Line	446.5	56.1	23.8	Boston, Mass.	Seattle, Wash.	General	5,268	8,785	6,567
Canadian	30	19.40	31	6.03	31	14.20	31	16.55	British	Can. Nat. Steamers	400.3	52.0	21.3	Montreal, Canada	Adelaide, Australia	General	3,708	5,891	4,114
Papoose	31	00.50	31	6.20	31	14.56	31	16.15	American	Petroleum Nav. Co.	423.0	53.2	18.0	Malmö, Sweden	Los Angeles, Calif.	Ballast	6,285	4,370	
Amberton	31	6.45	31	8.20	31	15.54	31	16.55	British	R. Chapman & Sons	395.0	54.0	17.0	Savona, Italy	Vancouver, B. C.	Ballast	5,756	4,139	
Oreanus	31	8.05	31	8.55	31	16.48	31	17.55	American	Quaker S. S. Line	395.0	55.0	21.0	Wilmington, Del.	Portland, Ore.	General	3,664	7,330	5,233
Marthaian	31	9.30	31	9.45	31	16.55	31	18.28	American	The Redwood Line	386.4	52.2	18.0	Gulfport, Miss.	San Francisco, Cal.	General	2,163	5,696	4,125
Island	30	10.30	31	10.40	31	18.09	31	19.07	American	Swayne & Hoyt	324.0	46.2	22.0	Tampa, Fla.	Vancouver, B. C.	General	3,636	3,984	2,612
Point Montara	30	13.40	31	11.55	31	20.31	30	20.17	British	Donaldson Line	385.0	51.6	18.0	Glasgow-England.	Vancouver, B. C.	General, bananas	1,061	6,576	4,724
Moveria	31	7.25	31	12.40	30	20.30	31	22.30	American	Ore S. S. Corp.	549.0	72.0	23.10	New York, N. Y.	Cruz Grande, Chile	Ballast	14,325	4,635	
Lebore	30	16.50	31	12.15	11-12	48	11-14	05	British	James Det. Wailer	120.0	22.0	14.6	Aberdeen, England	Vancouver, B. C.	General	66	222	75
Argon	31	10.45	31	14.45	1	11.36	1	12.50	British	Thos. Rice & Co.	430.0	55.9	26.3	Galveston, Texas	Yawata, Japan	(*)	6,790	6,987	4,933
Illingworth	31	10.45	31	8.00	31	14.56	31	14.56	American	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Swan	31	10.45	31	8.00	31	14.56	31	14.56	American	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Motor Sailor	31	10.45	31	8.00	31	14.56	31	14.56	American	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Levant Arrow	11-1	5.20	11-1	6.35	11-1	13.33	1	14.45	American	Standard Transp. Co.	468.3	62.7	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast	9,744	7,039	
Buffalo Bridge	1	7.45	1	8.10	1	15.03	1	18.25	American	Charles Nelson & Co.	324.0	46.0	19.0	Baltimore, Md	Seattle, Wash.	General	2,550	3,985	2,630
Santa Maria	1	7.45	1	8.45	1	14.31	2	00.04	American	Grace Line	466.0	64.0	22.0	New York, N. Y.	Talcahuano, Chile	General	3,075	10,350	6,382
Slemmestad	1	7.20	1	9.25	1	15.50	1	17.05	Norwegian	A. F. Klaveness	376.0	53.0	24.0	Mobile, Ala	Osaka, Japan	Cotton, steel	6,300	6,256	4,663
Nobata	1	2.15	1	10.35	1	17.49	1	17.15	British	Hain S. S. Co.	416.0	54.0	19.6	New York, N. Y.	Adelaide, Australia	General	3,728		
Nitro	1	9.40	2	6.00	2	12.49	5	8.17	American	U. S. Navy	460.0	60.1	25.0	Hampton Roads, Va.	San Diego, Calif.	Naval stores	2,615		
President Mon- roe	2	5.45	2	7.10	2	2.14	10	21.40	American	Dollar Line	502.1	62.2	27.0	New York, N. Y.	Panama, Straits Set.	General	4,199	12,023	8,495
Chunan	10-29	14.40	2	9.00	2	16.23	2	22.55	Panama	National Navigation Co.	116.0	21.0	8.0	Cristobal, C. Z.	Buenaventura, Col.	General	348	211	124
Denpark	11-2	8.45	2	10.15	2	17.17	2	20.58	British	J. & J. Dendelm.	350.1	49.0	14.6	Santa Cruz, C. Is.	Peru	Ballast			
Rockpool	2	19.15	2	20.05	3	9.30	3	11.42	British	Sr. R. Roper & Co.	405.1	53.5	16.0	St. Shields, Eng.	Vancouver, B. C.	Ballast	5,869	4,271	
Spreewald	2	14.28	3	6.05	3	13.38	4	20.27	German	Hamburg-American Line	399.0	54.0	19.7	Hamburg, Germany	Valparaiso, Chile	General	3,433	6,791	4,997
Arwyco	2	14.28	3	6.19	3	13.38	4	20.27	German	Telford S. S. Co.	225.0	34.0	17.8	Antwerp, Belgium	Shanghai, China	Liquors	985	1,370	783
Eastmoor	2	14.45	3	6.20	3	14.11	3	15.35	British	Can. Nat. Steamers	395.0	52.0	17.6	Montreal, Canada	Dunedin, N. Z.	General	2,740	5,958	4,245
Portland Maru	2	14.45	3	6.20	3	14.11	3	15.35	British	Kokusai Kisen Kaisha	388.0	52.0	17.6	Portland, Me.	Yawata, Japan	General	4,231	5,919	4,424
Raby Castle	3	00.05	3	7.25	3	15.18	3	17.00	Japanese	James Chambers & Co.	412.8	52.3	24.10	New York, N. Y.	Fusan, Japan	General	6,573	6,805	5,077
Port Curtis	3	15.45	3	8.25	3	15.56	3	17.00	British	Com Int'l & Dom. Line	460.0	58.5	23.0	New York, N. Y.	Dunedin, N. Z.	General	2,045	8,500	6,140
Jamaica	10-21	15.46	3	9.38	3	17.30	3	18.40	British	Pacific Steam Nav. Co.	220.0	54.0	13.0	Cristobal, C. Z.	Champerico, Guat	General	796	1,187	622
Benjamin	11-1	18.00	3	10.00	3	16.49	* 4	14.05	Norwegian	Norway-Pacific Line	452.0	59.5	20.5	Oslo, Norway	Vancouver, B. C.	General, bananas	3,586	9,082	6,140
Franklin	3	9.35	3	11.00	3	17.54			American	Tampa Inter-ocean Co.	434.0	57.6	20.0	Galveston, Texas	Shanghai, China	Cotton	4,881	7,982	5,911
Hanover	1	2.10	3	11.15	3	18.00	3	19.20	British	McClay & McIntyre	402.0	52.0	17.6	New York, N. Y.	Valparaiso, Chile	General	350	5,593	4,069
Uganda	1	17.55	3	12.14	3	18.57	3	20.15	German	North German Lloyd	216.0	33.0	14.2	Cristobal, C. Z.	Buenaventura, Col.	General	350	1,105	698
Pacific Ex- porter	2	8.50	3	13.10	3	19.49	3	21.08	British	Furness Withy & Co.	435.0	60.5	20.0	Glasgow-England	Vancouver, B. C.	General, bananas	1,394	9,633	5,998
Pacific Com- merce	3	13.25	3	13.50	3	21.55	3	22.00	British	Furness Withy & Co.	420.0	54.0	19.0	New York, N. Y.	Shanghai, China	(**)	3,287	6,996	5,346

* Tanker. ⁵ Motor schooner. ⁶ Mine sweeper. ⁷ Ammunition ship. ⁸ Cement, iron, and general. ⁹ Cotton, carbon, and scrap iron. ¹⁰ Scrap steel and tobacco. ¹¹ Tobacco, automobiles, and general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Cambrai ¹²	27	6.30	28	6.18	28	13.15	28	13.15	American	War Department	448.0	58.2	24.0	San Francisco, Cal.	Brooklyn, N. Y.	Army supplies.	179		
Dean Emery ¹³	27	15.10	28	6.52	28	14.40	28	14.40	American	Huasteca Pet. Co.	429.3	59.2	26.6	Los Angeles, Calif.	Baltimore, Md.	Gasoline	9,300	7,709	5,517
Elmhurst ¹⁴	27	19.30	28	8.12	28	16.00	28	17.40	German	Hamburg-American Line	397.0	54.0	24.4	Corral, Chile	Hamburg, Germany	General	6,903	5,965	4,268
Loghail ¹⁵	28	00.30	28	8.55	28	16.15	28	18.45	British	Royal Mail S. P. Co.	485.6	62.3	29.2	Vancouver, B. C.	Rotterdam, Holland	General	9,550	10,803	7,606
Theodore																			
Roosevelt ¹⁶	28	1.15	28	10.00	28	18.15	28	23.55	Norwegian	Norway-Pacific Line	425.5	55.2	28.2	Vancouver, B. C.	Oslo, Norway	General	8,901	7,593	5,637
Yero Carras	28	14.30	28	15.10	28	22.30	28	22.30	Greek	Carras Brothers	385.0	50.0	24.6	Tecopilla, Chile	Azores ¹⁶	Nitrates	7,250	5,145	3,710
Francis E.																			
Powell ¹⁷	28	23.30	29	5.58	30	12.02	30	12.02	American	Atlantic Refining Co.	431.0	59.2	26.0	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline	9,544	7,860	5,101
Chinan ¹⁸	29	1.00	29	6.31	29	14.40	29	14.40	Panama	National Navigation Co.	110.0	21.0	9.8	Buenaventura, Col.	Cristobal, C. Z.	(¹⁷)	233	211	124
Dryden	28	21.00	29	6.32	29	14.30	29	14.30	American	Tampa Intercoastal Co.	434.3	57.7	24.6	Iloilo, P. I.	Baltimore, Md.	General	8,113	7,983	5,882
Empire Arrow	28	23.30	29	7.31	29	18.05	29	18.05	American	Standard Transp. Co.	463.0	63.0	28.0	Los Angeles, Calif.	Providence, R. I.	Kerosene	12,153	9,841	6,946
Harry Luckenbach	28	23.00	29	8.27	29	15.10	29	15.10	American	Luckenbach Line	448.9	60.2	28.0	Seattle, Wash.	Mobile, Ala.	Lumber, general	7,200	9,262	6,853
Canadian																			
Scottish	29	4.30	29	8.58	29	18.40	29	21.10	British	Can. Nat. Steamers.	400.0	53.2	18.0	Adelaide, Australia.	Montreal, Canada	General	2,339	5,905	4,129
Maple Branch.	29	7.50	29	9.15	29	19.00	29	21.10	British	F. and W. Ritson.	400.0	52.0	23.8	Valparaiso, Chile	Liverpool, England	General	6,721	5,618	4,116
Cape of Good Hope ¹⁹																			
Notre Dame de Fourviere	29	9.20	29	10.07	29	20.12	29	22.20	British	Lyle Shipping Co.	405.0	52.0	25.0	Vancouver, B. C.	Hamburg, Germany	General	6,906	5,851	4,284
Gracefield	29	9.30	29	10.42	29	21.00	30	16.55	French	French Line	427.3	58.3	29.7	Vancouver, B. C.	Le Havre, France.	General	8,319	8,043	5,454
Hawaiian	23	12.15	29	13.37	29	20.50	29	20.50	British	E. J. Sutton & Co.	390.0	53.5	23.0	Vancouver, B. C.	Sharpness, England	Wheat	7,148	5,732	4,181
Illinois	29	13.00	29	14.09	29	22.00	29	22.00	American	Amer-Hawaiian Line.	404.6	53.9	27.6	Seattle, Wash.	Boston, Mass.	General	7,653	6,766	4,767
Chilore	29	17.20	29	18.15	30	13.35			French	French Line	400.0	51.6	27.0	San Antonio, Chile	Le Havre, France	General	8,219	6,336	4,301
Gold Shell ²⁰	30	1.30	30	6.02	30	15.15	30	15.15	American	Ore S. S. Corp.	549.6	72.2	35.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	20,000	15,438	9,348
Onondaga	29	14.50	30	6.39	30	15.41	30	19.15	Dutch	Nederl. Ind. Tank Mats	411.6	53.4	26.2	Los Angeles, Calif.	Land's End, Eng. ²⁰	Gasoline	7,448	6,201	4,336
Orient City	29	15.40	30	7.16	30	17.35	30	22.35	American	Ford Motor Co.	251.0	43.0	20.0	Vancouver, B. C.	New York, N. Y.	(¹⁸)	3,074	2,656	1,621
Ambassador	30	05.00	30	8.59	30	18.30	30	18.30	British	Sir W. R. Smith & Sons	396.0	53.0	25.7	Vancouver, B. C.	Leixoes, Portugal	Bulk wheat	7,868	5,979	4,419
Tusitula ²¹	30	5.00	30	9.15	30	11-12	30	11-12	American	Hall Brothers S. S. Co.	399.0	53.2	24.0	Ionique, Chile	Azores ¹⁶	Nitrates	7,800	5,983	4,193
Perene	28	19.15	30	9.58	30	19.03	31	6.10	Peruvian	Ship Tusitula, Inc.	201.0	39.4	21.0	Seattle, Wash.	Baltimore, Md.	Magnasite	2,500	1,802	1,046
Guatemala	30	11.40	30	13.32	30	20.35	31	14.05	American	Peruvia Line	270.0	39.0	18.4	Callao, Peru	New York, N. Y.	(¹⁹)	2,034	2,168	1,529
Manukal	30	11.40	30	13.38	30	21.32	30	21.32	American	Panama Mail S. S. Co.	360.0	51.5	20.0	San Francisco, Cal.	New York, N. Y.	General	4,384	5,776	4,081
F. J. Luckenbach	30	13.45	30	14.21	30	22.35	30	22.35	American	Amer-Hawaiian Line.	446.0	56.1	31.0	Portland, Ore.	New York, N. Y.	General	7,739	10,316	6,561
Florence Luckenbach	30	16.35	30	17.15	31	11.12	31	11.12	American	Luckenbach Line	401.8	52.2	24.0	Portland, Ore.	Beston, Mass.	General	9,271	8,508	6,179
Galveston ²²																			
Tulsa ²³																			

¹² U. S. Army transport. ¹³ Motor ship. ¹⁴ Sailing ship.¹⁵ Cruiser.¹⁶ For orders.¹⁷ Coffee, platinum, and general.¹⁸ Lumber and automobile parts.¹⁹ Copper, silver, and general.

London Im- porter	30	23.45	31	6.58	31	14.40	31	14.40	31	14.40	British	450.4	58.0	29.2	Vancouver, B. C.	Glasgow, Scotland.	General.	8,123	8,405	5,855
Emmanuel Stavroudis	29	22.25	31	7.20	31	15.55	31	17.10	31	17.10	Greek	398.5	48.5	26.0	Tocopilla, Chile	Azores ¹⁶	Nitrates	7,300	5,472	3,753
Egypt Maru	30	17.30	31	8.20	31	17.05	31	18.25	31	18.25	Japanese	400.0	53.7	...	Vancouver, B. C.	Norfolk, Va. ¹⁶	Wheat	8,557	7,018	5,059
O-9 ²⁰	31	8.49	31	8.49	31	18.10	31	18.10	31	18.10	American	175.0	16.4	...	Balboa, C. Z.	Cristobal, C. Z.	...	...	...	...
Susolanco.	31	3.46	31	9.05	31	18.20	11-1	9.15	31	18.20	American	324.0	46.2	23.0	San Francisco, Cal.	New York, N. Y.	Lumber	4,250	3,984	2,612
Guernar	31	3.00	31	9.15	31	18.45	31	22.00	31	22.00	German	385.0	53.2	25.0	Corral, Chile	Antwerp, Belgium	General	7,350	6,081	4,618
Kinderdijk	31	6.30	31	10.00	31	19.55	11-1	12.15	31	19.55	Dutch	469.7	58.0	24.8	Vancouver, B. C.	Hull, England	General	8,807	8,515	6,080
Paris City	31	8.45	31	10.24	31	20.15	2	8.00	31	20.15	British	411.5	55.0	28.0	Portland, Oreg.	Marcus Hook, Pa.	Lumber, grain.	9,000	6,673	4,763
Sunol ¹ ²¹	31	9.40	31	10.41	31	20.35	1	2.15	31	20.35	American	489.6	66.0	29.2	Los Angeles, Calif.	Baltimore, Md.	Gasoline	13,386	9,610	6,397
Willango.	31	10.00	31	11.10	31	21.01	31	21.00	31	21.00	American	409.0	53.3	24.2	San Francisco, Cal.	Liverpool, England	Lumber, general.	7,400	6,510	4,827
Losada ²¹	31	5.53	31	12.34	31	22.05	31	22.55	31	22.55	British	406.0	54.2	26.9	Corral, Chile	Baltimore, Md.	General	8,390	7,221	4,844
Cerro	31	11.10	31	12.57	31	23.15	31	23.15	31	23.15	German	449.0	58.3	13.9	Guayaquil, Ecuador	Cristobal, C. Z.	General	7,661	1,572	1,011
Witell	31	11.40	31	14.31	31	23.59	31	23.59	31	23.59	German	429.3	58.3	24.8	Vancouver, B. C.	Bremen, Germany	General	7,161	7,816	5,755
George H. Jones	31	19.00	11-1	6.08	11-1	13.35	11-1	13.35	31	13.35	American	429.3	59.2	26.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	9,435	7,689	5,667
Paul Shoup	31	21.44	1	6.37	1	14.05	1	14.05	31	14.05	American	424.4	58.2	26.0	San Francisco, Cal.	Philadelphia, Pa.	Gasoline	9,126	7,333	5,182
Hadnot	31	22.35	1	7.40	1	15.10	1	15.10	31	15.10	American	416.9	56.2	26.8	Los Angeles, Calif.	Boston, Mass	Gasoline	8,345	6,706	4,659
Trimountain	31	17.33	1	8.11	1	16.05	1	16.05	31	16.05	American	416.9	56.2	27.3	Los Angeles, Calif.	New York, N. Y.	Gas oil	9,000	6,728	4,734
Sucarcose	31	22.36	1	8.48	1	16.30	1	16.30	31	16.30	American	324.0	46.2	27.0	Vancouver, B. C.	Newark, N. J.	Lumber	4,040	3,984	2,628
Ohio Maru.	11-1	1.09	1	9.16	1	17.35	1	19.55	31	19.55	Japanese	385.0	51.0	26.7	Seattle, Wash.	Gibraltar ¹⁷	Wheat	7,700	5,928	4,381
San Jose	1	5.05	1	10.20	1	17.40	2	16.30	31	16.30	American	330.0	44.6	18.0	San Francisco, Cal.	Port Limon, C. R.	General	738	3,670	2,353
Cal.	1	9.40	1	11.02	1	17.55	3	12.14	31	12.14	German	216.6	32.9	12.2	Guayaquil, Ecuador	Cristobal, C. Z.	General	257	1,105	698
Point Gorda	1	11.10	1	12.09	1	19.05	1	19.05	31	19.05	American	324.0	46.2	22.0	Vancouver, B. C.	New Orleans, La.	Lumber, general.	3,829	3,984	2,643
Dio.	1	16.50	1	18.03	2	8.45	2	8.45	31	8.45	American	386.8	52.2	23.6	San Francisco, Cal.	New Orleans, La.	Lumber	6,152	5,708	4,131
Trocas ¹⁸ ¹⁹	1	15.25	2	6.04	2	13.45	2	13.45	31	13.45	British	440.0	59.5	27.0	Los Angeles, Calif.	Curacao, D. W. I.	Gasoline	9,162	7,918	4,797
Luigen ¹ ²⁰	1	23.00	2	6.38	2	14.55	2	16.35	31	16.35	British	385.0	50.5	24.0	Los Angeles, Calif.	Rouen, France	Benzone	6,243	5,088	3,741
Penelope ¹ ²¹	2	1.55	2	7.31	2	15.05	2	16.00	31	16.00	Danish	483.0	63.0	27.0	Talara, Peru	Hamburg, Germany	Gasoline	11,180	9,302	6,127
Aladdin ¹	2	4.05	2	7.51	2	15.35	2	15.35	31	15.35	American	435.6	56.2	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	8,666	7,408	5,112
Canada ¹³	2	3.35	2	8.19	2	16.55	3	1.25	31	1.25	Swedish	425.0	56.1	26.4	Seattle, Wash.	Stockholm, Sweden	Gasoline	7,139	7,476	5,485
Fort Armstrong	2	3.50	2	8.52	2	16.55	2	16.55	31	16.55	American	324.0	46.2	23.0	Los Angeles, Calif.	Savannah, Ga.	(²¹)	4,440	3,984	2,628
El Panquaco ²¹	25	15.39	2	9.00	2	16.45	2	16.45	31	16.45	Panaman	125.6	23.5	...	Balboa, C. Z.	Cristobal, C. Z.	Lumber, ore.	6,844	6,745	4,562
Santa Cecilia.	11-2	5.15	2	9.19	2	17.15	2	17.15	31	17.15	American	404.6	53.9	27.0	Englewood, B. C.	Baltimore, Md.	General	8,300	7,004	5,017
Iauri.	1	14.20	2	9.42	2	18.15	2	22.15	31	22.15	German	439.0	55.6	25.6	Valparaiso, Chile.	Hamburg, Germany	General	7,465	6,829	4,627
Nevedan	2	11.10	2	11.46	2	18.35	2	18.35	31	18.35	American	400.0	57.8	25.1	Portland, Oreg.	Boston, Mass	Lumber	7,197	6,936	5,024
Maine	2	12.30	2	13.15	2	20.30	2	20.30	31	20.30	American	462.0	54.2	26.6	Everett, Wash.	New York, N. Y.	General	7,465	6,829	4,627
Port Dunedin ²¹	2	10.35	2	14.33	2	21.35	2	21.35	31	21.35	British	406.9	59.8	24.0	Lyttleton, N. Z.	London, England	Lumber	5,500	9,959	7,226
Pacific Pine	2	16.45	2	17.22	3	11.35	3	11.35	31	11.35	American	410.5	54.3	25.6	Seattle, Wash.	Baltimore, Md	General	7,300	6,583	4,808
Steelore	2	1.30	3	6.07	3	15.30	3	15.30	31	15.30	American	550.3	72.2	34.6	Sparrows Pt., Md	Iron ore	...	20,000	15,551	4,297
Thiberton	3	00.15	3	6.45	3	17.00	3	18.35	31	18.35	British	400.0	52.4	24.6	Cruz Grande, Chile	Lisbon, Portugal.	Wheat	7,366	5,689	4,126
Swan ²²	3	00.15	3	6.45	3	17.00	3	17.00	31	17.00	British	188.0	35.6	...	Balboa, C. Z.	Cristobal, C. Z.	(²¹)	...	...	...
Gen. Wm. M. Graham	3	7.02	3	18.00	3	18.00	3	18.00	31	18.00	American	160.2	32.0	...	Balboa, C. Z.	Cristobal, C. Z.	Gasoline tops	10,000	7,629	5,325
David	3	2.30	3	7.15	3	17.55	3	21.00	31	21.00	American	430.0	59.2	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	601	2,844	1,750
McKelvey ¹	3	4.40	3	8.28	3	18.15	3	23.45	31	23.45	British	303.0	43.0	15.2	Paita, Peru	New York, N. Y.	General	...	6,652	4,212
Alvarado	3	6.00	3	9.06	3	19.30	4	00.05	31	00.05	German	429.0	50.0	26.4	Valparaiso, Chile	Rotterdam, Holland	General	7,960	6,052	4,212
Nitokris	3	6.05	3	9.26	3	19.25	3	19.25	31	19.25	British	400.0	53.0	26.0	Vancouver, B. C.	London, England	Wheat	6,203	4,851	3,326
King Robert	3	6.00	3	10.06	3	20.15	3	20.15	31	20.15	British	385.2	51.0	22.6	La Libertad, Fed r.	Philadelphia, Pa.	Crude oil	6,303	4,568	3,297
El Lobo	3	14.15	3	15.04	3	22.25	3	22.25	31	22.25	American	370.0	53.2	23.0	Tacoma, Wash	Baltimore, Md	Lumber, general.	...	...	...
Mundeta	3	14.15	3	15.04	3	22.25	3	22.25	31	22.25	American	370.0	53.2	23.0	Tacoma, Wash	Baltimore, Md	Lumber, general.	...	...	...

¹ Tanker.
²⁰ Submarine.
²¹ Revenue cutter.
²² Auxiliary mine sweeper.
²³ Lumber, sugar, and general.
²⁴ Flour, canned, and dried fruits.
²⁵ Lumber, copper, and general.
²⁶ Nitrates, ore, and cotton.
²⁷ Towing barge No. 2.
²⁸ Coffee, cocoa, wood, and bats.
All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

MOVEMENTS OF OCEAN VESSELS.

PORT OF CRISTOBAL.				
* ARRIVALS.			* DEPARTURES.	
Date.	Vessel.	Line.	From—	For—
October 28.	Utua	United Fruit Co.	Port Limon, Costa Rica.	Port Limon and Bocas.
October 29.	Wanks	Standard Fruit & S. S. Co.	New Orleans, La.	New York via Habana.
October 29.	Tolosa	United Fruit Co.	New York via Habana.	New Orleans and waypoints.
October 29.	William M. ²⁹	G. I. Bryan	Colon, R. P.	New York via Haiti.
October 30.	Pellerin de la Touche	French Line	Havre via waypoints.	Bluefields, Nicaragua.
October 30.	Anachucuna ³⁰	United Fruit Co.	Colon, R. P.	Curacao, D. W. I.
October 31.	Orinoco	Hamburg-American Line	Hamburg via waypoints.	San Blas, R. P.
October 31.	Suriname	United Fruit Co.	New Orleans, La.	Colon, R. P.
October 31.	Santa Marta	United Fruit Co.	New York via Kingston.	Port Limon, Costa Rica.
November 1.	Granada	Standard Fruit & S. S. Co.	New Orleans, La.	Puerto Colombia.
November 1.	Coppename	United Fruit Co.	Port Limon, Costa Rica.	New York via waypoints.
November 2.	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.	New Orleans, La.
November 2.	Mayari	United Fruit Co.	New York via Cuba.	Havre via waypoints.
November 2.	Linda S. ³¹	Surgeon Brothers	Colon, R. P.	Bluefields, Nicaragua.
November 3.	Orinoco	Hamburg-American Line	Port Limon, Costa Rica.	New Orleans and waypoints.
November 3.	Cartago	United Fruit Co.	New Orleans via Habana.	Hamburg via waypoints.
PORT OF BALBOA.				
²⁹ Schooner.	³⁰ Motor boat.	³¹ Motor schooner.		
October 29.	Craftsman ³²	R. J. McArdle Contracting Co.	Buenaventura, Colombia.	Pto. Armuelles, R. P.
October 29.	Cricamola ³³	Chiriqui Land Co.	Buenaventura, Colombia.	Buenaventura, Colombia.
October 31.	Dos Hermanos ³⁴	A. Valdez	Bayano River, R. P.	Bayano River, R. P.
October 31.	A. B. de Obarrío ³⁴	Pacific Fruit Co.	Bayano River, R. P.	Bayano River, R. P.
October 31.	Nueva Alianza ³⁴	H. Elliot	El Real, R. P.	El Real, R. P.
November 1.	Tejon	General Petroleum Corp.	San Francisco, Calif.	Los Angeles, Calif.
* Other than ships passing through the Canal.				
³² Tug.	³³ Motor yacht.	³⁴ Motor schooner.		

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Cargo Tonnage from Atlantic to Pacific in October Establishes New Record.

During the month of October, 1928, 875,641 long tons of cargo passed through the Canal from the Atlantic to the Pacific, establishing a new high record for cargo tonnage in this direction. The previous high mark for Pacific-bound cargo occurred in March, 1926, when 837,806 tons passed through. October, 1928, and March, 1926, are the only two months since the opening of the Canal that cargo tonnage from the Atlantic to the Pacific has exceeded the 800,000-ton mark. Increased tonnage in the United States intercoastal and the east coast United States to Far East trades has been the chief reason for the heavy Pacific-bound shipping in the past month, the tonnage in each of these trades having increased more than 62,000 tons over the monthly average of the two respective trades for the first 9 months of the current calendar year.

The following graph gives the principal trades contributing to the October, 1928, tonnage, from the Atlantic to the Pacific:

Trade route.	Tons of cargo.
United States intercoastal	298,721
United States to Far East	214,085
Europe to South America	73,527
Europe to United States	51,077
United States to Australasia	47,246
Europe to Australasia	47,235
Miscellaneous routes	143,750

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

MOVEMENTS OF OCEAN VESSELS. *Week ending at midnight, November 10, 1928.*

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Finn ²	3	18.40	4	6.10	4	12.58	Swedish	Colombian Mari. Co.	271.0	41.0	12.0	New York, N. Y.	Buenaventura, Col.	General	131	2,472	1,513
Sagadahoc	4	3.40	4	6.15	4	14.45	American	Argonaut S. S. Co.	420.5	54.2	24.9	Baltimore, Md.	Tacoma, Wash.	Steel, general	7,291	7,340	5,342
Maiko	4	2.12	4	9.05	4	15.13	American	Amer-Hawaiian Line	415.0	53.7	20.9	Boston, Mass.	Portland, Ore.	General	3,689	7,072	4,944
Nevada	4	2.23	4	10.25	4	16.54	French	French Line	420.0	56.0	22.8	Havre, France	Vancouver, B. C.	General	2,500	7,500	5,196
Evangel	4	16.40	4	17.10	5	9.42	Norwegian	General S. S. Corp.	365.0	52.3	15.6	Buenos Aires, Arg.	Los Angeles, Calif.	Coffee, guano, etc.	1,438	5,746	4,092
San Jose	5	4.40	5	6.25	5	13.45	American	United Fruit Co.	330.0	44.6	19.0	Port Limon, C. R.	San Francisco, Cal.	Bananas, general	761	3,670	2,353
Imertton	5	6.40	5	7.30	5	16.50	British	R. Chapman & Son	400.0	52.0	16.0	Trieste, Italy	Vancouver, B. C.	Ballast	8,304	7,946	5,695
Grylock	5	9.15	5	9.25	5	16.57	American	Isthmian S. S. Lines	430.7	54.3	27.0	Baltimore, Md.	Vancouver, B. C.	Steel, general	7,000	7,093	5,021
Leverbank ²	5	16.50	5	18.15	6	9.03	British	Bank Line, Ltd.	419.0	53.0	23.0	New York, N. Y.	Hongkong, China.	General	2,036 1/2	2,851	1,776
Araha	5	12.36	6	6.10	6	13.35	British	Pacific Steam Nav. Co.	203.0	43.0	12.7	New York, N. Y.	Callao, Peru	General	6,141	5,774	4,175
Tulsa ³	5	18.50	6	5.35	6	14.36	American	U. S. Navy	241.0	14.0		Gatun Lake, C. Z.	Balboa, C. Z.	General, steel	3,537	8,543	6,427
Charlton Hall	6	8.18	6	8.40	6	15.07	American	U. S. Steel Prod'n's Co.	400.0	50.0	26.8	New York, N. Y.	San Antonio, Chile.	General	6,717	9,027	6,539
Edward Luckenbach	6	9.40	6	9.55	6	17.21	British	Luckenbach Line	136.0	57.0	21.0	New Orleans, La.	Tacoma, Wash.	General	7,700	6,997	5,401
Leeds City	6	11.30	6	11.40	6	18.05	British	Texas S. S. Co.	400.0	54.3	24.0	Port Arthur, Texas	Dairen, China	Kerosine, gas oil	1,857	5,707	4,212
Demetriou	6	19.20	6	12.07	6	19.09	American	R. Chapman & Son	397.0	54.0	16.0	Pto. Ferrario, Italy	Vancouver, B. C.	Ballast	5,989	7,025	5,055
Buenaventura	6	9.20	6	12.19	6	19.53	American	Panama R. R. S. S. Line	251.0	43.0	20.8	New York, N. Y.	Guayaquil, Ecuador	General	4,538	8,218	6,032
Kako Maru	6	9.20	6	12.19	6	19.53	American	Nippon Yusen Kaisha	405.0	53.0	26.9	Baltimore, Md.	Kobe, Japan	General	5,430	5,757	4,268
Alfonso Perez	6	12.10	6	14.30	6	21.55	Spanish	Angel F. Perez	410.6	54.0	15.0	Lisbon, Portugal	Vancouver, B. C.	Ballast	7,847	7,611	5,450
Silverhelle ²	6	17.45	6	17.55	7	12.30	British	Kerr S. S. Co.	425.6	58.3	21.3	New York, N. Y.	Singapore	General	4,412	6,537	4,841
Dansborg	6	15.50	6	19.12	7	13.12	Danish	C. K. Hansen	369.0	51.0	22.0	New York, N. Y.	London, Philippines	General	6,717	9,027	6,539
Steel Trader	6	19.40	7	6.20	7	14.34	American	U. S. Steel Products Co.	442.0	56.0	26.0	Molokai, Ala.	Osaka, Japan	General	2,646	8,960	6,295
Petrela ¹	6	20.10	7	6.20	7	13.59	British	Shell Oil Co.	412.0	53.0	21.0	London, England	Los Angeles, Calif.	Ballast	5,875	6,246	4,627
Pacific Redwood	6	23.50	7	7.55	7	14.58	American	Dimon S. S. Corp.	409.0	54.0	17.10	Norfolk, Va.	Los Angeles, Calif.	General	12		
Paul Luckenbach	7	3.45	7	8.05	7	15.10	American	Luckenbach Line	471.0	59.6	23.0	Boston, Mass.	Seattle, Wash.	General	6,717	9,027	6,539
Castor ¹	7	6.18	7	10.50	7	18.05	American	Malmarcs	482.0	61.8	18.6	Southampton, Eng.	Los Angeles, Calif.	Ballast	8,960	6,295	
Santa Tecla	7	4.00	7	12.10	7	20.25	Swedish	N. O. & S. A. S. S. Co.	298.6	40.0	20.5	New Orleans, La.	Talcahuano, Chile	General	2,646	8,960	6,295
Carpena	7	9.45	7	12.10	7	18.56	British	Sir R. Ropner & Co.	405.0	53.5	15.6	Wilmington, Del.	Vancouver, B. C.	Ballast	5,875	6,246	4,627
Fortbridge	7	11.50	7	13.35	7	22.35	British	Seaboard Sales Corp.	390.0	55.0	18.0	Boston, Mass.	Vancouver, B. C.	Ballast	6,246	4,627	
Gambou ¹	7		7		7	12.57	American	San Blas Develop't Co				Cristobal, C. Z.	Gatun, C. Z.	Ballast	12		
C. O. Stillman ²	7	11.53	7	15.05	8	9.28	British	International Pet. Co.	565.0	75.0	27.0	New York, N. Y.	Los Angeles, Calif.	Ballast	16,780	9,885	
Emendik	6	18.30	8	6.10	8	13.30	Dutch	Holland-American Line	469.7	58.5	19.6	Rotterdam, Holland	Portland, Ore.	General, bananas	1,691	8,514	6,066
Simon Von Urecht	7	14.51	8	6.25	8	14.41	German	G. T. H. Siemens	407.0	54.0	25.0	New York, N. Y.	Gensan, China	Case oil	7,000	6,636	4,888
Mexican	7	17.55	8	7.20	8	15.09	American	Amer-Hawaiian Line	472.3	57.2	21.0	Boston, Mass.	Tacoma, Wash.	General	4,023	9,258	6,944
W. L. Steed ²	7	18.15	8	7.25	8	15.41	American	Huasteca Pet. Co.	416.3	56.1	21.0	Providence, R. I.	Los Angeles, Calif.	Ballast	6,751	4,795	

¹ Tanker.

² Motor ship.

³ Gunboat.

⁴ Launch.

⁵ Pig iron, steel, and cotton.

Fairfield City	7 18.40	8 8.25	8 16.07	8 17.10	American	U. S. Steel Products Co.	424.2	56.2	25.0	New York, N. Y.	Manila, Philippines	General	8,044	7,611	5,450
Sir Osborn	7 20.15	8 9.45	8 16.30	8 19.35	Norwegian	Anglo-Saxon Pet. Co.	471.8	64.0	18.0	Hamburg, Germany	Los Angeles, Calif.	Ballast		9,562	6,604
Holmden	7 20.38	8 9.50	8 16.59	8 19.30	American	Williams S. S. Line	468.2	58.0	24.2	Baltimore, Md.	Seattle, Wash.	General, slag	7,390	8,406	6,162
Willbabe															
Canadian	7 25.25	8 10.25	8 17.39	9 12.35	British	Can. Nat. Steamers	430.0	55.0	17.6	Montreal, Canada	McBourne, Aust'lia	General	2,210	7,689	5,518
Cruiser	8 9.05	8 11.29	8 17.39	9 12.35	Norwegian	Caucasian Oil Co.	331.0	55.0	17.3	London, England	Los Angeles, Calif.	Ballast		5,994	3,876
Sommerstad	8 5.45	8 12.00	8 18.43	9 12.35	British	Royal Mail S. P. Co.	450.0	58.0	19.11	Rotterdam, Holland	Vancouver, B. C.	General	2,172	8,878	6,588
Nobraska	7 14.25	8 13.50	8 20.17	8 23.00	German	Royal Line	450.0	58.0	19.4	Hamburg, Germany	San Antonio, Chile	General	2,077	7,756	5,378
Murta	8 2.20	8 14.15	8 21.18	8 23.00	Italian	Nav. Libera-Triestina	430.0	55.3	18.8	Trieste, Italy	Vancouver, B. C.	General	1,247	7,790	6,054
Cedina															
Nollington	8 14.20	8 14.55	8 21.45	9 1.25	British	Continental Grain Co.	399.0	53.0	13.0	Barry, England	Vancouver, B. C.	Ballast		6,213	4,382
Court	8 16.40	8 20.15	9 11.36	9 12.35	American	Calmar S. S. Co.	430.7	57.0	29.0	Baltimore, Md.	Seattle, Wash.	Steel, general	11,234	7,956	4,866
Cubore	8 15.20	9 6.10	9 13.30	9 14.15	British	Pacific Steam Nav. Co.	450.0	58.7	25.6	New York, N. Y.	Talechuan, Chile	General	3,500	9,158	6,176
Essequibo	8 16.15	9 6.07	9 14.12	9 15.15	British	Pacific Steam Nav. Co.	530.0	66.0	24.10	Liverpool, England	Talechuan, Chile	General	4,223	14,827	10,630
Orejo	10-31-23 15	9 7.08	9 15.41	9 16.50	German	Hamburg-American Line	227.0	34.0	14.10	Cristobal, C. Z.	Guayaquil, Ecuador	General	608	1,572	1,011
Holland Maru	11-8-18 20	9 7.08	9 15.13	9 16.50	Japanese	Kawasaki Kisen Kaisha	385.0	51.0	25.0	Norfolk, Va.	Yokohama, Japan	(*)	6,016	5,926	4,434
Eleanor	8 20.52	9 8.15	9 16.23	9 17.40	American	Christensen S. S. Co.	410.5	54.3	17.5	Baltimore, Md.	Portland, Oreg.	General	2,385	6,572	4,788
Christianson	9 10.35	9 10.30	9 18.31	9 22.55	American	Transmarine Lines	324.0	46.2	22.3	Pensacola, Fla.	Seattle, Wash.	General	2,800	3,984	2,628
Surtio	9 12.55	9 13.20	9 20.15	10 3.50	American	American Pioneer Line	455.0	60.0	25.0	Galveston, Texas	Manila, Philippines	Cotton, general	6,554	8,978	6,325
Ethan Allen	9 16.45	9 16.55	10 9.11	10 13.00	Japanese	Kokusai Nisen Kaisha	385.0	51.0	27.0	New York, N. Y.	Kobe, Japan	(*)	6,453	5,914	4,426
Singapore Maru	8 21.00	10 6.10	10 13.28	10 14.25	Dutch	Royal Neth. S. S. Co.	200.0	33.0	11.9	Cristobal, C. Z.	Tumaco, Colombia	General	118	1,183	742
Barati	9 8.35	10 6.10	10 13.28	10 14.25	American	U. S. Navy	292.0	44.0	17.6	High seas	Gambou, C. Z.	General	2,791	6,573	4,916
Cleveland	9 6.10	10 6.05	10 13.10	10 14.25	American	Calif. & East'n S.S. Co.	410.5	54.3	19.5	Philadelphia, Pa.	Seattle, Wash.	General	1,550	5,486	4,050
West Katun	9 18.55	10 7.15	10 14.30	10 15.50	British	Calif. & East'n S.S. Co.	409.0	52.0	19.0	New York, N. Y.	Talechuan, Chile	Motor car parts			
Magdala						DuPont & Co.									
Cities Service	9 20.00	10 7.15	10 14.59	10 16.35	American	Cities Service Trans. Co.	461.7	60.2	16.2	New York, N. Y.	Los Angeles, Calif.	Ballast	8,561	5,987	
Empire	10 8.00	10 8.45	10 15.38	10 23.50	American	Panama-Pacific Line	600.0	65.3	27.10	New York, N. Y.	San Francisco, Cal.	General	2,561	17,041	11,426
Mongolia	9 23.05	10 8.45	10 16.23	10 23.12	Swedish	Johnson Line	427.0	56.0	24.0	Gothenburg, Swed'n	Honolulu, T. H.	General	7,708	7,591	5,661
Buenos Aires	10 3.32	10 10.18	10 17.09	10 18.11	British	Imperial Oil Co.	410.0	58.0	22.0	Levia, Canada	Los Angeles, Calif.	Ballast	7,468	5,042	
El Grillo	10 5.46	10 10.50	10 18.11	10 19.26	Japanese	Osaka Shosen Kaisha	400.0	54.0	19.10	Houston, Texas	Shanghai, China	Cotton, tobacco	4,262	6,094	4,301
Hamburg Maru	10 11.50	10 12.10	10 19.45	11 1.35	Danzig	Baltic-Amer. Pet. Co.	469.7	63.0	21.6	Hamburg, Germany	Talara, Peru	Ballast	9,336	6,338	
Parsephone	10 10.05	10 13.20	10 20.64	11 2.10	German	North German Lloyd	469.7	61.0	21.6	Bremen, Germany	Portland, Oreg.	General	4,282		755
Havel	10 10.05	10 13.20	10 20.64	11 2.10	German	North German Lloyd	469.7	61.0	21.6	Bremen, Germany	Portland, Oreg.	General	4,282		755
Salvador	10-27-16 35	10 14.15	10 21.64	10 22.09	British	Pacific Steam Nav. Co.	215.0	33.5	17.5	Cristobal, C. Z.	Champerico, Guat.	General	1,141	1,170	

* Cruiser.

* Scrap iron, cotton, tobacco, and rosin.

* Pipe, pig iron, and rosin.

* Cotton, scrap iron, and general.

* Iron, glass, and general.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Julia Luckenbach	4 2.30	4 7.05	4 13.55	4 13.55	American	Luckenbach Line	436.6	59.2	30.0	Seattle, Wash.	Philadelphia, Pa.	Lumber, general	8,561	8,543	6,402
Royalstar	4 2.50	4 7.32	4 13.34	4 22.50	British	Blue Star Line	450.0	58.6	23.0	Vancouver, B. C.	Hull, England	Frozen, general	4,741	8,561	5,815
East Lynn	4 6.30	4 8.28	4 13.30	4 15.30	British	Sir W. R. Smith & Sons	401.1	51.3	25.3	Tacoma, Wash.	Liverpool, England	General	7,578	6,784	5,107
Santa Barbara	4 12.02	5 6.06	5 13.25	5 15.00	American	Graeco Line	466.0	61.0	25.6	Tacahuan, Chile	New York, N. Y.	General	5,850	7,972	5,687
Taketoyo Maru	4 17.40	5 6.44	5 14.25	5 22.20	Japanese	Nippon Yusen Kaisha	445.0	58.0	25.6	Manila, Philippines	Boston, Mass.	Nitrate	6,200		
Garrison Tower	4 20.05	5 7.28	5 14.55	5 14.55	British	Sheriff & Brownlie	386.7	47.7	24.0	Toepolia, Chile	Europe	Lumber	5,565	6,581	4,784
J. R. Gordon	5 4.00	5 8.08	5 15.45	5 15.45	American	Union Sulphur Co.	409.8	54.2	21.0	Tacoma, Wash.	Poughkeepsie, N. Y.	Lumber	7,191	7,611	5,450
Steel Engineer	5 6.25	5 8.52	5 16.00	5 16.00	American	St. Johns S. S. Lines	424.8	56.2	25.6	Seattle, Wash.	Philadelphia, Pa.	Bulk wheat	7,572	5,919	4,400
Liverpool Maru	5 8.45	5 10.05	5 17.30	5 18.55	Japanese	Kokusai Kisen Kaisha	385.0	51.0	26.2	Portland, Oreg.	Barecelona, Spain	Lumber and wood pulp			

* Canned fruits, grain, and general.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Alma Mendi	5	8 25	5	11 09	5	18 40	5	19 10	Spanish	Sota & Aznar	400	5	53	4	Iquique, Chile.	Nitrates	8,800	6,282	4,517
Volumbia	5	14 30	5	15 39	5	23 25	6	00 55	British	DuPont de Nemours	423	0	56	0	Toconilla, Chile.	Nitrates	8,600	6,226	4,524
Ana Luisa	5	11 00	6	7 09	6	13 35	6	14 30	Panaman	Luis Durati	574	4	80	3	Balboa, C. Z.	(17)	9,245	5,047	17,565
Urbe	6	10 35	6	11 04	6	18 35	6	18 40	Colombian.	Panama-Pacific Line	227	4	31	7	Buenaventura, Col.	(18)	888	1,154	663
Iowan	6	10 55	6	12 30	6	19 30	6	20 15	American	Petrola G. Hernandes	407	7	53	7	New York, N. Y.	General	8,769	7,079	5,450
Selma City	6	6 45	6	12 28	6	19 30	6	19 30	American	Amer-Hawaian Line.	424	2	56	2	Boston, Mass.	General	7,101	7,611	5,450
O-8	6	6 45	6	13 11	6	21 05	6	19 30	American	U. S. Navy	175	0	16	4	Avonmouth, Eng.	General	9,091	7,405	5,131
Franklin K.	6	17 16	7	6 04	7	13 40	7	13 40	American	Huasteca Petroleum Co.	435	0	56	2	Balboa, C. Z.	Gasoline	9,091	7,405	5,131
Lane	7	00 55	7	6 30	7	14 55	7	14 55	American	Refined Oil Co.	430	0	59	2	Los Angeles, Calif	Gasoline	10,500	7,497	5,181
Larry Doherty	7	6 00	7	7 07	7	16 10	7	17 00	American	Standard Oil Co. of Cal	440	0	58	2	Los Angeles, Calif	Gasoline	9,800	9,032	5,938
K. R. Kingsbury	6	21 00	7	7 46	7	17 25	7	17 25	American	Lukenbach Line	445	0	58	0	Portland, Oreg	General	7,892	8,695	6,375
Robert Luckenbach	7	1 00	7	8 11	7	18 30	7	21 00	American	Calmor S. S. Corp	409	8	54	2	Aberdeen, Wash	Lumber	5,387	6,757	4,919
Yorkmar	7	5 10	7	7 41	7	19 15	7	20 23	Panaman	Peruvian Line	374	7	46	3	Callao, Peru	General	2,043	4,466	2,405
Ucayali	7	9 30	7	9 30	7	19 45	7	19 45	British	Federal Steam Nav. Co.	473	0	60	1	Auckland, N. Z.	Frozen, general.	6,508	10,423	7,456
Westmoorland	7	9 55	7	10 30	7	20 25	7	21 45	British	Ben Line Steamers,Ltd	429	0	54	0	London, England	Wheat	8,080		
Benvenue	7	9 55	7	10 30	7	20 25	7	21 45	British	Ben Line Steamers,Ltd	429	0	54	0	Vancouver, B. C.	General	6,213	8,856	6,559
Narenta	7	11 10	7	11 54	7	21 42	8	4 50	British	Royal Mail S. P. Co.	450	2	58	3	Vancouver, B. C.	General	5,087	4,195	3,088
Palm Branch	7	15 10	7	15 45	7	22 35	7	22 35	British	F. & W. Ritson.	360	0	45	0	Magallanes, Chile.	General	9,076	7,425	5,292
Winfred	7	15 40	8	11 25	8	13 25	8	13 25	American	The Texas Co	435	0	56	0	Los Angeles, Calif	Gas oil	9,676	7,425	5,292
O'Donnell	7	14 00	8	6 14	8	14 30	8	14 30	German	Roland Line	360	7	51	0	Champerico, Guat	Ballast	5,038	3,533	
Erfurt	7	23 00	8	6 46	8	15 45	8	15 45	American	The Texas Co	425	8	57	0	Los Angeles, Calif	Gasoline	9,116	7,484	5,216
Helen Olmsted	7	16 50	8	7 02	8	18 00	8	18 00	British	Pacific Steam Nav. Co	215	7	33	5	Champerico, Guat	Cristobal, C. Z.	187	1,273	706
Acapulca	7	21 55	8	6 59	8	18 05	8	18 05	Colombian.	National Navigation Co.	107	2	22	9	Champerico, Guat	Coffee, hides	7,732	6,090	4,623
Gauca	7	19 15	8	8 15	8	18 48	8	20 58	Danish	Knit Knutson	385	0	53	3	Buenaventura, Col	General	238	238	103
Kina	8	2 30	8	8 40	8	19 10	8	19 10	American	Williams S. S. Line	390	0	54	2	Corral, Chile	General	7,732	6,090	4,623
Seekonk	8	6 30	8	8 58	8	20 05	8	20 05	French	French Line	425	0	55	0	Albani, B. C	General	6,930	6,162	4,417
Alaska	8	7 25	8	9 28	8	20 50	9	4 42	British	Donaldson Bros. Ltd	400	1	51	9	Vancouver, B. C	Lumber, general.	7,215	6,990	4,834
Parthenon	8	8 10	8	9 58	8	20 55	9	1 25	American	United Fruit Co.	330	6	44	5	Glasgow, Scotland	General	6,270	5,831	4,341
Union	8	8 20	8	10 09	8	21 00	8	6 10	Dutch	Royal Neth. S. Co.	202	9	33	1	Port Limon, C. Z.	General	993	3,675	2,229
Barat	7	18 00	8	10 44	8	21 20	8	22 40	Dutch	Ammeren Shipping Co.	370	0	53	3	Guayaquil, Ecuador	General	215	1,183	742
Woodsrecht	8	11 00	8	11 44	8	21 50	8	21 50	American	Amer-Hawaian Line.	415	0	53	7	Los Angeles, Calif	Gasoline	6,108	4,691	3,067
Alaskan	8	21 15	9	6 01	9	13 30	9	13 30	American	Huasteca Petroleum Co.	416	8	56	1	Tacoma, Wash	General	6,350	7,380	5,339
George W.	8	20 30	9	6 35	9	15 00	9	15 00	American	Brusgaard Kusterud	389	0	54	0	Los Angeles, Calif	Gasoline	9,100	6,703	4,759
Barnes	8	20 30	9	7 20	9	15 30	9	15 30	Norwegian.	Maritima Union	389	0	52	1	Vancouver, B. C	General	6,901	5,746	4,232
Hermion	8	21 30	9	7 20	9	15 30	9	17 10	Spanish					Antofagasta, Chile	Nitrates	7,050			
Jupiter														Azores					

1 Launch. 2 Submarine. 3 Motor ship. 4 For orders. 5 Coffee, hides, and gold. 6 Fruit, feed, zinc, and general. 7 Lumber and canned goods.

1 Tanker.

14 Submarine.

15 Motor ship.

16 For orders.

17 Canned goods and general.

18 Coffee, hides, and gold.

19 Fruit, lead, zinc, and general.

20 Lumber and canned goods.

	8	22	00	9	8	24	9	16	40	10	15	15	American	Panama R. R. S. S. Line	251.0	43.6	20.0	Guayaquil, Ecuador.	New York, N. Y.	1,618	2,874	1,941
Guayaquil													American	Charles Nelson & Co.	324.0	46.0	25.0	Ibercett, Wash.	Baltimore, Md.	4,044	3,984	2,628
Chetopa													American	Fearnley & Exer.	377.6	54.2	26.0	Kobischang, Siam	Habana, Cuba.	7,125	6,081	4,538
Fernhill ¹⁵													Norwegian.	Christian Smith.	294.1	48.3	18.0	Pisagua, Chile.	Granyille, France.	3,024	2,715	1,678
Pobbs													Norwegian.	Williams S. S. Line.	410.0	54.2	27.0	Lyverett, Wash.	New York, N. Y.	7,374	6,821	4,927
Willwello													American	East Asiatic Co.	410.0	55.2	28.8	Vancouver, B. C.	Lumber, general.	9,491	7,067	5,280
Amam ¹⁵													Danish	Kerr S. S. Co.	440.0	55.3	23.0	Manila, Philippines	(²⁴)	6,547	7,473	5,041
Silverphie ¹⁵													British									
Duchessa													Italian	Nav. Libera-Tristina	450.0	57.0	27.0	Vancouver, B. C.	Malta, Medit. Sea.	8,593	8,011	5,552
D'Acsta													Yugoslav	Milan Stejkovic	421.0	57.1	25.6	Tocopilla, Chile.	Azores ¹⁶	8,204	6,429	4,379
Dusan Simi													American	Arrow Line	415.0	55.7	26.6	Tacoma, Wash.	Savannah, Ga.	8,750	7,704	5,707
Peter Kerr																				(²⁴)		
Miyebashi													Japanese.	Nippon Yusen Kaisha.	445.0	58.0	23.0	Manila, P. I.	Boston, Mass.	9,284	8,012	5,749
Maru													Swedish.	Ore S. S. Corp.	561.3	72.2	33.6	Cruz Grande, Chile	New York, N. Y.	20,000	15,425	4,421
Swedenland ¹⁵													German.	Hamburg-American Line	376.2	51.8	25.0	Vancouver, B. C.	Hamburg, Germany	5,993	5,788	4,023
Oasis ¹⁵													American.	U. S. Navy	292.0	44.0	17.6	Curacaca, C. Z.	Cristobal, C. Z.			
Cleveland ²¹													Panama	Panama Government	70.0	18.6		Batou, C. Z.	Gatun Lake, C. Z.			
Amirante ²²																						

²⁴ Lumber, pulp, and copper.²⁵ Wheat, barley, and general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.												* DEPARTURES.											
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—																
November 4	Tolosa	United Fruit Co	Port Limon, Costa Rica.	November 4	Tolosa	United Fruit Co	New York via Habana.																
November 4	War Diwan	Anglo-Saxon Petroleum Co.	Curacao, D. W. I.	November 5	Cartago	United Fruit Co	New Orleans and waypoints.																
November 5	Calamares	United Fruit Co	New York via Habana.	November 5	War Diwan	Anglo-Saxon Petroleum Co.	Curacao, and Pto. Cortez.																
November 5	Denderah	Hamburg-American Line	Bremen via waypoints.	November 5	Waukes	Standard Fruit & S. S. Co	San Blas, R. P.																
November 5	Nitonia	Leyland Line	Liverpool via waypoints.	November 5	Mayer	United Fruit Co	New York via Kingston.																
November 6	Anaheucua ²⁵	United Fruit Co	Colon, R. P.	November 6	Denderah	Hamburg-American Line	New Orleans and waypoints.																
November 6	Norma	United Fruit Co	Port of Colombia.	November 6	Anaheucua ²⁵	United Fruit Co	Colon, R. P.																
November 7	Stuyvesant	United Fruit Co	New York via waypoints.	November 7	Stuyvesant	Royal Netherlands S. S. Co	Port Limon, Costa Rica.																
November 7	Arizani	United Fruit Co	Hamburg via waypoints.	November 7	Arizani	Elders & Fyffes, Ltd	Avonmouth via waypoints.																
November 7	Arizani	Royal Netherlands S. S. Co	Avonmouth via waypoints.	November 7	Norma	United Fruit Co	Perme, R. P.																
November 7	Arizani	Elders & Fyffes, Ltd	Avonmouth via waypoints.	November 7	Calamares	United Fruit Co	Port Limon, Costa Rica.																
November 7	Arizani	United Fruit Co	New York via Kingston.	November 7	Maravi	United Fruit Co	Puerto Colombia.																
November 7	Ancon	Panama R. R. S. S. Line	New York via Haiti.	November 7	Ancon	United Fruit Co	Colon, R. P.																
November 7	Gatun	Standard Fruit & S. S. Co	New Orleans, La.	November 8	Metapan	United Fruit Co	Port Limon, Costa Rica.																
November 7	Saramacca	United Fruit Co	Colon, R. P.	November 8	Saramacca	Metapan	Port Limon via Bocas.																
November 8	Anaheucua ²⁵	United Fruit Co	Bocas del Toro, R. P.	November 8	Anaheucua ²⁵	United Fruit Co	New Orleans, La.																
November 8	Suriname	United Fruit Co	San Blas, R. P.	November 8	Suriname	Standard Fruit & S. S. Co	New Orleans and waypoints.																
November 9	Waukes	Standard Fruit & S. S. Co	Port Limon, Costa Rica.	November 9	Gatun	Standard Fruit & S. S. Co	Amsterdam via waypoints.																
November 9	Stuyvesant	Royal Netherlands S. S. Co	Perme, R. P.	November 9	Stuyvesant	Royal Netherlands S. S. Co	Colon, R. P.																
November 10	Norma	United Fruit Co	Port Limon, Costa Rica.	November 10	Norma	United Fruit Co	Colon, R. P.																
November 10	Anaheucua ²⁵	United Fruit Co	Colon, R. P.	November 10	Anaheucua ²⁵	United Fruit Co	Colon, R. P.																
November 10	Mananqui	United Fruit Co	Puerto Colombia.	November 10	Mananqui	United Fruit Co	Colon, R. P.																
November 10	Parissima	United Fruit Co	New Orleans via Habana.	November 10	Parissima	United Fruit Co	Colon, R. P.																

(Continued on page 212, column 2.)

* Other than ships passing through the Canal.

²⁵ Motor boat.

Commercial Traffic Through the Panama Canal in October, 1928, by Trade Routes.

The following tabulations shows the commercial traffic through the Canal during the month of October, 1928, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for October, 1927 and 1926. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
.. United States	81	418,076	322,512	518,621	322,399	\$364,972 32	275,060
Europe to west coast of United States:							
British	11	50,266	39,747	64,913	38,258	36,780 67	6,160
Danish	1	5,660	5,223	6,919	5,223	6,541 25	7,206
Dutch	3	11,746	9,757	16,334	9,567	8,457 12	.....
French	1	4,545	3,996	6,587	3,641	3,272 40	.....
German	3	18,977	11,770	20,175	12,176	14,712 59	17,154
Norwegian	4	21,497	17,674	28,758	17,596	17,080 15	5,347
Swedish	1	5,337	2,861	5,210	3,747	3,576 25	4,312
United States	4	20,231	16,006	26,626	16,236	15,282 24	6,567
Totals	28	138,259	107,044	174,622	106,444	105,702 58	46,746
Europe to west coast Canada:							
British	21	104,556	75,145	118,921	73,547	77,129 09	5,688
Dutch	2	14,697	10,323	16,709	10,309	12,903 75	7,880
French	2	10,027	7,230	11,608	7,256	9,037 50	6,257
Italian	1	5,863	4,397	7,061	4,460	5,496 25	2,197
Swedish	2	9,995	7,357	11,988	9,049	7,131 60	.....
Totals	28	144,958	104,450	166,287	104,621	111,698 19	21,522
Europe to west coast South America:							
British	5	29,848	22,960	38,249	23,773	28,700 00	19,397
Danzig	1	6,127	5,268	8,339	5,007	4,411 44	.....
Dutch	3	18,639	12,095	21,116	11,953	15,118 75	13,484
French	2	8,506	7,547	11,001	7,501	9,300 80	5,278
German	4	19,917	13,692	21,905	13,452	17,115 00	16,962
Greek	3	11,326	8,040	12,912	7,977	8,154 72	.....
Italian	1	6,236	4,690	8,298	5,106	5,873 75	1,365
Norwegian	2	7,167	5,460	7,930	4,642	6,825 00	12,058
Spanish	3	11,481	9,464	15,352	9,593	9,269 89	153
Yugoslav	1	4,722	3,412	5,341	3,418	4,265 00	6,849
Totals	25	123,969	92,637	151,043	92,422	109,034 35	75,546
East coast of United States to Far East:							
British	4	20,701	14,054	22,745	14,101	17,567 50	26,098
Danish	3	9,543	7,763	11,606	7,115	9,703 75	13,037
German	1	4,885	2,968	4,974	2,958	3,710 00	7,600
Japanese	7	34,152	29,834	43,566	29,295	36,047 60	39,592
Norwegian	5	21,497	12,701	21,412	12,743	15,876 25	28,788
United States	6	30,446	21,814	38,867	21,661	27,267 50	44,032
Totals	26	121,224	89,134	138,170	87,873	111,072 60	159,147
East coast of United States to west coast of South America:							
British	3	11,375	8,941	15,758	9,571	9,980 97	5,408
Chilean	1	4,672	3,433	7,310	3,976	4,291 25	2,571
German	1	909	689	1,314	681	861 25	350
Peruvian	1	.....	.....	.....	.....	500 00	.....
Swedish	2	8,917	7,486	30,676	8,762	6,420 24	.....
United States	16	58,381	49,756	86,181	49,403	47,658 54	15,255
Totals	25	84,254	70,305	141,239	72,393	69,712 25	23,584

* Naval vessels.

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Cristobal, C. Z., to west coast of South America:							
Colombian.....	5	1,388	1,328	2,127	1,335	\$1,641.50	2,076
Dutch.....	1	742	294	780	323	367.50	130
German.....	5	4,532	2,777	5,500	2,890	3,471.25	1,036
Peruvian.....	1	2,959	1,515	4,617	2,427	1,893.75	356
Totals.....	12	9,621	5,914	13,024	6,975	7,374.00	3,598
East coast of United States to Australasia:							
British.....	7	36,239	28,076	40,774	25,633	35,095.00	33,676
Swedish.....	1	3,972	2,711	4,439	3,380	3,388.75	3,481
United States.....	2	5,406	5,000	6,916	4,973	6,126.91	5,116
Totals.....	10	45,617	35,787	52,129	33,986	44,610.66	42,273
Europe to Australasia:							
British.....	6	49,569	35,237	57,767	35,632	44,046.25	41,112
French.....	1	5,629	4,343	7,007	4,402	5,428.75	2,020
Norwegian.....	1	2,299	1,881	3,214	1,869	2,351.25	4,103
Totals.....	8	57,497	41,461	67,988	41,903	51,826.25	47,235
East coast of United States to west coast Canada:							
Danish.....	1	4,559	3,577	5,905	3,637	3,282.48	.....
United States.....	5	22,838	17,943	28,534	17,897	22,428.75	33,003
Totals.....	6	27,397	21,520	34,439	21,534	25,711.23	33,003
East coast Central America to west coast of United States:							
United States.....	6	16,310	14,595	23,439	14,436	16,574.93	3,397
East coast of United States to Philippine Islands:							
British.....	2	12,282	6,861	12,036	6,750	8,576.25	11,700
United States.....	3	19,014	16,593	22,524	14,349	20,628.75	23,264
Totals.....	5	31,296	23,364	34,560	21,099	29,205.00	34,964
East coast of Canada to Aus- tralia:							
British.....	5	21,867	17,201	28,061	17,270	21,501.25	16,736
Cristobal, C. Z., to west coast of Central America:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	2,291
Costa Rican.....	1	39	39	78	39	29.25	.....
Norwegian.....	2	1,110	908	1,587	873	1,135.00	2,321
Totals.....	5	2,590	2,233	3,963	2,216	2,771.75	4,612
Around the world:							
United States.....	3	21,885	15,835	26,521	15,760	19,793.75	13,656
East coast of South America to west coast Canada:							
Norwegian.....	1	4,723	2,728	4,624	2,765	3,410.00	2,482
United States.....	2	10,079	7,059	11,118	7,058	8,823.75	3,791
Totals.....	3	14,802	9,787	15,742	9,823	12,233.75	6,274
Cristobal, C. Z., to west coast of United States:							
Panamanian.....	1	2,603	1,383	2,461	1,384	1,728.75	2,494
United States.....	2	6,692	5,430	9,046	5,521	5,161.71	2,004
Totals.....	3	9,295	6,813	11,507	6,905	6,890.46	4,498
Europe to west coast Central America:							
German.....	2	7,041	4,748	8,325	4,788	5,935.00	8,759
Norwegian.....	1	1,678	1,310	2,406	1,284	1,637.50	672
Totals.....	3	8,719	6,058	10,731	6,072	7,572.50	9,431
Foreign ships in ballast, U. S. intercoastal:							
British.....	2	10,329	7,238	11,628	6,952	7,195.33	7,770
East coast of Central America to Australasia:							
British.....	2	9,101	5,850	9,655	5,841	7,312.50	12,787

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
South American intercoastal:							
Danzig.....	1	6,674	4,427	7,299	4,230	\$4,805.28	.....
Peruvian.....	1	2,405	989	3,305	1,514	1,236.25	316
Totals.....	2	9,079	5,416	10,604	5,744	6,041.53	316
Cristobal, C. Z., to Gatun Lake, C. Z.:							
Panaman.....	1	54	51	86	50	38.88	.....
United States.....	1	478	417	2,026	417	344.16	.....
Totals.....	2	532	468	2,112	467	383.04	.....
Cristobal, C. Z., to Balboa, C. Z.:							
Panaman.....	1	124	113	207	100	141.25	317
United States.....	1	875	831	1,819	880	630.00	.....
Totals.....	2	999	944	2,026	980	771.25	317
West Indies to west coast of United States:							
British.....	^a 1					^a 2,767.00	.....
Dutch.....	1	3,657	3,158	5,304	3,043	3,947.50	7,124
Totals.....	2	3,657	3,158	5,304	3,043	6,714.50	7,124
Africa to west coast of Canada:							
British.....	2	8,515	6,990	11,311	6,988	6,130.80	.....
East coast of United States to west coast Central America:							
Norwegian.....	1	1,114	967	1,613	932	1,208.75	700
East coast of United States to Hawaiian Islands:							
United States.....	1	1,730	1,528	2,647	1,542	1,910.00	2,741
East coast of Canada to west coast United States:							
Danish.....	1	4,418	3,585	5,702	3,583	4,481.25	2,800
East coast Canada to west coast South America:							
British.....	1	4,186	3,322	5,465	3,400	4,152.50	2,500
East coast of Canada to Far East:							
British.....	1	6,303	4,075	6,382	4,104	5,093.75	6,939
East coast of South America to west coast United States:							
British.....	1	4,943	4,693	6,500	4,692	3,519.75	.....
East coast of South America to Far East:							
Japanese.....	1	7,292	5,924	9,446	5,919	7,405.00	3,514
West Indies to Balboa, C. Z.:							
Norwegian.....	1	3,612	3,201	5,311	3,005	4,001.25	6,922
Egypt to west coast of South America:							
Yugoslav.....	1	4,178	3,710	5,861	3,741	3,008.16	.....
Africa to west coast United States:							
British.....	1	4,164	3,198	5,219	3,209	2,998.08	.....
Grand totals, Oct., 1928..	306	1,381,688	1,050,917	1,718,872	1,048,282	1,190,585.26	875,641
Grand totals, Oct., 1927..	289	1,345,683	1,041,924	1,686,239	1,034,897	1,167,843.28	700,592
Grand totals, Oct., 1926..	229	1,093,239	864,253	1,412,725	866,025	973,138.80	698,623

^a Naval vessel.

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	71	374,705	287,581	462,880	287,346	\$359,433.95	544,928
West coast of United States to Europe:							
British.....	17	74,624	55,575	89,886	55,444	69,468.75	131,678
Dutch.....	1	4,336	3,509	5,832	3,466	4,386.25	7,448
French.....	1	5,050	4,356	7,011	3,989	5,445.00	8,778
Japanese.....	1	4,611	4,223	5,838	4,219	5,278.75	7,852
Norwegian.....	4	19,168	14,846	23,940	14,827	18,557.50	31,544
Swedish.....	1	3,528	2,417	4,104	3,128	3,021.25	6,025
United States.....	2	10,844	7,476	11,877	7,338	9,345.00	16,162
Totals.....	27	122,161	92,402	148,488	92,411	115,502.50	209,487

PACIFIC TO ATLANTIC—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to Europe:							
Belgian.....	1	4,792	4,142	6,511	4,172	\$5,177.50	8,160
British.....	9	47,805	37,455	60,938	37,657	46,818.75	66,614
Dutch.....	3	17,219	11,909	19,639	11,446	14,886.25	27,289
French.....	2	8,742	6,947	11,175	6,820	8,683.75	15,958
German.....	6	28,911	20,412	32,730	20,159	25,515.00	45,250
Greek.....	6	23,355	16,783	26,706	16,729	20,978.75	45,112
Italian.....	2	14,222	9,473	18,418	11,040	11,841.25	12,273
Norwegian.....	2	7,844	5,599	9,290	5,614	6,998.75	13,872
Peruvian.....	1	3,544	3,510	4,763	3,089	4,252.80	5,430
Spanish.....	1	2,827	2,459	4,349	2,565	3,073.75	597
Yugoslav.....	2	7,257	5,533	8,719	5,538	6,916.25	13,678
Totals.....	35	166,518	124,222	203,238	124,829	155,142.80	254,233
West coast of South America to east coast United States:							
British.....	6	29,545	23,852	42,129	25,236	29,815.00	46,569
Chilean.....	2	9,377	6,899	14,620	7,952	8,623.75	8,708
German.....	1	2,817	1,545	2,593	1,526	1,931.25	337
Norwegian.....	1	5,219	5,207	7,041	5,234	6,262.80	9,754
Peruvian.....	1	1,529	1,483	2,155	1,169	1,834.80	2,023
Swedish.....	2	8,917	7,486	30,676	8,762	9,357.50	42,500
United States.....	12	59,648	49,345	85,143	49,495	61,475.70	139,022
Totals.....	25	117,052	95,817	184,357	99,374	119,300.80	248,913
West coast Canada to Europe:							
British.....	16	79,388	58,698	94,884	58,993	73,372.50	117,911
Danish.....	1	5,338	4,223	6,650	4,247	5,278.75	9,218
Dutch.....	1	6,060	4,860	7,651	4,796	6,075.00	8,807
French.....	2	10,339	8,346	13,636	8,381	10,432.50	15,555
German.....	4	24,411	15,851	25,816	15,721	19,851.25	29,181
Italian.....	1	6,025	5,056	7,098	4,498	6,320.00	8,900
Japanese.....	1	5,059	5,018	6,710	4,800	6,070.80	8,557
Norwegian.....	1	5,637	4,509	7,116	4,493	5,636.25	8,901
United States.....	1	5,188	3,856	6,194	3,845	4,820.00	7,929
Totals.....	28	147,445	110,447	175,755	109,774	137,857.05	214,959
West coast of South America to Cristobal:							
Colombian.....	3	1,133	1,083	1,741	1,101	1,342.45	983
Dutch.....	1	742	294	780	323	367.50	264
German.....	6	5,543	3,283	6,580	3,412	4,103.75	3,403
Norwegian.....	1	504	423	732	391	362.83	.....
Panamanian.....	1	124	113	207	109	141.25	233
Peruvian.....	1	2,959	1,515	4,617	2,427	1,893.75	2,003
Totals.....	13	11,005	6,711	14,657	7,763	8,211.58	6,886
West coast of Canada to east coast United States:							
British.....	4	17,110	11,489	18,503	11,394	14,350.00	27,166
United States.....	3	11,794	8,548	14,031	9,271	10,685.00	17,434
Totals.....	7	28,904	20,028	32,534	20,665	25,035.00	44,600
West coast United States to east coast of Central America:							
Norwegian.....	1	2,080	1,305	2,166	1,298	1,631.25	2,600
United States.....	5	13,957	12,510	20,130	12,367	15,594.05	11,048
Totals.....	6	16,037	13,815	22,296	13,665	17,225.30	13,648
West coast of Central America to Cristobal, C. Z.:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	312
Norwegian.....	2	1,720	1,452	2,468	1,414	1,408.33	325
United States.....	1	622	614	1,138	602	746.40	251
Totals.....	5	3,783	3,352	5,904	3,320	3,762.23	888
West coast of United States to West Indies:							
British.....	3	9,172	7,714	13,182	8,151	10,658.40	7,366
Norwegian.....	1	1,524	1,264	1,734	1,286	1,580.00	2,200
Totals.....	4	10,696	8,978	14,916	9,437	12,238.40	9,566

* Includes naval vessel of 5,300 displacement tons.

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of United States to Cristobal, C. Z.:							
Panaman	1	2,603	1,383	3,644	2,594	\$1,728.75	394
United States	2	6,692	5,430	9,046	5,521	6,787.50	10,884
Totals	3	9,295	6,813	12,690	8,115	8,516.25	11,278
West coast of South America to east coast Canada:							
British	2	12,688	10,999	18,512	11,227	13,748.75	25,265
Danzig	1	6,063	5,196	8,932	5,002	6,495.00	11,365
Totals	3	18,751	16,195	24,444	16,229	20,243.75	36,630
Canadian intercoastal:							
British	2	9,371	6,329	10,306	6,327	7,911.25	13,104
West coast of South America to Egypt:							
British	1	4,669	3,138	4,881	3,141	3,922.50	7,311
Yugoslav	1	3,954	2,685	4,807	2,661	3,356.25	7,156
Totals	2	8,623	5,823	9,188	5,802	7,278.75	14,467
Australasia to Europe:							
British	4	28,787	23,042	37,572	23,496	28,802.50	20,162
Australasia to east coast of United States:							
British	1	4,187	3,294	5,370	3,244	4,117.50	1,192
Australasia to east coast of Canada:							
British	2	8,620	6,552	10,792	6,594	8,190.00	3,969
Philippine Island to east coast of United States:							
United States	2	12,039	9,318	13,408	8,397	11,647.50	17,993
West coast of United States to east coast of South America:							
British	1	5,458	4,353	6,996	4,432	5,441.25	3,558
West coast United States to Egypt:							
British	1	4,778	4,347	7,403	4,277	5,433.75	9,100
West coast of South America to West Indies:							
United States	1	111	191	401	196	143.25	.....
Hawaiian Islands to east coast United States:							
United States	1	1,740	1,542	2,647	1,542	1,927.50	1,165
Hawaiian Islands to Europe:							
Swedish	1	5,533	3,430	5,554	4,225	4,287.50	7,184
Balboa, C. Z., to Gatun Lake:							
Panaman	1	67	67	67	67	80.40	.....
Balboa, C. Z., to Cristobal, C. Z.:							
Panaman	1	124	113	207	109	89.28	.....
Far East to east coast United States:							
Japanese	2	8,951	7,002	10,991	6,665	8,752.50	4,858
Far East to West Indies:							
Norwegian	1	4,284	2,507	4,333	2,494	3,133.75	7,648
Far East to Europe:							
Japanese	1	4,667	3,723	5,973	3,708	4,653.75	6,420
Grand totals, Oct., 1928..	251	1,133,692	867,994	1,436,367	874,503	1,084,360.04	1,706,836
Grand totals, Oct., 1927..	278	1,240,069	971,385	1,587,793	975,218	1,212,272.69	2,017,054
Grand totals, Oct., 1926..	216	1,031,280	810,255	1,331,947	815,672	1,016,075.13	1,676,088

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average tempera- ture. Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9)	1018	1020	1013	84.0
Balboa (dock 18)	1011	1021	1005	83.0

(NOTE—The above is based on two months observations at Cristobal, and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

Traffic by Nationality for October, 1928.

The following tabulation shows the commercial traffic through the Canal during the month of October, 1928, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, with corresponding totals for October, 1927 and 1926:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	77	385,585	284,872	456,782	281,025	\$320,154.19	198,192
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	2,571
Colombian.....	5	1,388	1,328	2,127	1,335	1,641.50	2,076
Costa Rican.....	1	39	39	78	39	29.25	
Danish.....	6	24,180	20,158	30,132	19,558	24,008.73	23,043
Danzig.....	2	12,801	9,695	16,238	9,237	9,216.72	
Dutch.....	10	49,391	35,627	60,243	35,195	40,794.62	28,118
French.....	6	28,707	23,116	36,203	22,800	27,039.45	13,555
German.....	16	56,261	36,644	62,193	36,945	45,805.00	51,861
Greek.....	3	11,326	8,040	12,912	7,977	8,154.72	
Italian.....	2	12,099	9,096	15,359	9,566	11,370.00	3,562
Japanese.....	8	41,444	35,758	53,012	35,214	44,352.60	43,106
Norwegian.....	18	64,697	46,830	76,855	45,709	53,525.15	63,393
Panamanian.....	3	2,781	1,547	2,754	1,534	1,908.88	2,811
Peruvian.....	4	5,364	2,504	7,922	3,941	3,630.00	672
Spanish.....	3	11,481	9,454	15,352	9,593	9,269.89	153
Swedish.....	6	28,131	20,415	52,313	24,938	20,516.84	7,793
United States.....	133	632,441	495,229	798,885	492,541	557,603.31	427,886
Yugoslav.....	2	8,900	7,122	11,292	7,159	7,273.16	6,849
Totals, October, 1928.....	306	1,381,688	1,050,917	1,718,872	1,048,282	1,190,585.26	875,641
Totals, October, 1927.....	289	1,345,683	1,041,924	1,686,239	1,034,897	1,167,843.28	700,592
Totals, October, 1926.....	229	1,093,239	864,253	1,412,725	866,025	973,138.80	693,623

¹ British cruiser of 5,534 displacement tons paying tolls of \$2,767 included in number of ships and tolls collected; tonnage not included.

² Two Peruvian submarines having a total displacement tonnage of 1,000 tons, paying tolls of \$500 included in number of ships and tolls collected; tonnage not included.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,792	4,142	6,511	4,172	\$5,177.50	8,160
British.....	71	337,543	258,114	423,652	260,917	323,658.40	481,277
Chilean.....	2	9,377	6,899	14,620	7,952	8,623.75	8,708
Colombian.....	3	1,133	1,083	1,741	1,101	1,342.45	983
Danish.....	1	5,338	4,223	6,650	4,247	5,278.75	9,218
Danzig.....	1	6,063	5,196	8,932	5,002	6,495.00	11,365
Dutch.....	6	28,357	20,572	33,902	20,031	25,715.00	43,808
French.....	5	24,131	19,649	31,822	19,190	24,561.25	40,291
German.....	17	61,682	41,121	67,719	40,818	51,401.25	78,171
Greek.....	6	23,355	16,783	26,706	16,729	20,978.75	43,112
Italian.....	3	20,247	14,529	25,516	15,538	18,161.25	21,173
Japanese.....	5	23,288	19,966	29,512	19,392	24,755.80	27,687
Norwegian.....	14	47,989	37,112	58,820	37,051	45,571.51	76,844
Panamanian.....	4	2,918	1,676	4,125	2,879	2,039.68	627
Peruvian.....	3	8,032	6,508	11,535	6,655	7,981.35	9,456
Spanish.....	1	2,827	2,459	4,349	2,565	3,073.75	597
Swedish.....	4	17,978	13,333	40,334	16,115	16,666.25	55,709
United States.....	101	497,340	386,411	626,895	385,920	482,605.85	766,816
Yugoslav.....	3	11,211	8,218	13,026	8,199	10,272.50	20,834
Totals, October, 1928.....	251	1,133,692	867,994	1,436,367	874,503	1,084,360.04	1,706,836
Totals, October, 1927.....	278	1,240,069	971,385	1,587,793	975,218	1,212,272.69	2,017,054
Totals, October, 1926.....	216	1,031,280	810,255	1,331,947	815,672	1,016,075.13	1,676,088

¹ British cruiser of 5,300 displacement tons, paying tolls of \$2,650 included in number of ships and tolls collected; tonnage not included.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,792	4,142	6,511	4,172	\$5,177.50	8,160
British.....	^a 148	723,228	542,986	880,434	541,942	^a 643,812.59	679,469
Chilean.....	3	14,049	10,332	21,930	11,928	12,915.00	11,279
Colombian.....	8	2,521	2,411	3,868	2,436	2,983.95	3,059
Costa Rican.....	1	39	39	78	39	29.25	.....
Danish.....	7	29,518	24,381	36,782	23,805	29,287.48	32,261
Danzig.....	3	18,864	14,891	25,170	14,239	15,711.72	11,365
Dutch.....	16	77,748	56,199	94,145	55,226	66,509.62	71,926
French.....	11	52,838	42,765	68,025	41,990	51,600.70	53,846
German.....	33	117,943	77,765	129,912	77,763	97,206.25	130,032
Greek.....	9	34,681	24,823	39,618	24,706	29,133.47	45,112
Italian.....	5	32,346	23,625	40,875	25,104	29,531.25	24,735
Japanese.....	13	64,732	55,724	82,524	54,606	69,108.40	70,793
Norwegian.....	32	112,677	83,942	135,675	82,760	99,096.66	140,237
Panama.....	7	5,699	3,223	6,879	4,413	3,948.56	3,438
Peruvian.....	^a 7	13,396	9,012	19,457	10,626	^a 11,611.35	10,128
Spanish.....	4	14,308	11,923	19,701	12,158	12,343.64	750
Swedish.....	10	46,109	33,748	92,467	41,053	37,183.09	63,502
United States.....	234	1,129,781	881,640	1,426,780	878,461	1,040,209.16	1,194,702
Yugoslav.....	5	20,111	15,340	24,228	15,358	17,545.66	27,683
Totals, October, 1928.....	557	2,515,380	1,918,911	3,155,239	1,922,785	2,274,945.30	2,582,477
Totals, October, 1927.....	567	2,585,752	2,013,309	3,274,032	2,010,115	2,380,115.97	2,717,646
Totals, October, 1926.....	445	2,124,519	1,674,508	2,744,672	1,681,697	1,989,213.93	2,374,711

^a Includes two naval vessels having a total displacement tonnage of 10,834 tons. ^a Includes two naval vessels having a total displacement tonnage of 1,000 tons.

Panama Canal Records.

A statement of various records made by traffic through the Panama Canal at different times was published in THE PANAMA CANAL RECORD of February 15, 1928. Since that time new records have been established with respect to several items, viz., commercial traffic for one year, commercial traffic for one day, and lowest pro rata cost of tolls per ton of cargo. A revised statement is accordingly given below.

In the tabulations directly following, data are shown separately for merchant or commercial vessels and for naval vessels because they are different types of craft:

MERCHANT OR COMMERCIAL VESSELS.

Feature.	Record.	Vessel.	Date of transit.
Length.....	678.2 feet.....	Empress of Scotland.....	April 2, 1926.
Beam.....	83.2 feet.....	Maleo.....	November 2, 1927.
Draft.....	35 feet 6 inches.....	Lebore.....	July 23, 1925.
	35 feet 6 inches.....	Marore.....	April 18, 1927.
Tonnage:			
Registered gross.....	27,132 tons.....	Belgenland.....	December 12, 1924.
Registered net.....	15,352 tons.....	Pelgenland.....	December 12, 1924.
Panama Canal net.....	18,999 tons.....	Empress of Scotland.....	April 2, 1926.
United States net.....	13,769 tons.....	Empress of Scotland.....	April 2, 1926.
Tolls.....	\$17,211.25.....	Empress of Scotland.....	April 2, 1926.
Cargo.....	22,600 tons crude oil.....	William Rockefeller.....	October 27, 1922.

(NOTE.—The *Belgenland* has made 3 transits since December 12, 1924, viz., in December, 1925, December, 1926, and December, 1927. The *Empress of Scotland* has made 1 transit since April 2, 1926, viz., in April, 1927.)

NAVAL VESSELS.

Feature.	Record.	Vessel.	Date of transit.
Length.....	888 feet.....	U. S. S. <i>Saratoga</i>	February 5, 1928.
Beam.....	107.9 feet.....	U. S. S. <i>Saratoga</i>	February 5, 1928.
Draft.....	33 feet 1 inch.....	U. S. S. <i>Colorado</i>	March 19, 1926.
Tonnage.....	44,799 tons displacement.....	H. M. S. <i>Hood</i>	July 23 and 24, 1924.
Tolls.....	\$22,399.50.....	H. M. S. <i>Hood</i>	July 23 and 24, 1924.

(Note.—The U. S. S. *Lexington*, a sister ship of the U. S. S. *Saratoga*, transited on March 25, 1928.)

In the following data the term "commercial traffic" includes all craft subject to payment of tolls except small vessels under 20 net tons, Panama Canal measurement. It does not include vessels in the public

service of the Governments of the United States, Panama, and Colombia, and ships which transit the Canal solely for the purpose of having repairs made at the Balboa shops and dry dock, as such vessels are exempt from payment of tolls.

Largest year's commercial traffic:

Number of transits, 6,456, fiscal year 1928.
Panama Canal net tonnage, 29,458,634, fiscal year 1928.
Tolls, \$26,944,499.77, fiscal year 1928.
Cargo, 29,630,709, fiscal year 1928.

Largest month's commercial traffic:

Number of transits, 589, December, 1927.
Panama Canal net tonnage, 2,616,728 tons, December, 1927.
Tolls, \$2,398,459.75, December, 1927.
Cargo, 2,717,646 tons, October, 1927.

Largest day's commercial traffic:

Number of transits, 33, October 1, 1927.
Panama Canal net tonnage, 152,610 tons, November 15, 1927.
Tolls, \$137,053.98, April 10, 1928.
Cargo, 163,202 tons, January 14, 1924.

Largest day's commercial traffic in one direction:

Number of transits, 19, Atlantic to Pacific, October 1, 1927.
Panama Canal net tonnage, 90,922 tons, Atlantic to Pacific, September 19, 1927.
Tolls, \$81,325.06, Atlantic to Pacific, October 1, 1927.
Cargo, 133,757 tons, Pacific to Atlantic, May 2, 1924.

Largest number of transits in any one day:

Thirty-five Government and 22 commercial vessels, a total of 57 vessels, January 17, 1924.

Smallest day's commercial traffic occurred on November 18, 1924, on which the number of transits was 2; Panama Canal net tonnage, 2,870 tons; tolls, \$2,865; and cargo, 2,809 tons.

The lowest pro rata cost of tolls per ton of cargo carried through the Canal on a commercial vessel is \$0.2166 per ton, which occurred with the transit of the Swedish motor ship *Amerikaland*, on April 20, 1928, carrying a cargo of iron ore from Cruz Grande, Chile, to Baltimore, Maryland. On this transit the *Amerikaland* carried 21,600 tons of cargo and paid tolls of \$4,678.75.

The fastest transit through the Canal, in 4 hours and 10 minutes, was made by the United States destroyer *Lawrence*, southbound, on December 2, 1917.

United States Intercoastal Traffic by Commodities for October, 1928.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for October, 1928, and the totals for October, 1927 and 1926. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the destination of "General cargo." These statistics are accordingly not precise but they are indicative of the kind and quantity of the cargo in transit through the Canal. The figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Agricultural implements.....	1,693	100	1,793
Alfalfa.....		27	27
Alfalfa meal.....		775	775
Ammonia.....	104		104
Ammunition.....	140		140
Asbestos.....	40		40
Asphalt.....	235	110	345
Automobiles.....	1,385	50	1,435
Automobile accessories.....	332	54	386
Casacara bark.....		75	75
Barley.....		502	502
Beans.....	9	17,029	17,038
Bones and bone meal.....	44		44
Borax.....	175	929	1,104
Bricks.....	222		222
Burlap.....	363	296	659
Calcium carbide.....	85		85
Camphor.....		276	276
Canned goods:			
Fish.....	1,848	20,090	21,938
Fruit.....	379	39,459	39,838
Meat.....	87	234	321
Milk.....	61	994	1,055
Soup.....	1,243		1,243
Vegetables.....	2,321	8,928	11,249
Miscellaneous.....	3,255	17,884	21,139
Carbon black.....	135	170	305
Celite filtercel.....		650	650
Cement.....	1,024		1,024
Charcoal.....	293	30	323
Chemicals.....	1,471	1,311	2,782
China and fire clay.....	394	27	421
Coal.....	3,767		3,767
Cocoa.....	21	16	37
Cocoanuts.....		430	430
Coffee.....	124	69	193
Coke.....	24		24
Cold storage:			
Butter.....		17	17
Cheese.....		380	380
Lard.....	495		495
Other.....	510	88	598
Confectionery.....	616		616
Cork.....	59		59
Cotton.....	84	790	874
Cyanide.....	125		125
Drugs.....	2,558	12	2,570
Earthenware.....	97	60	157
Eggs, dried.....		14	14
Explosives.....	27	12	39
Flour.....	32	9,129	9,161
Fruit:			
Dried.....	139	24,458	24,597
Fresh.....		526	526
Fuller's earth.....	525		525
Furniture.....	717		717
General.....	51,134	11,009	62,143
Glass and glassware.....	3,247	121	3,368
Glue.....	46		46
Granite.....	42		42
Graphite.....	20		20
Hair.....	100	190	290
Hardwoods.....	1,182		1,182
Hay.....		100	100
Hemp.....	22	1,044	1,066
Honey.....		346	346
Hops.....		47	47
Ink.....	123		123
Jute.....	79		79
Leather.....	12	2	14
Lime.....	71		71
Linoleum.....	1,530		1,530
Liquors.....	229		229
Lumber.....	1,435	172,961	174,396
Malt.....	177	3	180
Manufactured goods:			
Iron and steel.....	139,813	1,098	140,911
Machinery.....	4,808	622	5,430
Railroad material.....	4,270		4,270
Tinplate.....	3,972		3,972
Textiles.....	2,741	130	2,871
Miscellaneous.....	9,227	1,208	10,435
Marble.....	165		165
Matches.....	67		67

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Metals:			
Antimony.....		55	55
Copper.....	420	8,175	8,595
Iron.....	455		455
Lead.....	819	225	1,044
Scrap.....	933	203	1,136
Zinc.....	156	659	815
Other.....	55		55
Milk, powdered.....	23	787	810
Molasses.....	81		81
Nitrates.....	21		21
Nuts.....	67	1,261	1,328
Oats.....	62		62
Oils:			
Cottonseed.....	16		16
Crude.....	18		18
Gas oil, fuel oil.....		13,032	13,032
Gasoline, benzine, and naphtha.....	100	147,446	147,546
Kerosene.....	480	12,186	12,666
Lubricating and greases.....	4,191	130	4,321
Vegetable.....	95	36	131
Wood.....	40		40
Other.....	80	14	94
Ores:			
Copper.....		950	950
Magnesite.....		2,311	2,311
Other.....	40		40
Paint.....	887	79	966
Paper.....	6,661	2,610	9,271
Paper, pulp.....		1,543	1,543
Paper roofing.....	89		89
Peanuts.....	75	25	100
Peas.....		440	440
Phosphates.....	1,306	45	1,351
Porcelain.....	204	159	363
Rags.....	77	369	446
Rice.....	583	296	879
Rope.....	60	41	101
Rosin.....	1,078		1,078
Rubber:			
Manufactured.....	1,380	22	1,402
Scrap.....	69	50	119
Salt.....	104		104
Sand.....	629		629
Seeds:			
Cotton.....	25		25
Grass.....		226	226
Other.....		452	452
Shells.....	1,857	16	1,873
Silk.....		511	511
Skins and hides.....		1,207	1,207
Slate.....	954		954
Soap.....	2,736	64	2,800
Soda.....	413		413
Soda ash.....	1,421		1,421
Soda, bicarbonate.....	107		107
Soda, caustic.....	1,159		1,159
Starch.....	112		112
Sugar.....	16	2,920	2,936
Sulphur.....	8,410		8,410
Syrup.....	68		68
Talc.....	38	135	173
Tallow.....		305	305
Tar.....	361		361
Tea.....		33	33
Tobacco.....	7,350	53	7,403
Toys.....	45	61	106
Turpentine.....	128		128
Vegetables.....	20	4	24
Waste.....	111	150	261
Wax.....	223	69	292
Wheat.....		2,669	2,669
Wine.....	20	238	258
Wool.....		1,713	1,713
Zinc oxide.....	23		23
Totals, October, 1928.....	298,721	538,857	837,578
Totals, October, 1927.....	219,464	897,849	1,018,313
Totals, October, 1926.....	201,755	743,705	948,460

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Canal Traffic During First Fifteen Days of November.

During the first 15 days of November, 259 commercial vessels and 2 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,091,837.27, and on the launches, \$12, or a total tolls collection of \$1,091,849.27.

The daily average of transits of commercial vessels was 17.27 and the daily average tolls collection \$72,789.15. The average amount of tolls paid by each of the commercial transits was \$4,215.59, as compared with \$3,981.22 for the first 15 days of October. With respect to the number of commercial transits, traffic for the first 15 days of November was the same as the first 15 days of October, although the tolls this month were some \$60,000 higher.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 10½ months of the current calendar year, with the daily averages of transits and tolls:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	540	\$2,212,752.50	17.42	\$71,379.20
February.....	547	2,253,755.37	18.86	77,715.70
March.....	542	2,223,370.57	17.48	71,271.63
April.....	531	2,187,607.82	17.70	72,914.55
May.....	508	2,118,969.83	16.38	68,353.86
June.....	481	2,016,211.09	16.03	67,206.43
July.....	509	2,109,083.19	16.41	68,034.94
August.....	526	2,199,069.31	16.97	70,937.72
September.....	487	2,111,230.56	16.23	70,374.35
October.....	557	2,274,945.30	17.97	73,385.33
November (first 15 days).....	259	1,091,837.27	17.27	72,789.15
Totals.....	5,487	22,798,832.81	17.14	71,246.35

Grace Line Awards Contract for Ship.

The Grace Line has announced the awarding of a contract to the New York Shipbuilding Corporation of Camden, N. J., for the construction of a combined passenger and freight turbo-electric liner for the company's New York-west coast of South America service. The new ship, which will be 502 feet long and 64 feet beam, is to be delivered in January, 1930. It is reported that the new vessel will have the same general characteristics as the two new motor liners *Santa Maria* and *Santa Barbara* recently placed in the service by the Grace Line except that it will be turbo-electrically driven instead of being propelled by Diesel engines. The new ship is to have accommodations for 175 first-class passengers and a cargo capacity of 7,000 tons.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

CANAL WORK IN OCTOBER, 1928.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of October, 1928.

BALBOA HEIGHTS, C. Z., November 13, 1928.

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

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of October, 1928:

NUMBER OF TRANSITS.

During the month 557 commercial vessels passed through the Canal. In addition to these, 10 nonseagoing launches measuring under 20 tons, and 30 vessels belonging to or chartered by the United States Government transited the Canal. There was also one transit of a Panaman Government vessel and four transits of vessels solely for repairs on which no tolls were collected, making a total of 602 transits for the month, or a daily average of 19.42.

Tolls on the 557 commercial vessels amounted to \$2,274,945.30, and on the launches to \$94.50, a total of \$2,275,039.80, or a daily average on all traffic of \$73,388.38.

Traffic for October, 1928, was the heaviest of any month in the current calendar year to date, exceeding that of the previous month by 70 transits. This increase was largely due to increased traffic from the Atlantic to the Pacific, the number of transits in this direction having increased by 53 over September. As compared with October, 1927, traffic for the past month decreased by 10 transits owing to the comparatively small amount of mineral oils and wheat passing through from the Pacific to the Atlantic. The decrease in these two items amounted to almost 320,000 tons under October, 1927.

The total numbers of craft of all kinds transiting the Canal during the month of October, 1928, as compared with the same month in 1927 and 1926, are shown in the following tabulations:

	October, 1928.	October, 1927.	October, 1926.
Commercial vessels	557	567	445
Noncommercial vessels (Army and Navy)	30	23	25
Launches (under 20 tons)	10	14	19
Panaman Government vessels	1		
Colombian Government vessels		1	
Vessels for repairs	4	2	1
Totals	602	607	490

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun	5	6	11
Pedro Miguel	32	40	72
Miraflores	32	39	71
Totals	69	85	154

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year 1928, to the end of October, 1928, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1927.	1928.	1927.	1928.	1927.	1928.	1927.	1928.
January ..	443	540	2,121,631	2,422,770	2,241,765	2,372,061	\$1,984,760.71	\$2,212,752.50
February ..	449	547	2,201,328	2,460,111	2,230,107	2,660,425	1,994,869.82	2,253,755.37
March	496	542	2,413,999	2,441,077	2,533,525	2,428,662	2,217,913.20	2,223,370.57
April	464	531	2,224,590	2,384,491	2,429,807	2,473,884	2,065,236.92	2,187,637.82
May	471	508	2,248,892	2,274,612	2,379,713	2,497,588	2,066,070.73	2,118,969.83
June	455	481	2,152,926	2,227,865	2,220,097	2,139,565	1,970,377.97	2,016,211.09
July	509	509	2,406,955	2,318,395	2,450,468	2,291,955	2,215,515.99	2,199,083.19
August	543	526	2,513,614	2,437,246	2,429,947	2,425,336	2,274,040.55	2,199,069.31
September ..	540	487	2,522,942	2,295,053	2,397,753	2,313,011	2,294,432.34	2,111,230.56
October	557	557	2,583,752	2,515,380	2,717,646	2,582,477	2,380,115.97	2,374,945.30
Totals	4,937	5,228	23,402,539	23,777,000	21,039,828	24,184,964	21,463,295.20	21,706,995.54

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States Government, including merchant vessels chartered by the Government, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for October, 1928, as compared with the corresponding month in 1927 and 1926, and the monthly averages for the fiscal year 1928:

	October, 1928.	October, 1927.	October, 1926.	Average per month for fiscal year 1928.
Number of vessels.....	557	567	445	538
Panama Canal net tonnage.....	2,515,380	2,585,752	2,124,519	2,454,886
United States net tonnage.....	1,918,911	2,013,309	1,671,508	1,905,316
Registered gross tonnage.....	3,155,239	3,274,932	2,744,672	3,100,239
Registered net tonnage.....	1,922,785	2,010,115	1,681,697	1,903,974
Tolls.....	\$2,274,945.30	\$2,380,115.97	\$1,989,213.93	\$2,245,374.98
Tons of cargo carried.....	2,582,477	2,717,646	2,374,711	2,469,225

The daily average number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year.
	October, 1928.	October, 1927.	October, 1926.	
Number of transits.....	17.97	18.29	14.35	17.63
Panama Canal net tonnage.....	81,141	83,411	68,533	80,488
Tolls.....	\$73,385.33	\$76,777.93	\$64,168.19	\$73,618.85
Tons of cargo carried.....	83,305	87,666	76,604	80,958

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of October, 1928, as compared with October, 1927 and 1926, are shown in the following tabulation:

	Average per vessel.		
	October, 1928.	October, 1927.	October, 1926.
Panama Canal net tonnage.....	4,516	4,560	4,774
United States net tonnage.....	3,445	3,551	3,763
Registered gross tonnage.....	5,665	5,771	6,168
Registered net tonnage.....	3,452	3,545	3,779
Tolls.....	\$1.084 28	\$4.197 74	\$4.470 14
Tons of cargo (including vessels in ballast).....	4,636	4,793	5,336
Tons of cargo (laden vessels only).....	5,688	5,870	6,200

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and 72 cents per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per ton nor be less than 75 cents per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined both in accordance with the Panama Canal and the United States rules of measurement.

Due to this limiting proviso the tolls actually collected on laden vessels averaged \$0.94 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.72 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of October, 1928, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1.00 laden and \$0.60 ballast. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian	\$5,177.50	\$4,792.00		\$385.50
British	643,812.59	666,610.20	\$22,797.61	
Chilean	12,915.00	14,049.00	1,134.00	
Colombian	2,983.95	2,521.00		462.95
Costa Rican	29.25	23.40		5.85
Danish	29,287.48	27,694.40		1,593.08
Danzig	15,711.72	13,743.60		1,968.12
Dutch	66,509.62	73,049.60	6,539.98	
French	51,600.70	51,020.00		580.70
German	97,206.25	117,943.00	20,736.75	
Greek	29,133.47	30,150.60	1,017.13	
Italian	29,531.25	32,346.00	2,814.75	
Japanese	69,108.40	64,732.00		4,376.40
Norwegian	99,096.66	105,681.80	6,585.14	
Panaman	3,948.56	5,627.80	1,679.24	
Peruvian	11,611.35	13,896.00	2,284.65	
Spanish	12,343.64	11,253.20		1,090.44
Swedish	37,183.09	38,580.20	1,397.11	
United States	1,040,209.16	1,055,720.60	15,511.44	
Yugoslav	17,545.66	18,439.80	894.14	
Totals	2,274,945.30	2,347,874.20	83,391.94	10,463.04
Net increase for all traffic			72,928.90	

* Includes \$5,417 collected for naval vessels at 50 cents per displacement ton. * Includes \$500 collected for naval vessels at 50 cents per displacement ton.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade	\$18,262.33
United States foreign trade	2,128.48
United States Canal Zone trade	622.41
Net increase	15,511.44

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in October, 1928, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Belgian		1.70	1.70
British	.84	1.44	1.19
Chilean	.55	.93	.81
Colombian	1.50	.87	1.21
Danish	1.17	1.72	1.29
Danzig		1.88	1.88
Dutch	.75	1.54	1.09
French	.56	1.67	1.11
German	.94	1.27	1.11
Greek		1.93	1.93
Italian	.29	1.05	.75
Japanese	1.04	1.19	1.09
Norwegian	1.30	1.65	1.47
Panaman	1.03	.22	.62
Peruvian	.13	1.18	.75
Spanish	.04	.21	.11
Swedish	.84	3.09	2.33
United States	.96	1.54	1.26
Yugoslav	1.45	1.86	1.74
Averages, October, 1928	.92	1.51	1.24
Averages, October, 1927	.82	1.69	1.35
Averages, October, 1926	.90	1.63	1.31

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of October, 1928, is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	4	18,450	\$17,720.00	33	193,012	\$196,672.50
Ballast.....	44	227,960	164,163.99	1	5,095	3,668.40
General cargo ships:						
Laden.....	206	936,539	862,393.76	212	933,732	879,971.65
Ballast.....	46	198,430	142,770.51	3	1,742	1,254.24
Noncargo-carrying ships:						
Naval vessels.....	3		3,267.00	1		2,650.00
Tugs.....	1	90	108.00	1	111	143.25
Yachts.....	2	219	162.00			
Totals.....	306	1,381,688	1,190,585.26	251	1,133,692	1,084,360.04
Method of propulsion:						
Steam.....	242	1,111,952	967,868.93	206	920,722	888,616.08
Motor.....	62	269,214	222,327.08	43	211,257	193,688.36
Motor (schooner).....	1	180	132.75			
Nonpropelled.....	1	342	256.50	1	67	80.40
Sail.....				1	1,646	1,975.20
Totals.....	306	1,381,688	1,190,585.26	251	1,133,692	1,084,360.04

Of the 448 steam-driven vessels, 291 were oil burning, 155 coal burning, and 2 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of October, 1928. If tolls had been assessed against these vessels at commercial rates, the amount would have been approximately as indicated:

Class and Nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Cargo ships.....				1	3,415	\$4,268.75
Cruisers.....	1	8,900	\$4,450.00	3	14,550	7,275.00
Gunboats.....	1	1,575	787.50	1	1,575	787.50
Launches.....	2	20	15.00			
Minesweepers.....	2	1,900	950.00	1	950	475.00
Submarines.....	3	2,562	1,281.00	3	1,525	762.50
Supply ships.....				1	4,405	5,506.25
Survey ships.....				1	2,600	1,300.00
Tankers.....	1	6,424	7,708.80			
Tugs.....	2	2,000	1,000.00	2	2,000	1,000.00
U. S. Army vessels:						
Mineplanters.....	1	1,208	604.00	1	1,208	604.00
Transports.....	2	7,361	9,201.25	1	3,908	4,885.00
Totals, U. S. Government.....	15		25,997.55	15		26,864.00
Panamanian Government vessels:						
Transports.....	1	98	73.50			
Vessels for repairs:						
Tankers.....	2	3,186	2,380.50	2	3,186	2,380.50
Grand totals.....	18		28,460.55	17		29,253.50

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of October, 1928, carried cargo as follows: Atlantic to Pacific, 1,815 tons; Pacific to Atlantic, 473 tons; total, 2,288 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches transiting the Canal during the month of October, 1928. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Atlantic to Pacific	5	38	\$35.25	.....
Pacific to Atlantic	5	58	59.25	37
Totals	10	96	94.50	37

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of October, 1928, are shown in the following tabulation:

		Cristobal.	Balboa.	Total.
Local cargo arriving	tons	54,149	30,932	94,081
Local cargo shipped	tons	10,275	692	10,967
Transit cargo arriving	tons	2,549,513	2,576,307	5,125,820
Transit cargo clearing	tons	2,540,543	2,579,033	5,119,576
Cargo received for transshipment	tons	36,716	244	36,960
Cargo transhipped	tons	38,946	261	39,207
"Canal Zone for Orders" cargo:				
Number of receipts issued		62	25	87
Number of withdrawals		438	169	607
Tons received		4,060	272	4,332
Tons withdrawn		3,198	275	3,473
Packages received		4,934	4,086	9,020
Packages withdrawn		6,229	3,889	10,118
Vessels supplied with bunker coal:				
Commercial, other than Panama Railroad Company		70	7	77
Coal supplied to above vessels:				
Commercial, other than Panama Railroad Company	tons	20,373	512	20,885
Coal issued, miscellaneous:				
Panama Canal departments	tons	317	39	356
U. S. Army, including vessels	tons	204	1	205
Individuals and companies	tons	188		188
Panama Railroad Company	tons	5		5
Transferred to Navy	tons	552		552
Total sales and issues	tons	21,639	552	22,191
Coal on hand, October 1, 1928	tons	45,050		45,050
Coal on hand, November 1, 1928	tons	32,005		32,005
Coal received during month	tons	8,594		8,594
Coal received from Navy	tons		552	552
Fuel oil issued from Panama Canal tanks:				
Panama Canal departments	bbls.	6,883.62	16,424.34	23,307.96
Panama Railroad Company	bbls.	1,265.60		1,265.60
U. S. Army and Navy	bbls.	698.20	105.98	804.18
Individuals and companies	bbls.		351.17	351.17
Total sales and issues	bbls.	8,847.42	16,881.49	25,728.91
Fuel oil on hand, November 1, 1928	bbls.	66,501.80	59,741.68	126,243.48
Diesel oil received during October	bbls.		506.19	506.19
Diesel oil sold during October	bbls.	102.72		608.91
Diesel oil on hand, November 1, 1928	bbls.	23,568.78	493.25	24,062.03
Miscellaneous transfers	bbls.	708.53	1,026.15	1,734.68
Gasoline and kerosene pumped for The Panama Canal	bbls.	2,416.87	705.15	3,122.02
Gasoline pumped for individuals and companies	bbls.		8,054.12	8,054.12
Oil pumped for individuals and companies	bbls.	519,134.32	435,768.23	954,902.55
Oil pumped for U. S. Shipping Board	bbls.	1,707.00	732.00	2,439.00
Oil pumped for U. S. Navy	bbls.	7,163.00		7,163.00
Total fuel oil, gasoline, and kerosene handled	bbls.	540,079.86	463,673.33	1,003,753.19
Admeasurement of vessels:				
U. S. equivalent certificates issued		36	3	39
Measured for Panama Canal net tonnage		12	1	13
Remeasured for Panama Canal net tonnage		24	2	26
Panama Canal net tonnage corrected		1	4	5
U. S. equivalent tonnage corrected		12	11	23
Services of harbor equipment:				
Tugs, total operating hours		519½	416	935½
Launches, total operating hours		1,486	1,676½	3,162½

	Cristobal.	Balboa.	Total.
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	15,052.75	12,232.50	27,286.25
Pilotage.....	19,984.00	8,269.00	28,253.00
Seamen.....	13,940.00	11,448.00	25,388.00
Launch service.....	2,431.50	3,099.50	5,531.00
Wharfage.....	17,468.00	5,752.20	23,220.20
Ships measured.....	480.00	50.00	530.00
Miscellaneous.....	1,274.35	1,071.22	2,345.57
Ships repaired at Panama Canal shops:			
Commercial.....	64	24	88
U. S. Army and Navy.....	4	12	16
Panama Canal equipment.....	8	11	19
Totals.....	76	47	123
Vessels dry-docked:			
Commercial.....	8	11	19
U. S. Army and Navy.....		2	2
Panama Canal equipment.....	2	4	6
Totals.....	10	17	27
Clearances issued.....	308	321	629
Bills of Health issued.....	302	321	623

ALL VESSELS ENTERING AND CLEARING PORT

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.....	617	3,481,839	2,125,553	587	3,288,960	2,026,842
Vessels entering port but not transiting Canal.....	69	288,923	172,325	21	50,980	32,091
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	120	660,801	403,828	89	526,143	319,801
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.....	620	3,506,440	2,140,931	594	3,308,431	2,044,239
Vessels clearing port but not transiting Canal.....	71	305,318	183,460	26	55,301	35,618
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	123	678,375	416,349	91	527,389	320,482

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,513	736	2,249	220	248	468
From Pacific ports.....	143	100	243	197	138	335
Total disembarking.....	1,656	836	2,492	417	386	803
Embarking:						
For Atlantic ports.....	1,027	670	1,697	68	329	397
For Pacific ports.....	205	89	294	231	268	499
Total embarking.....	1,232	759	1,991	299	597	896
Remaining on board:						
From Atlantic to Pacific ports.....	599	190	789	1,666	2,251	3,917
From Pacific to Atlantic ports.....	650	1,226	1,876	668	869	1,537
From Atlantic to Atlantic ports.....	1,608	2,378	3,986			
From Pacific to Pacific ports.....				16	326	342
Total remaining on board.....	2,857	3,794	6,651	2,350	3,446	5,796
Total arriving.....	4,513	4,630	9,143	2,767	3,832	6,599
Total departing.....	4,089	4,553	8,642	2,649	4,043	6,692

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific	306	60	19.6
Pacific to Atlantic	251	60	23.9
Totals	557	120	21.5

In addition to the aforesaid, 55 passenger-carrying vessels called at the port of Cristobal and 5 at the port of Balboa without transiting the Canal, making a total of 180 passenger-carrying vessels calling at Canal ports during the month.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of October, 1928:

	Ice.	Groceries.	Cold Storage.	Laundry.	Miscellaneous.	Totals.
Sales at Cristobal to:						
Commercial vessels	\$3,060.64	\$12,068.59	\$20,302.41	\$95.42	\$5,933.52	\$50,490.58
Government vessels	125.78	828.82	11,669.28	105.99	541.70	13,271.57
Panama Railroad vessels	9.45	2.38	1,871.59	855.68	322.96	3,062.06
Total sales, October, 1928. . .	3,225.87	12,899.79	42,843.28	1,057.09	6,798.18	66,824.21
Total sales, October, 1927. . .	2,624.34	14,271.83	34,419.47	1,148.24	6,629.82	59,093.70
Total sales, October, 1926. . .	2,308.07	14,169.18	44,816.78	1,103.68	5,751.35	68,179.66
Sales at Balboa to:						
Commercial vessels	306.25	15,232.85	20,387.73	726.65	6,133.94	42,787.42
Government vessels	300.70	4,427.83	19,688.14	166.69	1,126.97	25,710.38
Panama Railroad vessels				42.24		42.24
Total sales, October, 1928. . .	606.95	19,660.73	40,075.87	935.58	7,260.91	68,540.04
Total sales, October, 1927. . .	1,420.83	14,569.73	37,558.46	1,007.36	4,761.25	59,317.63
Total sales, October, 1926. . .	1,171.60	9,792.83	23,230.91	587.11	2,754.62	37,537.07

The aggregate sales to Government vessels during the month was \$38,981.95; to Panama Railroad vessels, \$3,104.30; and to other commercial vessels, \$93,278; making the total sales to all vessels, \$135,364.25.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of October, 1928, as compared with the corresponding month in 1927 and 1926:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial.					
	North.	South.	Total.	North.	South.	Total.	Oct., 1928.	Oct., 1927.	Oct., 1926.
Gatun	243	275	518	11	10	21	539	553	441
Pedro Miguel	247	293	540	18	18	36	576	572	472
Miraflores	246	290	536	16	17	33	569	573	465
Number of vessels put through locks.									
Gatun	250	305	555	31	26	57	612	636	528
Pedro Miguel	250	302	552	59	62	121	673	667	557
Miraflores	250	302	552	59	61	120	672	676	557

CLASSIFICATION OF NONCOMMERCIAL TRAFFIC.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels	32	33	33
Panama Canal equipment	11	72	71
Launches (under 20 tons)	9	11	11
Panaman Government vessels	1	1	1
Vessels for repairs	4	4	4

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in October, 1928, as compared with the preceding month and the corresponding month in 1927:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	2,161,740,000	1,832,840,000	1,724,670,000
Leakage.....	60,000,000	30,500,000	20,000,000
Maintenance.....			34,780,000
Totals, October, 1928.....	2,221,740,000	1,863,340,000	1,779,450,000
Totals, September, 1928.....	1,917,410,000	1,587,400,000	1,524,900,000
Totals, October, 1927.....	2,188,900,000	1,891,490,000	1,745,740,000

HYDROGRAPHY.

In the following tabulation the hydrographic conditions in the Canal Zone and vicinity during the month of October, 1928, are shown in comparative form:

	October.		October—Years of record.		
	1923.	1927.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Chagres River at Alhajuela:					
Monthly mean discharge.....	4,001	3,238	8,126	2,031	3,579
Maximum momentary discharge.....	23,702	12,050	108,300		
Gatun Lake watershed:					
Total yield.....	10,999	9,439	27,260	9,432	12,880
Net yield.....	10,445	8,810	26,805	8,810	12,324
Draft on Gatun Lake for lockages and power.....	2,948	2,943	2,948	2,191	2,290

* October 22, 1923.

‡ Not including October, 1914.

The total yield of the Gatun Lake watershed for the month of October was 15 per cent below the 15-year October average, or 10,999 c. f. s. compared with an average of 12,880 c. f. s. Maximum and minimum October total yields of record are 27,260 c. f. s. in 1923 and 9,432 c. f. s. in 1926, respectively. The lake varied in elevation from 85.76 feet on the 1st to 86.65 feet on the 31st, averaged 86.09 feet, and ended at elevation 86.54 feet. There was an increase in storage during the month of 2.9 billion cubic feet, the equivalent of .64 of a foot on Gatun Lake. The net yield for the month amounted to 28 billion cubic feet.

Miraflores Lake varied in elevation from 53.20 feet on the 30th to 54.90 feet on the 13th, averaged 53.98 feet, and ended at elevation 54.30 feet. Eight hundred and fifty-one million cubic feet were wasted over the Miraflores spillway.

SEISMOLOGY.

Seismic disturbances were recorded during the month on the 8th, 11th, 12th, 13th, 25th, and 30th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,063,800 kilowatt hours, and the computed water consumption was 3,902,280,300 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 1,700 kilowatt hours, with a fuel oil consumption of 18.71 barrels.

In addition to the usual operating and maintenance work performed; 48 work orders, comprising 96 items of additions or repairs, were completed on 25 vessels during the month. There were 457 work orders issued during the month, as compared with 349 for the previous month.

MECHANICAL DIVISION.

During the month miscellaneous repairs were made on 76 vessels at Cristobal and 47 at Balboa. Ten vessels were dry-docked at Cristobal and 17 at Balboa. At Cristobal the annual overhaul of submarines *O-7* and *O-10* was completed during October, and overhaul on the *S-15* was started during the month. At Balboa work was carried forward on the U. S. tug *Sciota*, three U. S. Navy submarines, and the mineplanter *Gen. Wm. M. Graham*.

MUNICIPAL ENGINEERING DIVISION.

Work was carried forward on several improvement projects in the cities of Colon and Panama, and in the Canal Zone. The usual maintenance work was performed on roads, streets, and walks, and the sewer and water systems. The amount of water pumped during the month totaled 727,212,500 gallons.

DREDGING DIVISION.

A general movement and settlement occurred at South Cucaracha slide on the 18th of the month, involving an area of approximately five acres. Observation points in this area moved from 5 to 13 feet. From the 18th to the 22d, the movement continued at a very slow rate after which it remained quiescent. The quantity of material entering the Canal prism was negligible. East and West Culebra slides also showed a slight movement toward the Canal during the month.

There were no other slides and no delays to shipping during the month.

The total excavation during October was 268,650 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gaillard Cut—			
Project No. 2, Lirio Curve	5,000	89,850	94,850
Project No. 9, west Culebra basin	500	3,500	4,000
Maintenance	5,000		5,000
Balboa inner harbor—			
Project No. 1		57,800	57,800
Maintenance	3,000		3,000
Plant excavation:			
Naval air station fill, Coco Solo	104,000		104,000
Totals	117,500	151,150	268,650

The ferry crossing at the north end of Pedro Miguel locks operated 31 days during the month. Five hundred and eight trips were made, and 37 Panama Canal, 46 U. S. Army, and 2,113 other vehicles, a total of 2,196 were ferried across the Canal.

SCHOOLS.

The Canal Zone white schools opened on October 1. The colored schools operated on a 12-month basis. Compared with the month of October, 1927, the white schools were increased by 155 pupils and the colored schools by 45 pupils, with 3 additional white teachers and 1 additional colored teacher employed to take care of the increased enrollment.

The following tabulation shows the enrollment and number of teachers for October, 1927 and 1928:

	October, 1927.	October, 1928.
White schools:		
Gross enrollment	2,294	2,449
Teachers	83	86
Colored schools:		
Gross enrollment	2,793	2,838
Teachers	60	61

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on October 31, 1928, totaled 21,578, composed of 7,443 Americans, 2,635 of whom were men, 2,247 women, and 2,561 children; 211 Europeans, 100 of whom were men, 32 women, and 79 children; and 13,924 West Indians, 4,151 of whom were men, 2,590 women, and 7,183 children. The total number of persons in quarters on October 31, 1927, was 21,132.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of October 17, 1928, with a comparison of the working force for the preceding month and for October, 1927:

	As of October 17, 1928.			Total employees.	
	Gold.	Silver.	Total.	September, 1928.	October, 1927.
Operation and Maintenance:					
Office.....	41	58	99	98	81
Electrical.....	158	171	329	313	314
Municipal Engineering.....	86	902	988	776	641
Lock Operation.....	225	634	909	910	860
Dredging.....	177	919	1,096	1,085	1,084
Mechanical.....	456	868	1,254	1,315	1,266
Marine.....	209	633	842	937	846
Fortifications.....	23	304	327	374	253
Totals.....	1,405	4,539	5,944	5,808	5,348
Supply Department:					
Quartermaster.....	198	1,914	2,112	1,985	1,962
Subsistence.....	7	100	107	109	100
Commissary.....	221	1,198	1,419	1,392	1,303
Cattle Industry.....	6	126	132	131	227
Hotel Washington.....	9	93	102	102	104
Transportation.....	54	211	265	263	251
Totals.....	495	3,642	4,137	3,982	3,947
Accounting Department.....	194	8	202	202	210
Health Department.....	278	880	1,158	1,154	1,042
Executive Department.....	520	238	818	782	789
Totals.....	992	1,186	2,178	2,138	2,041
Panama Railroad Company:					
Superintendent.....	49	269	318	319	270
Transportation.....	61	116	180	184	181
Receiving & Forwarding Agency.....	87	1,757	1,844	1,447	1,206
Coaling stations.....	48	271	319	313	313
Totals.....	248	2,413	2,661	2,263	2,093
Grand totals, October, 1928.....	3,140	11,780	14,920		
Grand totals, September, 1928.....	3,090	11,101		14,191	
Grand totals, October, 1927.....	2,993	10,376			13,329

Additions to the gold force on the Isthmus in October were as follows: Employed in the United States, 36; reemployed in the United States, 1; employed on the Isthmus, 25; reemployed on the Isthmus, 8; total, 70. Separations from the gold force totaled 29, as follows: Resigned, 20; discharged, 6; retired, 2; died, 1. At the end of the month there were on file 120 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 213 deaths occurred during the month of October, 1928, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 19.74 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 45; tuberculosis (various organs), 38; diarrhea and enteritis, 18; organic diseases of the heart, 16; and syphilis, 11. There were 7 deaths from nephritis, 6 from cancer, 1 each from typhoid fever, whooping cough, diphtheria, amebic dysentery, and meningococcus meningitis. There were 21 deaths of nonresidents. These are not included in the above statistics.

There were 311 live births, and 13 stillbirths, reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 30.02 per 1,000 population. Deaths among children under 1 year of age numbered 45, giving an infant mortality rate of 144.69.

The total number of malarial cases reported from the Zone and the cities of Panama and Colon during October was 151, of whom 18 were employees (4 white and 14 colored), 23 were members of employees' families (8 white and 15 colored), 25 were Canal Zone agriculturists, 45 were other civilian nonemployees, and 40 were Army and Navy personnel. Of the 41 employees and members of employees' families, 26 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There were no deaths from malaria.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions and received on the Isthmus during the month totaled \$399,081.72, of which \$378,632.98 was for the

Department of Operation and Maintenance and \$20,448.74 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap and obsolete and second-hand material amounted to \$44,655.98.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of September, 1928, as compared with September, 1927, with the figures for the first three months of the current fiscal year as compared with the same period in the fiscal year 1928.

It is impossible to submit the figures for the month of October at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	September, 1928.	September, 1927.	To end of September.	
			This year.	Last year.
Tolls	\$2,125,982 10	\$2,294,499 04	\$6,417,763.94	\$6,784,266.50
Other receipts	324,178 44	297,477 70	958,181.17	859,132.63
Total transit revenues	2,450,160 54	2,581,976 74	7,375,945.11	7,643,399.23
Total transit expenses	1,004,841.96	979,586.61	3,117,793.73	2,888,605.26
Net transit revenues	1,445,318 58	1,602,390 13	4,258,151 38	4,754,793.97
Three per cent capital charge	617,134.86	610,551 14	1,847,912 40	1,829,724.98
Transit surplus	828,183.72	991,838 99	2,410,241 98	2,925,068.99
Business revenues	1,299,257 85	1,188,760 46	3,810,693.78	3,829,460.65
Business expenses	1,147,972 40	1,114,614 62	3,614,772.44	3,578,251.21
Net business revenues	61,285 45	74,115 84	195,921 34	251,209.44
Three per cent capital charge	69,646.36	69,474.77	194,752.22	193,594.83
Business surplus	619 09	13,641.07	1,169.12	57,614.61
Combined revenues	3,335,239.95	3,497,417 74	10,271,175 22	10,558,261 82
Combined expenses	1,928,635 92	1,820,911 77	5,817,099.50	5,652,258.41
Net revenues	1,506,604 03	1,676,505 97	4,454,075 72	5,006,003 41
Three per cent capital charge	677,891 22	671,025 91	2,042,664 62	2,023,319.81
Combined surplus	828,892 81	1,005,480 06	2,411,411 10	2,982,683 60

Respectfully,

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Three Weeks Ending November 17, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cambrai	U. S. Government	October 27.	October 28.	1,268	219
Peru	East Asiatic Co	October 28.	October 29.	424	
Cauca	National Navigation Co	October 28.	October 28.		9
Ecuador	Panama Mail S. S. Co.	October 28.	October 29.	17	17
City of Panama	Panama Mail S. S. Co.	October 30.	October 30.		5
Guatemala	Grace Line	October 30.	October 30.	38	
Brielle	Royal Netherlands S. S. Co.	October 30.	October 31.	274	
Santa Maria	Grace Line	November 1.	November 1.		1
Tejon	Standard Transportation Co.	November 1.	November 2.	10,102	
Itauri	Hamburg-American Line	November 2.	November 2.	55	
President Monroe	Dollar Line	November 2.	November 2.		2
Jamaica	Pacific Steam Navigation Co.	November 3.	November 3.		6
Spreewald	Hamburg-American Line	November 3.	November 4.	528	
Benjamin Franklin	Fred Olsen & Co.	November 3.	November 3.	389	
Taketoyo Maru	Nippon Yusen Kaisha	November 4.	November 5.	113	
Regulus	A. O. Lingvig.	November 4.	November 8.	2,693	
Santa Tecla	N. O. & S. A. S. S. Co	November 7.	November 7.	57	
Acajutla	Pacific Steam Navigation Co.	November 7.	November 8.	1	
Epoca	Nordstrom Chelin	November 10.	November 11.	250	
Venezuela	Panama Mail S. S. Co	November 12.	November 12.	30	38
Litipua	Anglo-Saxon Petroleum Co.	November 13.	November 14.	6,923	
Mojave	Standard Transportation Co.	November 14.	November 15.	10,233	
Buenos Aires	Spanish Line	November 14.	November 14.	124	
Acajutla	Pacific Steam Navigation Co.	November 14.	November 14.		1
Santa Elisa	Grace Line	November 15.	November 15.	1	
Cauca	National Navigation Co.	November 17.	November 17.		5

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors. An illustrated pamphlet explaining in detail the arrangement may be had upon application to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

On general merchandise the rates are as follows:

(a) For handling cargo from ship's side to storage place, the customary inward local charge of \$1 per ton.

(b) For delivery or reforwarding, customary outward local charge of \$1 per ton. (Total of 20 cents per ton more than regular transfer charge.)

(c) For storage, 3 cents per ton per day, except that no charge will be made for the first 35 days.

The Panama Railroad Company stores this cargo in four fireproof warehouses, 160 feet by 850 feet, at Cristobal, and in one of the same dimensions at Balboa.

Cargo stored for orders can be reforwarded from the Isthmus—each carrier to collect its proportion of the through rate instead of the local. This means that should a shipment move from New York to the Canal Zone, it will of course pay regular local rate to Balboa or Colon, as the case may be—but should owner wish to reforward to, say, "Guayaquil," he can do so by paying the oncarrier's proportion of the through rate. Upon evidence that the shipment or any part of it moved beyond the Canal Zone, the initial carrier will refund the difference between the through and local rate.

Cargo intended for warehousing at Cristobal or Balboa should be so indicated on the bill of lading, thus "Cristobal for orders" or "Balboa for orders." When so consigned it is not necessary for shippers to secure consular papers at original point of shipment, nor to have bills of lading consulated. Cargo consigned to Canal Zone for orders may be delivered in the Republic of Panama in which case it is necessary to prepare an invoice on which duties can be paid. When evidence of payment of duty is presented to the Canal Zone customs officers they will issue the necessary release and delivery can be taken in the usual way. For those on the Canal Zone who are allowed to import goods duty free the Panama Canal customs release is all that is necessary. For reshipment from storage to a foreign country the shipper takes out bill of lading, consular invoice and sobordo if necessary and cargo is forwarded as regular outward local.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," are shown in the pamphlet referred to above.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
For steamships, including warships of all nations when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.....	11.00	14.00

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, November 17, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Rotorua	10	16.40	11	6.12	11	13.17	British.	N. Z. Shipping Co.	526 0	61.4	23.6	London, England	Auckland, N. Z.	General.	4,540	12,846
Modavia	10	3.00	11	6.15	11	13.40	British.	Donaldson Bros., Ltd.	387 0	53.6	16.5	Glasgow-England	Vancouver, B. C.	General, bananas	1,031	6,719
Point Sur	11	2.20	11	7.30	11	15.06	American	Gulf-Pacific Line	324 0	46.0	14.11	Corpus Christi, Tex.	Los Angeles, Calif.	(%)	4,708	3,984
City of Osaka	11	3.45	11	7.50	11	15.11	British.	Ellerman Austral'n Line	433 0	57.0	25.2	New York, N. Y.	Premantle, Australia	General	5,160	8,606
Kofuku Maru	11	9.00	11	9.20	11	16.08	Japanese	Kokusai Kaisha	385 0	51.0	21.0	Jacksonville, Fla.	Yokohama, Japan	(?)	3,354	6,209
Castletown	11	10.00	11	10.05	11	16.58	American	Charles Nelson & Co.	321 0	50.0	20.1	Baltimore, Md.	Seattle, Wash.	General	3,639	3,872
Eagle	11	14.45	11	14.55	11	21.41	American	Standard Oil Co.	410 0	56.0	22.6	New York, N. Y.	Los Angeles, Calif.	Ballast	8,201	6,226
Magyar	11	15.15	11	15.30	12	13.50	British	Blue Star Line	490 0	54.0	19.6	Liverpool, England	Vancouver, B. C.	Ballast	7,352	5,510
Pennyworth	11	13.40	11	20.05	12	14.46	British	R. S. Dalgleish	410 0	52.0	25.6	Boca Grande, Fla.	Moji, Japan	Cotton, phos. tes.	6,778	6,179
Venezuela	10	19.40	12	6.05	12	13.28	American	Panama Mail S. Co.	389 0	48.7	24.6	New York, N. Y.	San Francisco, Cal.	General	3,064	6,083
O-6	12	6.05	12	6.05	12	14.30	American	U. S. Navy	172 4	18.0		Cristobal, C. Z.	Balboa, C. Z.			
O-8	12	6.05	12	6.05	12	14.30	American	U. S. Navy	172 4	18.0		Cristobal, C. Z.	Balboa, C. Z.			
O-10	12	6.05	12	6.05	12	14.25	American	U. S. Navy	172 4	18.0		Cristobal, C. Z.	Balboa, C. Z.			
O-7	12	6.05	12	6.05	12	14.25	American	U. S. Navy	172 4	18.0		Cristobal, C. Z.	Balboa, C. Z.			
O-9	12	6.05	12	6.05	12	14.25	American	U. S. Navy	172 4	18.0		Cristobal, C. Z.	Balboa, C. Z.			
S-16	12	6.05	12	6.05	12	14.25	American	U. S. Navy	231 0	21.10		Cristobal, C. Z.	Balboa, C. Z.			
William Penn	11	15.45	12	7.20	12	14.52	American	Rosevelt S. Co., S. B.	440 0	60.2	26.10	Baltimore, Md.	Hongkong, China.	Ballast	9,025	9,019
El Alito	11	19.50	12	7.15	12	15.25	British	Imperial Oil Co.	440 0	57.5	21.0	Halifax, N. S.	Talara, Peru	General	7,555	5,049
Cumbetland	11	1.40	12	8.55	12	16.43	British	Federal Steam Nav. Co.	520 0	64.2	27.6	Newport, England	Timaru, N. Z.	General	9,450	12,930
Limon	12	5.38	12	9.55	12	17.10	American	United Fruit Co. *	330 0	44.0	19.6	Port Limon, C. R.	San Francisco, Cal.	Bananas, coffee.	916	3,675
Ucayali	7	19.15	12	10.23	12	18.18	Peruvian	Peruvian Line	374 7	46.3	18.0	Cristobal, C. Z.	Callao, Peru	General	112	4,466
San Leonardo	12	7.30	12	10.10	12	17.49	British	Anglo-Mexican Pet. Co.	401 9	54.2	20.0	Aldersham, England	San Francisco, Cal.	Ballast	5,962	3,650
Feltre	12	1.10	12	11.45	12	18.40	American	Ore S. S. Corp.	449 1	57.2	19.0	Baltimore, Md.	Cruz Grande, Chile	Ballast	7,808	5,139
Bagaduce	12	6.05	12	6.05	12	13.28	American	Ore S. S. Corp.	449 1	57.2	19.0	Baltimore, Md.	Balboa, C. Z.			
Major Pullen	12	6.05	12	6.05	12	13.40	American	U. S. Navy	449 1	57.2	19.0	Baltimore, Md.	Balboa, C. Z.			
Suturnco	12	15.40	12	15.50	13	11.46	American	Transmarine Lines	324 0	46.0	19.0	Newark, N. J.	Catun, C. Z.	General	1,938	3,984
Magdalen	12	14.30	13	5.55	13	13.49	British	Pacific Steam Nav. Co.	401 6	59.3	23.2	Hull, England	Valparaiso, Chile	General	2,811	8,817
West Cape	12	19.25	13	6.15	13	13.41	American	Munson, McCor k Line.	409 5	54.2	20.7	New York, N. Y.	Los Angeles, Calif.	General	4,729	6,566
Dakotan	12	21.45	13	7.20	13	13.57	American	Amer.-Hawaiian Line	407 7	53.7	27.0	Boston, Mass.	Seattle, Wash.	General	5,028	7,156
City of Mandan	13	8.15	13	8.35	13	15.15	British	Ellerman Lines	442 0	57.0	27.0	Baltimore, Md.	Shanghai, China.	General	9,278	8,855
Montrealite	13	7.35	13	9.10	13	15.48	British	Imperial Oil Co.	410 0	68.3	23.6	Montreal, Canada	Talara, Peru	Ballast	11,555	7,639
Andreas K	13	7.25	13	9.15	13	16.58	Greek	Margaron Brothers	361 0	46.0	13.6	Barry, England	Arica, Chile	Ballast	4,307	3,161
Robin Adair	13	8.35	13	9.55	13	17.24	American	Ishman S. S. Lines	424 8	55.2	27.3	New York, N. Y.	Tacoma, Wash.	Steel, general	8,846	7,470
Seminole	13	13.00	13	13.15	13	20.03	American	Rosevelt S. S. Co., S. B.	402 0	54.0	26.0	New Orleans, La.	Premantle, Australia	General	3,754	6,972
Dorothy Luckenbach	13	19.25	13	19.50	14	12.35	American	Luckenbach Line	448 9	60.2	26.0	Boston, Mass.	Seattle, Wash.	General	7,800	9,294
Sun	13	19.30	13	20.40	14	13.36	American	Sun Oil Co.	448 6	66.0	22.0	Chester, Pa.	Los Angeles, Calif.	Ballast	9,620	6,424

* Tanker.

* Submarine.

* Tug.

* Launch.

* Lumber, sulphur, and general.

* Scrap rail and tobacco.

* Case oil, steel, and general.

	13	10	15	14	6	07	14	15	28	14	16	40	French	French Line	398.0	51.0	20.4	Havre, France	Talcahuano, Chile	General	2,647½	6,025	4,187
Saint Joseph																							
Canadian																							
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Can. Nat. Steamships	400.6	52.0	21.0	Montreal, Canada	Vancouver, B. C.	General	4,600	5,893	4,187
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
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Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,965	8,270	6,190
Belgic	13	20	25	14	7	30	14	16	11	14	17	05	British	Trans. Pacific S. S. Co.	437.6	52.0	24.0	Umea, Sweden	Brisbane, Australia	General	5,9		

2 Tinplate, steel, and general.

tobacco, and general,

General.

10 A

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

W. S. Rheem	11	1.25	11	6.10	11	14.40	11	18.40	American	Standard Oil Co. of Cal.	500 0	58.2	28.8	Los Angeles, Calif.	London, England	Gasoline	13,800	11,224	7,895
Jason	11	2.10	11	7.10	11	15.09	11	21.05	Dutch	Royal Neth. S. S. Co.	350 6	48.6	22.0	Copimbo, Chile	Europe	Nitrates, general	4,629	4,321	3,120
Orita	11	0.10	11	8.05	11	15.45	11	20.15	British	Pacific Steam Nav. Co.	485.0	58.0	32.1	Macallanca, Chile	Liverpool, England	General	7,906	9,836	6,561
Osina	11	4.02	11	8.48	11	16.35	11	18.30	Dutch	Anglo-Saxon Pet. Co.	400 3	52.5	23.7	San Francisco, Cal.	Curacao, D. W. I.	Stoveoil	7,046	5,912	3,657

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.			
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.		
Manizales.	11	13	30	11	14	12	11	14	12	German	North German Lloyd	216	5	33	0	Guayaquil, Ecuador	General	301	1,132	741	
Consuelo.	11	14	40	11	15	04	12	16	35	British	T. & J. Harrison.	305	5	32	0	Portland, Ore.	General	6,549	5,753	3,857	
Sunbeam.	12	4	30	12	6	07	12	14	20	American	Sun Oil Co.	429	3	50	2	Los Angeles, Calif	Gas line	9,302	7,709	5,562	
Minola.	11	23	50	6	22	12	15	30	17	30	N. O. & S. A. S. S. Co.	238	6	40	21	Callao, Peru	Nitrates	3,580	2,885	1,895	
Schwarzwald.	12	1	37	12	7	16	12	16	10	German	Hamburg-American Line	399	6	44	26	Valparaiso, Chile	General	8,019	6,571	4,607	
Durastafage.	12	3	20	12	8	20	12	16	50	British	Wessel, Duval & Co.	384	4	52	24	Caleta Colosa, Chile	Nitrates	7,327	5,173	3,651	
Eluro.	12	3	40	12	8	50	12	17	10	British	Pacific Steam Nav. Co.	450	3	56	25	Taltushano, Chile	General	3,329	9,291	6,301	
Panama.	12	8	10	12	9	36	12	18	25	British	Royal Mail S. P. Co.	375	3	48	3	Talcahuano, Chile	Apples, prunes	2,175	4,717	3,359	
Pilar de	12	13	32	12	14	04	12	21	15	British	Larrinaga & Co.	445	0	58	1	Seattle, Wash	Grain, lumber	9,504	7,643	5,562	
Larrinaga	12	14	20	12	14	32	12	22	15	British	N. O. & S. A. S. S. Co.	311	0	44	2	Portland, Ore.	Grain, lumber	4,383	3,545	2,562	
Milloncel.	12	15	30	12	15	03	13	13	03	American	Standard Transp. Co.	467	6	62	7	Antofagasta, Chile	Gas line	11,271			
Royal Arrow.	13	3	00	13	6	08	13	13	35	American	Standard Transp. Co.	467	6	62	7	Los Angeles, Calif	Gas line	9,460	7,978	5,840	
Pat Dobeny.	13	3	00	13	6	45	13	14	05	American	Richfield Oil Co.	480	2	59	2	New York, N. Y.	Gas line	9,460	7,978	5,840	
Bantu.	13	3	30	13	7	25	13	15	25	American	Norton, Lilly & Co.	360	0	47	0	Seattle, Wash	General	7,506	9,032	6,655	
Nebraska.	13	3	52	13	8	03	13	16	15	American	Amer-Hawaiian Line	471	0	59	2	Portland, Ore.	General	7,506	9,032	6,655	
Kentuckian.	13	6	50	13	8	24	13	16	40	British	Amer-Hawaiian Line	414	5	53	7	Boston, Mass.	General	5,795	7,049	4,941	
San Manuel.	13	10	20	13	11	07	13	19	14	British	Eagle Oil Transp. Co.	407	0	52	3	San Francisco, Cal	Gasoline	7,446	6,183	4,313	
Amerikaland.	13	14	20	13	16	29	14	11	45	Swedish	Ore S. S. Corp.	561	0	72	0	Lizard Head, Eng	Iron ore	21,500	15,560	4,996	
Sapelo.	12	12	45	14	6	24	14	13	55	American	U. S. Navy.	461	6	60	0	Cruz Grande, Chile	Gas line	11,220	7,486	5,112	
Lio.	13	20	00	14	6	40	14	14	50	American	Standard Transp. Co.	431	0	59	2	Los Angeles, Calif	Gas line	9,430	7,486	5,112	
Alclair.	13	21	15	14	7	22	14	15	20	American	Standard Transp. Co.	429	3	59	2	Los Angeles, Calif	Gas line	10,066	7,665	5,402	
Chimian.	13	20	00	14	6	55	14	14	59	Panaman	National Navigation Co.	116	0	21	0	New York, N. Y.	Treasure	80	211	124	
Lewis Luck-	13	23	30	14	7	45	14	16	30	American	Lukenbach Line	496	0	68	2	Cristobal, C. Z.	Lumber, general	12,250	11,487	8,763	
enbach.	13	23	30	14	8	25	14	17	20	American	Malloy Transport Co.	334	0	48	0	Boston, Mass	Lumber	4,750	4,171	2,827	
Maltran.	14	5	00	14	8	27	14	17	40	Norwegian	Malloy Transport Co.	195	1	32	9	New York, N. Y.	Coffee	55	985	606	
Stella.	14	1	00	14	9	21	14	17	55	British	Pine W. R. Smith & Sons	378	0	31	5	Cristobal, C. Z.	Bulk wheat	7,201	5,297	3,787	
Bradburn.	14	3	25	14	9	35	14	18	24	20	British	St. John S. S. Co., Ltd	411	7	54	5	Dublin, Ireland	Wheat, lumber	8,600	6,512	4,665
Indian City.	14	4	37	14	10	01	14	19	08	British	St. John S. S. Co., Ltd	399	4	34	5	Antwerp, Belgium	Lumber	8,500	6,138	4,354	
Pacific Cedar.	14	6	40	14	10	43	14	19	40	British	Dimon S. S. Corp	411	0	34	5	New York, N. Y.	Wheat	9,020	6,956	5,133	
Welsh City.	14	11	00	14	11	42	14	19	55	British	Sir W. R. Smith & Sons	324	0	46	2	Seattle, Wash	Port Newark, N. J.	3,285	3,934	2,612	
Sutrope.	14	11	10	14	11	55	14	20	30	American	Transmarine Lines	324	0	46	2	Everett, Wash	Lumber	9,730	7,481	4,975	
S. C. T. Dodd.	14	7	45	14	12	22	14	20	30	Spanish	Standard Oil Co of Cal	425	0	57	2	San Francisco, Cal	Gasoline	9,730	7,481	4,975	
Buenos Aires.	14	7	45	14	12	22	14	21	15	Spanish	Spanish Line	407	0	48	0	Valparaiso, Chile	General	1,332	5,624	3,844	
Canadian Run-	14	12	10	14	12	45	14	22	42	British	Can. Nat. Steamships	320	0	44	0	Barcelona, Spain	Lumber, general	2,654	3,169	2,022	
ner.	14	12	50	14	13	36	14	22	00	American	Transmarine Lines.	324	0	46	2	Victoria, B. C	Lumber	3,908	3,984	2,612	
Sugilleno.	14	12	50	14	13	36	14	22	00	American	Transmarine Lines.	324	0	46	2	Everett, Wash	Lumber	3,908	3,984	2,612	
Hans Leon-	14	12	50	14	13	36	14	22	00	American	Transmarine Lines.	324	0	46	2	Everett, Wash	Lumber	3,908	3,984	2,612	
hardt.	14	12	50	14	13	36	14	22	00	American	Transmarine Lines.	324	0	46	2	Everett, Wash	Lumber	3,908	3,984	2,612	
Point Reyes.	14	13	29	14	14	09	14	23	05	German	Cia. Maritima Colon.	233	0	36	1	Buenaventura, Col.	(16)	894	1,568	908	
	14	13	29	14	14	09	14	23	05	American	Swayne & Hoyt.	324	0	46	2	Portland, Ore.	(17)	3,489	3,981	2,617	

¹ Motor ship.

¹⁶ Nitrates and antimonium ore.

¹⁷ Lumber, explosives, and general.

Tanker.

Lumber, explosives, and general.

Coffee, hides, rubber, cocoa, and ivory nuts.

Navy stores and fuel oil.

Nitrates and antimony ore.

Wiegand.	14	14	25	14	15	28	15	00	45	16	13	16	German.	North German Lloyd.	393	0	53	0	26	2	San Antonio, Chile.	Hamburg, Germany.	General.	7,527	6,573	4,629
Trafalgar.	14	23	52	15	6	43	15	14	50	15	16	40	British.	Glen & Co.	386	0	52	0	23	9	Valparaiso, Chile.	Norfolk, Va.	Nitrates.	7,309	5,174	3,657
Honduras.	15	00	30	15	7	39	15	16	30	16	11	40	French.	French Line.	404	9	51	0	23	6	Talcahuano, Chile.	Havre, France.	General.	7,064	6,020	4,312
Eastern Knight.	15	2	00	15	7	58	15	17	45	15	17	45	American.	Arrow Line.	415	0	56	0	29	0	Portland, Oreg.	Jacksonville, Fla.	(*)	9,317	7,643	5,657
Henry D.																										
Whiton.	15	3	20	15	8	36	15	18	20	15	18	20	American.	Union Sulphur Co.	315	0	51	6	26	0	Seattle, Wash.	New York, N. Y.	Lumber.	5,250	5,367	2,925
San Mateo.	15	8	05	15	10	11	15	19	05	16	16	05	American.	United Fruit Co.	351	2	44	2	19	4	San Francisco, Cal.	Port Limon, C. R.	Crude oil, gen'l.	569	3,406	2,141
Matrix.	15	16	30	16	5	57	16	13	55	16	20	45	French.	Sinclair Oil Co.	422	4	57	5	24	7	Long Beach, Calif.	Rouen, France.	Gasoline.	8,019	7,000	4,545
City of San Francisco.	15	16	26	16	6	39	16	15	10				Panaman.	Panama Mail S. S. Co.	296	0	45	9	16	0	San Francisco, Cal.	Cristobal, C. Z.	Coffee, general.	435	3,818	2,606
Empirestar.	15	16	50	16	7	16	16	16	10	16	17	25	British.	Blue Star Line.	423	4	56	0	24	1	Portland, Oreg.	Buenos Aires, Arg.	(*)	3,822	7,444	5,621
Pacific.																										
Shipper.	15	16	45	16	8	14	16	16	55	16	16	55	British.	Furness, Withy & Co.	420	0	58	0	26	9	Vancouver, B. C.	Glasgow, Scotland.	General.	7,853	7,982	5,858
Wentworth.	16	5	10	16	8	36	16	17	30	16	17	30	British.	R. S. Dalgleish.	400	0	52	3	24	0	San Francisco, Cal.	Avonmouth, Eng.	Barley in bags.	7,065	5,721	4,058
Sabotawan.	16	4	45	16	8	48	16	18	05	16	18	05	American.	Redwood Line.	386	8	52	2	23	6	San Francisco, Cal.	Mobile, Ala.	Lumber, general.	6,435	5,708	4,138
Albion.	16	5	00	16	9	31	16	19	15	16	21	25	German.	Hamburg-American Line.	376	0	51	0	22	6	Antofagasta, Chile.	Azores.	Nitrates.	6,454	5,551	3,751
Witram.	16	12	05	16	12	49	16	20	30	16	22	07	German.	North German Lloyd.	450	0	58	0	24	6	Vancouver, B. C.	Antwerp, Belgium.	General.	7,365	7,820	5,661
Panam.	16	13	00	16	13	43	16	20	40	16	20	40	American.	Amer.-Hawaiian Line.	407	7	53	7	28	9	Los Angeles, Calif.	New York, N. Y.	General.	8,584	7,098	5,065
Annie-Johnson.	16	11	37	16	14	45	16	21	40	17	1	10	Swedish.	Johnson Line.	392	0	52	6	24	9	Vancouver, B. C.	Stockholm, Sweden.	General.	5,540	6,590	4,919
San Ugon.	17	2	30	17	6	10	17	14	15	17	19	20	British.	Anglo-Mexican Pet. Co.	413	0	53	4	24	6	Los Angeles, Calif.	Lizard Head.	Gasoline.	7,375	5,976	4,069
Mystic.	16	17	59	17	6	35	17	15	10	17	15	10	American.	Munson, McCork & Line.	400	7	54	2	27	6	Tacama, Wash.	Ponce, P. R.	Lumber, general.	6,283	6,633	4,668
West Montop.	17	3	45	17	7	20	17	16	15	17	16	15	American.	Calif. & East'n S. S. Co.	410	0	54	4	24	4	St. Helens, Oreg.	Philadelphia, Pa.	Lumber.	7,632	6,484	4,675
Trojanstar.	17	7	50	17	8	39	17	16	50	17	22	10	British.	Blue Star Line.	473	8	60	0	28	0	Vancouver, B. C.	Newcastle, Eng.	General.	5,728	10,405	7,401
Marbrion.	17	8	40	17	9	29	17	17	23	17	22	10	British.	R. Chapman & Son.	412	0	56	0	27	6	Vancouver, B. C.	London, England.	Wheat.	9,720	6,823	4,797
Ionic.	17	6	22	17	12	09	17	19	25	17	22	10	British.	Shaw, Savill & Albion.	500	0	63	3	27	6	Auckland, N. Z.	London, England.	Frozen.	4,865	12,872	9,577
Grootendijk.	17	4	30	17	14	57	17	22	50	18	10	29	Dutch.	Holland-American Line.	450	0	58	0	29	0	Vancouver, B. C.	Antwerp, Belgium.	Grain, general.	9,584	8,730	5,861

¹ Tanker.

² Lumber, wheat, and copper.

³ Fruit and cold storage.

⁴ For orders.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
November 11.	Calamares.	United Fruit Co.	Port Limon, Costa Rica.	November 11.	Calamares.	United Fruit Co.	New York via Habana.
November 12.	Banan.	United Fruit Co.	Kingston, Jamaica.	November 11.	Ancon.	Panama R. R. S. S. Line.	New York via Haiti.
November 13.	Pastores.	United Fruit Co.	New York via Habana.	November 12.	Manqui.	United Fruit Co.	New York via Kingston.
November 13.	Philadelphian.	Leyland Line.	Liverpool via waypoints.	November 12.	Parissima.	United Fruit Co.	New Orleans and waypoints.
November 14.		Standard Fruit & S. S. Co.	New Orleans, La. and waypoints.	November 13.	Wanks.	Standard Fruit & S. S. Co.	San Blas, R. P.
November 14.				November 13.	Pastores.	United Fruit Co.	Port Limon, Costa Rica.
November 14.	Copename.	United Fruit Co.	New Orleans, La.	November 15.	Anacucuna.	United Fruit Co.	Colon, R. P.
November 15.	Sixola.	United Fruit Co.	New York via Kingston.	November 15.	Copename.	United Fruit Co.	Porto Colombia and Bocas.
November 15.	Saranacca.	United Fruit Co.	Colon, R. P.	November 15.	Sixola.	United Fruit Co.	New York via waypoints.
November 15.				November 15.	Banan.	United Fruit Co.	Perme, R. P.
November 16.	Puerto Rico.	French Line.	Bocas del Toro, R. P.	November 15.	Saranacca.	United Fruit Co.	New Orleans, La.
November 16.	Wanks.	Standard Fruit & S. S. Co.	St. Nazaire and waypoints.	November 16.	Philadelphian.	Leyland Line.	Galveston via Port Limon.
November 16.	William M.	G. I. Bryan.	San Blas, R. P.	November 16.	Granada.	Standard Fruit & S. S. Co.	New Orleans, La.
November 16.	Linda S.	Surgeon Brothers.	Colon, R. P.	November 16.	Puerto Rico.	French Line.	Havre via waypoints.

¹ Motor boat.

² Schooner.

³ Other than ships passing through the Canal.

(Continued on page 232, column 2.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Three Weeks Ending November 17, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cauca	National Navigation Co.		October 28.		382
Coppename	United Fruit Co.		October 28.		92
Seattle	Hamburg-American Line.		October 28.		462
Euador	Panama Mail S. S. Co.		October 28.		59
Aconcagua	Chilean Line.		October 28.		189
Theodore Roosevelt	Fred Olsen Line.	October 28.	October 28.	(¹)	274
Ulua	United Fruit Co.	October 28.	October 28.	37	519
Cbiman	National Navigation Co.	October 29.	November 2.	(¹)	348
Cristobal	Panama R. R. S. S. Line.		October 29.		1,151
Heredia	United Fruit Co.		October 29.		115
William M.	R. Feuillebois	October 29.	October 29.	(¹)	31
Canadian Scottish	Canadian National Steamships	October 29.	October 29.	7	(²)
Brielle	Royal Netherlands S. S. Co.	October 29.	October 30.	408	466
Wanks	Standard Fruit & S. S. Co.	October 29.	October 30.	(¹)	4
Notre Dame de Fourviere	French Line.	October 29.	October 30.	224	124
Lautaro	Pacific Steam Navigation Co.	October 29.	October 29.	2 ¹	143
Tolua	United Fruit Co.	October 29.	October 31.	908	25
Floreana	Colombian Transport Co.		October 30.		304
Perene	Peruvian Line.	October 30.	October 30.	11 ¹	120
City of Panama	Panama Mail S. S. Co.		October 30.		2,552
Guatemala	Panama Mail S. S. Co.	October 30.	October 31.	141	300
Moveria	Donaldson Line.	October 30.	October 31.	(¹)	325
Illinois	French Line.	October 30.	November 1.	1,061	215
Pellerin de Latouche	French Line.	October 30.	November 1.	235	1,032
Suriname	United Fruit Co.	October 31.	October 31.	870	57
Gernar	North German Lloyd.	October 31.	October 31.	(¹)	75
Orinoco	Hamburg-American Line.	October 31.	October 31.	125	(²)
Santa Marta	United Fruit Co.	October 31.	November 1.	1,139	763
Kinderdijk	Holland-American Line.	October 31.	November 1.	(¹)	297
Cerigo	Hamburg-American Line.	October 31.	November 1.	767	
Coppename	United Fruit Co.	October 31.	November 1.	107	250
San Jose	United Fruit Co.	November 1.	November 2.	1,143	109
Granada	Standard Fruit & S. S. Co.	November 1.	November 2.	658	736
Uganda	McClay & McIntyre	November 1.	November 3.	1,196	(¹)
Calí	Hamburg-American Line.	November 1.	November 3.	257	267
Benjamin Franklin	Norway-Pacific Line.	November 1.	November 3.	93	212
Canada	Johnson Line.	November 2.	November 2.	(¹)	225
Itauri	Hamburg-American Line.	November 2.	November 2.	31	(²)
Pacific Exporter	Furness, Withy & Co.	November 2.	November 3.	(¹)	334
Wanks	Standard Fruit & S. S. Co.	November 2.	November 3.	123	
Linda S.	R. Feuillebois	November 2.	November 3.	(¹)	42
Mayari	United Fruit Co.	November 2.	November 3.	369	
Spreewald	Hamburg-American Line.	November 2.	November 3.	5	151
Cartago	United Fruit Co.	November 3.	November 3.	852	
Orinoco	Hamburg-American Line.	November 3.	November 3.	3	330
Nitokris	Hamburg-American Line.	November 3.	November 3.	85	(¹)
Alvarado	Pacific Steam Navigation Co.	November 3.	November 3.	226	112
Tolua	United Fruit Co.	November 4.	November 4.	28	525
Nevada	French Line.	November 4.	November 4.	74	(²)
War Diwan	Anglo-Saxon Petroleum Co.	November 4.	November 5.	3,306	(²)
Cartago	United Fruit Co.		November 5.		18
Wanks	Standard Fruit & S. S. Co.		November 5.		71
Santa Barbara	Grace Line.	November 5.	November 5.	1	21
Taketoyo Maru	Nippon Yusen Kaisha	November 5.	November 5.	381	(¹)
Buenaventura	Panama R. R. S. S. Line.	November 5.	November 6.	288	8
Arana	Pacific Steam Navigation Co.	November 5.	November 6.	312	14 ¹
Denderah	Hamburg-American Line.	November 5.	November 6.	590	1
Calamares	United Fruit Co.	November 5.	November 7.	883	3 ¹
Nitonian	Leyland Line.	November 5.	November 8.	2,065	(²)
Urube	Estrada G. Hermanos.	November 6.		888	
Mayari	United Fruit Co.		November 6.		374
Eemdiik	Holland-American Line.	November 6.	November 8.	822	187
Santa Tecla	N. O. & S. A. S. S. Line.	November 7.	November 7.	49	127
Maravi	United Fruit Co.	November 7.	November 7.	6	1,155
Stuyvesant	Royal Netherlands S. S. Co.	November 7.	November 7.	91	(²)
Ucayali	Peruvian Line.	November 7.		2,043	
Ancon	Panama R. R. S. S. Line.	November 7.		4,389	
Saramacca	United Fruit Co.	November 7.	November 8.	783	182
Metapan	United Fruit Co.	November 7.	November 8.	593	722
Murla	North German Lloyd	November 7.	November 8.	422	121 ¹
Gatun	Standard Fruit & S. S. Co.	November 7.	November 9.	522	623
Nebraska	Royal Mail S. P. Co.	November 8.	November 8.	47	(¹)
Essequibo	Pacific Steam Navigation Co.	November 8.	November 9.	43	(²)
Oropesa	Pacific Steam Navigation Co.	November 8.	November 9.	84	82
Acajutla	Pacific Steam Navigation Co.	November 8.		187	
Alaska	French Line.	November 8.	November 8.	188	58
Cellina	Nav. Libera-Tristina	November 8.	November 8.	182	(¹)
Cauca	National Navigation Co.	November 8.		258	
Kina	Orient S. S. Co.	November 8.	November 8.	(¹)	25

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged.	Laded.
				Tons.	Tons
Suriname.....	United Fruit Co.....	November 8..	November 8..	149	462
Limon.....	United Fruit Co.....	November 8..	November 9..	1,136	410
Cerigo.....	Hamburg-American Line.....	November 9..	November 9..		701
Baralt.....	Royal Netherlands S. S. Co.....	November 8..	November 10..	318	118
Ainam.....	Danish East Asiatic Line.....	November 9..	November 9..	10	(²)
Hermion.....	Bruusgaard Kicsterud & Co.....	November 9..	November 10..	383	(²)
Guayaquil.....	Panama R. R. S. S. Line.....	November 9..	November 10..	669	493
West Katan.....	California & Eastern S. S. Line.....	November 9..	November 10..	480	(²)
Stuyvesant.....	Royal Netherlands S. S. Co.....	November 9..	November 10..	(¹)	669
Wanks.....	Standard Fruit & S. S. Co.....	November 9..	November 9..	108	
Modavia.....	Donaldson Line.....	November 10..	November 10..	(¹)	484
Mayebachi Maru.....	Nippon Yusen Kaisha.....	November 10..	November 10..	176	(²)
Manaqui.....	United Fruit Co.....	November 10..	November 10..	314	825
Norma.....	United Fruit Co.....	November 10..	November 10..	(¹)	383
Venezuela.....	Panama Mail S. S. Co.....	November 10..	November 10..	473	
Parismina.....	United Fruit Co.....	November 10..	November 10..	752	
Salvador.....	Pacific Steam Navigation Co.....	November 10..	November 10..		1,141
Ancon.....	Panama R. R. S. S. Line.....	November 10..	November 11..		2,386
Calamares.....	United Fruit Co.....	November 11..	November 11..	28	521
Osiris.....	Hamburg-American Line.....	November 11..	November 11..	(²)	7
Jason.....	Royal Netherlands S. S. Co.....	November 11..	November 11..	143	(²)
Orita.....	Pacific Steam Navigation Co.....	November 11..	November 11..	9	49
Manizales.....	North German Lloyd.....	November 11..	November 17..	272½	262½
Ebro.....	Pacific Steam Navigation Co.....	November 12..	November 12..	9	238
Ucayali.....	Peruvian Line.....	November 12..	November 12..		137½
Venezuela.....	Panama Mail S. S. Co.....	November 12..	November 12..		460
Parismina.....	United Fruit Co.....	November 12..	November 12..		212
Magellan.....	Pacific Steam Navigation Co.....	November 12..	November 13..	279	49
Schwarzwald.....	Hamburg-American Line.....	November 12..	November 13..	69	167
Wanks.....	Standard Fruit Co.....	November 12..	November 13..		6½
Pastores.....	United Fruit Co.....	November 12..	November 14..	1,242	12
Acajutla.....	Pacific Steam Navigation Co.....	November 12..	November 14..		1,126½
Saint Joseph.....	French Line.....	November 13..	November 14..	163	12
Isis.....	Hamburg-American Line.....	November 13..	November 15..	28	367
Philadelphian.....	Leyland Line.....	November 13..	November 15..	1,134	(²)
Copenhagen.....	United Fruit Co.....	November 14..	November 15..	1,091	87
Hans Leonhardt.....	Colombian Transport Co.....	November 14..	November 15..	169	(²)
Buenos Aires.....	Spanish Line.....	November 14..	November 15..	108	305
Sivaola.....	United Fruit Co.....	November 14..	November 15..	634	845
Wiegand.....	Roland Line.....	November 14..	November 15..	2	140
Saramacca.....	United Fruit Co.....	November 15..	November 15..	16	578
Granada.....	Standard Fruit Co.....	November 14..	November 16..	492	703
Stella.....	Panama Mail S. S. Co.....	November 14..	November 17..	60	1,140
Leon XIII.....	Spanish Line.....	November 15..	November 16..	228	(²)
San Mateo.....	United Fruit Co.....	November 15..	November 16..	865	162
Puerto Rico.....	French Line.....	November 15..	November 16..	159	928
Honduras.....	French Line.....	November 15..	November 16..	623	(²)
Saint Jean.....	French Line.....	November 16..	November 17..	208	331
Annie Johnson.....	Johnson Line.....	November 16..	November 16..	(¹)	15
William M.....	R. Feuillebois.....	November 16..	November 16..	(¹)	30
Linda S.....	R. Feuillebois.....	November 16..	November 16..	(¹)	30
City of San Francisco.....	Panama Mail S. S. Co.....	November 16..	November 16..	435	
Wanks.....	Standard Fruit Co.....	November 16..	November 16..	120	
Almelo.....	Royal Netherlands S. S. Co.....	November 16..	November 17..	244	229
Cauca.....	National Navigation Co.....	November 16..	November 17..		379
Grootendijk.....	Holland-American Line.....	November 17..	November 17..	20½	
Kotonia.....	Isbrandtsen-Moller Co.....	November 17..	November 17..	560	
Banan.....	United Fruit Co.....	November 17..	November 17..	(¹)	530

* No cargo discharged.

* No cargo laded.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide the means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective, in the course of handling large traffic through the Canal in over 13 years of operation.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Transit and Harbor Regulations of The Panama Canal," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.

The Hydrographic Office at Cristobal maintain at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometric comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m., 12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

Binders for The Panama Canal Record.

Cardboard covers, punched and fitted with brass fasteners forming binders for THE PANAMA CANAL RECORD are offered for sale at 25 cents a set, for the benefit of those who wish to keep a file of the issues for ready reference. Orders may be addressed to The Panama Canal, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 229.

PORT OF CRISTOBAL.—Continued.				* DEPARTURES.			
* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
November 16.	Galveston.	U. S. Navy.	High seas.	November 16.	Linda S. ²¹	Surgeon Brothers	Bluefields and waypoints.
November 17.	Banan	United Fruit Co.	Pernu, R. P.	November 16.	William M. ²²	G. J. Bryan.	Bluefields.
November 17.	Anahuenua ²¹	United Fruit Co.	Colon, R. P.	November 17.	Anahuenua ²¹	United Fruit Co.	Colon, R. P.
November 17.	Kotonia	Isbrandtsen Moller & Co.	Puerto Mexico and way- ports.	November 17.	Galveston.	U. S. Navy.	High seas.
November 16.	San Mateo.	United Fruit Co	High seas.	November 17.	Banan	United Fruit Co.	Mobile, Ala.
				November 17.	San Mateo	United Fruit Co.	Port Limon, Costa Rica.
PORT OF BALBOA.							
21 Motor boat.				22 Motor schooner.			
November 11.	San Luis ²⁴ .	Chiriqui Land Co	Puerto Armañelles, R. P.	November 12.	San Luis ²⁴	Chiriqui Land Co.	Puerto Armañelles, R. P.
November 13.	Cricamola ²⁵ .	Chiriqui Land Co	Puerto Armañelles, R. P.	November 14.	Cricamola ²⁵ .	Chiriqui Land Co.	Puerto Armañelles, R. P.
November 13.	Litopa.	Anglo-Saxon Petroleum Co.	Los Angeles, Calif.	November 14.	El Colon ²⁴	H. Elliot	El Real, R. P.
November 13.	El Colon ²⁴ .	H. Elliot	El Real, R. P.	November 15.	Litopa	Anglo-Saxon Petroleum Co.	Los Angeles, Calif.
November 14.	Mojave.	General Petroleum Co.	Los Angeles, Calif.	November 15.	Mojave	General Petroleum Co.	Los Angeles, Calif.
November 14.	Almirante ²⁴ .	A. Valdez	Bayano River, R. P.	November 15.	Almirante ²⁴	A. Valdez	Bayano River, R. P.
November 15.	Martha ²⁵	Chr. Hamnevig.	Puerto Armañelles, R. P.	November 17.	Martha ²⁵	Chr. Hamnevig.	Puerto Armañelles, R. P.
22 Motor schooner.				* Other than ships passing through the Canal.			
22 Motor ship.							

* Other than ships passing through the Canal.

²¹ Motor ship.

²² Motor schooner.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., November 28, 1928. No. 17.

Supplement No. 9—Tariff No. 9.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., *November 17, 1928.*

ITEM 9.—HANDLING LINES.

Substitute the following:

1. For each man furnished by The Panama Canal on board vessels for the purpose of handling lines and locomotive wires on board such vessels, to promote their safety while being passed through the locks, charge will be made as follows:

Complete transit of Canal—	
24 hours or less.....	\$4.00
Each additional 12-hour period or fraction thereof.....	2.00
Partial transit of Canal—	
Between Cristobal and Gatun Lake.....	2.00
Between Cristobal and Paraiso mooring.....	3.00
Between Balboa and Paraiso mooring.....	2.00
Between Balboa and Gatun Lake.....	3.00
Between Paraiso mooring and Gatun Lake.....	2.50
From Cristobal to Gatun Lake, remain aboard vessel, and return to Cristobal.....	4.00
Boarding vessel and debarking without making transit on account of vessel failing to start through the Canal for reasons other than the fault of The Panama Canal.....	1.50
2. For each man furnished by The Panama Canal on board vessels, to provide a sufficient number of handle lines when necessary to shift vessels from one dock or berth to another..... per job.. 2.00
3. No charge will be made for handling lines at docks on the arrival or departure of a vessel, but, whenever launch service is used in connection with tying up a vessel, a charge will be made for launch service at rates fixed in this tariff.
4. Subsistence of seamen handling lines will be furnished by vessels and, where vessels have not the facilities to furnish subsistence, the necessary meals will be provided by The Panama Canal for account of the vessel at the following rates:

For seamen handling lines..... each, per meal..	0.30
For gold employees..... each, per meal..	0.50

H. BURGESS,
Governor, The Panama Canal.
President, Panama Railroad Company.

New Motor Ships for the New Zealand Shipping Company.

It is reported that the *Rangitiki*, first of the three passenger and cargo motor vessels of 17,500 gross tons, which are being built at Clydebank for the New Zealand Shipping Co., will sail from Southampton on February 15, 1929, on her maiden voyage to New Zealand, via the Panama Canal. The two remaining vessels will sail in September and October next. These vessels will have accommodations for first, second, and third class passengers and will have 425,000 cubic feet available for refrigerated cargo and 150,000 cubic feet for general cargo.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, November 24, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Lavington	17	18 30	18	6 10	18	13 48	18	15 15	British.	Haldin and Co.	420.0	54.0	14.0	Cardiff, England.	Vancouver, B. C.	Ballast.	6,833	4,953	
Court	17	18 45	18	6 20	18	13 10	18	14 20	British.	Earl, Stodt & Clayton	405.0	53.6	14.0	Middlesboro, Eng.	Vancouver, B. C.	Ballast.	5,802	4,203	
Boulderpool.	18	00 40	18	7 58	18	14 05	18	15 15	American.	Amer.-Hawanan Line	404.6	53.9	19.6	Boston, Mass.	Portland, Oreg.	General.	4,072	6,779	
Kansas	17	9 40	18	9 30	18	16 38			American.	U. S. Government	172.0	32.0	11.6	San Juan, P. R.	Balboa, C. Z.	Ballast.			
Acacia	18	9 45	18	9 30	18	16 38			British.	Anglo-Saxon Pet. Co.	452.0	59.0	19.0	Onskoldsvik, Swed.	Los Angeles, Calif.	Ballast.	8,036	5,005	
Bullmouth	18	11 00	18	10 02	18	22 40	18	23 53	American.	Ore S. S. Corp.	550.3	72.2	21.0	Baltimore, Md.	Cruz Grande, Chile	Ballast.	15,551	4,297	
Marore	18	11 00	18	10 02	18	22 40	18	23 53	British.	N. Z. Shipping Co.	437.0	58.0	29.4	London, England.	N. Plymouth, N. Z.	General.	4,808	9,079	
Buapehu	18	10 20	18	17 15	19	9 36	19	14 45	British.	Atlantic Refining Co.	424.4	58.2	22.0	Philadelphia, Pa.	San Francisco, Cal.	Ballast.	7,333	5,182	
Pail Shoup	18	18 40	18	20 05	19	11 17	19	12 25	American.	J. W. Mitchell	390.0	55.5	15.6	River Tyne, Eng.	Vancouver, B. C.	Ballast.	5,898	4,321	
Willowpool	18	19 30	19	6 01	19	12 38	19	14 25	British.	Argonaut S. S. Line.	484.3	57.7	27.0	Baltimore, Md.	Tacoma, Wash.	Steel, general.	8,605	7,935	
Lancaster	18	20 47	19	6 20	19	13 50	19	15 05	American.	United Fruit Co.	375.2	44.2	19.6	Port Limon, C. R.	San Francisco, Cal.	Coffee, bananas	857 1/2	3,496	
San Mateo	19	6 20	19	7 30	19	14 12	19	15 15	American.	Avenue Shipping Co.	375.0	53.0	21.0	New York, N. Y.	Sydney, Australia.	General.	5,438	6,295	
Winton	18	15 18	19	9 10	19	15 49	20	4 00	British.	Racic S. S. Co.	435.0	56.0	26.0	Blyth, England.	Iquique, Chile	Coal.	7,900	7,079	
Carica Milica	19	11 25	19	13 20	19	20 07	19	22 25	Yugoslav	N. of England S. S. Co.	326.0	55.0	15.6	Norfolk, Va.	Vancouver, B. C.	Ballast.	6,179	5,121	
Hartbridge	19	14 15	19	14 25	19	21 22	20	1 25	British.	Ore S. S. Corp.	549.0	72.0	22.4	Norfolk, Va.	Cruz Grande, Chile	Ballast.	14,538	9,348	
Chilore	17	7 05	19	16 45	20	10 03	20	11 16	American.	Pacific Steam Nav. Co.	264.8	41.2	15.6	New York, N. Y.	Guayaquil, Ecuador	(6)	916	2,746	
Cid	18	00 50	20	6 18	20	16 12	20	22 40	British.	F. & W. Ritson	398.6	53.8	20.0	London, England.	Corral, Chile	General	3,251 1/2	5,760	
Pear Branch	19	15 58	20	6 15	20	16 26	20	17 35	British.	Ishman S. S. Lines	405.0	52.4	26.1	New York, N. Y.	Vancouver, B. C.	Steel, general.	7,308	6,872	
China	19	17 15	20	7 15	20	17 29	20	18 45	American.	Empire Shipping Co.	408.0	53.5	16.0	Newcastle-on-Tyne	Vancouver, B. C.	Ballast.	5,873	4,292	
Thirby	19	23 25	20	7 25	20	18 20	20	19 21	British.	Standard Transp. Co.	408.0	62.6	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	9,841	6,946	
Yankee Arrow	19	23 30	20	8 20	20	18 50	20	20 13	American.	Fearnley & Eger	408.3	55.3	19.3	Malmo, Sweden	Freemantle, Aust. lia.	Ballast.	6,522	4,389	
Glitter	20	6 55	20	10 20	20	19 10	20	22 40	Norwegian.	Comth & Dom. Line.	403.0	52.0	21.0	New York, N. Y.	Buenaventura, Col.	General.	3,950	6,067	
Inkun	20	12 55	20	13 30	20	20 45	20	22 05	British.	U. S. Army	156.0	32.0		Cristobal, C. Z.	Balboa, C. Z.		2,957		
Gen. Wm. M. Graham	20	4 15	21	6 00	21	12 52	21	17 35	American.	U. S. Navy	390.0	51.0	19 10	Norfolk, Va.	Bremerton, Wash.	General			
Vega	20	4 15	21	6 00	21	12 52	21	17 35	American.	U. S. Navy	390.0	51.0	19 10	Norfolk, Va.	Bremerton, Wash.	General			
August Leonhardt	20	12 40	21	6 10	21	13 40	21	15 30	German.	Colombian Marit. Co.	328.0	46.0	13 11	New York, N. Y.	Buenaventura, Col.	General, cattle.	540	3,724	
William	20	12 40	21	6 10	21	13 40	21	15 30	German.	Colombian Marit. Co.	328.0	46.0	13 11	New York, N. Y.	Buenaventura, Col.	General, cattle.	540	3,724	
McAllum	20	12 20	21	7 15	21	14 24	21	15 20	Greek.	R. Kulukundis	400.0	51.0	15.0	Aust'dam, Holland.	Iquique, Chile.	Ballast.	6,141	4,591	
Shiksan Maru	20	13 45	21	7 05	21	15 18	21	19 10	Japanese.	Mitsui & Co.	401.0	53.0	24.0	Newcastle-on-Tyne	Puget Sound, Wash.	(7)	7,000		
Steel Worker.	21	8 00	21	8 20	21	15 49	21	19 50	American.	Ishman S. S. Lines	429.0	56.0	23.0	Mobile, Ala.	Yokohama, Japan	General	7,814	7,611	
Katrina	21	9 25	21	10 00	21	16 36	21	17 35	American.	Luckenbach Line	446.0	56.0	27.8	New York, N. Y.	Los Angeles, Calif.	General	5,180	8,508	
Luckenbach.	21	2 25	21	11 55	21	17 54	21	19 00	Chilean.	South American Line.	421.0	56.2	24.6	New York, N. Y.	Valparaiso, Chile.	General	2,334	7,764	
Aconagua	18	14 20	21	12 15	21	19 18	21	20 25	American.	U. S. Navy	405.0	56.0	23.4	Cristobal, C. Z.	Corinto, Nicaragua	General	2,324	7,764	
Kanawha	21	16 40	21	17 40	22	9 02	22	13 15	British.	Dodd, Thomson & Co.	400.0	51.8	15.0	Belfast, Ireland.	Portland, Oreg.	Ballast.	6,279	4,336	
King Neptune	21	16 40	21	17 40	22	9 02	22	13 15	British.	Dodd, Thomson & Co.	400.0	51.8	15.0	Belfast, Ireland.	Portland, Oreg.	Ballast.	6,279	4,336	
Manukal	21	17 20	21	18 00	22	11 20	22	12 15	American.	Amer.-Hawanan Line.	489.0	62.0	24.0	New York, N. Y.	San Francisco, Cal.	General	4,033	10,316	
Tanker.									Motor ship.	Miner planter.									
									Lighthouse tender.										
									Automobiles, steel, and cotton.										
									Supply ship.										
									Coke and silver sand.										

7 Coke and silver sand.

8 Automobiles, steel, and cotton.

9 Supply ship.

10 Motor ship.

11 Lighthouse tender.

12 Tanker.

	18 30	22	6 10	22	13 04	22	18 30	Danzig	Standard Shipping Co.	470.0	63.0	19.0	New York, N. Y.	Talara, Peru	Ballast	9,346	6,063
Isla 3	21	18 30	22	6 10	22	13 04	22	18 30	Can.-Amer. Ship. Co.	483.6	57.0	21.0	Rotterdam, Holland	Vancouver, B. C.	Ballast	10,011	7,278
Chief Skidegate	21	20 15	22	7 45	22	14 08	22	15 35	Furness, Withy & Co.	450.4	63.0	23.0	Newport News, Va.	Manila, Philippines	General	5,502	6,089
Royal Prince	22	5 55	22	7 45	22	16 57	22	18 10	Shaw, Savill & Albion	500.4	63.0	25.0	London, England	Auckland, N. Z.	General	4,546	9,383
Tamara	22	6 00	22	7 45	22	15 04	23	7 15	Common Brothers	390.0	53.6	15.0	So. Shields, Eng.	Vancouver, B. C.	Ballast	5,611	4,127
Sedvisan	22	6 35	22	7 50	22	17 52	22	21 17	Rettenmiser & Kulkundis	360.6	48.0	13.0	Cardiff, England	Arica, Chile	Ballast	4,711	3,478
Enos	22	6 35	22	7 50	22	18 40	23	19 53	Rettensmiser & Kulkundis	420.0	54.0	16.1	Newcastle-on-Tyne	Vancouver, B. C.	Ballast	6,963	5,008
Blythmoor	22	10 40	22	11 05	22	19 56	23	00 38	J. Steward Grain Co.	550.3	67.3	27.10	Liverpool, England	Talcahuano, Chile	General	4,175	16,844
Orbita	22	6 45	22	13 55	22	20 37	23	00 38	Pacific Steam Nav. Co.	462.0	61.2	24.9	Hamburg, Germany	Vancouver, B. C.	General	6,592	9,139
Portland 3	21	11 00	22	15 12	22	21 37	22	22 40	Hamburg-American Line	550.0	72.0	21.5	Newport News, Va.	Crux Grande, Chile	Ballast	15,551	4,297
Steele	21	16 10	22	16 40	22	9 15	23	10 39	Ore S. S. Corp.	481.0	61.8	24.3	Genoa, Italy	Valparaiso, Chile	General	1,615	12,941
Virgilio 3	22	6 10	23	7 15	23	12 38	23	20 45	Nav. Gen. Italiana	574.4	80.3	28.0	New York, N. Y.	San Francisco, Cal.	General	2,775	24,506
California	23	6 30	23	7 15	23	14 02	23	24 00	Panama-Pacific Line	380.0	53.0	19.8	Montreal, Canada	Adelaide, Australia	General	3,000	5,326
Sheafmead	22	17 10	23	7 15	23	15 10	23	16 45	Can. Nat. Steamships	404.6	54.0	21.0	Boston, Mass.	Seattle, Wash.	General	3,806	6,754
Oregonian	23	1 45	23	8 45	23	15 31	23	16 45	Amer-Hawaiian Line	195.4	31.6	15.0	Miami, Florida	Honolulu, T. H.	Ballast	1,808	9,319
Ara 8	23	6 15	23	9 55	23	16 00	24	14 10	W. K. Vanderbilt	389.5	53.0	17.6	So. Shields, Eng.	Vancouver, B. C.	Ballast	2,279	5,040
Ionestar	23	15 25	23	12 35	23	19 06	23	20 05	Blue Star Line	430.0	61.0	26.2	Newport, England	Portland, Ore.	General	1,808	9,319
Nariva	23	5 25	23	13 20	23	20 15	23	21 45	Royal Mail S. P. Co.	410.5	54.0	18.8	Buenos Aires, Arg.	Vancouver, B. C.	General	1,808	9,319
West Camargo	23	12 15	23	13 55	23	20 41	23	21 45	McCormick S. S. Co.	417.0	56.0	19.0	Providence, R. I.	Los Angeles, Calif.	Ballast	6,199	4,917
Lightburne	23	12 15	23	13 55	23	20 41	23	21 45	Texas S. S. Co.	292.0	44.0	18.0	Niagara	Balboa, C. Z.	Sand and rags	6,199	4,917
Elstervlo 3	23	15 10	23	18 50	24	9 10	24	10 28	U. S. Navy	394.0	50.0	23.0	Antwerp, Belgium	Seattle, Wash.	General	1,860	9,613
Pacific Pioneer	21	14 45	24	6 10	24	12 50	24	14 10	W. L. Comyn & Co.	435.0	60.1	19.10	Glasgow-England	Vancouver, B. C.	General	2,914	7,819
Buani	22	10 30	24	6 20	24	13 34	24	23 15	Furness, Withy & Co.	400.0	58.0	20.6	Hamburg-Germany	Corral, Chile	General	3,051	211
Pacific	22	1 45	24	6 10	24	15 05	24	18 10	Royal Neth. S. S. Co.	116.0	21.0	8.6	Cristobal, C. Z.	Buenaventura, Col.	General	8,150	5,782
Tuscaloosa City	24	3 10	24	7 35	24	15 09	24	16 30	National Navigation Co.	367.0	50.0	26.0	Pt. Arthur, Texas	Hongkong, China	Case oil	7,388	6,111
Fensburg	24	8 15	24	8 40	24	17 46	24	18 49	Oversea Trading Co.	424.2	56.2	22.0	New York, N. Y.	Shanghai, China	General	8,065	5,396
El Lobo	24	9 20	24	10 00	24	17 05	24	18 30	Ishimian S. S. Lines	454.0	60.0	17.0	Antwerp, Belgium	Vancouver, B. C.	Ballast	6,040	4,357
Elkhorn	24	7 55	24	11 25	24	18 45	24	20 15	Can.-Amer. Ship. Co.	434.0	60.0	17.0	Newcastle, Eng.	San Francisco, Cal.	Ballast	4,851	3,326
Wray Castle	24	8 20	24	12 36	24	19 48	24	21 20	W. Ramegan & Co.	400.3	52.1	15.2	Philadelphia, Pa.	La Libertad, Ecuador	Ballast	6,811	5,016
Tashmoo	24	11 10	24	12 40	24	20 28	24	22 10	C. T. Bowring & Co.	385.2	51.0	17.6	Philadelphia, Pa.	Shanghai, China	General	3,100	6,830
Andalusia	24	12 55	24	14 55	24	22 06	25	00 55	Tampa Intercean Co.	402.0	54.0	24.0	Havre, France	Hongkong, China	General	3,100	6,830
Wayfarer	23	11 05	24	16 35	25	9 27	25	10 35	Barber S. S. Line	419.0	55.8	24.1	Charleston, S. C.	Vancouver, B. C.	General	2,500	3,984
Key West	24	18 50	24	20 35	25	10 19	25	14 40	French Line	285.0	42.0	17.6	Penarth, England	Arica, Chile	Ballast	5,728	3,855
Tut 12	24	24	24	24	24	24	24	24	Charles Nelson & Co.	385.0	50.0	15.0	Liverpool, England	Vancouver, B. C.	General	5,925	5,585
Superior 12	24	24	24	24	24	24	24	24	D. Tripovich	395.5	50.0	19.0	Gothenburg, Sweden	Corral, Chile	General	1	1
	24	24	24	24	24	24	24	24	T. & J. Harrison	381.4	53.2	24.8	Cristobal, C. Z.	Gatun, C. Z.	Ballast	2	2
	24	24	24	24	24	24	24	24	Scand.-So. Pacific Co.	381.4	53.2	24.8	Cristobal, C. Z.	Gatun, C. Z.	Ballast	2	2
	24	24	24	24	24	24	24	24	J. J. Burton	381.4	53.2	24.8	Cristobal, C. Z.	Gatun, C. Z.	Ballast	2	2
	24	24	24	24	24	24	24	24	F. R. Mauldin	381.4	53.2	24.8	Cristobal, C. Z.	Gatun, C. Z.	Ballast	2	2

11 Sail boat.

10 Launch.

9 Cruiser.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

8 Yacht.

7 Tanker.

6 Tanker.

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MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Quebec City.....	18	12 30	18	13 20	18	20 40	18	20 40	British.....	Reardon Smith Line.....	415.0	54.2	25.5	Vancouver, B. C.	Lisbon, Portugal.....	Wheat.....	8,006	5,406
Gundule.....	18	12 55	18	13 41	18	22 20	18	23 35	Yugoslav.....	Baburiza & Co.....	409.0	55.2	26.8	Antofagasta, Chile.	Europe.....	Nitrates.....	8,334	4,570
Ramon de Larrinaga.....	18	13 20	18	14 25	18	23 00	19	9 55	British.....	Larrinaga & Co.....	449.9	57.9	24.3	Vancouver, B. C.	Lisbon, Portugal.....	Wheat.....	8,467	5,600
Hegira.....	18	14 15	18	15 00	19	11 05	19	11 05	American.....	Hegira S. S. Co.....	440.0	56.0	28.0	Everett, Wash.	Baltimore, Md.....	Lumber.....	11,000	8,353
Brighton.....	19	00 30	19	6 45	19	13 35	19	13 35	British.....	R. Chapman & Son.....	406.0	54.0	24.3	Vancouver, B. C.	Rotterdam, Holland.....	Wheat.....	7,926	5,729
Santa Cruz.....	19	4 00	19	7 21	19	14 00	19	23 10	American.....	Grace Line.....	384.0	50.2	24.0	Chaparral, Chile.	New York, N. Y.....	(¹⁶)	5,431	3,868
Denmark.....	19	6 15	19	8 30	19	15 20	19	15 20	British.....	J. & J. Denholm.....	350.0	49.0	21.8	Chicama, Peru.....	Göteborg, Swed.....	Sugar in bags.....	5,275	3,924
Madras City.....	19	8 50	19	9 37	19	17 12	19	19 45	British.....	Sir W. R. Smith & Sons.....	382.9	53.5	25.6	Portland, Ore.....	Queensdown, Ire.....	Bulk wheat.....	7,641	4,377
All America.....	18-20	20 00	19	10 15	19	18 15	26	11 58	American.....	All America Cables.....	278.4	37.0	16.8	Balboa, C. Z.....	Cristobal, C. Z.....	(¹⁷)	1,919	875
Santa Teresa.....	1-19	5 00	19	11 54	19	18 15	19	21 55	American.....	Grace Line.....	360.2	51.6	22.6	Talcahuano, Chile.	New York, N. Y.....	(¹⁸)	2,883	5,726
Loriga.....	19	9 10	19	13 04	19	20 50	20	18 30	British.....	Pacific Steam Nav. Co.....	406.0	54.0	26.9	Buenaventura, Chile.	London, England.....	(¹⁹)	8,151	7,331
Florena.....	18	8 35	19	13 29	19	22 50	20	18 55	Colombian.....	Colombian Transp. Co.....	150.0	27.2	9.8	Talcahuano, Chile.	Cartagena, Col.....	(²⁰)	301	410
Clearton.....	19	13 20	19	14 23	19	21 30	19	21 30	American.....	R. Chapman & Son.....	400.0	52.3	25.0	Portland, Ore.....	Falmouth, Eng.....	(²¹)	7,230	5,710
Lebor.....	20	03 20	20	6 03	20	16 55	20	16 55	American.....	Ore S. S. Corp.....	550.0	72.2	34.0	Cruz Grande, Chile.	New York, N. Y.....	(²²)	20,000	14,325
Persphone.....	19	19 00	20	6 54	20	14 35	20	14 35	Danish.....	Baltic-Amer. Pet. Co.....	468.6	63.2	27.3	Talara, Peru.....	Hamburg-Germany.....	Iron ore.....	11,447	9,336
Rhodopis.....	20	3 30	20	7 33	20	17 03	20	18 35	German.....	Kosmos Line.....	435.5	51.0	27.3	Valparaiso, Chile.	Hamburg-Germany.....	Nitrates, general.....	7,603	7,525
Atlante.....	20	3 30	20	8 28	20	18 26	21	4 55	American.....	Argonaut S. S. Line.....	410.5	54.3	24.6	Englewood, B. C.	Philadelphia, Pa.....	Lumber.....	6,855	6,567
Ohion.....	20	7 10	20	8 48	20	17 38	20	17 38	American.....	Amer-Hawaiian Line.....	407.7	53.7	25.7	Portland, Ore.....	Boston, Mass.....	General.....	6,579	7,103
J. L. Luckenbach.....	20	7 50	20	9 06	20	18 55	20	18 55	American.....	Luckenbach Line.....	448.9	60.2	32.0	Portland, Ore.....	Boston, Mass.....	General.....	11,000	9,294
Sydney.....	20	8 44	20	9 59	20	19 50	21	21 25	Swedish.....	Axel Brestrom & Son.....	431.1	54.2	27.6	Vancouver, B. C.	Avonmouth, Eng.....	Bulk wheat.....	9,460	6,771
India Maru.....	20	9 06	20	10 19	20	20 30	22	15	Japanese.....	Kawasaki S. S. Co.....	385.0	51.0	25.0	Vancouver, B. C.	Hull, England.....	Bulk wheat.....	7,671	5,928
Leise Maersk.....	20	10 03	20	13 01	20	20 25	20	20 25	Danish.....	Isbrandtsen Moller Co.....	302.2	44.2	21.6	Hilo, P. I.....	Philadelphia, Pa.....	Sugar.....	4,216	3,212
Port Free- mantle.....	20	12 07	20	13 46	20	21 30	20	21 30	British.....	Com'th & Dom. Line.....	477.4	63.1	25.6	Hobart, Tasmania	London, England.....	Frozen, general.....	6,139	10,652
Salina.....	19	18 15	20	15 09	20	22 50	20	22 50	American.....	Gladsstone Transp. Co.....	425.8	57.0	28.0	Los Angeles, Calif.	Baltimore, Md.....	Crude oil.....	10,354	7,484
Ganden.....	20	14 30	20	15 21	21	11 15	21	16 20	American.....	United Fruit Co.....	419.5	56.5	26.0	Los Angeles, Calif.	Port Limon, C. R.....	Fuel oil.....	9,036	6,977
Mary Ellen	21	6 00	21	6 27	21	13 45	21	13 45	American.....	The Texas Co.....	569.7	70.3	30.3	Los Angeles, Calif.	Baltimore, Md.....	Bulk gasoline.....	16,835	12,425
Atlantic.....	20	19 25	21	7 20	21	15 20	21	21 05	Greek.....	Relaximnis Kulukundis.....	410.7	54.1	25.5	Tocopilla, Chile.....	Azores.....	Nitrates.....	8,100	6,221
Cape Lad.....	20	19 45	21	7 41	21	16 00	21	17 20	British.....	Dodd, Thomson & Co.....	400.7	54.8	23.6	Vancouver, B. C.	Hull, England.....	Wheat.....	7,065	6,279
Cape Comorin.....	20	23 00	21	8 20	21	17 30	21	19 10	British.....	Can-Am. Ship. Co.....	400.0	53.6	25.9	Vancouver, B. C.	Hamburg-Germany.....	(²³)	7,385	6,246
King City.....	21	2 00	21	8 52	21	17 10	21	17 10	British.....	Sir W. R. Smith & Sons.....	400.5	54.3	26.6	Vancouver, B. C.	London, England.....	General.....	7,700	6,993
Vancouver.....	21	7 30	21	9 27	21	17 45	21	17 45	American.....	Vacuum Oil Co.....	425.0	57.0	28.3	San Francisco, Cal.	Paulsboro, N. J.....	Lubricating oil.....	10,223	7,473
Mantero.....	21	5 40	21	9 58	21	18 20	24	8 25	Peruvian.....	Peruvian Line.....	367.5	46.0	19.0	Callao, Peru.....	Cristobal, C. Z.....	Copper, general.....	1,865	4,838
Orkanger.....	21	5 30	21	10 20	21	18 45	21	18 45	Norwegian.....	Westfal, Larsen & Co.....	458.0	59.1	26.6	Los Angeles, Calif.	London, England.....	Gasoline.....	10,155	8,291
Commercial	21	16 15	21	16 58	22	11 35	22	13 26	American.....	Moore & McCormack.....	460.7	55.2	25.3	Tocopilla, Chile.....	Norfolk, Va.....	Nitrates.....	7,700	6,597
Guide.....	21	16 15	21	16 58	22	11 35	22	13 26	American.....	Moore & McCormack.....	460.7	55.2	25.3	Tocopilla, Chile.....	Norfolk, Va.....	Nitrates.....	7,700	6,597

¹⁶ Motor ship. ¹⁷ Copper, nitrates, and products. ¹⁸ Copper, lead, and general. ¹⁹ Machinery and pipes. ²⁰ Lumber, wheat, fish meal, and oil.

Date.	Vessel.	Line.	* ARRIVALS.		From—	* DEPARTURES.		Line.	For—									
			Date.	Vessel.		Date.	Vessel.											
November 18.	Heredia.	United Fruit Co.	November 18.	Kotonia.	New Orleans via Habana.	November 18.	Kotonia.	Isbrandtsen Moller & Co.	Boston via Santiago.									
November 18.	Pastores	United Fruit Co.	November 18.	Pastores	Port Limon, Costa Rica.	November 18.	Pastores	United Fruit Co.	New York via Habana.									
November 18.	Padilla.	Colombian S. Co.	November 18.	Padilla	Puerto Colombia.	November 18.	Padilla	Colombian S. Co.	Puerto Colombia.									
November 18.	Hans Arp.	Royal Netherlands S. S. Co.	November 19.	Heredia.	Amsterdam via wayports.	November 19.	Heredia.	United Fruit Co.	New Orleans via wayports.									
November 18.	James McGee.	Standard Shipping Co.	November 19.	Hans Arp	Baton Rouge, La.	November 19.	Hans Arp	Royal Netherlands S. S. Co.	Jacksonville, Fla.									
* Other than ships passing through the Canal.																		
PORT OF CRISTOBAL.																		
²² U. S. Navy tug. ²¹ Submarine. ²⁰ Coffee, hides, and wax. ¹⁹ Grain, lumber, and canned goods. ¹⁸ Coffee, cacao, and hides.																		
All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.																		
Edgar F. Inck-	17.10	17.45	22	11.40	22	11.40	22	11.40	American.	Luckenbach Line.	425.0	57.3	29.6	Tacoma, Wash.	Mobile, Ala.	8,000	8,568	6,648
Frankenwald.	22	6.13	22	15.00	22	15.00	22	20.05	German.	Hamburg-American Line	399.4	54.2	26.0	Coronel, Chile.	Hamburg, Germany	8,004	6,375	4,490
Borga	22	6.39	22	15.49	22	15.49	22	19.25	Norwegian.	Fred Olsen & Co.	383.6	51.4	25.5	Vancouver, B. C.	Norway	6,000	5,242	3,706
Esparta.	22	3.44	22	7.19	22	15.50	22	17.05	American.	United Fruit Co.	383.6	44.0	17.8	San Francisco, Cal.	Port Limon, C. R.	626	3,672	2,367
Hazelside.	22	8.05	22	8.44	22	17.05	22	17.05	British.	Charlton S. S. Co.	385.0	52.9	23.8	Vancouver, B. C.	Rotterdam, Holland	7,185	5,676	4,200
Masmar.	22	8.35	22	9.10	22	17.05	22	17.05	American.	Calmar S. S. Co.	395.0	51.0	25.0	Aberdeen, Wash.	Philadelphia, Pa.	4,753	6,242	4,471
Divie Arrow	22	12.00	22	12.44	22	19.45	22	19.55	American.	Standard Transp. Co.	468.3	62.7	28.0	Buenaventura, Cal.	Baltimore, Md.	11,435	9,744	7,140
Finn	22	8.50	22	12.08	22	20.45	22	00.35	Swedish.	Ch. Maritima Colon.	273.0	41.0	15.6	San Francisco, Cal.	New York, N. Y.	775	2,472	1,513
Willboro.	22	11.47	22	13.26	22	22.12	22	23.05	American.	Williams S. S. Line	414.7	55.7	27.6	San Francisco, Cal.	Baltimore, Md.	8,254	7,717	5,763
Gracia.	22	7.15	22	13.57	22	22.55	22	22.55	British.	Donaldson Brothers.	415.5	54.4	27.6	Tacoma, B. C.	Nitrates	6,389	6,809	4,842
Garfield.	22	13.52	22	15.13	23	9.12	23	10.55	American.	N. O. & S. A. S. Co.	299.4	45.0	22.6	Valparaiso, Chile.	General	3,679	3,256	2,010
Drechtidijk	22	14.04	22	15.31	23	11.45	23	16.40	Dutch.	North Pacific Coast Line	485.5	62.3	30.1	Vancouver, B. C.	Rotterdam, Holland	9,980	10,793	7,619
Bradelyde.	22	16.31	22	17.19	23	13.05	23	13.05	British.	Sir W. R. Smith & Sons	399.6	53.0	25.2	Vancouver, B. C.	Bulk wheat.	7,761	5,883	4,118
La Marsellaise.	22	21.00	22	6.40	23	14.06	24	7.50	French.	French Line.	429.5	58.2	27.3	Vancouver, B. C.	Antwerp, Belgium	9,989	8,079	5,580
Clan McPhee.	22	21.50	22	6.55	23	14.15	23	15.55	British.	Cayzer Irvine & Co.	430.0	53.5	27.0	Panama, So-	English Channel	7,550	7,081	4,942
Montrolite	23	1.50	23	7.27	23	18.00	23	18.00	British.	Imperial Oil Co., Ltd.	510.9	65.2	29.8	Cabo Blanco, Peru.	Halifax, N. S.	16,184	11,555	7,639
Thomas P. Beal	22	22.00	23	8.14	23	17.00	23	17.00	American.	U. S. Steel Products Co.	394.0	55.0	27.0	Vancouver, B. C.	Dublin, Ireland.	7,947	7,047	5,100
Portsea	23	8.25	23	9.09	23	18.50	23	22.25	British.	Sea S. S. Co.	365.0	51.6	26.0	Vancouver, B. C.	W. Hartlepool, Eng.	7,000	5,401	3,842
Lumen	23	10.16	23	11.00	23	19.00	24	00.47	British.	H. E. Moss & Co.	420.1	54.4	23.0	Los Angeles, Calif	Southampton, Eng.	8,243	6,045	4,843
Minnesota.	23	12.11	23	12.58	23	19.45	23	19.45	American.	Amer-Hawaiian Line.	407.0	53.7	26.6	Seattle, Wash.	Boston, Mass.	7,500	7,150	5,024
S-16	23	9.06	23	13.18	23	13.18	23	13.18	American.	U. S. Navy.	175.0	20.0	16.4	Balboa, C. Z.	Cristobal, C. Z.			
O-6	23	8.50	23	6.07	24	13.35	24	13.35	American.	U. S. Navy.	175.0	16.4	16.4	Balboa, C. Z.	Cristobal, C. Z.			
O-8	23	6.07	24	6.07	24	13.35	24	13.35	American.	U. S. Navy.	175.0	16.4	16.4	Balboa, C. Z.	Cristobal, C. Z.			
O-7	23	6.14	24	6.14	24	13.35	24	13.35	American.	U. S. Navy.	175.0	16.4	16.4	Balboa, C. Z.	Cristobal, C. Z.			
O-10	23	6.22	24	6.22	24	13.35	24	13.35	American.	U. S. Navy.	175.0	16.4	16.4	Balboa, C. Z.	Cristobal, C. Z.			
Bagaduce	24	6.19	24	6.19	24	13.35	24	13.35	American.	U. S. Navy.	150.0	28.0	28.0	Valparaiso, Chile	Cristobal, C. Z.			
Amsterdam	24	6.40	24	7.05	24	17.25	24	20.30	Dutch.	Royal Neth. S. S. Co.	473.0	63.3	29.5	San Francisco, Cal.	Hamburg, Germany	12,580	11,638	7,744
Java Arrow	24	7.30	24	8.22	24	18.10	24	18.10	American.	Standard Oil Co. of N.Y.	408.3	62.7	27.6	Vancouver, B. C.	New York, N. Y.	11,432	10,084	7,888
Indra	19	11.10	24	8.36	24	18.15	24	18.15	Danish.	Canadian Transp. Co.	390.7	53.2	27.5	Vancouver, B. C.	Baltimore, Md.	7,100	6,173	4,418
Aurora	24	9.52	24	10.52	24	19.25	24	19.25	American.	Standard Transp. Co.	431.0	59.2	27.0	Los Angeles, Calif	New York, N. Y.	10,503	7,855	5,102
Antinous	24	12.55	24	13.39	24	21.25	25	6.10	French.	Gie des Mess. Mart'e.	413.0	56.2	23.0	Noumea, N. Calid	Dunkirk, France.	3,875	7,643	5,364
Durazzo	24	12.55	24	14.01	24	22.20	24	22.20	German.	Hamburg-American Line	227.5	34.5	14.3	Balboa, C. Z.	Cristobal, C. Z.	816	1,633	1,041
Navy Launch.	24		24		24		24		American.	U. S. Navy.				Balboa, C. Z.	Gatun Lake, C. Z.			

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.		
Date.	Vessel.	Line.	From—	Date.	Vessel.	For—
November 19.	Commodore Rollins.	United Fruit Co.	Kingston, Jamaica.	November 20	James McGee.	Standard Shipping Co.
November 19.	Rugia.	Hamburg-American Line.	Tampico via wayports.	November 21	Rugia.	Hamburg via West Indies.
November 19.	Ulua.	United Fruit Co.	New York via Habana.	November 21	Carare.	Avonmouth via wayports.
November 19.	Denver.	U. S. Navy.	Boston, Mass.	November 21	Ulua.	Port Limon, Costa Rica.
November 21.	Carare.	Elders & Wyfles, Ltd.	Avonmouth via wayports.	November 21	Wanks.	San Blas, R. P.
November 21.	Gatun.	Standard Fruit & S. S. Co.	New Orleans, La.	November 21	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
November 21.	Cristobal.	Panama R. R. & S. Line.	New York via Haiti.	November 21	R. Feuillebois.	Bluefields, Nicaragua.
November 21.	Zacapa.	United Fruit Co.	New Orleans, La.	November 22	Zacapa.	New York via wayports.
November 21.	Venezuela.	United Fruit Co.	New York via Kingston.	November 22	Suriname.	Port Limon, via Bocas del Toro.
November 21.	Teutonia.	Royal Netherlands S. S. Co.	Amsterdam via wayports.	November 22	Commodore Rollins.	Perne, R. P.
November 22.	Coppename.	R. Feuillebois.	Colon, R. P.	November 22	Coppename.	New Orleans, La.
November 22.	Wynerie.	Hamburg-American Line.	Hamburg via wayports.	November 22	Teutonia.	Tampico via wayports.
November 22.	Anachucuna.	United Fruit Co.	Puerto Colombia.	November 22	Anachucuna ²² .	Colon, R. P.
November 22.	Wanks.	Anglo-Saxon Petroleum Co.	Colon, R. P.	November 23.	Gatun.	New Orleans and wayports.
November 23.	Venezuela.	United Fruit Co.	San Blas, R. P.	November 24.	Venezuela.	Amsterdam via wayports.
November 23.	Dungannon.	Standard Fruit & S. S. Co.	Port Limon, Costa Rica.	November 24.	Commodore Rollins.	Mobile, Ala.
November 24.	Anachucuna.	Royal Netherlands S. S. Co.	Port Arthur, Texas.	November 24.	Wynerie.	Port Arthur and wayports.
November 24.	Cartago.	Texas S. S. Co.	Colon, R. P.	November 24.	Anachucuna ²² .	Curacao, D. W. I.
		United Fruit Co.	Perne, R. P.			Colon, R. P.
		United Fruit Co.	New Orleans via Habana.			

* ARRIVALS.				* DEPARTURES.		
Date.	Vessel.	Line.	From—	Date.	Vessel.	For—
November 18.	Motor schooner.	Nippon Yusen Kaisha.	Valparaiso, Chile.	November 19	Anyo Maru.	Hongkong, China.
November 19.	Anyo Maru.	Grace Line.	Los Angeles, Calif.	November 20	Bokuyo Maru.	Valparaiso, Chile.
November 19.	Nora.	Nippon Yusen Kaisha.	Hongkong, China.	November 21	Nora.	Los Angeles, Calif.
November 20.	Bokuyo Maru.	U. S. Army.	High seas off Corinto.	November 21	San Luis ²⁴ .	Puerto Armales, R. P.
November 20.	Cambrai ²³ .	Chiriqui Land Co.	Puerto Armales, R. P.	November 21	Cricamola ²⁵ .	Puerto Armales, R. P.
November 20.	San Luis ²⁴ .	A. Valdez.	Bayano River, R. P.	November 21	Des Hermanas ²⁴ .	Panama Bay, R. P.
November 20.	Cricamola ²⁵ .	Chiriqui Land Co.	Bayano River, R. P.	November 23	A. B. de O'Barrio ²⁴ .	Bayano River, R. P.
November 23.	Des Hermanas ²⁴ .	Pacific Fruit Co.	El Real, R. P.	November 23	El Colon ²⁴ .	El Real, R. P.
November 23.	A. B. de O'Barrio ²⁴ .	H. Elliot.	El Real, R. P.	November 23	Nina ²⁴ .	El Real, R. P.
November 23.	El Colon ²⁴ .	H. Elliot.	El Real, R. P.			
November 23.	Nina ²⁴ .	H. Elliot.	El Real, R. P.			

PORT OF BALBOA.

²¹ Motor schooner. ²² Motor boat.²³ Army transport. ²⁴ Motor schooner. ²⁵ Motor yacht. * Other than ships passing through the Canal.

Tonnage of Canned and Dried Fruits Through Canal in October Establishes Record.

During the month of October, 1928, 72,530 tons of canned fruit and 63,305 tons of dried fruit passed through the Canal from the Pacific to the Atlantic. This establishes record figures for both of these items, the previous high mark for canned fruit being in October, 1925, when 65,155 tons were declared, and for dried fruit in November of last year when 60,122 tons were passed through.

Of the total canned fruit tonnage through the Canal last month, all but 1,066 tons originated on the west coast of the United States, 39,459 tons being reported as destined to the east coast of the United States and 27,355 tons to Europe. Of the dried fruit, which also originated on the west coast of the United States, 24,458 tons were reported as being destined to the east coast of the United States and 38,446 tons to Europe.

Notice to Mariners.

BALBOA HEIGHTS, C. Z., November 26, 1928.

No. 487.

The following was received by the Hydrographic Office from the Customs Administration at Managua, Nicaragua, under date of November 9, 1928, Administrative Circular No. 172:

NUMBERING OF AND SUMMARY OF FINAL PLANTING AND LOCATION OF NEW BUOYS IN CORINTO HARBOR. "COLLECTORS OF CUSTOMS, STEAMSHIP COMPANIES, AND OTHERS CONCERNED:

1. With the exception of six (6) spar buoys which have been authorized to be manufactured and located in the upper inner harbor in the vicinity of the dock at Corinto, Nicaragua, all the work of planting and relocating buoys in Corinto harbor has been accomplished.

2. Request has been made to the Hydrographic Office, U.S. Navy Department, Washington, D. C., to have all the navigational aids referred to below, designated by numbers on the new chart of Corinto harbor being prepared by that office.

3. The navigational aids passed on the starboard hand entering the outer and inner harbor will be numbered in that order from Nos. 2 to 12; likewise those passed on the port hand will be numbered from Nos. 1 to 7.

4. The navigational aids with their respective number are as follows:

PASSED ON STARBOARD HAND.

No. 2. Red gas buoy in thirty-five (35) feet of water at mean low water in the following location: Bearing three hundred twelve degrees (312°), distance three hundred forty yards (340), from Cardon Head Light. This buoy now has the following characteristics: Flashing red light single flash; period, three (3) seconds; flash, five-tenths (5/10) second; eclipse, two and five-tenths (2 5/10) seconds.

No. 4. Red nun buoy in forty-two (42) feet of water, at mean low water, four hundred twenty (420) yards bearing one hundred twenty-nine (129°) degrees from Cardon Head Light.

No. 6. Red nun buoy in twenty-five (25) feet of water at mean low water bearing one hundred and thirty-three (133°) degrees, distance eight hundred twenty (820) yards from Cardon Head Light.

No. 8. Red nun buoy in twenty-five (25) feet of water at mean low water bearing one hundred and twenty-three (123½°) degrees and thirty minutes, distance one thousand one hundred twenty (1,120) yards from Cardon Head Light.

No. 10. Red nun buoy in thirty (30) feet of water at mean low water bearing one hundred and sixteen (116½°) degrees and thirty minutes, distance one thousand five hundred (1,500) yards from Cardon Head Light.

No. 12. Red nun buoy in same position as shown on H. O. Chart No. 2604 (10th Edition) in twenty-seven (27) feet of water at mean low water, as for former buoy No. 8.

PASSED ON PORT HAND.

No. 1. Black forty (40) foot spar buoy in twenty-seven (27) feet of water at mean low water, bearing two hundred and eighty seven (287½°) degrees and thirty minutes, distance sixteen hundred and seventy-five (1,675) yards from Cardon Head Light.

No. 3. Black forty (40) foot spar buoy on the range of the outer harbor (front beacon and church cross) in twenty-six (26) feet of water at mean low water, bearing three hundred fifty four (354°) degrees, distance four hundred seventy (470) yards from Cardon Head Light.

No. 5. Black can buoy in twenty-eight (28) feet of water at mean low water in the same position as shown on H. O. Chart No. 2604 (10th Edition) for the former black nun buoy No. 1.

No. 7. Black gas buoy in twenty-seven (27) feet of water at mean low water in the following location: Bearing one hundred fourteen degrees (114°), distance seven hundred forty yards (740), from Cardon Head Light. This buoy has the following characteristics: Flashing white light single flash; period, three (3) seconds; flash, five-tenths (5/10) second; eclipse, two and five-tenths (2 5/10) seconds.

5. Customs Administrative Circular No. 171, dated August 28, 1928, is amended accordingly.

6. The Customs Service, in the name of the Government of the Republic of Nicaragua, desires to express its appreciation of the services rendered by Admiral David F. Sellers, Commander Special Service Squadron, and Capt. H. A. Baldrige, Commander, U. S. S. *Rochester*, and his officers and men, in connection with the relocating and numbering of the buoys in Corinto Harbor, all of the work having been authorized by the Admiral and accomplished under the supervision of the Commander of the U. S. S. *Rochester*, free of charge to the Nicaraguan Government.

The Acting Collector-General of Customs,
Republic of Nicaragua.

W. J. CRAMPTON."

H. BURGESS,
Governor.

Cargo Through Canal During October, 1928.

On pages 242 and 243 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in October, 1928. This cargo, segregated according to direction, as compared with October, 1927, and the differences, are shown in the following tabulation:

	October, 1928.	October, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	875,641	700,592	+175,049
Pacific to Atlantic.....	1,706,836	2,017,054	-310,218
Totals.....	2,582,477	2,717,646	-135,169

As will be noted above, tonnage from the Atlantic to the Pacific increased 175,049 tons over that in October, 1927, while that from the Pacific to the Atlantic showed a decrease of 310,218 tons, or a net decrease of cargo tonnage in both directions under October, 1927, of 135,169 tons. The increased tonnage from the Atlantic to the Pacific, the heaviest month in the history of the Canal for cargo moving in this direction, was directly attributable to heavy shipping over two trade routes, viz., United States intercoastal and from the east coast of the United States to Asia. The decreased cargo tonnage from the Pacific to the Atlantic has been caused by the inactivity of shipments of mineral oils and grain, two of the most important commodities shipped in bulk in this direction.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-eight per cent of the cargo moving from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 22.2 per cent in Europe. Cargo originating in the United States was 104,425 tons, or over 21 per cent, greater than the amount coming from that area in October, 1927. Relatively, however, the amounts coming from the east coast of the United States in the two months were about the same. Cargo from Europe showed an actual increase of 46,050 tons, as well as a small relative increase. The actual increase amounted to about 31 per cent over the amount shipped in October last year.

Destination.—Over 42 per cent of the Pacific-bound cargo was destined to the United States; 24.7 per cent to Asia (including the Philippines); 14.2 per cent to Australasia; and 11.8 per cent to South America. Tonnage to all these areas, with the exception of South America, showed actual increases over the corresponding month a year ago. The increase to the United States amounted to 111,144 tons, or 42 per cent; that to Asia an increase of 47,018 tons, or 22 per cent; and that to Australasia an increase of 3,780 tons, or 3 per cent. That to South America decreased 700 tons. Tonnage to the United States also showed relative increases over October, 1927, while the percentage of the total cargo to Australasia last month was somewhat lower than in October last year.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 54.7 per cent originated on the west coast of the United States; 32.9 per cent in South America; and 8.8 per cent in Canada. Cargo from the United States showed a decrease under October, 1927, of 372,654 tons, or 28.4 per cent. The percentage of the total cargo from the United States in October last year was 64.9 per cent as compared with 54.7 per cent in

October, 1928. Cargo from South America and Canada showed relative as well as actual increases over October, 1927, the actual increases amounting to 44,429 tons, or 8.6 per cent, and 53,053 tons, or 54.4 per cent, respectively.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify over 85 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 15 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic to Pacific-bound commodities which aggregated more than 10,000 tons for October, 1928, or October, 1927, are listed in the following tabulation, showing differences:

Commodity.	October, 1928.	October, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	2,505	12,515	-10,010
Asphalt.....	16,256	11,399	+4,857
Automobiles.....	22,955	10,662	+12,293
Automobile accessories.....	10,115	5,245	+4,870
Cement.....	27,344	12,995	+14,349
Coal and coke.....	9,227	16,117	-6,890
Cotton.....	51,085	46,736	+4,349
Manufactured goods:			
Iron and steel.....	217,665	158,904	+58,761
Machinery.....	13,954	24,502	-10,548
Railroad material.....	21,251	9,231	+12,020
Tinplate.....	12,412	2,874	+9,538
Textiles.....	10,189	18,312	-8,132
Miscellaneous.....	18,243	6,991	+11,252
Metals, various.....	18,585	2,397	+16,188
Oils, mineral.....	76,960	57,400	+19,560
Paper.....	18,075	14,120	+3,955
Phosphates.....	15,498	11,920	+3,578
Sulphur.....	16,063	24,026	-7,963
Tobacco.....	24,679	4,552	+20,127

The above 19 commodity groups comprise over 68 per cent of the cargo moving from the Atlantic to the Pacific during October, 1928. It will be noted that 14 of these items show increases and 5 decreases. The heaviest increase was in iron and steel.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 99 per cent of all cargo moving from the Pacific to the Atlantic during the month of October, 1928. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month a year ago are listed below, showing differences:

Commodity.	October, 1928.	October, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	29,166	27,338	+1,828
Beans.....	27,790	11,332	+16,458
Canned goods (fish, fruit, vegetables, etc.).....	143,233	109,793	+33,440
Cold storage (food products).....	10,981	8,588	+2,393
Copra.....	16,037	6,220	+9,817
Cotton.....	7,888	8,857	-969
Flour.....	13,482	10,757	+2,725
Fruit, dried.....	63,305	32,753	+30,552
Fruit, fresh.....	14,259	2,879	+11,380
Lumber.....	280,022	300,213	-20,191
Metals, various.....	57,621	51,299	+6,331
Nitrates.....	226,267	254,112	-27,845
Oils, mineral.....	358,484	581,579	-223,095
Ores, principally iron.....	153,315	156,027	-2,712
Rice.....	10,556	1,812	+8,744
Sugar.....	35,200	70,976	-35,776
Wheat.....	167,551	263,711	-96,160

* Does not include fresh fruit.

The above 17 commodity groups comprise over 94 per cent of the cargo moving from the Pacific to the Atlantic during October, 1928. Ten of the items show increases. Mineral oils and wheat decreased heavily, while canned goods and fruit showed increases.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, October, 1928.

(Figures represent tons of 2,240 pounds.)

From—	SOUTH AMERICA.					NORTH AMERICA.							ASIA.					AUSTRALASIA.			Grand totals.	Per cent of total cargo.			
	Chile	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	West coast of United States.	West coast of Canada.	West coast of Central America.	West coast of North America. ¹	Balboa, C. Z. ²	Hawaii.	Total, North America.	Japan.	China.	Philippines.	Far East. ¹	Total, Asia.	Australia.	New Zealand.			Australasia. ¹	Total, Australasia.	
NORTH AMERICA:																									
UNITED STATES—																									
North Atlantic ports.	6,598	2,820	924	6,031	4,859	21,232	254,146	1,943	3,865		38	4,538	264,530	40,788	25,673	11,091	24,723	102,275	27,248	3,454	600	31,302	419,339	47.8	
South Atlantic ports.							3,402						3,402				233		9,116	395			335	12,913	1.5
Gulf ports.	783	124	68	237	20	1,242	41,173	2,346				487	44,006	66,069	26,946	7,711	1,908	102,694	6,524	9,025		15,549	163,491	18.7	
Totals, U. S.	7,391	2,944	992	6,268	4,879	22,474	298,721	4,289	3,865		38	5,025	311,938	113,477	53,749	19,933	26,926	214,083	34,167	12,479	600	47,246	535,743	68.0	
Cristobal, C. Z. ²	505	3,956	929	551	1,251	7,192	2,480	22	11,819			14,321											21,513	2.5	
East coast of Canada.							2,800	2,500					5,300	1,893				1,893	7,081	9,655		16,736	23,929	2.7	
West Indies.	43				13	56	8,424	600			6,922	15,946											16,002	1.8	
East coast Mexico and Central America.							32.52						3,252							5,601	7,186		12,787	16,039	1.8
Totals, N. America.	7,939	6,900	1,921	6,819	6,143	29,722	315,677	7,411	15,684		6,960	5,025	350,757	115,370	53,749	19,933	26,926	215,978	46,849	29,320	600	76,769	673,226	76.8	
Europe:																									
British Isles.	13,347	236	375	3,450	4,954	22,362	9,840	2,506	1,928		24	12,346											79,923	9.1	
Belgium.	6,673	148	405	1,323	793	9,272	14,087	825				16,864											26,136	3.0	
Denmark.	1,012		173	78	5,540	6,833					75												6,908	0.8	
France.	2,514		3	347	133	2,997	2,118	959	557			3,634										2,020	2,020	8,651	0.9
Germany.	3,165	1,548	710	1,749	1,103	8,275	12,252	3,827	1,880		535	18,494											26,769	3.1	
Holland.	2,021	352	569	1,374	24	4,340	4,252	1,002				5,254											9,594	1.1	
Italy.					481	481	1,534	13	180			1,727											2,268	0.3	
Norway and Sweden.	2,477	1,312	65	445	150	4,449	5,327	30	2,019		1,085	8,461											12,510	1.5	
Spain and Portugal.	6			50	158	214																	214	0.0	
Europe. ¹	1,055	245	9		12,995	14,304	1,667	1,024	4,239			6,930											21,234	2.4	
Totals, Europe.	32,239	3,841	2,309	8,816	26,331	73,527	51,077	10,186	10,803		1,719	73,785											164,547	22.2	
E. coast of S. America.		286				286	6,952	202			29	7,183		399					399				7,868	1.0	
Grand totals.	40,169	11,027	4,230	15,635	32,474	103,535	373,706	17,799	26,487		8,708	5,025	431,725	115,769	53,749	19,933	26,926	216,377	50,932	62,074	10,978	124,004	875,641	100.0	
Per cent of total cargo:																									
October, 1928.	4.6	1.2	0.5	1.8	3.7	11.8	42.7	2.0	3.0		1.0	0.6	49.3	13.2	6.1	2.3	3.1	24.7	5.7	7.2	1.3	14.2	100.0		
October, 1927.	5.7	1.7	0.6	2.2	4.7	14.9	37.5	2.0	1.8	1.0	0.1	1.3	43.7	14.0	5.5	2.9	1.8	24.2	8.1	8.0	1.1	17.2	100.0		
October, 1926.	3.0	1.0	0.6	1.8	6.2	12.6	39.2	1.9	2.2	1.2		0.4	44.9	13.1	6.9	1.9	6.3	28.2	6.3	7.5	0.5	14.3	100.0		

¹ General cargo not routed so as to allow aggregation between definite ports.² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, October, 1928.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.										Grand totals.	Per cent of total cargo.				
	UNITED STATES.					East coast of Central America.	Cristobal, C. Z.²	Total, North America.	EUROPE.																	
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.				West Indies.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Russia.	Spain and Portugal.	Europe.¹	Total, Europe.			East coast of South America.	Egypt.	Africa.	
SOUTH AMERICA:																										
Chile.....	161,231	8,099	11,908	181,238		1,351		1,485	184,074	24,124	8,383	314,714	5,121	2,840	3,995	951		3,405	157,640	221,177		14,467		419,718	24.6	
Colombia.....	59			59				3,099	3,158		17		49							66				3,224	0.2	
Ecuador.....	17,045			17,045				3,943	20,988	25		105	262		189			209	299	1,089				22,077	1.3	
Peru.....	41,798			41,798	630			2,146	80,574	19,796	1,951	1,812	1,852	2,318	254	133	5,822		1,141	35,082				115,656	6.8	
W. coast S. Am.	40			40				266	306						105				43	148				451		
Totals, S. Am.	220,173	8,099	11,908	240,180	630	1,351		10,939	289,100	43,945	10,351	1,815	16,671	7,750	3,094	4,423	6,773		3,614	159,126	257,562	14,467		561,129	32.9	
NORTH AMERICA:																										
W. coast Canada..	36,219		1,855	38,074	43,104	6,820			57,998	50,544	376		3,814	4,163	11,218	431		7,868	12,687	91,101	1,436			150,535	8.8	
W. coast C. Am.	24			24				2,120	2,144															2,144	0.1	
W. coast U. S.	490,405	16,063	32,389	538,857		10,371	12,236	13,116	574,580	205,237	3,484	1,654	20,884	35,558	19,101	14,590	677	22,521	20,235	333,961	6,392	9,100		934,033	64.7	
Hawaii.....	1,165		613	1,778					1,778	1,452	131			33			404			2,050				3,828	0.2	
Totals, N. Am.	527,813	16,063	34,857	578,733	13,104	17,191	12,236	15,236	636,500	257,283	3,991	1,654	24,698	39,754	30,319	15,021	1,081	30,389	32,922	437,112	7,828	9,100		1,090,540	63.8	
ASIA:																										
China.....	2,501			2,501				22	2,523															2,523	0.1	
Japan.....	1,858			1,858					1,858															1,858	0.1	
Philippines.....	8,770		8,610	17,380					17,380															17,380	1.1	
Far East.....	477			477					8,125															8,125	0.5	
Totals, Asia.....	13,606		8,610	22,216		7,648		22	29,886															29,886	1.8	
AUSTRALASIA:																										
Australia.....	1,109			1,109	1,230				2,339															2,339	0.1	
New Zealand.....	2,910			2,910	72				2,982	12,367					2,853					4,740	7,593			15,349	0.9	
Australasia.....																								7,593	0.5	
Totals, Australasia.....	4,019			4,019	1,302				5,321	12,367					2,853					4,740	19,980			25,281	1.5	
Grand Totals:																										
October 1928.....	765,611	24,162	55,375	845,148	51,036	26,190	12,236	26,197	960,807	313,595	14,342	3,469	41,369	47,504	36,266	19,444	7,854		34,003	196,788	714,634	7,828	23,567		1,706,836	100.0
Per cent of total cargo:																										
October, 1928.....	44.9	1.4	3.2	49.5	3.1	1.5	0.7	1.5	56.3	18.4	0.8	0.2	2.4	2.8	2.1	1.1	0.5		2.0	11.5	41.8	0.5	1.4		100.0	
October, 1927.....	51.6	3.3	1.9	56.8	2.5	2.4		4.5	66.2	15.4	0.7	0.2	1.7	2.2	2.4	0.6	0.5	0.3	0.3	6.9	31.2	0.6	2.0		100.0	
October, 1926.....	57.8	2.3	1.3	61.4	5.1	0.7		1.4	68.6	16.6	1.1		1.1	2.2	0.5	0.8	1.4		0.2	5.4	29.3	0.6	0.5	1.0	100.0	

¹ Includes both local and transit cargo.² General cargo not routed so as to allow segregation between definite ports.

Notaries Public in the Canal Zone.

The following is a list of notaries public commissioned in the Canal Zone as of November 23, 1928. The list gives, by towns, the name, where stationed, and the date of expiration of commission:

ANCON.

Bowen, Vollie S., Land Office, February 27, 1930.
 Boyd, Oscar S., Municipal Division, July 30, 1931.
 French, A. W., Gorgas Hospital, May 14, 1929.
 Latimer, J. G., Ancon Laundry, April 30, 1930.
 McGahhey, J. T., Clubhouse, August 12, 1930.
 Ohlson, Elmer F., Gorgas Hospital, December 3, 1930.
 Russell, C. V., Gorgas Hospital, April 29, 1930.
 Shaeffer, L. E., Office J. O. Collins, April 6, 1929.
 Sheibley, F. H., District Court, October 27, 1929.
 Walker, J. J., District Court, November 22, 1931.

BALBOA.

Hyde, W. H., Port Captain's Office, March 6, 1930.
 Kalar, J. D., Port Captain's Office, April 13, 1929.
 Kelley, Thomas H., Mechanical Division, August 18, 1930.
 Lefever, John E., Fort Amador, February 28, 1931.
 Prager, J. F., Balboa storehouse, December 13, 1929.
 Smith, Walter R., Balboa storehouse, September 4, 1931.
 Stillwell, J. L., Fort Amador, April 20, 1931.

BALBOA HEIGHTS.

Attaway, E. F., Administration Building, room 343, October 28, 1930.
 Boggs, W. B., Administration Building, room 316, August 4, 1931.
 Buehler, G. H., Administration Building, room 205, August 17, 1931.
 Fenton, John A., Administration Building, room 203, July 28, 1930.
 Illwitzer, P. G., Administration Building, room 270, October 12, 1929.
 Schecker, C. A., Administration Building, room 244, January 19, 1930.
 Sims, Walter H., Quarry Heights, December 1, 1930.
 Taylor, R. G., Administration Building, room 318, April 30, 1930.
 Ungar, J., Administration Building, room 301, February 2, 1929.
 Wang, Frank H., Administration Building, room 305, April 29, 1929.

COROZAL.

Grimm, G. L., Corozal Hospital, October 6, 1929.
 Johnson, Mrs. Anna O., Panama Ordnance Depot, February 26, 1930.

CRISTOBAL.

Atwood, H. E., Commissary Division, April 8, 1930.
 Campbell, J. S., District Court, January 28, 1929.
 Clarke, V. J., Commissary Division, January 14, 1929.
 Cotton, Charles, Coaling Plant, March 20, 1929.
 Daly, E. J., United Fruit Co., May 26, 1929.
 Flood, Arthur, Customs office, November 15, 1931.
 Hargy, F. F., Port Captain's office, May 28, 1930.
 MacSparran, E. S., Receiving & Forwarding Agency, December 1, 1930.
 Murray, P. E., Magistrate, October 13, 1929.
 Scarborough, W. W., clubhouse, January 21, 1930.
 Slocum, E. L., Chase National Bank, August 10, 1929.
 Walsh, M. H., Customs Office, August 5, 1929.
 Ellis, Edward E., Coaling Plant, May 24, 1930.

GATUN.

P. L. Malone, Railroad Station, November 23, 1931.

PARAISO.

Holzappel, A. F., Dredging Division, August 10, 1929.

PEDRO MIGUEL.

Norris, R. N., Municipal Division, August 11, 1930.
 Rader, T. C., Pacific Locks, January 21, 1930.
 Wright, A. M., Dredging Division, January 21, 1930.
 Cauthers, R. A., Municipal Division, June 16, 1930.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending November 24, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cambrai.....	U. S. Army.....	November 15.	November 16.	72	34
Isis.....	Hamburg-American Line.....	November 15.	November 16.	343	45
City of San Francisco.	Panama Mail S. S. Co.....	November 15.	November 16.	142	27
Cauca.....	National Navigation Co.....	November 17.	November 17.	.....	4
Almelo.....	Royal Netherlands S. S. Co.....	November 17.	November 18.	201	.....
Anyo Maru.....	Nippon Yusen Kaisha.....	November 18.	November 18.	.....	30
Santa Teresa.....	Grace Line.....	November 19.	November 19.	.....	138
Indian.....	Orient S. S. Co.....	November 19.	November 21.	620	.....
Cid.....	Pacific Steam Navigation Co.....	November 20.	November 23.	.....	190
Bokuyo Maru.....	Nippon Yusen Kaisha.....	November 20.	November 23.	60	.....
Vega.....	U. S. Government.....	November 21.	November 21.	14	.....
California.....	Panama-Pacific Line.....	November 23.	November 23.	.....	154
Cambrai.....	U. S. Government.....	November 20.	.....	1,268	.....
Baarn.....	Royal Netherlands S. S. Co.....	November 24.	November 24.	119	

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., December 5, 1928. No. 18.

Canal Traffic During November.

During the month of November, 1928, 527 commercial vessels and 5 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,225,937.48, and on the launches, \$20.40, or a total tolls collection of \$2,225,957.88.

The daily average number of transits of seagoing vessels for the month was 17.57, and the daily average tolls collection, \$74,197.91. The average amount of tolls paid by each of the commercial transits was \$4,223.79, as compared with \$4,084.28 for the month of October.

Commercial traffic for November was lower by 30 transits and almost \$49,000 in tolls than the traffic for the previous month although the daily average tolls collection during November was slightly higher than that in October.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 11 months of the current calendar year, with the daily averages of transits and tolls, together with the totals for the first 11 months of the calendar years 1927 and 1926:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	540	\$2,212,752.50	17.42	\$71,379.20
February.....	547	2,253,755.37	18.86	77,715.70
March.....	542	2,223,370.57	17.48	71,721.63
April.....	531	2,187,607.82	17.70	72,914.55
May.....	508	2,118,969.83	16.38	68,353.86
June.....	481	2,016,211.09	16.03	67,206.43
July.....	509	2,109,083.19	16.41	68,034.94
August.....	526	2,199,069.31	16.97	70,937.72
September.....	487	2,111,230.56	16.23	70,374.35
October.....	557	2,274,945.30	17.97	73,385.33
November.....	527	2,225,937.48	17.57	74,197.91
Totals, first 11 months, 1928.....	5,755	23,932,933.02	17.18	71,441.59
Totals, first 11 months, 1927.....	5,496	23,832,563.19	16.46	71,354.98
Totals, first 11 months, 1926.....	4,962	21,905,503.32	14.85	65,585.34

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 3, 1928.

No. 491.

The following was received by the Hydrographic Office through the Captain of the Port, Cristobal:

BUENAVENTURA, COLOMBIA, December 3, 1928.

Palmas Light out and will take 15 days to repair.

(Signed) T. LOPEZ, Captain of the Port.

J. L. SCHLEY,
Acting Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, December 1, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Salt water draft.		From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	Water draft.			Nature.	Tons.	
Anglo-Indian.	25	1 40	25	13 45	25	15 00	British	Union Sal. de Espana	426 0	59 5	21 0	Torreveiga, Spain.	Tacoma, Wash.	Salt	7 250	5 322
Almagro	24	15 50	25	16 42	25	17 43	British	Pacific Steam Nav. Co.	309 7	40 3	18 5	New York, N. Y.	Valparaiso, Chile.	General	2 983	1 770
Pacific Hemlock	25	9 00	25	16 06	25	17 15	American	Dixon S. S. Corp.	403 0	54 2	21 0	New York, N. Y.	Seattle, Wash.	General	5 560	4 378
City of Rayville	25	6 30	25	17 00	25	19 02	American	Roosevelt S. S. Co., S. B.	401 9	54 2	21 0	New York, N. Y.	Adelaide, Australia	General	1 685	7 097
Vaba	24	2 10	25	12 20	25	19 25	American	T. P. Galliger & Co.	330 0	54 6	15 0	Baton Rouge, La.	Los Angeles, Calif.	Ballast	6 205	4 284
Calmar	25	12 50	25	13 05	25	20 32	American	Calmar S. S. Corp.	385 0	51 0	28 0	Baltimore, Md.	Seattle, Wash.	Steel, general.	8 553	6 347
Harry Lucken- bach.	25	14 15	25	14 55	25	21 20	American	Luckenbach Line	448 9	60 2	24 0	Mobile, Ala.	Seattle, Wash.	General	5 000	9 262
No. 282 ¹	25	17 35	25	17 50	26	9 09	American	U. S. Army	425 6	58 0	22 0	Cristobal, C. Z.	Balboa, C. Z.	Ballast	5 050	8 218
Silverhazel ²	25	6 20	26	6 15	26	12 55	British	Silver Line, Ltd.	411 5	54 1	22 0	New York, N. Y.	Shanghai, China.	General	1 913	8 898
Noorddijk.	26	1 47	26	6 15	26	14 35	Dutch	Holland-American Line.	470 0	58 0	20 0	Rotterdam, Holland	Vancouver, B. C.	General	4 345	6 609
Chilcop.	26	6 55	26	7 35	26	14 35	American	Chile S. S. Co.	429 3	59 2	18 0	Baltimore, Md.	Chancal, Chile.	General	7 568	5 283
Atlantic Sun	26	6 55	26	7 35	26	16 30	American	Sun Oil Co.	375 0	47 6	14 0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	4 900	3 603
Virginia S.	25	20 55	26	8 05	26	15 18	Greek	Zacharias Samethrakis	480 0	62 0	25 5	Las Palmas, C. I.	Taitai, Chile	Ballast	5 665	10 174
Hurumi	26	9 15	26	9 30	26	16 50	British	N. Z. Shipping Co.	409 6	65 1	19 6	Falmouth, England	Brisbane, Australia	General	4 537	6 627
Absarupi	26	13 45	26	14 00	26	20 46	American	Munson, McCork & Line.	434 8	56 0	18 0	New York, N. Y.	Tacoma, Wash.	General	7 425	5 202
Winfred	26	14 30	26	14 35	26	21 20	American	Texas S. S. Co.	360 2	51 6	24 6	Baltimore, Md.	Los Angeles, Calif.	Ballast	2 277	5 776
O'Donnell	26	19 05	27	6 09	27	12 57	American	Panama Mail S. S. Co.	69 0	17 0	10 6	New York, N. Y.	San Francisco, Cal.	General	5 450	11 053
Guatemala	20	12 20	27	6 15	27	14 06	British	E. T. Huffman	477 9	63 0	28 3	Boston, Mass.	San Francisco, Cal.	Ballast	8 838	7 472
Asritid	26	17 10	27	6 10	27	14 02	British	Shaw, Savill & Albion.	425 0	55 0	26 6	Liverpool, England	Auckland, N. Z.	General	5 797	4 090
Manioa	26	22 30	27	7 25	27	15 10	American	Isthmian S. S. Lines	400 0	52 3	21 6	Baltimore, Md.	Tacoma, Wash.	Steel, general.	4 922	5 712
Robin Gray	27	9 40	27	10 00	27	18 20	British	Hain S. S. Co.	400 0	52 3	21 6	Port Said, Egypt.	Vancouver, B. C.	Ballast	4 397	3 984
Tremadour	27	10 30	27	10 50	27	17 47	Greek	D. A. Stathatos & Co.	334 0	46 0	23 0	Newcastle-on-Tyne	Thio, N. California	Coke and coal.	9 688	7 731
Dionysios	27	12 35	27	12 55	27	20 54	American	Swayne & Hoyt.	430 0	56 0	20 9	New Orleans, La.	Vancouver, B. C.	Sulphur, general.	842	1 041
Stathatos	27	13 45	27	13 45	27	20 42	Japanese	Osaka Shosen Kaisha.	430 0	56 0	20 9	Buenos Aires, Arg.	Yokohama, Japan	General	3 273	7 875
Point Arena	24	22 20	27	14 13	27	21 35	German	Hamburg-American Line	227 0	34 7	13 10	Cristobal, C. Z.	Buenaventura, Col.	General	3 328	9 154
Montevideo	27	13 30	27	15 00	27	21 55	American	Amer.-Hawaitian Line.	471 0	57 2	19 9	New York, N. Y.	Tacoma, Wash.	General	3 328	9 154
Maru	27	9 45	27	13 45	27	21 48	American	Ramon Carbello	415 0	55 7	27 5	Cristobal, C. Z.	Gatun, C. Z.	Unknown	9 688	7 731
Durazo	24	22 20	27	14 13	27	21 35	American	De Leon	435 0	55 7	27 5	Cristobal, C. Z.	Gatun, C. Z.	General	7 461	5 189
Texas	27	13 30	27	15 00	27	21 55	American	Williams S. S. Line	367 3	46 0	19 7	Portland, Me.	Seattle, Wash.	Ballast	359	4 838
Quipo	27	15 20	27	17 25	28	11 55	American	Atlantic Refining Co.	336 8	52 2	17 5	Charleston, S. C.	Los Angeles, Calif.	General	2 458	5 684
Bicalla	27	15 20	27	17 25	28	11 55	American	Peruvian Line	560 0	62 3	25 0	Covenas, Colombia	Los Angeles, Calif.	General	266	15 041
Willizo	27	17 55	27	18 55	28	12 22	American	Calif. & East'n S. S. Co.	560 0	62 3	25 0	Philadelphia, Pa.	Los Angeles, Calif.	Coffee	266	15 041
H. C. Folger	27	17 55	27	18 55	28	12 22	American	Los Angeles S. S. Co.	560 0	62 3	25 0	Buenos Aires, Arg.	Los Angeles, Calif.	Coffee	266	15 041
Mantaro	26	21 35	28	6 02	28	14 19	Peruvian	Calif. & East'n S. S. Co.	560 0	62 3	25 0	Buenos Aires, Arg.	Los Angeles, Calif.	Coffee	266	15 041
New Britain	27	18 15	28	6 25	28	14 49	American	Calif. & East'n S. S. Co.	560 0	62 3	25 0	Buenos Aires, Arg.	Los Angeles, Calif.	Coffee	266	15 041
City of Los Angeles	28	5 55	28	7 45	28	14 19	American	Calif. & East'n S. S. Co.	560 0	62 3	25 0	Buenos Aires, Arg.	Los Angeles, Calif.	Coffee	266	15 041

¹ Tanker.² Motor ship.³ U. S. Army launch.⁴ Motor schooner.⁵ Launch.⁶ Cotton, coffee, and meat.⁷ Towing Bicalda.

Romanby	27	20	20	28	7	15	28	15	34	28	17	35	British	Sir. R. Ropner & Co.	390	0	55	5	13	6	Tyne, England	Vancouver, B. C.	Ballast	5,910	4,242	
Skramstad	27	20	35	28	8	28	28	16	12	28	17	35	Norwegian	Fern Line	382	0	53	0	24	11	Galveston, Texas	Yokohama, Japan	Ballast	6,690	4,233	
Atlanta	27	21	00	28	8	45	28	16	22	28	17	35	Greek	Brit. & Pac. Trad'g Co	410	5	54	3	16	0	Amst'dam,Holland	Arica, Chile	Ballast	6,230	4,540	
Larry Doheny	28	12	04	28	12	20	28	18	59	28	20	05	American	Tidewater Oil Co.	430	0	59	2	18	10	New York, N. Y.	Los Angeles, Calif	Ballast	7,494	5,181	
Andrea F.	28	11	50	28	12	35	28	20	15	28	21	15	American	Luckenbach Line	496	0	68	0	22	0	Boston, Mass.	Seattle, Wash.	Steel, general	5,510	11,487	
Lukenbach.	28	22	05	29	6	20	29	13	10	29	14	35	American	Huasteca Petroleum Co	435	0	56	2	19	0	Baltimore, Md	Los Angeles, Calif	Ballast	7,405	5,131	
Franklin K.	29	8	50	29	9	04	29	15	25	29	20	10	Swedish	Ore S. S. Corp	561	0	72	0	20	0	New York, N. Y.	Cruz Grande, Chile	Ballast	15,425	4,421	
Svealand	29	3	50	29	9	25	29	15	55	30	00	16	American	Grace Line	466	0	64	0	24	5	New York, N. Y.	Talcahuano, Chile	General	3,081	10,583	
Santa Barbara	29	10	15	29	10	40	29	17	29	29	18	45	British	Sir W. R. Smith & Sons	402	0	54	0	14	6	Cardiff, England	Vancouver, B. C.	Ballast	6,621	4,916	
Skegness	22	15	50	29	11	15	29	17	54	29	19	33	American	United Fruit Co.	330	0	44	0	16	6	Cristobal, C. Z.	San Francisco, Cal.	Ballast	807	3,673	
Esparta	22	15	50	29	11	15	29	12	00	29	18	55	British	R. Chapman & Son	412	0	52	0	16	0	Tyne, England	Vancouver, B. C.	Ballast	6,811	4,810	
Koranton	29	11	40	29	12	00	29	18	55	29	20	10	British													
Rossington	29	10	05	29	13	00	29	21	35	30	2	47	British	Haldin & Co.	420	0	56	0	15	0	Gibraltar	Vancouver, B. C.	Ballast	6,963	4,959	
Court	29	14	15	29	15	10	30	9	24	30	10	27	American	United Fruit Co.	419	5	56	5	20	0	Santa Marta, Col.	Los Angeles, Calif	Ballast	6,997	4,959	
Camden	29	15	55	29	16	10	30	11	26	30	12	30	American	Huasteca Petroleum Co.	417	0	56	0	20	0	Baltimore, Md.	Los Angeles, Calif	Ballast	6,763	4,759	
Geo. W.	29	15	55	29	16	10	30	11	26	30	12	30	American													
Barnes	29	15	55	29	16	10	30	11	26	30	12	30	American													
City of San	16	15	10	30	6	00	30	13	39	30	16	20	Panman	Panama Mail S. S. Co.	296	0	46	5	20	6	Cristobal, C. Z.	San Francisco, Cal.	General	3,255	3,848	
Francisco	26	17	15	30	6	10	30	13	56	30	17	05	Norwegian	H. C. Stevenson	183	2	30	0	9	7	Cristobal, C. Z.	Buenaventura, Col.	General	450	780	
Martha	28	9	00	30	6	16	30	13	56	30	16	02	German	Hamburg-AmericanLine	468	0	58	0	24	0	Hamburg, Germany	Vancouver, B. C.	General	6,508	9,568	
Hessen	28	16	28	30	7	20	30	14	42	30	18	10	American	Texas S. S. Co.	425	8	57	0	22	0	Philadelphia, Pa.	Los Angeles, Calif	Ballast	7,484	5,216	
Helen Olmsted	28	16	28	30	7	20	30	14	42	30	18	10	American	N. O. & S. A. S. Co.	298	6	40	0	20	6	New Orleans, La	Talcahuano, Chile	General	2,200	2,835	
Mineola	29	10	25	30	7	45	30	15	00	30	22	50	American	Charles Nelson & Co.	380	0	53	2	19	6	Baltimore, Md	San Francisco, Cal.	General	3,656	5,653	
Sacramento	30	6	00	30	7	45	30	15	31	30	16	46	American	Isthmian S. S. Lines	424	2	56	2	25	10	Mobile, Ala	Shanghai, China	Steel, general	7,842	7,611	
Anistion City.	30	3	00	30	8	35	30	16	10	30	17	26	American													
President	30	8	45	30	9	40	30	16	27	30	21	40	American	Dollar Line	502	1	62	2	26	0	New York, N. Y.	Around the world	General	5,060	12,023	
Van Buren.	28	13	50	30	10	40	30	17	54	30	20	35	German	Hamburg-AmericanLine	441	0	53	1	25	6	Hamburg, Germany	Valparaiso, Chile	General	4,067	7,621	
Heluan	29	10	00	30	11	22	30	18	17	30	19	48	German	North German Lloyd	475	0	59	0	23	3	Bremen, Germany	San Antonio, Chile	General	4,588	8,734	
Lippe	30	3	38	30	13	10	30	20	20	30	21	40	American	Transmarine Lines	324	0	46	1	21	6	Newark, N. J.	San Francisco, Cal.	General	2,800	3,984	
Sicarsco	30	10	45	30	13	10	30	21	08	30	22	10	Greek	Livorno	365	0	51	5	20	0	Swansea, England	Valparaiso, Chile	Coal	4,676	4,504	
Eugenia.	30	13	20	30	13	35	30	20	27	12	100	32	Japanese	Nippon Yusen Kaisha.	400	0	54	6	23	0	Baltimore, Md	Kobe, Japan	General	5,627	5,790	
Calcutta Maru	30	10	45	30	13	10	30	21	08	30	22	10	Greek	Livorno	365	0	51	5	20	0	Swansea, England	Valparaiso, Chile	Coal	4,676	4,504	
Hazel Branch	14	9	20	30	14	11	30	21	55	30	23	10	British	F. & W. Rison	400	0	51	0	21	6	Liverpool, England	Valparaiso, Chile	General	4,500	5,208	
Sikeborg	30	13	30	30	18	00	12	1	53	12	10	17	Danish	C. K. Hansen	265	0	42	2	16	0	Cardenas, Cuba	Los Angeles, Calif	Sugar	2,000	2,040	
Vera Radcliffe.	12	1	4	45	12	1	6	35	1	13	51	1	British	E. T. Radcliffe	415	0	55	0	17	6	Algiers, Algeria	Vancouver, B. C.	Ballast	6,791	4,906	
Great City	1	5	20	1	6	35	1	14	00	1	15	24	British	Empire Shipping Co	420	5	56	9	15	6	Cardiff England	Vancouver, B. C.	Ballast	7,029	5,478	
Port Caroline.	1	6	20	1	7	43	1	14	49	1	16	14	British	Com'lth & Dom. Line	480	0	62	0	24	9	New York, N. Y.	Brisbane, Australia	General	3,159	10,740	
Foreastbank	1	6	25	1	7	50	1	15	40	1	17	04	British	Andrew Weir & Co.	420	5	54	0	25	6	Tampa, Fla	Osaka, Japan	General	7,987	7,097	
Jane	1	6	25	1	7	50	1	15	40	1	17	04	British													
Christenson	1	7	03	1	8	30	1	15	45	1	17	04	American	Arrow Line	423	0	54	2	20	8	Baltimore, Md	Los Angeles, Calif	General	4,852	6,615	
Barah.	11	29	19	15	1	9	55	1	16	30	1	17	50	Dutch	Royal Neth. S. S. Co.	202	0	33	1	11	9	Cristobal, C. Z.	Buenaventura, Col.	General	2,980	1,183
Agwistar	12	100	20	1	11	30	1	18	10	1	20	00	American	Grace Line	370	0	53	1	20	0	New York, N. Y.	Buenaventura, Col.	General	3,224	5,523	
Washington	1	16	55	1	17	05	2	9	31	2	11	52	Japanese	Kokusai Kisen Kaisha.	385	0	51	0	21	0	Newport News, Va.	Yokohama, Japan	General, cotton	3,681	5,919	
Maru.	1	16	55	1	17	05	2	9	31	2	11	52	Japanese	H. C. Downey							Cristobal, C. Z.	Gatun, C. Z.	General	5,919	4,400	
Buccanero	1	16	55	1	17	05	2	9	31	2	11	52	Japanese													

Steel pipe, coal, and general.

Bananas, cocoa, and coffee.

Phosphates and cotton.

Tanker.

Home	16	20	29	17	15	30	13	00	30	16	15	British	Charlton S. S. Co.	Vancouver, B. C.	Lisbon, Portugal	Wheat	6,951	5,127	3,718
Levant Arrow	28	8 54	30	6 20	30	14 51	12-5	35	American	Standard Transp. Co.	468 3	62 7	27 0	Los Angeles, Calif	New York, N. Y.	(15)	11,176	9,744	7,039
Benelech	29	17 00	30	6 43	30	17 45	30	22 55	British	Wm. Thomson & Co.	410 0	54 1	23 6	Vancouver, B. C.	Birkenhead, Eng.	Lumber, wheat.	7,470	6,621	4,227
King Malcolm	29	18 00	30	7 19	30	18 12	30	18 12	British	Dodd, Thomson & Co.	400 0	59 0	25 0	Vancouver, B. C.	Manchester, Eng.	Wheat	8,387	7,367	5,561
Rio Diamante	30	3 00	30	8 09	30	18 35	12-1	1 30	British	Thompson S. S. Co.	400 0	56 2	24 0	Vancouver, B. C.	Hamburg, Germany	Wheat	8,053	7,357	4,583
Stockton	30	1 33	30	9 11	30	19 05	30	19 25	American	Gladstone Transp. Co.	425 8	57 0	28 0	Los Angeles, Calif	Baltimore, Md.	Crude oil	10,711	6,485	5,231
Canadian	30	9 50	30	10 37	30	20 00	12-1	00 20	British	Can. Nat. Steamships	400 0	52 0	21 0	Cairns, Australia	Halifax, N. S.	General	4,500	5,914	4,195
Commodore	30	16 15	12-1	6 24	12-1	12 40			British	Pacific Steam Nav. Co.	215 0	33 5	12 7	Champerico, Guat.	Cristobal, C. Z.	(16)	148	1,270	735
Salvador	30	21 30	1	6 30	1	13 45	1	13 45	American	Amer-Hawayan Line	404 6	53 9	26 0	Seattle, Wash.	Boston, Mass.	General	6,323	6,777	4,761
Voivoda Putnik	12-1	1 00	1	7 27	1	16 10	1	16 45	Yugoslav	Yugoslav-Amer. Nav. Co.	400 0	52 9	28 0	Antofagasta, Chile.	Azores	Nitrates	8,900	6,016	4,178
Orduna	1	5 15	1	8 33	1	16 05	1	23 25	British	Pacific Steam Nav. Co.	550 3	67 0	32 0	Talcahuano, Chile	Liverpool, England	General	7,233	17,140	12,015
Rio Dorado	1	1 00	1	8 33	1	16 05	1	23 25	British	Pacific Steam Nav. Co.	550 3	67 0	32 0	Portland, Ore.	Cork, Ireland	Wheat	7,700	6,189	4,509
Dochet	1	4 30	1	9 19	1	17 12	1	17 12	American	Thompson S. S. Co.	380 8	52 5	24 1	San Francisco, Cal.	New Orleans, La.	Lumber, general	5,463	5,705	4,167
Tudorstar	1	10 30	1	11 19	1	20 15	1	22 45	British	Redwood Line, Inc.	386 8	52 9	23 6	Vancouver, B. C.	Hull, England	Fruit, general	4,574	7,624	5,574
Asia	1	12 05	1	13 03	1	20 12	1	20 12	Danish	Blue Star Line	440 0	54 0	24 0	Vladivostok, Sib.	Copenhagen, Den.	General	9,350	7,396	5,587
American Star	1	13 40	1	14 56	1	22 15	2	2 10	American	East Asiatic Co.	425 0	55 0	27 0	Port Angeles Wash.	Norfolk, Va.	Lumber, general	6,307	5,699	4,167
										Charles Nelson & Co.	388 8	52 2	23 7	Port Angeles Wash.	Norfolk, Va.	Lumber, general	6,307	5,699	4,167

¹⁵ Gasoline and kerosene.

¹⁶ Coffee, wood, and general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
November 25.	Ulua	United Fruit Co.	Port Limon, Costa Rica.	November 25.	Cristobal	Panama R. R. S. S. Line	New York via Haiti.
November 26.	Maravi	United Fruit Co.	Puerto Colombia.	November 26.	Cartago	United Fruit Co.	New Orleans and waypoints.
November 26.	Toloca	United Fruit Co.	New York via Kingston.	November 26.	Maravi	United Fruit Co.	New York via Kingston.
November 26.	Nitonian	Leyland Line	Tunas de Zaza, Cuba.	November 27.	Nitonian	Leyland Line	Curacao and Cartagena.
November 27.	Mayari	United Fruit Co.	New York, N. Y.	November 27.	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.
November 28.	Surgeon Brothers	United Fruit Co.	Colon, R. P.	November 27.	Ulua	United Fruit Co.	New York via waypoints.
November 28.	Linda S.	Standard Fruit & S. S. Co.	New Orleans, La.	November 28.	Toloca	United Fruit Co.	Port Limon, Costa Rica.
November 28.	Granada	Elders & Fyffes, Ltd	Avonmouth, England.	November 28.	Linda S.	Surgeon Brothers	Bluefields, Nicaragua.
November 28.	Tilapa	United Fruit Co.	New York via Kingston.	November 28.	Mayari	United Fruit Co.	Puerto Colombia.
November 29.	Santa Marta	United Fruit Co.	Havre via waypoints.	November 29.	Santa Marta	United Fruit Co.	New York via waypoints.
November 29.	Flandre	French Line	Mobile, Ala.	November 29.	Tilapa	Elders & Fyffes, Ltd	Kingston, Jamaica.
November 29.	Pan-American Petroleum Co.	Pan-American Petroleum Co.	Tampico, Mexico.	November 29.	Anacuena	French Line	Colon, R. P.
November 29.	Anacuena	United Fruit Co.	Colon, R. P.	November 30.	Flandre	French Line	Havre via waypoints.
November 30.	Suriname	United Fruit Co.	Bocas del Toro, R. P.	November 30.	Granada	Standard Fruit & S. S. Co.	New Orleans and waypoints.
November 30.	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.	December 1.	Banan	United Fruit Co.	Port Limon, Costa Rica.
November 30.	Lalla	Gulf Caribbean S. S. Co.	New Orleans, La.	December 1.	Anacuena	United Fruit Co.	Colon, R. P.
December 1.	San Pablo	United Fruit Co.	New York via waypoints.	December 1.	Lalla	Gulf Caribbean S. S. Co.	Cartagena, Colombia.
December 1.	Anacuena	United Fruit Co.	Colon, R. P.	December 1.	Suriname	United Fruit Co.	New Orleans, La.
December 1.	Paragmina	United Fruit Co.	New Orleans via Habana.	December 1.	S. M. Spalding	Pan-American Petroleum Co.	Aruba, D. W. I.
December 1.				December 1.	San Pablo	United Fruit Co.	New York via Kingston.

¹⁷ Motor schooner. ¹⁸ Motor boat.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
November 26.	Circamola	Chiriqui Land Co.	Pto. Armuellas, R. P.	November 26.	Circamola	Chiriqui Land Co.	Pto. Armuellas, R. P.
November 27.	San Luis	Chiriqui Land Co.	Pto. Armuellas, R. P.	November 28.	San Luis	Chiriqui Land Co.	Pto. Armuellas, R. P.
November 27.	A. B. de Obarrío	Pacific Fruit Co.	Bayano River, R. P.	November 28.	A. B. de Obarrío	Pacific Fruit Co.	Panama Bay, R. P.
November 28.	Des Hermanos	A. Valdez	Bayano River, R. P.	November 28.	Des Hermanos	A. Valdez	Panama Bay, R. P.

¹⁹ Motor ship. ²⁰ Motor schooner.

* Other than ships passing through the Canal.

Tanker Traffic Through the Panama Canal in November, 1928.

During the month of November, 1928, 81 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 438,224, on which tolls of \$391,315.05 were collected. Cargo amounted to 433,952 tons. In point of net tonnage, tanker traffic for the past month showed a decrease of 19.0 per cent under the same traffic for the corresponding month a year ago, while cargo tonnage decreased 11.7 per cent under the cargo tonnage of November, 1927.

Tank ships comprised 15.3 per cent of the total commercial transits through the Canal during the month; made up 17.6 per cent of the total Panama Canal net tonnage; were the source of 17.5 per cent of the tolls collected; and carried 17.3 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of November, 1928, segregated by direction of transit and nationality of vessels, are shown in the following tabulations, with comparative totals for the two preceding months and for November, 1927:

Nationality.	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	11	61,369	\$46,474.74	9,244
Danzig.....	2	12,401	8,928.72	.....
Norwegian.....	2	8,265	5,950.80	.....
Swedish.....	1	6,295	4,532.40	.....
United States.....	21	116,282	83,723.04	.....
Totals, November, 1928.....	37	204,612	149,609.70	9,244
Totals, October, 1928.....	48	246,410	181,883.99	32,050
Totals, September, 1928.....	41	235,793	171,293.73	9,015
Totals, November, 1927.....*	50	281,063	203,739.65	7,448
<i>Pacific to Atlantic.</i>				
British.....	7	32,758	35,847.85	59,862
Danzig.....	2	12,465	13,130.00	22,627
Dutch.....	2	6,724	7,352.50	13,154
French.....	1	4,545	4,995.00	8,019
Norwegian.....	1	5,822	6,096.25	10,156
United States.....	31	171,298	174,283.75	310,890
Totals, November, 1928.....	44	233,612	241,705.35	424,708
Totals, October, 1928.....	34	198,107	200,340.90	358,076
Totals, September, 1928.....	48	259,927	268,061.25	482,630
Totals, November, 1927.....	46	259,990	266,590.80	484,015

Of the total tanker traffic shown above, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for November, 1927:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
November, 1928.....	29	160,638	115,659.36	.....
October, 1928.....	36	186,866	135,890.77	.....
September, 1928.....	28	161,006	115,924.32	.....
November, 1927.....	38	220,128	158,492.16	.....
<i>From Los Angeles.</i>				
November, 1928.....	33	174,578	180,329.10	317,050
October, 1928.....	23	134,002	131,918.40	232,617
September, 1928.....	35	187,938	191,746.25	345,357
November, 1927.....	31	173,486	176,863.75	327,064

Executive Order.**For the Government of Corozal Hospital.**

By virtue of the authority vested in me I hereby establish the following order for the Canal Zone governing Corozal Hospital, amending the Executive Order promulgated May 10, 1911, to read as follows:

SECTION 1. The Panama Canal asylum for the insane shall be at Corozal Hospital, under the jurisdiction of the Health Department. Its object shall be the shelter and curative treatment of the insane.

SEC. 2. The Superintendent of Corozal Hospital shall be the administrative chief of the asylum, subject to existing laws and orders and to such rules and regulations as may be issued by the Health Department in accordance with existing laws and orders. He shall have the supervision over the professional and administrative personnel of the asylum and over the inmates, and he shall satisfy himself that all patients receive the care and medical treatment which are best adapted to their comfort and recovery.

He shall see that a proper register of each patient is kept, showing name, previous residence, occupation, origin and antecedents, and condition at the time of admission; and he shall keep a record of their mental and physical condition, as well as the medical treatment they receive during the time of their stay in the asylum. The death or discharge of patients shall be entered in the register.

SEC. 3. No person declared to be insane shall be kept in jail, prison, hospital for the sick, or other similar institution, except on written authority of the Superintendent of Corozal Hospital, which authority shall state the reason therefor.

SEC. 4. Except as provided for in sections 14 and 15, no person shall be admitted as a patient in the asylum for the insane except upon the order of the District Judge of the Canal Zone, provided that if a patient is in a state of violent insanity he may be admitted at once by the Superintendent of Corozal Hospital, without an order from the Court, into the quarters provided for the observation of persons alleged to be insane, upon the written request of any physician employed by the United States Government; or such patient may be admitted to the observation quarters by said Superintendent upon his own authority.

It shall be the duty of the Superintendent of Corozal Hospital to file a written report with the Clerk of the District Court within twenty-four hours after the patient has been admitted to the observation quarters, which report shall set out the name, age, and physical condition of patient, together with name of physician attending patient at time of admittance, and as soon as the clerk shall have received the report, he shall enter it upon the docket and the District Judge shall proceed to examine and determine the case in like manner as if the petition had been presented to him prior to the patient's admission into observation quarters.

SEC. 5. To obtain the judicial order provided for in the preceding section, it shall be necessary for the nearest relative of the person alleged to be insane to present a petition, duly subscribed and sworn to by the petitioner, to the Judge of the District Court of the Canal Zone, which petition shall state the sex, age, and nationality of patient, if known, and the facts showing patient's mental infirmity, and, if possible, the history of the case and the form of insanity with which he is suffering and the attending circumstances making it necessary that he be confined in the asylum. The petition shall be accompanied by a certificate signed by one or more reputable physicians to the effect that such person is insane.

When the nearest relatives of the person alleged to be insane are absent or refuse to act, the petition may be made by any person residing within the Canal Zone, and in that event the petitioner shall state that the nearest relatives of the patient are absent or refuse to act.

SEC. 6. The petition provided for in the preceding section shall take precedence over all other matters pending before the court and shall be heard by the Judge thereof without delay, and if the facts stated therein are sufficient to satisfy him of the insanity of the person sought to be confined, he shall issue orders at once directing that the person alleged to be insane be taken in custody for observation.

SEC. 7. The order of the Judge directing that the person alleged to be insane be placed under observation shall be sufficient authority for the Superintendent of Corozal Hospital to admit the patient into the asylum for the purpose of observation, there to remain until the observation is concluded; and the Judge shall direct in said order that, if the observation shall show that the patient is not insane, he shall be set at liberty at once, and the Superintendent of Corozal Hospital shall forthwith report his action thereon to the Judge who issued the order.

The observation of the alleged insane person shall be made in suitable quarters within the asylum grounds by the Superintendent of Corozal Hospital, or under his

direction, and shall be for a period of not more than thirty days, and the Judge who issues the order for the detention of the patient shall require the Superintendent to make reports thereon.

It shall be the duty of the physician in charge of the observation to examine the patient and observe the symptoms of the case. Within thirty days after the patient is placed under observation, the Superintendent shall make a report in writing, stating whether the patient is sane or insane; the report shall contain a statement of the facts upon which the opinion is based, and shall be immediately filed with the clerk of the court.

SEC. 8. It shall be the duty of the Court to render final judgment therein, either committing the patient to the asylum, or ordering his discharge, or directing that he be turned over to his relatives who are able and willing to take care of him.

SEC. 9. The relatives of the person alleged to be insane, or the District Attorney, may appear and contest the report of the Superintendent, and in such cases the Judge shall hear the evidence presented by the parties and render judgment thereon, as provided in section eight.

SEC. 10. Any person interested in an inmate of the asylum, who believes such inmate is improperly detained therein, may make application to the District Judge for the discharge of such patient. Upon receipt of such application the Judge shall issue an order to the Superintendent, Corozal Hospital, to make a report on the patient's condition, and upon the receipt of such report shall consider the case, and, in his discretion, may grant or deny the application. The Judge may cause the patient to be examined by two competent physicians who shall report in writing as to the condition of the patient.

SEC. 11. A patient serving a sentence for the violation of the criminal laws of the Canal Zone shall be discharged from the Hospital upon the order of the District Court. All other patients may be discharged by the Superintendent. He shall file with the clerk of the court a written statement that in his judgment such patient has recovered, or that the discharge will not be detrimental or dangerous to the public welfare or injurious to the patient, provided that before discharging any patient who has not recovered, the Superintendent shall satisfy himself by adequate investigation that the relatives or friends of the patient are able and willing to receive and care for such patient.

No patient shall be discharged from the Hospital without suitable clothing.

SEC. 12. If any person confined in a prison or penitentiary under the sentence of a court becomes insane, he shall be committed to the asylum for the insane by the Judge of the District Court. In all such cases the provisions of this order relating to the period of observation of the patient and the trial of the issue as to his insanity shall be observed. Whenever a person is committed to the insane asylum under the provisions of this section, the order of commitment issued by the court shall include a statement of the offense of which the person was convicted, the term of his imprisonment and the date upon which said term is to expire. Should such person be discharged from the insane asylum before the date of the expiration of his term of imprisonment, he shall be returned to the penal institution from which he was taken.

SEC. 13. Nothing contained in this order shall be construed to repeal or modify the provisions of the Code of Criminal Procedure of the Canal Zone relating to the inquiry into the insanity of the defendants before trial or after conviction.

SEC. 14. Insane patients from the Republic of Panama may be admitted into the asylum for the insane in accordance with the existing agreements between the Canal Zone authorities and the Panaman authorities, or under such changes and modifications of said agreement as may be made from time to time.

SEC. 15. The Superintendent of Corozal Hospital is authorized to receive as patients, members of the Army, Navy, and Marine Corps, for observation, and care pending their transfer to the United States, upon the order of the Commanding General of the Panama Canal Department, United States Army, or the Commandant of the 15th Naval District of the United States Navy, or other competent naval authority in the case of naval vessels in Canal Zone waters which are not under the jurisdiction of the 15th Naval District.

SEC. 16. The Governor of The Panama Canal is hereby authorized to make rules and regulations necessary for the carrying out of the provisions of this order.

SEC. 17. This order shall take effect thirty days from this date.

CALVIN COOLIDGE

THE WHITE HOUSE,

November 3, 1928.

New Monthly Record for Rainfall at Balboa Heights.

During the month of November, a total of 20.5 inches of rain fell at Balboa Heights, which exceeds the previous record at this station for November (1920), by 1.28 inches and exceeds the high record for any month in the past 32 years by 0.23 inch. The previous highest rainfall, 20.27 inches, occurred in October, 1900. In establishing this new record, more than twice the normal amount of rain fell in November, 9.92 inches being the average.

The unusually heavy rainfall occurred at Balboa Heights and vicinity only, other points on the Isthmus reported rainfall slightly below normal. The 57 year average at Cristobal for November is 21.42 inches, and the highest month of record (November, 1862) is 43.01 inches.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending December 1, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Grootendijk	Holland-American Line	November 18	November 18		62
Pastores	United Fruit Co.	November 18	November 18	57	759
Heredia	United Fruit Co.	November 18	November 19	644	65
Hans Arp	Royal Netherlands S. S. Co.	November 18	November 19	819	(*)
James McGee	Standard Shipping Co.	November 18	November 19	15,700	(*)
Cid	Pacific Steam Navigation Co.	November 18	November 20	146	303
Santa Teresa	Grace Line	November 19	November 19	(*)	4
Santa Cruz	Grace Line	November 19	November 19	200	162
Loriga	Pacific Steam Navigation Co.	November 19	November 20	61	78
Rugia	Hamburg-American Line	November 19	November 20	(*)	282
Ulua	United Fruit Co.	November 19	November 21	950	19
August Leonhardt	Colombian Transport Co.	November 20	November 21	50	(*)
Wanks	Standard Fruit & S. S. Co.	November 21	November 21		11
Venezuela	Royal Netherlands S. S. Co.	November 21	November 21	58	(*)
Carmania	R. Feuillebois	November 21	November 21	(*)	31½
Suriname	United Fruit Co.	November 21	November 22	592	48
Zacapa	United Fruit Co.	November 21	November 22	434	1,244
Portland	Hamburg-American Line	November 21	November 22	6½	272
Pacific Pioneer	Furness, Withy & Co.	November 21	November 22	(*)	339
Gatun	Standard Fruit Co.	November 21	November 23	247	805
Mantaro	Peruvian Line	November 21	November 23	1,865	(*)
Cristobal	Panama Railroad S. S. Line	November 21	November 21	3,496	
Borga	Fred Olsen & Co.	November 22	November 22	(*)	15
Orbita	Pacific Steam Navigation Co.	November 22	November 22	86	197
Frankenwald	Hamburg-American Line	November 22	November 22	19	10
Teutonia	Hamburg-American Line	November 22	November 22	127	64
Nariva	Royal Mail Steam Packet Co.	November 22	November 23	58	91
Finn	Colombian Transport Co.	November 22	November 23	100	(*)
Virgilio	Italian Line	November 22	November 23	341	(*)
West Camargo	McCormick S. S. Co.	November 22	November 23	200	(*)
Coppenname	United Fruit Co.	November 22	November 22	65	¾
Wyneric	Anglo-Saxon Petroleum Co.	November 22	November 24	6,551	(*)
Baarn	Royal Netherlands S. S. Co.	November 22	November 24	350	353
Esparta	United Fruit Co.	November 22	November 22	1,013	
Dungannon	Texas Oil Co.	November 23	November 24	6,800	(*)
Wanks	Standard Fruit & S. S. Co.	November 23	November 23	120	
La Marseilles	French Line	November 23	November 24	133	34
Venezuela	Royal Netherlands S. S. Co.	November 23	November 24	(*)	664
Wayfarer	Harrison Line	November 23	November 24	595	
Vaba	T. P. Galliger & Co.	November 24	November 24	7,670	
Georgie	French Line	November 24	November 24	81	9
Amsterdam	Royal Netherlands S. S. Co.	November 24	November 24	75	(*)
Durazo	Hamburg-American Line	November 24	November 24	816	
Commodore Rollins	United Fruit Co.	November 24	November 24	(*)	347
Almagro	Pacific Steam Navigation Co.	November 24	November 24	58	
Cartago	United Fruit Co.	November 24	November 24	230	
Chiman	National Navigation Co.	November 24	November 24		304
Aconcagua	Chilean Line	November 21	November 21	(*)	250
Cristobal	Panama Railroad S. S. Line	November 25	November 25		2,251
Almagro	Pacific Steam Navigation Co.	November 25	November 25		18
Cartago	United Fruit Co.	November 25	November 26		34
Noorderdijk	Holland-American Line	November 25	November 26	800	(*)
Ulua	United Fruit Co.	November 25	November 27	40	249
Guatemala	Panama Mail S. S. Co.	November 25	November 27	517	733
Teno	Chilean Line	November 26	November 26	(*)	28
Maravi	United Fruit Co.	November 26	November 26	19	514
Nitonian	Leyland Line	November 26	November 27	(*)	154
Tolosa	United Fruit Co.	November 26	November 28	639	352

* No cargo discharged.

* No cargo laded.

* 1 case.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z.—Continued.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Mantaro.....	Peruvian Line.....	November 26.	November 28.	(¹)	279
Martha.....	Chr. Hannevig.....	November 26.	November 30.	(¹)	519
Montevideo Maru.....	Osaka Shesen Kaisha.....	November 27.	November 27.	21	(²)
Wanks.....	Standard Fruit & S. S. Co.....	November 27.	November 27.		11
Durazzo.....	Hamburg-American Line.....	November 27.	November 27.		842
Mayari.....	United Fruit Co.....	November 27.	November 28.	379	442
Cali.....	North German Lloyd.....	November 27.	November 27.	789	
Jamaica.....	Pacific Steam Navigation Co.....	November 27.	November 28.	397	
Linda S.....	R. Feuillebois.....	November 28.	November 28.	(¹)	34
Santa Marta.....	United Fruit Co.....	November 28.	November 29.	726	627
Esparta.....	United Fruit Co.....	November 28.	November 29.		711
Taormina.....	Italian Line.....	November 28.	November 29.	157	423
Heluan.....	Hamburg-American Line.....	November 28.	November 30.	330	205
Hessen.....	Hamburg-American Line.....	November 28.	November 30.	67	656
Granada.....	Standard Fruit Co.....	November 28.	November 30.	857	660
La Perla.....	United Fruit Co.....	November 29.	November 29.	1,270	
S. M. Spalding.....	Huasteca Petroleum Co.....	November 29.	December 1.	10,100	(²)
City of San Francisco.....	Panama Mail S. S. Co.....	November 29.	November 30.		3,260
Flandre.....	French Line.....	November 29.	November 30.	227	324
Cauca.....	National Navigation Co.....	November 29.	November 29.	257	
Aeohen.....	North German Lloyd.....	November 29.	November 30.	67	119
Lippe.....	North German Lloyd.....	November 29.	November 30.	507	120
Baralt.....	Royal Netherlands S. S. Co.....	November 29.	December 1.	553	280
Banan.....	United Fruit Co.....	November 29.	December 1.	(¹)	82
Mineola.....	N. O. & S. A. S. S. Line.....	November 29.	November 30.	125	57
Wanks.....	Standard Fruit & S. S. Co.....	November 30.	November 30.	80	
Laila.....	Gulf-Caribbean S. S. Co.....	November 30.	December 1.	40	(²)
Levant Arrow.....	Standard Transportation Co.....	November 30.	December 1.	1,025	(²)
Suriname.....	United Fruit Co.....	November 30.	December 1.	107	675
Parismina.....	United Fruit Co.....	December 1.	December 1.	724	
Orduna.....	Pacific Steam Navigation Co.....	December 1.	December 1.	5	126½
San Pablo.....	United Fruit Co.....	December 1.	December 1.	154	
Salvador.....	Pacific Steam Navigation Co.....	December 1.	December 1.	148	
Canadian Commander.....	Canadian National Steamships.....	November 30.	December 1.	44	(¹)
Colombia.....	Panama Mail S. S. Co.....	November 27.	November 28.	410	210

* No cargo discharged.

* No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending December 1, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Colombia.....	Panama Mail S. S. Co.....	November 26.	November 27.	162	
Guatemala.....	Grace Line.....	November 27.	November 27.	26	3
Levant Arrow.....	Standard Transportation Co.....	November 29.	November 30.	1,000	
President Van Buren.....	Dollar Line.....	November 30.	November 30.	9	
Mineola.....	N. O. & S. A. S. S. Co.....	November 30.	November 30.	30	
City of San Francisco.....	Panama Mail S. S. Co.....	November 30.	November 30.		1
Ruahina.....	New Zealand Shipping Co.....	December 1.	December 4.	5	

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 13 years of operation.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
For steamships, including warships of all nations when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.....	11.00	14.00

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, White male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat....	Tuesdays, Thursdays, and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m.; Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Section "B:"	
Ward 5, Male, private rooms, American boys.....	Daily, 9.30 to 11 a. m.; 2.00 to 4.30 p. m.;
Ward 6, Foreign, male and female, private rooms, American girls.....	6.30 to 8.00 p. m.
Ward 7, White female, private rooms.....	(No visitors permitted in nursery.)
Ward 8, Obstetrical department, white females (Nursery).....	
Section "C:"	
Ward 9, White foreign, male.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p. m.
Ward 11, Colored, male, surgical.....	
Ward 12, Colored, male, medical, eye and ear.....	
Ward 13, Colored, male, G. U.....	
Ward 14, American, male, G. U.....	
Section "D:"	
Ward 15, American, male, surgical.....	Tuesdays, Thursdays, and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m.
Ward 16, American, male, medical, eye and ear.....	Sundays and holidays, 9.30 to 11 a. m.; 2.00 to 4.00 p. m.
Ward 17, Colored children.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p. m.
Ward 18, White children.....	Daily, 9.20 to 11 a. m.; 2 to 4 p. m.
Ward 19, Colored, female, medical.....	} Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p. m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation.....	No visitors permitted except to visit tuberculosis patients, Thursdays, Sundays, and holidays, 1.30 to 3 p. m.

Permission to visit outside of visiting hours will be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

Tolls Charges for Transit of The Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity..... \$1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity..... .72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton..... .50
4. 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
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton.
6. Vessels returning from Gatun Lake to original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office
at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., December 12, 1928. No. 19.

Dollar Line Announces Expansion Program.

The Dollar Steamship Company has announced the awarding of a contract to the Newport News Shipbuilding Company for increasing the passenger accommodations on three of the company's round-the-world liners and for completely remodeling the passenger quarters of the steamship *President Johnson*, formerly the Panama Pacific Liner *Manchuria*. The first of the vessels now in service to go into the yards will be the steamship *President Harrison*, on her arrival at New York in January. She will be replaced on the run by the steamship *President Johnson*. Upon completion of the work on the *President Harrison* it will be reentered in the world tour service and another vessel on the line will be sent into the yards. *

Delivery of the steamship *Mongolia*, now in the intercoastal run of the Panama Pacific Line, and recently purchased by the Dollar Line, is expected within a few months. The vessel will be renamed and is to undergo alterations similar to those now under way on the steamship *President Johnson*.

In connection with the expansion program of the Dollar Line, it is reported that plans and specifications are being prepared for the three ships the company purposes building and bids will be asked for in a short time.

The Dollar Line at present has fortnightly sailings through the Panama Canal in the around-the-world service.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 7, 1928.

No. 494.

The following was received by the Hydrographic Office through the Captain of the Port, Cristobal:

BUENAVENTURA, COLOMBIA, December 3, 1928.

Repairs to Las Palmas light finished. Light again in operation.

(Signed) T. LOPEZ, Captain of the Port.

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 11, 1928.

No. 496

The following was received by the Hydrographic Office through the Colon radio:

S. S. *August Leonhardt*, December 8th—A two-masted schooner was sunk in a collision in Buenaventura River. The wreck is lying north 53° east true, 2 miles from Sollado Point, right in the steamship track and is very dangerous to navigation. Masts are showing about three meters above water. A light was not exhibited when we passed Saturday afternoon.

(Signed) B. SIEVERS,
Second Officer, *August Leonhardt*.

J. L. SCHLEY,
Acting Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, December 8, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Hawaiian	1	19.30	2	6.08	2	12.41	2	13.42	American	Amer-Hawaiian Line.	404.0	54.0	20.3	Boston, Mass.	Portland, Oreg.	General	3,975	6,766	4,767
S. C. T. Dodd	1	20.55	2	6.18	2	13.17	2	14.25	American	Standard Oil Co.	425.0	57.0	19.6	New York, N. Y.	Los Angeles, Calif.	Ballast	7,481	4,975	
Chelan	2	6.20	2	7.32	2	13.55	2	18.08	American	U. S. Government	337.5	42.0	15.0	Roseton, Mass.	Seattle, Wash.	Ballast			
Omphale	2	4.55	2	11.20	2	17.37	2	19.08	French	French Line	422.4	53.5	20.9	Roseton, France	Los Angeles, Calif.	Ballast	6,871	4,635	
Astoria	2	13.20	2	13.40	2	19.45	2	21.10	Danish	Canadian Transp. Co.	378.6	53.5	19.4	Corner Brook, N.F.	Portland, Oreg.	Paper	4,407	6,241	4,583
Superior	2	19.38	2	19.55	2	11.42	2	15.20	American	Transmarine Lines	324.0	46.2	22.0	Mobile, Ala.	Seattle, Wash.		4,406	3,984	2,612
Trautman	2	19.50	2	20.05	3	12.55	3	14.15	British	Andrew Weir & Co.	400.0	52.0	21.11	Galveston, Texas	Melbourne, Australia	Sulphur	6,629	5,804	4,066
Edgar Quinet	11-23	7.10	3	6.12	3	13.45	3	15.20	French	French Government	521.0	70.5	28.0	Trinidad, B. W. I.	San Francisco, Cal.	Ballast			
S-16 s.			3	6.20	3	14.50			American	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.				
O-7 s.			3	6.20	3	14.50			American	U. S. Navy	172.4	18.0		Cristobal, C. Z.	Balboa, C. Z.				
O-9 s.			3	6.20	3	14.50			American	U. S. Navy	172.4	18.0		Cristobal, C. Z.	Balboa, C. Z.				
O-6 s.			3	6.20	3	15.05			American	U. S. Navy	172.4	18.0		Cristobal, C. Z.	Balboa, C. Z.				
O-8 s.			3	6.20	3	15.05			American	U. S. Navy	172.4	18.0		Cristobal, C. Z.	Balboa, C. Z.				
O-10 s.			3	6.20	3	15.05			American	U. S. Navy	172.4	18.0		Cristobal, C. Z.	Balboa, C. Z.				
Pacific	12-3	1.25	3	7.12	3	15.45	3	20.36	American	Argonaut S. S. Co.	400.0	56.0	23.6	Baltimore, Md.	Tacoma, Wash.	General, steel	7,328	6,517	4,723
Dio	3	1.45	3	7.42	3	16.20	3	18.30	American	Redwood Line	380.0	52.0	17.0	New Orleans, La.	San Francisco, Cal.	General	2,914	5,708	4,131
Brandanger	3	9.10	3	9.45	3	16.26	3	18.32	Norwegian	Westfal, Larsen & Co.	381.6	53.6	18.0	Buenos Aires, Arg.	Vancouver, B. C.	General	2,990	6,289	4,722
Vikingstar	3	10.30	3	10.45	3	17.49	4	18.00	British	Blue Star Line	401.0	52.0	19.6	Ilave, France	Vancouver, B. C.	Ballast	6,870	4,909	
Saale	3	11.35	3	11.55	3	18.57	3	20.00	German	North German Lloyd	470.0	61.1	22.11	Hamburg, Germany	Vancouver, B. C.	General	4,885	9,335	6,844
Bagaduce	3	18.15	3	18.30	4	9.34	4	10.46	American	U. S. Navy	149.3	30.0		Cristobal, C. Z.	Balboa, C. Z.				
Hanley	4	3.20	4	6.20	4	13.45	4	15.20	Norwegian	Fern Line	380.0	56.0	25.0	New York, N. Y.	Seattle, Wash.	General	9,518	8,310	6,005
Fernellif	4	5.05	4	6.20	4	14.38	4	15.20	British	Hunting & Son	380.0	53.6	24.4	Kobe, Japan	Los Angeles, Calif.	Ballast	6,488	6,112	4,284
Sylvanfield	4	5.05	4	6.20	4	14.38	4	15.20	British	J. & J. Denholm, Ltd.	380.0	53.6	24.4	Newcastle, England	Los Angeles, Calif.	Ballast	5,900	3,993	
Holmark	3	22.25	4	7.20	4	14.58	4	16.35	British	Ore S. S. Corp.	423.5	56.0	18.0	Porto Fernio, Italy	Arica, Chile	Ballast	6,419	4,659	
Americaland	4	8.25	4	8.45	4	15.45	4	21.40	Swedish	Richfield Oil Co.	561.0	72.2	21.6	Baltimore, Md.	Cruz Grande, Chile	Ballast	15,560	4,496	
Pat Doherty	4	12.05	4	12.20	4	20.08	4	21.15	American	Richfield Oil Co.	430.2	59.2	20.0	Bayonne, N. J.	Los Angeles, Calif.	Ballast	7,978	5,840	
Glenworth	4	12.25	4	12.35	4	20.58	4	22.20	British	J. H. Winchester	450.0	55.5	16.6	Manchester, Eng.	Vancouver, B. C.	Ballast	7,999	5,867	
Galveston	4	4.55	4	13.14	4	21.30			American	U. S. Navy	292.0	44.5	18.0	Nicaragua	Balboa, C. Z.				
Texas Mari.	4	4.55	4	13.14	4	21.30			American	U. S. Navy	292.0	44.5	18.0	Nicaragua	Balboa, C. Z.				
K. R. Kingsbury	4	7.30	5	6.10	5	13.10	5	12.20	Japanese	Kokusai Kisen Kaisha	425.0	53.6	27.0	Galveston, Texas	Nagasaki, Japan		6,869	6,899	5,139
Neveadan	4	23.45	5	6.10	5	13.10	6	2.30	American	Standard Oil Co.	440.0	53.2	19.3	Baton Rouge, La.	Los Angeles, Calif.	Gasoline	(¹⁰)	9,033	5,938
Bowes Castle	5	3.05	5	9.30	5	17.31	5	16.30	British	Amer-Hawaiian Line	460.0	57.8	20.6	Boston, Mass.	Seattle, Wash.	General	2,650	6,829	4,627
Cal.	11-27	17.25	5	10.40	4	18.11	5	21.12	German	James Chambers & Co.	418.0	56.0	23.10	New York, N. Y.	Hongkong, China	General, case oil	5,800	6,675	4,718
Horace Luckenbach	12-5	9.05	5	12.10	5	18.30	5	22.27	American	North German Lloyd	228.0	32.0	14.8	Cristobal, C. Z.	Buenaventura, Col.	General	290	1,105	698
Sejoita			5	10.05	5	17.31			American	Lukenbach Line	445.0	58.0	21.6	Boston, Mass.	Seattle, Wash.	General	4,556	8,699	6,363
Oride	5	17.00	6	9.01	6	10.15	6	10.15	American	Quaker Line	410.5	54.2	19.0	Cristobal, C. Z.	Balboa, C. Z.	General	4,137	6,755	4,873

¹⁰ Towing barge. ¹¹ Cotton and scrap iron. ¹² Cotton, pig iron, and general. ¹³ Pig iron, and general. ¹⁴ Submarine. ¹⁵ Motor ship. ¹⁶ Tanker. ¹⁷ Coast Guard cutter. ¹⁸ Cruiser.

Asel Johnson	5	13	50	6	6	10	6	12	55	6	18	15	Swedish	Johnson Line	409	0	52	6	21	4	Gotteburg, Swed	San Francisco, Cal.	4,692	6,642	4,860	
Polaric	5	20	15	6	6	20	6	13	50	6	15	35	British	Bank Line, Ltd	376	5	52	1	28	0	New York, N. Y.	Seattle, Wash.	7,224	8,255	5,944	
Orient	6	3	05	6	7	10	6	14	24	6	15	35	American	Oriental Navigation Co.	461	5	52	0	17	3	Newport News, Va.	Seattle, Wash.	6,200	7,750	5,805	
Wilkeno.	6	5	10	6	7	20	6	14	54	6	15	35	American	Williams S. S. Line	415	0	55	6	21	5	Norfolk, Va.	Seattle, Wash.	6,200	7,750	5,805	
Linton	6	6	45	6	8	25	6	15	14	7	3	02	British	Avenue Shipping Co.	375	0	52	0	19	0	New York, N. Y.	Surva, Fiji Islands.	3,084	6,217	4,680	
Queenswood	6	7	45	6	8	25	6	15	14	7	3	02	British	J. Constantine S. S. Line	375	0	56	0	20	0	New York, N. Y.	Puntarenas, C. R.	3,084	6,217	4,680	
Jamaica	11-27	17	30	6	9	20	6	17	01	6	18	15	British	Damon S. S. Co.	223	0	24	0	13	7	Cristobal, C. Z.	Champerico, Guat	5,500	4,973	3,581	
Pacific Pine	12-6	9	50	6	10	00	6	17	25	6	18	25	American	Pacific Steam Nav. Co.	223	0	24	0	13	7	New York, N. Y.	Seattle, Wash.	776	1,187	622	
Guayquil	4	21	00	6	10	35	6	17	47	6	18	52	American	Panama R. S. S. Line.	251	0	54	3	17	0	New York, N. Y.	Guayquil, Ecuador	4,080	6,583	4,808	
Tredinnick	6	6	50	6	11	05	6	17	47	6	19	40	British	Hain S. S. Co.	400	8	52	1	19	0	Montreal, Canada.	Geelong, Australia	1,638	2,874	1,944	
La Perla	6	6	10	6	14	15	6	20	12	6	21	24	American	United Fruit Co.	325	2	48	1	20	5	Perme, R. P.	San Francisco, Cal.	2,620	6,004	4,469	
Royal Arrow	6	18	15	6	18	20	7	11	02	7	12	05	American	Standard Transp. Co.	467	6	62	7	18	0	New York, N. Y.	Los Angeles, Calif	362	4,033	2,261	
Oroya	6	16	50	7	6	08	7	13	24	7	14	40	British	Pacific Steam Nav. Co.	525	0	62	3	25	6	Liverpool, England	Valparaiso, Chile	4,551	13,137	9,067	
Mississippi	5	22	40	7	6	25	7	11	11	7	15	45	French	French Line	410	0	52	4	20	0	Havre, France	Talcahuano, Chile	2,447	7,156	4,984	
Utacurion	4	19	45	7	7	00	7	14	42	7	14	45	American	Union Oil Co.	435	0	56	0	17	8	Cristobal, C. Z.	Los Angeles, Calif	1,269	1,680	986	
Banan.	5	21	35	7	7	30	7	15	57	7	17	15	Norwegian.	United Fruit Co.	250	0	34	7	16	9	Port Limon, C. R.	Puntarenas, C. R.	1,269	1,680	986	
Perene	6	9	20	7	7	30	7	15	57	7	17	15	Peruvian	Peruvian Line	270	0	39	0	15	6	New York, N. Y.	Callao, Peru	1,670	2,168	1,529	
Norwich City	6	26	00	7	8	35	7	16	31	7	22	24	British	Canadian Transp. Co.	397	0	53	0	24	6	Guantanamo, Cuba	San Francisco, Cal.	2,544	6,051	4,514	
Arizona	7	00	10	7	8	35	7	16	31	7	22	24	British	French Line	425	0	51	8	21	0	Havre, France	Vancouver, B. C.	2,720	7,097	4,936	
Ebro	6	23	10	7	10	00	7	17	20	7	18	25	British	Pacific Steam Nav. Co.	450	0	57	0	25	11	New York, N. Y.	Talcahuano, Chile	4,105	9,291	6,301	
Canadian Mil-	7	2	00	7	9	55	7	17	40	7	21	30	British	Can. Nat. Steamships	400	3	52	0	22	5	Montreal, Canada.	Vancouver, B. C.	6,880	5,892	4,186	
ter	7	23	45	7	10	10	7	18	22	7	19	37	Swedish	Colombian Mari. Co.	256	0	39	0	14	0	New York, N. Y.	Buenaventura, Col.	566	7,715	5,562	
Britic	7	9	10	7	11	05	7	19	10	7	21	50	American	Sun Oil Co.	429	3	59	2	19	0	Philadelphia, Pa.	Los Angeles, Calif	7,715	5,562	4,186	
Brunswick	7	8	20	7	11	35	7	20	05	7	23	30	Panama.	Atlantic Oil Ship. Co.	471	0	63	0	22	0	London, England	Los Angeles, Calif	7,915	4,797	4,144	
Spondilus	7	10	05	7	12	32	7	20	27	7	23	30	British	Anglo-Saxon Pet. Co.	440	4	59	5	0	22	0	Amsterdam, Holl.	Los Angeles, Calif	7,915	4,797	4,144
Peterson	7	11	45	7	12	32	7	20	27	7	23	30	British	E. Stoddard & Clayton.	400	0	52	3	16	6	Marsailles, France	Vancouver, B. C.	8,805	6,497	4,246	
Lema	7	3	20	7	14	26	7	21	40	7	23	15	Italian	N. V. Libera-Friesma	450	0	57	0	17	10	Trieste, Italy.	Vancouver, B. C.	2,429	5,959	4,246	
Fernmoor.	7	13	18	7	20	30	8	9	20	8	10	30	British	Empire Shipping Co.	399	9	52	9	15	0	Liverpool, England	Vancouver, B. C.	6,898	3,357	1,887	
Unbe Mendi	7	15	00	7	21	10	8	9	56	8	11	22	Spanish	Sota and Aznar	376	0	50	0	13	0	Sagunto, Spain.	Guaymas, Mexico	6,898	3,357	1,887	
Radnorshire	7	14	45	8	6	08	8	13	25	8	15	20	British	Royal Mail S. P. Co.	412	0	55	6	19	3	Rotterdam, Holland	Vancouver, B. C.	408	238	163	
Cauca	11-20	22	55	8	6	03	8	13	14	8	15	20	Colombian.	National Navigation Co.	107	2	22	0	11	0	Cristobal, C. Z.	Buenaventura, Col.	5,998	6,095	4,381	
Filleigh.	12-17	23	8	6	20	8	14	12	8	15	20	British	W. J. Taren.	395	0	55	0	15	0	0	Alexandria, Egypt.	Vancouver, B. C.	2,161	5,673	4,153	
Hovick Hall	7	19	40	7	7	05	8	16	36	8	18	00	American	U. S. Steel Products Co.	400	0	51	0	26	0	Philadelphia, Pa.	Corral, Chile	5,998	6,095	4,381	
Bloemfontein.	8	40	10	8	7	30	8	15	32	8	18	00	British	Norton, Lilly & Co.	401	0	50	0	20	5	New York, N. Y.	Auckland, N. Z.	2,161	5,673	4,153	
Eastern City	8	2	50	8	7	40	8	15	32	8	20	07	British	Egger Fort & Parker.	400	0	53	0	15	6	Barry, England	Vancouver, B. C.	6,280	6,996	5,042	
Yonachichi	8	3	30	8	8	20	8	17	15	8	21	25	American	Roosevelt, S. S. Co. B.	402	0	54	0	25	0	Baltimore, Md	Shanghai, China	6,280	6,996	5,042	
City of Tokio.	8	3	50	8	8	30	8	18	10	8	19	25	British	Ellerman Lines, Ltd	442	0	58	0	27	0	New York, N. Y.	Fremantle, Aust'lia	5,054	9,085	6,933	
William H.	8	4	05	8	9	05	8	18	01	8	19	20	American.	Huasteca Petroleum Co.	435	0	56	2	21	0	Norfolk, Va.	Los Angeles, Calif	7,406	5,111	4,621	
Doheny	8	6	35	8	9	40	8	18	43	8	20	07	American	Luckenbach Line.	401	0	52	0	22	6	New Orleans, La.	Seattle, Wash.	5,598	6,092	4,621	
Florence Luck-	8	6	35	8	9	40	8	18	43	8	20	07	American	Atlantic Refining Co.	430	0	59	2	21	0	New York, N. Y.	La Libertad, Eod'r	5,808	8,093	5,347	
Hampton	8	8	25	8	10	15	8	18	59	8	20	07	American	Biorn Bornstad & Co.	360	5	51	0	22	6	Galveston, Texas	Yokohama, Japan	2,533	7,905	5,869	
Roads	8	7	15	8	10	30	8	20	55	8	21	45	Norwegian.	Furness, Withy & Co.	420	0	58	0	19	8	Glasgow, England	Vancouver, B. C.	988	6,061	4,029	
Qisla	6	22	00	8	11	17	8	19	32	9	1	18	British	N. Pacific Coast Serv.	440	0	56	0	23	0	Dartmouth, Eng.	Vancouver, B. C.	988	6,061	4,029	
Pacific Trader	8	5	58	8	12	35	8	20	41	8	22	00	British	Strauss & Co.	393	0	52	5	13	0	Chester, Pa.	Vancouver, B. C.	988	6,061	4,029	
Meissouer	8	9	25	8	12	35	8	20	41	8	22	00	Swedish	Amer-Hawaiian Line.	445	0	59	8	18	4	Newport News, Va.	San Francisco, Cal.	8,567	6,020	6,020	
Oxelsson	8	9	25	8	12	35	8	20	41	8	22	00	Swedish	Amer-Hawaiian Line.	445	0	59	8	18	4	Newport News, Va.	San Francisco, Cal.	8,567	6,020	6,020	
Californian	8	9	35	8	13	05	8	21	16	8	22	25	American	R. Smith & Co.	420	0	54	5	16	6	Barry, England.	Portland, Oreg	6,870	5,043	5,043	
Vulcan City	8	9	47	8	13	15	8	21	35	8	22	40	British	R. Smith & Co.	420	0	54	5	16	6	Barry, England.	Portland, Oreg	6,870	5,043	5,043	

12 General, kerosene, gas, and cattle.

13 Phosphates and cottonseed.

* Tanker.

** General, kerosene, gas, and cattle.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.		Beam.	Salt draft.	From—	For—	Cargo		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.			Nature.	Tons.					Gross.	Net.		
Suncoi ¹	8	9.48	8	14.05	8	22.05	8	23.18	American	Sun Oil Co	480	6	66	0 21 0	Chester, Pa	Los Angeles, Calif	Ballast.		9,610	6,396
Arenas	8	9.15	8	14.35	8	22.17	8	23.50	Greek	Rehymnis & Kuldis	370	0	50	0 15 0	Cardiff, England	Atica, Chile	Ballast.			
Francis E.	8	11.40	8	14.55	8	22.55	9	00.05	American	Athletic Refining Co	431	0	59	2 20 0	Providence, R. I.	Los Angeles, Calif	Ballast.	7,860	5,101	
Iowan	8	13.45	8	15.35	8	23.02	9	00.05	American	Amer.-Hawaiian Line	407	7	53	7 18 8	Boston, Mass	Portland, Oreg	General	3,135	7,079	5,028
Powell	8	14.05	8	16.05	8	23.50	9	11.05	Japanese	Kok sai Kis in Kaisha.	385	0	51	0 26 0	New York, N. Y	Moli, Japan.	General	6,568	5,915	4,423
Brazil Maru	8	14.05	8	16.05	8	23.50	9	11.05	Japanese	Kok sai Kis in Kaisha.	385	0	51	0 26 0	New York, N. Y	Moli, Japan.	General	6,568	5,915	4,423
THROUGH THE CANAL—PACIFIC TO ATLANTIC.																				
Arcadia ¹⁴	11-18	16.38	2	6.11	2	11.25	3	9.55	American	U. S. Government	172	0	32	0 12 8	Balboa, C. Z.	San Juan, P. R.				
San Francisco	12-2	3.00	2	6.58	2	13.35	2	16.40	German	Hamburg-American Line	432	3	54	1 26 0	Vancouver, B. C.	Hamburg, Germany	General	7,134	8,454	6,344
Alodi Mendi.	2	4.00	2	8.23	2	16.20	2	17.10	Spanish	Sota & Aznar	400	0	53	0 25 2	Talita, Chile	Aires ¹⁷	Nitrates	8,107	6,009	4,051
Taitan	1	20.00	2	8.56	2	17.45	2	19.10	German	Kaufmabtei A. G.	312	4	55	8 26 6	Vancouver, B. C.	Leixoes, Portugal	Wheat	9,020		
Charles	2	5.50	2	9.26	2	17.39	2	17.30	American	Arrow Line	409	7	54	2 24 7	Los Angeles, Calif	New York, N. Y.	Lumber	7,115	6,693	4,915
Charles R.	2	7.45	2	10.10	2	18.10	2	18.19	American	Munson, McCork's Line.	401	5	53	2 26 6	San Francisco, Cal.	Philadelphia, Pa.	Lumber, general	9,000	7,082	5,167
McCormick	2	11.45	2	12.27	2	19.30	2	19.30	American	Williams S. S. Line	386	8	52	2 24 6	Port Alberni, B. C.	New York, N. Y.	Lumber, general.	5,439	5,089	4,080
Williplo	2	12.10	2	12.55	2	21.15	2	20.10	American	Calif. & East'n S. S. Co	419	0	54	4 25 6	Olympia, Wash.	Philadelphia, Pa.	Lumber	8,380	6,473	4,682
West Minto	2	12.10	2	12.55	2	21.15	2	20.10	American	Army Transport Service	448	0	58	2 22 8	Balboa, C. Z.	New York, N. Y.	Household goods	45		
Cambrai ¹⁵	11-20	18.03	2	14.30	2	22.40	2	20.10	American	U. S. Army	466	0	64	0 26 6	Balboa, C. Z.	Miraflores, C. Z.				
Lauch	3	6.05	3	12.45	3	19.05	3	19.05	American	Grace Line	420	5	54	7 22 6	Talcahuano, Chile	New York, N. Y.	Copper, nitrates.	5,315	10,350	6,382
Santa Maria ¹⁵	12-2	14.50	3	6.40	3	14.12	3	14.12	British	Blue Star Line	420	5	54	7 22 6	Vancouver, B. C.	Hull, England	(¹⁶)	4,242	7,321	5,852
Gothicstar	2	22.00	3	6.40	3	14.12	3	14.12	American	Ore S. S. Corp	449	1	57	2 25 8	Vancouver, B. C.	Baltimore, Md	Iron ore	11,000	7,808	5,139
Felore	3	4.45	3	7.34	3	15.47	3	15.47	American	Axel Bros'trom & Son.	446	0	54	2 25 0	Vancouver, B. C.	Hull, England	Wheat	8,556	8,840	5,014
Sagaland	3	7.00	3	8.04	3	15.53	3	16.55	Swedish	Koksan Kisan Kaisha.	425	0	53	7 28 7	Vancouver, B. C.	Rotterdam, Holland	Wheat	9,070	6,909	5,147
Yuri Maru.	3	8.15	3	8.56	3	16.45	3	20.20	Japanese	French Line	401	0	53	0 28 7	Vancouver, B. C.	Rotterdam, Holland	General	9,278	7,678	5,563
Arkansas	3	10.20	3	11.16	3	19.40	4	16.05	French	Hamburg-American Line	327	2	31	0 13 6	Guayaquil, Ecuador	Haive, France	(¹⁷)	730	1,572	1,011
Cerigo	3	11.20	3	12.19	3	19.30	3	19.30	German	Transmarine Lines.	224	0	46	2 23 6	Seattle, Wash	Port Newark, N. J.	Lumber	4,100	3,954	2,612
Sineweco	3	15.57	3	16.26	3	16.26	4	10.05	American	U. S. Navy	155	0	29	0	Balboa, C. Z.	Cristobal, C. Z.				
Saota	3	8.05	3	15.35	3	15.35	4	18.35	American	N. Z. Shipping Co.	489	6	63	2 25 6	Napier, N. Z.	Cristobal, C. Z.	Frozen, general	5,665	11,443	8,417
Ruaine	1	1.30	4	6.21	4	14.05	4	18.35	British	C. T. Bowring & Co.	385	0	51	0 22 6	La Libertad, Fed'r.	Southampton, Eng.	Crude oil	6,192	4,851	3,326
El Lobo	3	19.30	4	6.35	4	14.05	4	14.05	British	Carras Steam Nav. Co.	361	0	47	2 23 0	Tecopilla, Chile	Philadelphia, Pa.	Nitrates	5,700	4,602	3,460
Prims.	3	19.00	4	7.10	4	17.05	4	17.05	Greek	Transmarine Lines	324	0	46	2 24 6	Vancouver, B. C.	Azores ¹⁷	Lumber	4,000	3,984	2,628
Sidawaco.	3	20.00	4	8.34	4	17.05	4	17.05	American	Union Oil Co. of Calif.	435	0	56	0 29 0	Los Angeles, Calif	Newark, N. J.	(¹⁸)	9,467	7,482	5,209
Utacaron	3	17.45	4	8.58	4	19.45	7	7.00	American	Union Oil Co. of Calif.	435	0	56	0 29 0	Los Angeles, Calif	Cristobal, C. Z.				
Canadian	3	22.30	4	9.15	4	17.18	4	17.18	British	Can. Nat. Steamships	400	0	52	3 18 7	Auckland, N. Z.	Halifax, N. S.	General	1,082	5,954	4,139
Conqueror	3	22.30	4	9.15	4	17.18	4	17.18	British	T. & J. Harrison	435	0	56	2 24 9	Vancouver, B. C.	London, England	General	8,200	7,712	5,437
Collegian.	3	21.30	4	9.30	4	18.30	5	1.05	British	T. & J. Harrison	435	0	56	2 24 9	Vancouver, B. C.	London, England	General	8,200	7,712	5,437
Tanker.																				

¹⁴ U. S. Army transport.¹⁵ Motor ship.¹⁶ U. S. Army transport.¹⁷ For orders.¹⁸ Chilled apples and general.¹⁹ Coffee, cocoa, and hides.²⁰ Fuel oil and gasoline.

	Missouri	4	7.00	4	9.48	4	19.05	4	19.05	4	19.30	4	19.30	Amer.-Hawaiian Line	443.0	59.8	28.0	Portland, Ore.	New York, N. Y.	Lumber, general	8,729	6,567	6,020
Lillian Luckenbach	4	10.00	4	10.25	4	19.30	4	19.30	American	4	19.30	4	19.30	Luckenbach Line	448.9	60.2	31.6	Portland, Ore.	Boston, Mass.	Lumber, general	8,900	9,204	6,865
Laurel	4	10.30	4	11.15	4	20.10	4	20.10	American	4	20.10	4	20.10	States S. S. Co.	410.5	51.2	27.0	San Francisco, Cal.	Wilmington, Del.	Lumber, general	6,973	6,756	4,874
Wearpool	4	10.45	4	12.02	4	21.18	5	1.40	British	5	1.40	5	1.40	Sir R. Roper & Co.	390.5	55.5	22.9	Vancouver, B. C.	Hull, England	Wheat	7,852	5,920	4,435
Federiko Glavie	4	15.30	4	16.10	4	16.10	5	13.50	Yugoslav	5	13.50	5	13.50	Dubrovačka Plovidba	421.6	54.7	25.0	Tucupilla, Chile	Azores ²⁷	Nitrates	9,380	6,839	5,208
Laguna	4	11.40	4	16.44	5	11.05	5	11.45	British	5	11.45	5	11.45	Pacific Steam Nav. Co.	421.6	54.7	25.0	Talcahuano, Chile	Liverpool, England	General	7,226	7,139	4,640
Monongia	4	11.08	5	6.24	5	14.25	5	14.56	American	5	14.56	5	14.56	Panama Pacific Line	630.0	65.3	30.6	San Francisco, Cal.	New York, N. Y.	Gasoline	7,226	17,041	11,426
Simnington	4	17.50	5	6.39	5	15.20	5	15.20	American	5	15.20	5	15.20	Huasteca Petroleum Co.	416.8	56.1	27.0	Los Angeles, Calif.	New Orleans, La.	Gasoline	8,700	6,751	4,795
Court	4	16.40	5	7.05	5	16.10	5	17.00	British	5	17.00	5	17.00	Haldin & Co.	420.0	56.5	24.0	Vancouver, B. C.	Hamburg, Germany	Wheat	8,644	6,963	4,958
Thames Maru.	5	4.00	5	8.11	5	17.15	5	17.45	Japanese	5	17.45	5	17.45	Kawasaki Kisen Kaisha	385.0	51.0	25.6	Portland, Ore.	Dublin, Ireland	Wheat	7,452	5,928	4,381
Pagle	5	4.30	5	8.34	5	17.00	5	17.00	American	5	17.00	5	17.00	Standard Transp. Co.	410.0	56.0	28.0	Los Angeles, Calif.	New York, N. Y.	Gas oil	8,340	8,201	6,226
Hefron	5	6.15	5	9.35	5	17.55	5	18.35	American	5	18.35	5	18.35	Hefron S. S. Co.	440.0	56.0	27.6	Everett, Wash.	Philadelphia, Pa.	Lumber	9,000	8,312	6,097
Bennadhu	5	21.40	6	6.36	6	14.25	6	15.50	British	6	15.50	6	15.50	Ben Line	401.0	52.1	27.0	Vancouver, B. C.	Rotterdam, Holland	Wheat	8,116	6,562	4,745
Dendeldijk	5	21.25	6	7.16	6	14.25	6	16.35	Dutch	6	16.35	6	16.35	Holland-American Line	485.6	62.0	29.0	Vancouver, B. C.	Rotterdam, Holland	General	9,646	10,786	7,551
San Jose	6	4.50	6	8.02	6	15.10	7	16.15	American	7	16.15	7	16.15	United Fruit Co.	330.0	44.1	18.6	San Francisco, Cal.	Port Limon, C. R.	General	742	3,570	2,353
Sir Osborn	6	3.00	6	10.04	6	17.25	6	17.25	Norwegian	6	17.25	6	17.25	A. F. Klaveness	471.8	64.0	27.6	Los Angeles, Calif.	Land's End, Eng.	Gasoline	12,381	9,562	6,604
Holnden	6	9.25	6	14.08	6	18.00	6	18.00	American	6	18.00	6	18.00	Amer.-Hawaiian Line	404.6	53.9	27.0	Los Angeles, Calif.	Boston, Mass.	General	5,929	6,756	4,775
Dunrobin	6	14.00	6	14.58	6	22.38	7	3.50	British	7	3.50	7	3.50	DuPont de Nemours	404.6	53.9	27.0	Liquique, Chile	Charleston, S. C.	Nitrates	8,247	5,651	4,076
Capt. Crowl	6	17.25	6	16.11	7	16.35	7	16.35	American	7	16.35	7	16.35	U. S. Army	215.7	33.5	14.0	Balboa, C. Z.	Pedro Miguel, C. Z.	General	2583	1,273	706
Acapulco	6	21.15	7	6.54	7	16.50	7	17.55	British	7	17.55	7	17.55	Pacific Steam Nav. Co.	400.0	52.4	19.0	San Jose de Guate	Cristobal, C. Z.	General	1,577	5,956	4,172
Canadian Victor	6	21.50	7	6.54	7	16.50	7	17.55	British	7	17.55	7	17.55	Can. Nat. Steamships	400.0	58.3	26.3	Adelaide, Australia	Halifax, N. S.	Nitrates, general	7,848	7,817	6,097
Boskoop	6	23.09	7	8.10	7	18.08	7	18.08	American	7	18.08	7	18.08	Royal Neth. S. S. Co.	289.0	44.1	21.3	Corral, Chile	New York, N. Y.	Lumber	3,400	2,637	1,701
San Pedro	7	5.10	7	8.25	7	18.10	7	18.10	American	7	18.10	7	18.10	Hammond Lumber Co.	324.0	46.2	24.0	Seattle, Wash.	New Orleans, La.	General	3,834	3,984	2,617
Point Fernin	7	8.00	7	8.47	7	19.15	7	20.25	French	7	20.25	7	20.25	Swayne & Hoyt	400.0	52.5	26.0	Portland, Ore.	Le Havre, France	General	7,976	5,964	4,384
Pensylvania	7	4.30	7	8.56	7	17.50	7	17.50	Colombian	7	17.50	7	17.50	Freight Line	391.0	23.0	7.0	Talcahuano, Chile	Cristobal, C. Z.	General	117	160	92
Atrato	7	8.20	7	9.41	7	20.15	7	20.15	American	7	20.15	7	20.15	Colombian Transp. Co.	403.0	52.4	29.4	Buenaventura, Col.	Cristobal, C. Z.	General	8,897	6,804	4,897
Curaca	7	9.30	7	10.12	7	21.20	7	21.20	German	7	21.20	7	21.20	Grane Line	369.7	51.0	23.6	Coquimbó, Chile	New York, N. Y.	General	5,606	4,813	3,361
Nienburg	7	23.20	7	11.05	7	21.08	8	10.07	Japanese	8	10.07	8	10.07	North German Lloyd	415.0	55.5	21.3	San Antonio, Chile	Bremen, Germany	Nitrates	5,243	5,994	3,876
Argun Maru	7	11.20	7	12.09	7	21.05	8	15.05	Norwegian	8	15.05	8	15.05	Osaka Shosen Kaisha	381.0	55.2	27.3	Hongkong, China	New York, N. Y.	Gasoline	7,757	5,994	3,876
Sommerstad	7	11.20	7	12.09	7	21.05	8	15.05	Norwegian	8	15.05	8	15.05	Citic Service Co.	381.0	55.2	27.3	Los Angeles, Calif.	Baltimore, Md.	General	19,800	15,476	4,354
Bethore	6	22.10	6	15.52	8	15.05	8	15.05	American	8	15.05	8	15.05	Ore S. S. Corp.	357.0	10.4	4.8	Cruz Grande, Chile	Gatun Lake, C. Z.	Iron ore	12,300	4,367	3,161
M. D.	7	16.50	8	6.13	8	19.55	8	19.55	American	8	19.55	8	19.55	J. A. Mloon	407.6	62.7	28.0	Balboa, C. Z.	Providence, R. I.	Kerosene	6,000	2,873	1,776
Sylvan Arrow	7	18.50	8	7.02	8	20.15	8	21.25	Greek	8	21.25	8	21.25	Standard Transp. Co.	361.0	46.2	24.7	Los Angeles, Calif.	Gibraltar	Nitrates	969	8,090	7,611
Andreas K.	7	21.47	8	7.28	8	21.08	9	11.05	American	9	11.05	9	11.05	Margaritis Brothers	231.0	44.0	16.0	Liquique, Chile	New York, N. Y.	General	8,090	7,611	5,450
Buenaventura	7	22.20	8	8.00	8	21.08	9	11.05	American	9	11.05	9	11.05	Panama R.R.S. Line	232.0	44.0	16.0	Guayaquil, Ecuador	Cristobal, C. Z.	Wheat, general	8,090	7,611	5,450
Cleveland	8	1.00	8	8.39	8	21.35	9	6.45	American	9	6.45	9	6.45	U. S. Navy	424.2	56.2	26.4	Guayaquil, Ecuador	Azores ²⁷	Nitrates	6,000	6,000	
Knoxville City	8	1.00	8	8.39	8	21.35	9	6.45	American	9	6.45	9	6.45	Evans & Sons	381.0	49.0	25.2	Tucupilla, Chile	Avonmouth, Eng.	Wheat, general	8,090	7,611	5,450
Georgios M.	7	21.00	8	9.36	8	22.30	9	6.45	Greek	9	6.45	9	6.45	N. Kulukundis	381.0	49.0	25.2	Tucupilla, Chile	Azores ²⁷	Nitrates	6,000	6,000	
Gen. G. W.	7	21.00	8	9.36	8	22.30	9	6.45	Greek	9	6.45	9	6.45	N. Kulukundis	381.0	49.0	25.2	Tucupilla, Chile	Azores ²⁷	Nitrates	6,000	6,000	
Getty	7	21.00	8	9.36	8	22.30	9	6.45	Greek	9	6.45	9	6.45	N. Kulukundis	381.0	49.0	25.2	Tucupilla, Chile	Azores ²⁷	Nitrates	6,000	6,000	
Chateau	7	2.00	8	10.19	8	19.20	9	11.10	American	9	11.10	9	11.10	U. S. Army	448.0	58.0	25.0	Balboa, C. Z.	Cristobal, C. Z.	Army supplies	143	5,700	4,302
Thierry	8	2.00	8	11.13	8	22.50	9	6.34	British	9	6.34	9	6.34	U. S. Army	369.0	54.2	27.0	San Francisco, Cal.	New York, N. Y.	Sugar	5,700	6,209	4,302
Ravenaar	8	11.00	8	12.33	8	23.35	9	23.35	American	9	23.35	9	23.35	Smith Pritchard & Co.	369.0	54.2	27.0	San Francisco, Cal.	Liverpool, England	Wheat	7,700	6,214	4,665
Cedarhurst	8	13.30	8	14.24	9	00.30	9	00.30	American	9	00.30	9	00.30	T. P. Gallagher & Co.	385.0	52.0	23.8	Maui, Philippines	New York, N. Y.	Coconut oil	7,700	6,214	4,665
England Maru	8	13.32	8	15.07	9	00.35	9	10.00	Japanese	9	10.00	9	10.00	Kokusai Kisen Kaisha	385.0	52.0	23.8	Vancouver, B. C.	Antwerp, Belgium	Wheat	7,700	6,214	4,665
Chetard	8	13.32	8	15.07	9	00.35	9	10.00	Greek	9	10.00	9	10.00	Rethymnis & Kolis.	369.0	52.0	23.8	Tucupilla, Chile	Azores ²⁷	Nitrates	6,600	4,715	3,584

²⁷ Tanker.

²⁸ Cruiser.

²⁹ Tug.

³⁰ Lumber, wheat, and general.

³¹ Canned fish, fruit, and general.

³² Coffee, sugar, hides, bullion, and general.

³³ Coffee, tagua, and wool.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
December 2.....	Tolosa.....	United Fruit Co.	Port Limon, Costa Rica.	December 2.....	Tolosa.....	United Fruit Co.	New York via Habana.
December 3.....	Mercan.....	Leyland Line	Liverpool, England.	December 3.....	Parismitin.....	United Fruit Co.	New Orleans and wayports.
December 3.....	Calumares.....	United Fruit Co.	New York via Habana.	December 4.....	William M. ³¹	G. I. Bryan.....	Bluefields, Nicaragua.
December 3.....	Calumares.....	United Fruit Co.	Colon, R. P.	December 4.....	Winks.....	Standard Fruit & S. S. Co.	San Blas, R. P.
December 5.....	Cavina.....	Elders & Fyffes, Ltd.	Avonmouth via wayports.	December 5.....	Denver.....	Leyland Line.....	Casilda, Cuba.
December 5.....	Gatun.....	Standard Fruit & S. S. Co.	New Orleans, La.	December 5.....	Cavina.....	U. S. Navy.....	Bluefields, Nicaragua.
December 5.....	Coppename.....	United Fruit Co.	New Orleans, La.	December 5.....	Van Renselaer.....	Elders & Fyffes, Ltd.	Bristol via wayports.
December 5.....	Ancon.....	Panama Railroad S. S. Line.	New York via Haiti.	December 5.....	Calumares.....	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
December 5.....	Van Renselaer.....	United Fruit Co.	New York via Kingston.	December 5.....	Metapan.....	United Fruit Co.	Port Limon, Costa Rica.
December 5.....	Hidelford.....	Royal Netherlands S. S. Co.	Amsterdam via wayports.	December 6.....	Coppename.....	United Fruit Co.	New York via wayports.
December 6.....	Anachucuna ³²	G. Olsen.....	Curacao, D. W. I.	December 6.....	Anachucuna ³²	United Fruit Co.	Port Limon and Boeas.
December 6.....	Cuba.....	United Fruit Co.	Colon, R. P.	December 6.....	Anachucuna ³²	United Fruit Co.	Colon, R. P.
December 7.....	Anachucuna ³²	Hamburg-American Line	Tampico, Mexico.	December 7.....	Cuba.....	United Fruit Co.	Colon, R. P.
December 7.....	Saramacca.....	United Fruit Co.	Colon, R. P.	December 7.....	Gatun.....	Hamburg-American Line	Hamburg via wayports. ¹
December 7.....	Winks.....	Standard Fruit & S. S. Co.	Boeas del Toro, R. P.	December 7.....	Saramacca.....	Standard Fruit & S. S. Co.	New Orleans and wayports.
December 7.....	Van Renselaer.....	United Fruit Co.	San Blas, R. P.	December 8.....	Franconia.....	United Fruit Co.	New Orleans, La.
December 8.....	Heredia.....	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	December 8.....	Van Renselaer.....	Cunard Line.....	New York via wayports.
December 8.....	Linda S. ³³	United Fruit Co.	New York via wayports.	December 8.....	Hidelford.....	Royal Netherlands S. S. Co.	Amsterdam via wayports.
December 8.....	Surgeon Brothers	Surgeon Brothers	New Orleans via Habana.	December 8.....	Linda S. ³³	C. Olsen.....	Curacao, D. W. I.
December 8.....	Surgeon Brothers	Surgeon Brothers	Colon, R. P.	December 8.....	Linda S. ³³	Surgeon Brothers.....	Bluefields, Nicaragua.

PORT OF BALBOA.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
December 3.....	San Luis ³⁴	Chiriqui Land Co.	Puerto Armales, R. P.	December 5.....	San Luis ³⁴	Chiriqui Land Co.	Puerto Armales, R. P.
December 5.....	Cricanola ³⁵	Chiriqui Land Co.	Puerto Armales, R. P.	December 5.....	El Colon ³⁴	H. Elliot.....	El Real, R. P.
December 5.....	El Colon ³⁴	Chiriqui Land Co.	El Real, R. P.	December 5.....	A. B. de Obarrio ³⁴	Pacific Fruit Co.	Bayano River, R. P.
December 5.....	A. B. de Obarrio ³⁴	Pacific Fruit Co.	Bayano River, R. P.	December 5.....	Dos Hermanos ³⁴	A. Valdez.....	Bayano River, R. P.
December 5.....	Dos Hermanos ³⁴	U. S. Army	San Francisco, Calif.	December 6.....	Somme ³⁶	U. S. Army.....	San Francisco, Calif.
December 5.....	Somme ³⁶	U. S. Army	San Francisco, Calif.				

* Other than ships passing through the Canal.

³⁴ Motor schooner. ³⁵ Motor ship. ³⁶ U. S. Army transport.

Commercial Traffic Through the Panama Canal in November, 1928, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of November, 1928, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for November, 1927 and 1926. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	66	352,022	270,199	432,809	269,780	\$308,198.16	217,358
Europe to west coast Canada:							
British.....	27	131,217	97,475	154,057	94,596	98,042.42	9,556
Dutch.....	3	18,074	13,953	22,460	13,751	16,717.62	3,604
French.....	1	5,196	3,349	5,693	3,499	4,186.25	2,500
German.....	2	13,346	8,903	15,248	9,075	11,128.75	13,100
Italian.....	1	6,054	5,031	7,061	4,460	6,288.75	1,247
Spanish.....	1	4,512	4,287	5,649	3,374	3,248.64	.....
Totals.....	35	178,399	132,998	210,168	128,755	139,612.43	30,007
East coast of United States to Far East:							
British.....	11	60,946	39,234	63,306	38,638	49,042.50	73,776
Danish.....	2	9,304	8,492	11,474	8,660	10,615.00	12,996
German.....	1	4,888	2,975	4,949	2,956	3,718.75	7,000
Japanese.....	8	37,297	32,667	47,507	31,755	40,290.80	43,257
Norwegian.....	2	8,899	4,943	8,558	4,945	6,178.75	12,990
United States.....	7	39,171	27,985	42,642	26,918	34,981.25	49,672
Totals.....	31	160,505	116,296	178,436	113,872	144,827.05	199,691
Europe to west coast of South America:							
British.....	5	35,868	27,034	45,677	28,096	33,792.50	18,961
Danzig.....	1	6,338	5,236	8,956	5,041	4,563.36	.....
Dutch.....	2	12,754	7,405	12,455	7,595	9,256.25	7,762
French.....	2	8,288	6,574	10,785	6,594	8,217.50	3,086
German.....	5	25,710	18,679	30,597	18,693	23,348.75	19,235
Greek.....	7	27,005	20,611	30,523	19,268	19,971.54	4,676
Italian.....	2	12,964	8,511	16,217	9,557	9,087.20	1,615
Norwegian.....	2	8,985	5,893	9,614	5,837	7,366.25	11,780
Spanish.....	1	3,729	2,969	5,087	3,000	3,700.00	347
Yugoslav.....	2	9,806	7,644	12,338	7,715	8,307.22	7,900
Totals.....	29	151,447	110,547	182,249	111,396	127,610.57	75,362
East coast of United States to west coast of South America:							
British.....	8	24,306	18,885	31,484	19,169	22,410.97	11,466
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	2,324
Danzig.....	1	6,063	5,196	8,932	5,002	4,365.36	.....
German.....	1	2,817	1,545	2,593	1,526	1,931.25	540
Swedish.....	1	4,421	3,743	15,339	4,377	3,183.12	.....
United States.....	13	59,137	48,385	83,895	47,072	48,548.14	25,525
Totals.....	25	101,449	81,220	149,553	81,122	84,771.34	39,855
Europe to west coast of United States:							
British.....	9	48,063	38,138	63,051	38,347	37,549.89	9,058
German.....	1	6,790	4,432	7,256	4,418	5,540.00	4,252
Japanese.....	1	4,570	2,716	4,615	2,705	3,395.00	7,000
Norwegian.....	4	19,850	15,518	25,863	15,538	16,315.80	8,772
United States.....	3	16,013	10,884	18,890	13,893	11,651.15	12,165
Totals.....	18	95,286	71,688	119,675	74,811	74,451.84	41,277
Cristobal, C. Z., to west coast of South America:							
Colombian.....	1	163	164	233	166	195.60	380
Dutch.....	1	742	294	780	323	367.50	120
German.....	4	3,491	2,260	4,347	2,334	2,825.00	2,098
Norwegian.....	1	504	423	732	391	528.75	450
Panamanian.....	2	248	226	414	218	282.50	653
Peruvian.....	1	2,405	989	3,305	1,514	1,236.25	112
Totals.....	10	7,553	4,356	9,811	4,946	5,435.60	3,813

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to west coast of Canada:							
British	4	17,650	12,338	19,950	12,329	\$12,708 00	.....
United States	3	13,283	10,564	17,354	10,677	13,205 00	20,009
Totals	7	30,933	22,902	37,304	23,006	25,913 00	20,009
East coast of United States to Australasia:							
British	5	26,696	17,615	28,610	17,605	22,018 75	20,321
United States	1	5,268	3,763	5,879	3,689	4,703 75	1,685
Totals	6	31,964	21,378	34,489	21,294	26,722 50	22,006
Europe to Australasia:							
British	5	40,724	31,259	50,738	31,623	39,073 75	25,069
Greek	1	4,041	3,231	5,450	3,335	4,038 75	4,922
Totals	6	44,765	34,490	56,188	34,958	43,112 50	29,991
East coast of Canada to Aus- tralasia:							
British	5	27,258	20,906	33,570	20,810	26,132 50	21,561
Around the world:							
United States	1	32,525	25,350	41,062	24,370	31,687 50	17,652
East coast of United States to Philippine Islands:							
British	1	6,089	4,970	7,886	4,934	6,212 50	5,502
Danish	1	4,268	2,634	4,289	2,675	3,292 50	5,450
United States	2	11,975	8,297	13,308	8,282	10,371 25	14,598
Totals	4	22,332	15,901	25,483	15,891	19,876 25	25,550
East coast of Central America to west coast United States:							
United States	4	11,682	10,295	16,456	10,132	11,252 98	2,535
Cristobal, C. Z., to west coast of Central America:							
British	3	2,063	1,900	3,436	1,906	2,353 90	3,064
Norwegian	1	606	485	855	482	606 25	1,117
Totals	4	2,669	2,385	4,291	2,388	2,960 15	4,181
East coast of United States to Hawaiian Islands:							
United States	2	2,158	1,937	3,517	1,949	2,228 46	3,234
East coast of Canada to west coast of South America:							
British	2	12,688	10,999	18,512	11,227	9,135 36	.....
Cristobal, C. Z., to west coast of United States:							
Panaman	1	2,606	1,384	3,644	2,591	1,730 00	3,255
United States	1	2,367	2,087	3,304	2,071	2,608 75	807
Totals	2	4,973	3,471	6,948	4,665	4,338 75	4,062
East coast of South America to west coast United States:							
Norwegian	1	4,092	2,342	3,870	2,327	2,927 50	1,438
United States	1	9,701	7,076	12,643	6,993	8,845 00	266
Totals	2	13,796	9,418	16,513	9,320	11,772 50	1,704
Foreign vessels in ballast, U. S. intercoastal:							
British	1	9,885	8,727	16,436	9,643	7,117 20	.....
Canadian intercoastal:							
British	1	4,182	3,318	5,757	3,554	4,147 50	4,600
East coast of Canada to west coast United States:							
British	1	5,042	4,355	7,259	4,414	3,630 24	.....
West Indies to west coast of United States:							
Danish	1	1,355	1,382	1,806	1,100	1,626 00	2,000
West Indies to west coast of Canada:							
British	1	4,510	3,226	5,029	3,154	3,247 20	.....
South American intercoastal:							
Peruvian	1	2,959	1,515	4,617	2,427	1,893 75	359

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of South America to west coast Canada:							
United States.....	1	5,040	3,731	5,823	3,705	\$4,663 75	2,279
East coast of South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	3,273
Europe to Hawaiian Islands:							
Swedish.....	1	5,661	3,406	5,641	4,320	4,257.50	7,708
Europe to Far East:							
British.....	1	783	754	1,110	552	939.60	685
Egypt to west coast United States:							
British.....	1	3,650	3,303	5,674	3,261	2,628.00	.....
Egypt to west coast Canada:							
British.....	1	4,090	3,233	5,302	3,231	2,944.80	.....
Africa to west coast South America:							
British.....	1	2,658	2,320	3,491	2,153	1,913.75	.....
Grand totals, Nov., 1928.	275	1,340,040	1,010,176	1,652,246	1,010,593	1,144,261.24	780,752
Grand totals, Nov., 1927.	296	1,372,032	1,066,378	1,733,018	1,064,837	1,181,440.24	597,434
Grand totals, Nov., 1926.	211	1,006,793	781,615	1,279,163	784,715	880,392.01	696,615

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	81	418,881	323,208	519,233	322,923	\$404,010.00	640,941
West coast Canada to Europe:							
British.....	20	145,451	104,435	169,012	104,480	130,543.75	221,938
Danish.....	1	5,286	4,207	6,636	4,236	5,258.75	9,491
Dutch.....	2	13,479	10,966	17,703	10,976	13,707.50	19,545
French.....	2	10,434	7,461	12,428	7,490	9,326.25	16,106
German.....	2	9,684	6,427	10,550	6,435	8,003.75	13,358
Italian.....	1	5,552	4,686	7,714	4,662	5,857.50	8,593
Japanese.....	1	4,381	4,361	5,873	4,254	5,257.20	7,672
Norwegian.....	2	7,938	5,641	9,163	5,695	7,051.25	13,000
Swedish.....	3	15,023	11,067	18,333	13,638	13,833.75	24,053
United States.....	2	10,550	7,197	11,506	7,093	8,996.25	15,048
Totals.....	45	227,778	166,448	268,918	168,959	207,865.95	348,804
West coast of South America to Europe:							
British.....	6	24,410	19,798	32,093	20,072	24,747.50	38,681
Danish.....	1	4,623	2,989	4,750	3,006	3,736.25	7,732
Danzig.....	2	12,465	10,504	17,895	10,048	13,130.00	22,627
Dutch.....	2	10,864	6,890	11,879	6,698	8,612.50	17,281
French.....	1	4,312	3,743	5,903	3,743	4,678.75	7,065
German.....	8	37,308	28,551	46,685	28,684	35,688.75	57,654
Greek.....	1	4,482	3,346	5,600	3,333	4,182.50	8,100
Italian.....	1	6,236	4,699	8,298	5,106	5,873.75	3,746
Norwegian.....	1	1,678	1,310	2,406	1,284	1,637.50	3,024
Spanish.....	6	24,552	21,189	32,757	20,611	26,321.55	41,047
Yugoslav.....	2	8,949	6,873	10,860	6,887	8,591.25	16,599
Totals.....	31	139,879	109,892	179,126	109,472	137,200.30	223,556
West coast of South America to east coast United States:							
British.....	8	31,574	24,757	41,158	25,505	30,946.25	49,495
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	4,762
German.....	1	909	689	1,314	681	861.25	894
Swedish.....	3	10,430	8,793	32,276	9,816	10,991.25	42,276
United States.....	11	38,025	30,783	50,152	30,284	38,297.15	79,027
Totals.....	24	85,610	68,455	132,210	70,262	85,387.15	176,454
West coast of United States to Europe:							
British.....	13	55,494	44,309	70,863	44,605	55,331.60	91,725
Dutch.....	1	3,067	2,724	4,668	2,627	3,405.00	6,108
French.....	1	4,545	3,996	6,587	3,641	4,995.00	8,019
Japanese.....	2	8,781	8,707	11,737	8,513	10,537.20	15,272
Norwegian.....	1	5,822	4,877	8,030	4,814	6,096.25	10,156
Swedish.....	1	5,485	3,406	5,558	4,246	4,257.50	7,139
United States.....	1	7,895	6,052	9,832	6,019	7,565.00	13,800
Totals.....	20	91,089	74,071	117,275	74,465	92,187.55	152,219

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast South America to Cristobal, C. Z.:							
Colombian.....	3	989	945	1,569	959	\$1,173.05	1,403
Dutch.....	2	1,484	588	1,560	646	735.00	873
German.....	4	3,178	2,372	4,230	2,428	2,965.00	2,164
Panaman.....	1	124	113	207	109	141.25	.....
Peruvian.....	2	5,364	2,504	7,922	3,941	3,130.00	3,908
Totals.....	12	11,139	6,522	15,488	8,083	8,144.30	8,348
Australasia to Europe:							
British.....	6	43,706	32,288	52,499	32,342	40,360.00	37,566
French.....	1	5,364	4,287	7,138	4,335	5,358.75	3,876
Totals.....	7	49,070	36,575	59,637	36,677	45,718.75	41,442
West coast of Canada to east coast of United States:							
British.....	1	4,423	2,774	4,532	2,751	3,467.50	6,000
Danish.....	1	4,418	3,585	5,702	3,583	4,481.25	6,687
United States.....	4	14,250	10,906	17,832	10,835	13,632.50	21,663
Totals.....	6	23,091	17,265	28,066	17,169	21,581.25	34,350
West coast United States to east coast of Central America:							
United States.....	6	16,310	14,595	23,439	14,436	18,190.70	12,767
Philippine Islands to east coast United States:							
British.....	1	5,644	3,088	5,122	3,085	3,860.00	6,547
Danish.....	1	2,206	1,711	2,925	1,748	2,176.25	4,216
Japanese.....	2	11,436	8,767	13,970	8,609	10,958.75	14,213
Totals.....	4	19,286	13,596	22,017	13,442	16,995.00	24,976
West coast of United States to West Indies:							
British.....	1	4,797	4,355	7,406	4,277	5,443.75	9,162
Dutch.....	1	3,657	3,158	5,304	3,043	3,947.50	7,046
United States.....	1	4,668	3,405	5,685	3,414	4,256.25	6,280
Totals.....	3	13,122	10,918	18,395	10,734	13,647.50	22,488
West coast of Central America to Cristobal, C. Z.:							
British.....	2	1,328	1,252	2,308	1,256	1,543.90	584
Norwegian.....	1	606	485	855	482	606.25	55
Totals.....	3	1,934	1,737	3,163	1,738	2,150.15	639
West coast of United States to east coast of South America:							
British.....	1	5,621	4,484	7,199	4,524	5,605.00	3,822
West coast of United States to Cristobal, C. Z.:							
Panaman.....	1	2,606	1,384	2,461	1,384	1,730.00	357
Canadian interoastal:							
British.....	1	2,022	1,839	3,091	1,812	2,298.75	2,654
West coast of Central America to east coast United States:							
German.....	1	3,533	2,542	4,201	2,554	2,543.76	.....
South American interoastal:							
Colombian.....	1	307	302	405	308	372.00	302
West coast of South America to east coast Canada:							
British.....	1	7,639	6,607	11,309	6,845	8,255.00	15,184
West coast of South America to West Indies:							
United States.....	1	103	187	358	198	140.25	.....
Australasia to east coast of Canada:							
British.....	1	4,195	3,355	5,493	3,347	4,193.75	4,450
Far East to West Indies:							
Norwegian.....	1	4,538	2,477	4,116	2,454	3,096.25	7,125
Balboa, C. Z., to Cristobal, C. Z.:							
Norwegian.....	1	504	423	732	391	362.88	.....
Grand totals, Nov., 1928.	252	1,128,257	866,882	1,426,332	872,177	1,081,676.24	1,720,878
Grand totals, Nov., 1927.	263	1,219,685	948,485	1,519,491	942,258	1,187,827.75	1,891,448
Grand totals, Nov., 1926.	217	1,025,695	809,948	1,304,198	809,819	1,008,609.10	1,575,834

Traffic by Nationality for November, 1928.

The following tabulation shows the commercial traffic through the Canal during the month of November, 1928, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, with corresponding totals for November, 1927 and 1926:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	93	468,368	349,989	570,335	349,242	\$385,041.34	203,619
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	2,324
Colombian.....	1	163	164	233	166	195.60	380
Danish.....	4	14,927	12,508	17,569	12,435	15,533.50	20,446
Danzig.....	2	12,401	10,432	17,888	10,043	8,928.72	.....
Dutch.....	6	31,570	21,652	35,695	21,669	26,341.37	11,486
French.....	3	13,484	9,923	16,478	10,093	12,403.75	5,586
German.....	14	57,042	38,794	64,990	39,002	48,492.50	46,255
Greek.....	8	31,046	23,842	35,973	22,603	24,010.29	9,598
Italian.....	3	19,018	13,542	23,278	14,017	15,375.95	2,862
Japanese.....	10	47,688	39,553	59,389	38,847	48,898.30	53,530
Norwegian.....	11	42,936	29,604	49,492	29,520	33,923.30	36,547
Panamanian.....	3	2,854	1,610	4,058	2,812	2,012.50	3,908
Peruvian.....	2	5,364	2,504	7,922	3,941	3,130.00	471
Spanish.....	2	8,241	7,247	10,736	6,374	6,948.64	347
Swedish.....	5	26,095	18,033	39,870	22,500	19,091.77	19,873
United States.....	105	544,332	419,669	678,692	415,638	481,293.99	355,620
Yugoslav.....	2	9,806	7,644	12,338	7,715	8,307.22	7,900
Totals, November, 1928..	275	1,340,040	1,010,176	1,652,246	1,010,593	1,144,261.24	780,752
Totals, November, 1927..	296	1,372,032	1,066,378	1,733,018	1,064,837	1,181,440.24	597,434
Totals, November, 1926..	211	1,006,793	781,645	1,279,163	784,715	880,392.01	696,615

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	71	336,304	253,341	412,085	254,901	\$316,596.75	487,808
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	4,762
Colombian.....	4	1,296	1,247	1,974	1,267	1,545.05	1,705
Danish.....	4	16,533	12,522	20,013	12,573	15,652.50	28,126
Danzig.....	2	12,465	10,504	17,895	10,048	13,130.00	22,627
Dutch.....	8	32,551	24,326	41,114	23,990	30,407.50	50,853
French.....	5	24,655	19,487	32,056	19,209	24,358.75	35,066
German.....	16	54,612	40,581	66,980	40,782	50,092.51	74,070
Greek.....	1	4,482	3,346	5,600	3,333	4,182.50	8,100
Italian.....	2	11,788	9,385	16,012	9,768	11,731.25	12,339
Japanese.....	5	24,598	21,835	31,580	21,376	26,753.15	37,157
Norwegian.....	7	21,086	15,213	25,302	15,120	18,850.38	33,360
Panamanian.....	2	2,730	1,497	2,668	1,493	1,871.25	357
Peruvian.....	2	5,364	2,504	7,922	3,941	3,130.00	3,908
Spanish.....	6	24,552	21,189	32,757	20,611	26,321.55	41,047
Swedish.....	7	30,938	23,266	56,167	27,700	29,082.50	73,468
United States.....	107	510,682	396,333	638,037	395,202	495,088.10	789,526
Yugoslav.....	2	8,949	6,873	10,860	6,887	8,591.25	16,599
Totals, November, 1928..	252	1,128,257	866,882	1,426,332	872,177	1,081,676.24	1,720,878
Totals, November, 1927..	263	1,219,685	948,485	1,519,491	942,258	1,187,827.75	1,891,448
Totals, November, 1926..	217	1,025,695	809,948	1,304,198	809,819	1,008,609.10	1,575,834

(Continued on next page.)

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Traffic by Nationality.—Continued from page 267.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	164	804,672	603,330	982,420	604,143	\$701,638.09	691,427
Chilean.....	2	9,377	6,899	14,620	7,952	8,623.75	7,086
Colombian.....	5	1,459	1,411	2,207	1,433	1,740.65	2,085
Danish.....	8	31,460	25,030	37,582	25,008	31,186.00	48,572
Danzig.....	4	24,866	20,936	35,783	20,091	22,058.72	22,627
Dutch.....	14	64,121	45,978	76,809	45,659	56,748.87	62,339
French.....	8	38,139	29,410	48,534	29,302	36,762.50	40,652
German.....	30	111,654	79,375	131,970	79,784	98,585.01	120,325
Greek.....	9	35,528	27,183	41,573	25,936	28,192.79	17,698
Italian.....	5	30,806	22,927	39,290	23,785	27,107.20	15,201
Japanese.....	15	72,286	61,388	90,969	60,223	75,651.45	90,687
Norwegian.....	18	64,022	44,817	74,794	44,640	52,773.68	69,907
Panamanian.....	5	5,584	3,107	6,726	4,305	3,883.75	4,265
Peruvian.....	4	10,728	5,008	15,844	7,882	6,260.00	4,379
Spanish.....	8	32,793	28,436	43,493	26,985	33,270.19	41,394
Swedish.....	12	57,033	41,299	96,037	50,200	48,174.27	93,341
United States.....	212	1,055,014	816,002	1,316,729	810,840	976,382.09	1,145,146
Yugoslav.....	4	18,755	14,517	23,198	14,602	16,898.47	24,499
Totals, November, 1928	527	2,468,297	1,877,058	3,078,578	1,882,770	2,225,937.48	2,501,630
Totals, November, 1927	559	2,591,717	2,014,863	3,252,509	2,007,095	2,369,267.99	2,488,882
Totals, November, 1926	428	2,032,488	1,591,593	2,583,361	1,594,534	1,889,001.11	2,272,449

United States Intercoastal Traffic by Commodities for November, 1928.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for November, 1928, and the totals for November, 1927 and 1926. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the destination of "General cargo." These statistics are accordingly not precise but they are indicative of the kind and quantity of the cargo in transit through the Canal. The figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Agricultural implements.....	1,069	552	1,621
Alfalfa.....		491	491
Alfalfa meal.....		614	614
Ammonia.....	256		256
Asbestos.....	140		140
Asphalt.....	118	254	372
Automobiles.....	826	270	1,096
Automobile accessories.....	15	66	81
Bamboo.....		25	25
Barley.....	12		12
Beans.....	126	8,277	8,403
Bones and bonemeal.....	50		50
Borax.....	138	1,097	1,235
Bricks.....	619		619
Burlap.....	101	13	114
Calcium carbide.....	27		27
Camphor.....		48	48
Canned goods:			
Fish.....	869	16,105	16,974
Fruit.....	234	44,842	45,076
Meat.....		30	30
Milk.....		201	201
Soup.....	820		820
Vegetables.....	3,064	6,270	9,334
Miscellaneous.....	3,625	5,039	8,664
Carbon black.....	63	75	138
Celite filtereel.....		810	810
Cement.....	674	149	823

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Charcoal.....	135	45	180
Chemicals.....	1,592	581	2,173
China and fire clay.....	78		78
Coal.....	2,407		2,407
Cocoa.....	47	50	97
Coconuts.....	12	202	214
Coffee.....	25	481	506
Coke.....	1,042		1,042
Cold storage:			
Butter.....		50	50
Fish.....		50	50
Lard.....	800	150	950
Meat.....		15	15
Other.....	133		133
Confectionery.....	453		453
Cork.....	13		13
Cotton.....	80	2,710	2,790
Drugs.....	629	284	913
Earthenware.....	516	58	574
Eggs, dried.....		106	106
Explosives.....	53		53
Fertilizer.....	345		345
Flour.....	126	6,964	7,090
Fruit:			
Dried.....	164	14,000	14,164
Fresh.....		17	17
Furniture.....	73		73
General.....	47,851	5,072	52,923
Glass and glassware.....	1,421	184	1,605
Glue.....	27		27
Graphite.....	10		10
Hair.....		92	92
Hardwoods.....	900		900
Hay.....		1,750	1,750
Hemp.....	18	1,079	1,097
Honey.....		231	231
Hops.....		94	94
Infusorial earth.....		57	57
Leather.....	14		14
Linoleum.....	829		829
Liquors.....	132		132
Lumber.....	2,579	174,207	176,786
Malt.....	33		33
Manufactured goods:			
Iron and steel.....	110,648	521	111,169
Machinery.....	4,313	1,353	5,666
Railroad material.....	144	50	194
Tinplate.....	6,307		6,307
Textiles.....	2,808	224	3,032
Miscellaneous.....	7,723	288	8,011
Marble.....	35		35
Matches.....	43		43
Metals:			
Antimony.....		16	16
Copper.....	60	8,604	8,664
Iron.....	39		39
Lead.....		670	670
Scrap.....	1,295	349	1,644
Tin.....	26	700	726
Zinc.....		2,022	2,022
Other.....	33		33
Milk, powdered.....	10	465	475
Molasses.....	97		97
Musical instruments.....	10		10
Nuts.....		98	98
Oils:			
Coconut.....	5		5
Cottonseed.....	116		116
Crude.....		21,125	21,125
Gas oil, fuel oil.....		29,180	29,180
Gasoline, benzine, and naphtha.....		228,231	228,231
Kerosene.....		10,789	10,789
Lubricating and greases.....	2,699	10,433	13,132
Olive.....	12		12
Vegetable.....	255		255
Other.....	10		10
Ores:			
Copper.....	1,500		1,500
Magnesite.....		2,002	2,002
Other.....	48	45	93
Paint.....	665	36	701
Paper.....	6,075	4,964	11,039
Paper pulp.....	24	2,497	2,521
Peanuts.....	17		17
Phosphates.....	585	120	705

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Plaster	12		12
Porcelain	81	223	304
Quicksilver		1	1
Rags	62	564	626
Rice	822	377	1,199
Rope	204	458	662
Rosin	1,385		1,385
Rubber:			
Manufactured	580	269	849
Scrap		116	116
Salt	168		168
Sand	11		11
Seeds:			
Cotton		20	20
Other		1,113	1,113
Shells	462	87	549
Silk		228	228
Skins and hides		1,913	1,913
Slag	1,000		1,000
Slate	360		360
Soap	1,160	203	1,363
Soda	447		447
Soda, ash	900		900
Soda, bicarbonate	160		160
Soda, caustic	878		878
Starch	30		30
Sugar	62	5,632	5,694
Sulphur	3,626		3,626
Syrup	74		74
Talc		218	218
Tallow		216	216
Tar	27		27
Tea	10	97	107
Tobacco	1,113	155	1,268
Toys	17		17
Turpentine	102		102
Vegetables	30	10	40
Waste	58	1,094	1,152
Wax	25	209	234
Wheat		2,970	2,970
Wine		515	515
Wool		3,262	3,262
Totals, November, 1928	234,851	638,489	873,340
Totals, November, 1927	169,663	605,019	774,682
Totals, November, 1926	220,765	621,001	841,766

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending December 8, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cambrai	U. S. Government	November 21	December 2		106
Utacarbon	Union Oil Co. of California	December 3	December 4	303	
U. S. A. T. Somme	U. S. Government	December 5	December 6		1,244
K. R. Kingsbury	Standard Oil Co.	December 5	December 5	2,156	
Argun Maru	Osaka Shosen Kaisha	December 7	December 7	44	
Banan	John Pederson	December 7	December 7		25
Chateau Thierry	U. S. Government	December 7	December 8	1,023	19

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average temperature, Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9)	1018	1020	1013	84.0
Balboa (dock 18)	1011	1021	1005	83.0

(NOTE—The above is based on two months observations at Cristobal, and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors. An illustrated pamphlet explaining in detail the arrangement may be had upon application to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

On general merchandise the rates are as follows:

(a) For handling cargo from ship's side to storage place, the customary inward local charge of \$1 per ton.

(b) For delivery or reforwarding, customary outward local charge of \$1 per ton. (Total of 20 cents per ton more than regular transfer charge.)

(c) For storage, 3 cents per ton per day, except that no charge will be made for the first 35 days.

The Panama Railroad Company stores this cargo in four fireproof warehouses, 160 feet by 850 feet, at Cristobal, and in one of the same dimensions at Balboa.

Cargo stored for orders can be reforwarded from the Isthmus—each carrier to collect its proportion of the through rate instead of the local. This means that should a shipment move from New York to the Canal Zone, it will of course pay regular local rate to Balboa or Colon, as the case may be—but should owner wish to reforward to, say, "Guayaquil," he can do so by paying the oncarrier's proportion of the through rate. Upon evidence that the shipment or any part of it moved beyond the Canal Zone, the initial carrier will refund the difference between the through and local rate.

Cargo intended for warehousing at Cristobal or Balboa should be so indicated on the bill of lading, thus "Cristobal for orders" or "Balboa for orders." When so consigned it is not necessary for shippers to secure consular papers at original point of shipment, nor to have bills of lading consulsated. Cargo consigned to Canal Zone for orders may be delivered in the Republic of Panama in which case it is necessary to prepare an invoice on which duties can be paid. When evidence of payment of duty is presented to the Canal Zone customs officers they will issue the necessary release and delivery can be taken in the usual way. For those on the Canal Zone who are allowed to import goods duty free the Panama Canal customs release is all that is necessary. For reshipment from storage to a foreign country the shipper takes out bill of lading, consular invoice and sobordo if necessary and cargo is forwarded as regular outward local.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," are shown in the pamphlet referred to above.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
For steamships, including warships of all nations when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.....	11.00	14.00

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective October 18, 1928:

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.20
Brass, sheet, average.....	Lb.	.35
Bronze, Tobin, average.....	Lb.	.23
Gasoline, motor grade.....	Gal.	.14½
Metal, yellow.....	Lb.	.24
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.17
Oil, Diesel, at Cristobal only, in bulk, no surcharge.....	Bbl. of 42 gals.	1.80
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.00
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.43
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.59
Oil, engine, gas, extra heavy, in drums, Gulftriton No. 2250.....	Gal.	.50
Oil, kerosene, in drums.....	Gal.	.11
Oil, marine engine.....	Gal.	.54
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.11
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.06
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.16
Waste, cotton, white.....	Lb.	.16

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 13 years of operation.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., December 19, 1928. No. 20.

Holiday Greetings.

In the absence of Governor Burgess, it gives me great pleasure to extend to the personnel of The Panama Canal and the Panama Railroad Company, to the patrons and friends of the Canal, and to the people of the Republic of Panama, sincere good wishes for a Merry Christmas and a happy and prosperous New Year.

The loyalty, cooperation and friendship of our employees and our friends have contributed vitally to the great measure of success attained by the Canal during the present year.

J. L. SCHLEY,
*Acting Governor, The Panama Canal,
Second Vice President, Panama Railroad Co.*

Canal Traffic During First Fifteen Days of December.

During the first 15 days of December, 289 commercial vessels and 7 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,222,383.61 and on the launches, \$60.30, or a total tolls collection of \$1,222,443.91.

The daily average of transits of commercial vessels was 19.26 and the daily average tolls collection, \$81,492.24. The average amount of tolls paid by each of the commercial transits was \$4,229.70, as compared with \$4,215.59 for the first 15 days of November.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 11½ months of the current calendar year, with the daily averages of transits and tolls:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January	540	\$2,212,752.50	17.42	\$71,379.20
February	547	2,253,755.37	18.86	77,715.70
March	542	2,223,370.57	17.48	71,721.63
April	531	2,187,607.82	17.70	72,914.55
May	508	2,118,969.83	16.38	68,353.86
June	481	2,016,211.09	16.03	67,206.43
July	509	2,109,083.19	16.41	68,034.94
August	526	2,199,069.31	16.97	70,937.72
September	487	2,111,230.56	16.23	70,374.35
October	557	2,274,945.30	17.97	73,385.33
November	527	2,225,937.48	17.57	74,197.91
December (first 15 days)	289	1,222,383.61	19.26	81,492.24
Totals	6,044	25,155,316.63	17.27	71,872.33

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS. *Week ending at midnight, December 15, 1928.*

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
M. F. Elliott ¹	8	17 05	9	6 24	9	14 01	9	15 20	American	Standard Shipping Co.	425.0	57.2	22.0	New York, N. Y.	Los Angeles, Calif.	Ballast.		7.481	4.946
Oranemor	9	6 30	9	7 55	9	15 22	9	18 05	British	Balfour Williamson Co.	399.6	49.0	15.0	Tyne, England	Portland, Oreg.	Ballast.		5.883	4.236
Aabyryn	9	7 00	9	10 34	9	17 15	9	18 28	British	Andrew Weir & Co.	335.0	52.0	21.5	Tampico, Mexico	Brisbane, Australia.	Asphalt.	5.225	3.955	
Jugoslavija	9	10 35	9	10 55	9	18 02	9	21 05	Yugoslav	Baburiza & Co.	410.0	49.0	16.0	Valencia, Spain	Arica, Chile.	Ballast.		5.686	4.188
Lebore	9	5 30	9	11 42	9	19 33	9	21 05	American	Ore S. S. Corp.	549.0	72.0	20.0	New York, N. Y.	Cruz Grande, Chile.	Ballast.		14.325	4.635
Skagerak ²	9	7 05	9	12 48	9	19 50	9	23 25	American	Atlantic Tank Line.	411.0	55.0	23.0	Danzig	Los Angeles, Calif.	Ballast.		6.412	4.176
Albolsa	9	7 40	9	13 15	9	21 37	9	23 10	Italian	Corrado S. S. Co.	332.0	50.0	16.0	Philadelphia, Pa.	Arica, Chile.	Ballast.		5.346	4.104
Port Armstrong	9	13 07	9	13 40	9	21 55	10	1 00	American	Charles Nelson & Co.	324.0	46.2	20.6	Charleston, S. C.	Seattle, Wash.	General, pipe.	3.760	3.984	2.628
Mary Ellen	9	11 28	9	14 05	9	22 11	9	23 28	American	Texas S. S. Co.	509.0	70.0	21.10	Baltimore, Md.	Los Angeles, Calif.	Ballast.		12.425	8.838
Gen. G. W.																			
Getty ³			9	9 30	9	17 15			American	U. S. Army.	89.0	22.0		Cristobal, C. Z.	Balboa, C. Z.	Towing barge.			
Outer ⁴	9	19 55	9	20 10	9	9 33	10	11 49	Yugoslav	U. S. Army.	378.0	53.3	21.0	New York, N. Y.	Balboa, C. Z.	Ballast.	5.315	5.236	3.987
Islel	9	6 37	10	6 10	10	12 55	10	23 15	American	Atlant. Plov. Ivo Racic	360.0	51.6	22.0	Kastel, Sucreac	Chilean ports.	Cement.	1.102	5.710	4.023
San Jose	10	3 50	10	6 18	10	13 20	10	14 00	American	Panama Mail S. S. Co.	330.0	44.6	18.0	New York, N. Y.	San Francisco, Cal.	General, coffee.	589	3.670	2.353
Steel Traveler.	9	17 55	10	6 10	10	14 00	10	15 00	American	United Fruit Co.	424.2	56.2	27.3	Port Limon, C. R.	San Francisco, Cal.	Bananas	8.692	7.698	5.509
British Peer ¹	9	18 25	10	7 25	10	14 54	10	16 20	British	Isthmian S. S. Lines	385.0	51.5	23.6	New York, N. Y.	Singapore, Str. Set.	General.		5.238	3.330
Pont Bonita	10	4 55	10	7 35	10	15 58	10	17 15	American	British Tanker Co.	324.0	46.0	24.0	Falmouth, England	Talara, Peru	Ballast.	4.000	7.689	5.667
Geo. H. Jones ²	10	2 15	10	7 30	10	15 18	10	16 20	American	Gulf-Pacific Line	429.0	59.2	24.0	Louison, Texas	Seattle, Wash.	General		5.578	3.685
Workworth	10	6 30	10	8 22	10	16 09	10	17 15	British	Warner Quinlan Co.	401.0	53.1	23.0	New York, N. Y.	Los Angeles, Calif.	Ballast.		7.184	6.224
Pennmar	10	7 42	10	9 10	10	17 35	10	19 00	American	R. S. Dalglis & Co.	385.3	51.2	25.0	Barcelona, Spain	Vancouver, B. C.	Steel, general.		6.529	4.623
Silksworth	10	7 48	10	9 43	10	17 39	10	19 00	British	Calmar S. S. Corp.	415.0	53.0	25.0	Baltimore, Md.	Osaka, Japan.	Cotton, phos ates		4.415	6.228
Transporter.	10	8 35	10	10 42	10	18 26	11	4 55	British	Thomas Rice & Co.	400.0	52.0	18.0	Boca Grande, Fla.	Auckland, N. Z.	General	8.901	7.473	5.523
Robin Hood	10	13 40	10	13 56	10	21 40	10	22 55	American	Can. Nat. Steamships	424.8	55.2	28.0	Montreal, Canada	Tacoma, Wash.	General	540	15	15
St. Michel ¹	9	20 00	10	14 12	10	20 49			American	Isthmian S. S. Lines	436.0	58.0	23.9	Baltimore, Md.	Balboa, C. Z.	Army supplies.			
No. 31051 ⁶			10		10	13 25			American	U. S. Army				Cristobal, C. Z.	Gatun, C. Z.	Ballast.			
Capt. Crowl ⁴			10		10	10 58			American	United Fruit Co.				Cristobal, C. Z.	Gatun, C. Z.	Ballast.			
Caroline			10		10	10 58			American	U. S. Army				Cristobal, C. Z.	Gatun, C. Z.	Ballast.			
Maersk ²	10	13 55	10	17 30	11	8 52	11	10 17	Danish	Anglo-Saxon Pet. Co.	456.8	59.0	19.0	Fredericia, Den'k	Los Angeles, Calif.	Ballast		8.102	5.694
Radnor	10	19 27	10	19 45	11	11 35	11	12 45	American	Amer. Pioneer Line S.B.	434.3	57.7	25.8	Calveson, Texas	Manila, Philippines	General	7.603	7.982	5.956
Ramara	10	16 45	11	6 05	11	13 34	11	19 10	British	N. Z. Shipping Co.	495.0	62.3	28.0	London, England	Wellington, N. Z.	General	3.023	11.911	8.945
Manlius	10	13 00	11	6 45	11	14 23	11	15 30	British	Shaw, Savill & Albion.	477.5	61.1	27.6	London, England	Timaru, N. Z.	General	3.918	11.588	8.252
Seola ³	11	6 55	11	6 15	11	14 23	11	15 30	American	U. S. Navy	149.3	30.0		Cristobal, C. Z.	Balboa, C. Z.	Towing barge.			
Zrnaki	11	6 55	11	8 05	11	15 08	11	16 30	Yugoslav	Baburiza & Co.	399.0	53.2	13.0	Alexandria, Egypt.	Antofagasta, Chile.	Ballast.		6.207	4.536
Idarwald	10	8 49	11	10 25	11	17 09	12	17 00	German	Hamburg-American Line	399.6	54.2	25.0	Hamburg, Germany	Valparaiso, Chile.	General	4.885	6.561	4.510

⁶ Barge.

³ U. S. Army transport.

⁴ Launch.

⁵ Tug.

² Motor ship.

¹ Tanker.

Orestes	10 16.03	11 12.15	11 19.00	13 00.17	Dutch	Royal Neth. S. S. Co.	347.2	48.2	18.0	Ans'dam, Holland	Corral, Chile	General	2,709	4,167	3,083
Markakis	11 10.50	11 13.35	11 20.20	11 21.35	Greek	M. Markou	375.0	48.7	15.0	Oral, Algeria	Arica, Chile	Ballast	5,371	3,930	
Salvador	1 12.40	11 13.48	11 21.05	11 22.40	British	Pacific Steam Nav. Co.	375.0	33.0	17.4	Cristobal, C. Z.	Champerico, Guat	General	1,129	1,270	735
Illyria	11 10.15	11 14.05	11 21.10		American	Cornelius Crane	120.0	30.0	12.6	Boston, Mass.	Galapagos Island	Ballast		378	275
Tillie		11	12.12		American	Amer. Banana Corp.	435.0	56.0	17.0	Cristobal, C. Z.	Gatun, C. Z.	Ballast		2	2
Derbyline	3 18.25	11 20.05	12 9.25	12 22.16	American	Amer. Banana Corp.	435.0	56.0	17.0	New York, N. Y.	Los Angeles, Calif	Ballast	7,446	5,144	
Cerigo	3 19.50	12 6.05	12 14.30	12 15.40	German	Texas S. S. Co.	227.0	34.4	14.8	Cristobal, C. Z.	Buenaventura, Col	General	752	1,572	1,011
Oklahoma	11 6.45	12 6.14	12 14.05	12 15.30	French	Hamburg-American Line	400.0	51.6	21.6	Haar, France	Talcahuano, Chile	General	3,157	6,014	4,477
F. J. Lucken- bach	12 1.25	12 7.25	12 15.08	12 16.10	American	Luckenbach Line	446.0	56.0	22.0	Boston, Mass.	Tacoma, Wash.	General	3,777	8,508	6,179
Northumber- land	4 2.25	12 7.30	12 15.27	13 8.05	British	Federal Steam Nav. Co.	530.0	63.0	29.0	London, England	Wellington, N. Z.	General	9,374	13,268	9,124
Alaskan	12 5.00	12 8.07	12 15.39	12 16.45	American	Amer.-Hawaii Line	415.0	48.0	19.5	Boston, Mass.	Tacoma, Wash.	General	2,434	7,380	5,339
Tenue	12 6.30	12 8.25	12 16.45	12 18.40	British	Alfred Holt & Co.	486.0	58.0	29.8	Baltimore, Md.	Dalmy, China	General	8,872	9,366	6,474
Langleford	12 6.50	12 9.45	12 17.13	12 18.40	British	McClelland & Co.	376.0	57.0	15.0	Porto Ferrario, Italy	Vancouver, B. C.	Ballast	5,195	3,515	
Lubart	10 6.42	12 12.06	12 19.16	12 23.03	Belgian	Soc. Anon. de Com.	440.0	57.0	24.8	Antwerp, Belgium	Los Angeles, Calif	Cresote	8,100	7,615	4,976
Kuote Nelson	11 24.00	12 13.16	12 19.48	14 3.48	Norwegian	Fred Olsen & Co.	436.0	56.0	23.10	Oslo, Norway	Vancouver, B. C.	General	6,001	8,016	5,854
Nitro	12 7.05	12 14.00	12 21.48	12 23.00	Italian	Soc. Anon. Co.	406.0	48.0	14.8	Genoa, Italy	Valparaiso, Chile	General	1,677	5,742	4,180
Munares	12 15.48	12 18.58	13 9.19	13 10.46	American	Russell S. S. Line	370.0	53.0	22.0	Baltimore, Md.	Tacoma, Wash.	General	5,265	5,577	4,225
Sawokla	10 15.48	12 6.25	13 12.31	13 16.21	American	Russell S. S. Co., S. B.	403.0	53.0	16.0	New York, N. Y.	Fremantle, Aust'lia	General	2,633	7,097	5,317
Elktonpark	13 4.30	13 8.20	13 15.06	13 16.25	British	J. & J. Dindom	403.0	53.0	23.6	Genoa, Italy	Arica, Chile	Ballast	7,376	7,957	5,458
Neptunian	13 8.12	13 8.30	13 15.50	13 20.00	British	W. A. Souther & Co.	400.0	51.6	24.8	New Orleans, La	Yokohama, Japan	General	2,449	5,726	4,086
Santa Teresa	12 2.45	13 9.15	13 16.00	13 17.15	American	Grace Line	360.2	51.6	23.0	New York, N. Y.	Talcahuano, Chile	Ballast	7,130	5,240	
New Jersey	13 10.30	13 10.40	13 17.21	13 18.36	American	Texas S. S. Co.	400.0	52.0	16.2	Montreal, Canada	Geelong, Australia	Motors, general	2,100	5,857	4,350
Trewhidden	13 6.25	13 11.55	13 18.52	13 23.27	British	Hain S. S. Co.	411.0	55.0	16.0	London, England	Vancouver, B. C.	Ballast	7,038	5,166	
York City	13 14.10	13 14.20	13 21.00	14 6.19	British	Reardon Smith Line	324.0	46.0	21.6	New York, N. Y.	San Francisco, Cal	General	4,008	4,984	2,612
Susolano	13 14.28	13 14.55	13 22.15	13 23.27	American	Transmarine Line	324.0	46.0	17.7	London, England	Valparaiso, Chile	General	3,222	7,216	4,912
La Paz	12 18.55	14 6.07	14 13.05	14 20.15	British	Pacific Steam Nav. Co.	406.0	54.0	17.7	New York, N. Y.	Callao, Peru	General	9124	2,844	1,748
Alvarado	12 22.45	14 6.05	14 13.30	14 14.55	British	Pacific Steam Nav. Co.	387.0	52.0	20.0	Mohile, Ala	San Francisco, Cal	Sulphur, general	5,709	5,708	4,138
Satowan	13 23.25	14 7.20	14 14.01	14 14.55	American	Redwood Line	586.4	80.3	27.0	New York, N. Y.	San Francisco, Cal	General	3,824	18,100	
Virginia	14 6.35	14 7.40	14 16.00	15 00.50	American	Panama-Pacific Line	586.4	80.3	27.0	New York, N. Y.	San Francisco, Cal	General	3,450	12,023	8,443
President Hayes	14 6.10	14 7.55	14 15.56	14 21.52	American	Dollar Line	502.0	46.0	18.0	New York, N. Y.	San Francisco, Cal	General	2,580	3,289	2,628
Chetopa	14 00.20	14 8.50	14 16.23	14 18.35	American	Charles Nelson & Co.	323.0	55.0	10.0	Baltimore, Md.	Seattle, Wash.	General	2,954	4,524	
Volumbia	14 8.30	14 8.45	14 17.08	14 18.35	British	Can.-Amer. Ship. Co.	423.5	56.0	18.0	Norfolk, Va.	Vancouver, B. C.	Ballast	412	4,466	2,405
Ucayali	13 17.15	14 12.45	14 19.35	14 21.15	Peruvian	Peruvian Line	374.7	46.4	21.9	Covenas, Colombia	Callao, Peru	Cattle, general	2,944	4,600	4,622
Ludwigshafen	13 13.45	14 12.45	14 20.02	15 17.25	German	Roland Line	333.0	54.0	20.0	Bremen, Germany	San Antonio, Chile	General	840	985	605
Stella	10 17.35	14 15.00	15 10.11	16 1.48	Norwegian	Panama Mail S. S. Co.	191.0	44.0	32.0	Cristobal, C. Z.	Punta Arenas, C. R.	General			
Maasboer	14 14.00	14 15.00	15 14.22	14 23.55	Danish	Halcyon S. S. Co.	444.0	59.0	18.0	S. Shields, England	Vancouver, B. C.	Ballast			
Olipioneer	14 15.05	14 20.30	15 9.20	17 21.00	British	British Oil Shipping Co.	410.0	53.5	22.6	Newcastle, England	Los Angeles, Calif	Ballast	1,000		
Nyanza	14 11.15	15 6.23	15 13.42	15 16.24	British	Wessel, Duval & Co.	403.0	52.0	17.5	New York, N. Y.	San Antonio, Chile	General			
Nikola	14 16.50	15 6.15	15 14.42	15 19.00	Yugoslav	Baburizza & Co.	400.6	52.3	15.0	Alexandria, Egypt	Antofagasta, Chile	Ballast	5,826	3,969	
Solana	14 17.50	15 7.05	15 15.20	15 16.24	American	Tidewater Oil Co.	419.5	56.5	21.0	New York, N. Y.	San Francisco, Cal	Ballast	7,060	5,025	
Elsa	14 19.20	15 7.12	15 15.52	15 17.25	Norwegian	Harry Berthsen	389.0	52.0	18.0	Hamburg, Germany	Los Angeles, Calif	Ballast			
Santa Cecilia	14 19.5	15 8.25	15 16.26	15 17.25	American	Argonaut S. S. Co.	404.6	53.9	28.2	New York, N. Y.	Los Angeles, Calif	Steel, general	8,188	6,745	4,562
Jaya Arrow	15 22.00	15 9.15	15 17.00	15 18.50	American	Standard Oil Co.	488.6	62.0	20.1	New York, N. Y.	Los Angeles, Calif	Ballast	10,084	7,388	
Epidaurio	15 5.45	15 10.40	15 17.00	15 19.50	American	Bahurizza & Co.	360.0	48.0	12.0	Santa Cruz, C. I.	Chile	Ballast	2,650	4,617	3,412
Suglienco	15 6.15	15 10.40	15 18.10	15 23.44	Yugoslav	Transmarine Lines	324.0	46.2	20.0	Newark, N. J.	San Francisco, Cal	General	1,803	5,874	4,185
Tirso	15 22.00	15 11.30	15 18.48	15 19.50	Italian	Nav. Gen. Italiana	400.0	52.5	19.8	Genoa, Italy	Valparaiso, Chile	General	8,280	8,460	6,425
Valacia	15 7.00	15 12.50	15 19.40	15 21.60	British	Cunard Line	460.0	57.0	20.0	Liverpool, England	Fremantle, Aust'lia	General			

* Steel, scrap, and cotton.

† Yacht.

‡ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.—Continued.

Ship.	Arrived at port.		Entered Canal.	Completed transit.		Cleared for sea.	Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Tongking ⁹	15	9 35	15	13 20	15	21 05	16	14 30	Danish					Coke, general	3,070	7,013 5,317
McLane ¹⁰	15	13 00	15	14 00	15	20 30			American			Newcastle, Eng.	Vancouver, B. C.	Ballast		
Alert ¹⁰	15	13 00	15	14 00	15	20 30			American			New London, Conn.	San Francisco, Cal.	Ballast		
Bonham ¹⁰	15	13 00	15	14 00	15	20 30			American			New London, Conn.	San Francisco, Cal.	Ballast		
Wing ¹⁰	15	13 00	15	14 00	15	20 28			American			New London, Conn.	San Francisco, Cal.	Ballast		
Montgomery ¹⁰	15	13 00	15	14 00	15	20 28			American			New London, Conn.	San Francisco, Cal.	Ballast		
Morris ¹⁰	15	7 20	15	14 00	15	20 28			American			New London, Conn.	San Francisco, Cal.	Ballast		
Plum Branch	15	11 57	15	14 40	15	22 10	16	1 05	British			Liverpool, England	Corral, Chile	General	4,700	5,761 3,881
Motor Sailor									American			Cristobal, C. Z.	Gatun, C. Z.	Ballast		
THROUGH THE CANAL—PACIFIC TO ATLANTIC.																
⁹ Motor ship. ¹⁰ Coast Guard cutter.																
Marore	8	00 30	9	4 53	9	15 08	9	15 08	American			Cruz Grande, Chile	Baltimore, Md.	Iron ore	20,000	15,551 4,297
Amberton	9	00 05	9	7 33	9	17 40	9	17 40	British			Vancouver, B. C.	Falmouth, England	Wheat	7,972	5,756 4,139
Effie M.																
Morrisey ⁹	7	10 30	9	7 23	9	18 40	10	8 25	British			Prince Rupert, B. C.	New York, N. Y.	Ballast	1,986	120 88
Ucayali	9	6 30	9	8 05	9	18 42	11	7 00	Peruvian			Callao, Peru	Covenas, Colombia	General	1,986	4,466 2,405
Lubrico	9	9 05	9	9 45	9	18 50	9	22 45	American			Los Angeles, Calif.	Bayonne, N. J.	Gasoline	9,434	7,227 4,827
Castor ⁹	9	9 30	9	12 46	9	21 27	9	21 20	Swedish			San Francisco, Cal.	Land's End, Eng.	Gasoline	11,871	8,960 6,295
Uganda	9	15 50	9	16 44	10	11 58	10	11 58	British			Iquique, Chile	Savannah, Ga.	Nitrates	7,725	5,593 4,069
Maradak	9	16 08	10	6 40	10	14 38	10	14 38	American			Seattle, Wash.	Baltimore, Md.	(¹¹)	3,660	3,984 2,628
Fella ⁹	10	3 40	10	7 08	10	15 40	10	21 15	Italian			Vancouver, B. C.	Trieste, Italy	Wheat, general	9,150	7,784 6,045
Ese-quiho	10	4 30	10	8 21	10	15 00	10	21 35	British			Talcahuano, Chile	New York, N. Y.	Copper, general	2,943	9,158 6,176
Sciota ¹¹									American			Balboa, C. Z.	Cristobal, C. Z.	(¹²)	101	985 605
Stella	10	5 00	10	8 28	10	17 35	15	15 53	Norwegian			San Jose, Guate.	Cristobal, C. Z.	Coffee	545	3,724 2,817
August Leonhardt	10	5 30	10	8 35	10	17 30	10	23 10	German			Buenaventura, Col.	New York, N. Y.	(¹³)		
Cities Service	10	8 15	10	9 19	10	18 05	10	18 05	American			Los Angeles, Calif.	Boston, Mass.	Gasoline	9,815	8,561 5,998
Empire ¹	10	6 35	10	11 17	10	18 45	11	00 40	British			San Francisco, Cal.	Hamburg, Germany	General	3,268	6,014 4,482
Gaelsthar	10	16 20	10	17 58	11	11 25	11	11 25	American			Portland, Ore.	Baltimore, Md.	(¹⁴)	8,893	8,300 6,020
Jefferson Myers	10	10 30	11	6 25	11	13 10	12	1 12	American			San Francisco, Cal.	New York, N. Y.	General	2,218	5,926 4,178
Ecuador	10	18 30	11	6 30	11	16 38	11	16 38	American			Los Angeles, Calif.	Chester, Pa.	Gasoline	13,519	9,620 6,424
Sun ¹²	10	19 05	11	7 14	11	18 15	11	23 30	Dutch			Vancouver, B. C.	Rotterdam, Holland	General	9,318	9,165 7,056
Moordijk																
Walter A.	10	22 30	11	7 57	11	18 15	11	18 15	American			Portland, Ore.	Boston, Mass.	General	6,832	8,785 6,567
Luckenbach	11	7 04	11	10 25	11	18 50	11	18 50	American			Portland, Ore.	Boston, Mass.	General	7,588	7,107 5,041
Pennsylvania	11	7 45	11	10 47	11	19 30	13	00 10	American			Valparaiso, Chile	New York, N. Y.	(¹⁷)	5,715	6,672 4,905
Santa Cecilia																

¹¹ For orders.¹² Tug.¹³ Tanker.¹⁴ Copper, nitrates, coffee, and cocoa.¹⁵ Lumber, copper, and general.¹⁶ Coffee, hides, and general.¹⁷ Lumber, grain, and copper.

Benrath	11	10	30	11	11	15	11	20	30	11	21	25	British	Ben Line	420.1	54.0	24.6	Vancouver, B. C.	Antwerp, Belgium	8,300	6,425	4,068
Manitoway	11	13	00	11	14	01	11	21	30	11	21	50	American	P. N. Shipping Co.	380.0	53.2	27.8	Los Angeles, Calif.	New York, N. Y.	6,253	6,203	4,330
Manitoway	11	15	30	11	16	04	12	9	20	13	20	12	Peruvian	Peruvian Line	438.7	53.2	25.9	Callao, Peru	Liverpool, England	6,827	6,644	5,413
Manitoway	12	1	30	12	6	03	12	16	25	12	16	25	American	Ore S. S. Corp.	449.6	52.2	24.0	Cruz Grande, Chile	New York, N. Y.	20,000	14,588	9,348
Manitoway	12	1	30	12	6	35	12	16	25	12	16	25	American	Tampa Intercoastal Co.	440.0	50.0	27.2	Manila, Philippines	New York, N. Y.	8,737	8,280	9,063
Manitoway	12	6	00	12	7	18	12	17	35	12	17	35	American	Williams S. S. Line	443.4	57.2	24.9	Everett, Wash.	New York, N. Y.	7,993	7,933	9,839
Manitoway	12	6	00	12	8	24	12	18	35	12	19	30	German	North German Lloyd	449.1	58.5	25.2	Vancouver, B. C.	Hamburg, Germany	7,269	7,933	9,799
Manitoway	12	6	30	12	8	46	12	18	40	12	18	40	British	Can-American S. S. Co.	366.5	52.5	20.6	Vancouver, B. C.	Genoa, Italy	5,670	4,842	3,488
Manitoway	12	8	40	12	9	31	12	18	58	12	18	58	American	Redwood Line	386.6	52.2	24.3	San Francisco, Cal.	Mobile, Ala.	5,837	5,099	4,125
Manitoway	12	8	50	12	9	54	12	19	40	12	19	40	German	Roland Line	216.0	33.0	11.6	Guayaquil, Ecuador	Cristobal, C. Z.	939	1,132	741
Manitoway	12	9	00	13	6	20	13	15	25	13	15	25	American	U. S. Navy	175.0	16.4	...	Balboa, C. Z.	Cristobal, C. Z.	337	337	...
Manitoway	12	19	40	13	6	45	13	14	35	13	14	35	British	R. Chapman & Son	399.4	52.3	24.2	Vancouver, B. C.	Cristobal, C. Z.	7,215	5,740	4,087
Manitoway	12	23	00	13	7	08	13	15	15	13	15	15	German	Vergetts, Ltd.	375.3	50.0	20.3	Azores	Azores	6,750	4,703	3,474
Manitoway	13	2	20	13	7	56	13	16	40	13	16	15	German	Hamburg-American Line	425.2	54.1	22.3	Tacopilla, Chile	Hamburg, Germany	6,391	7,173	5,514
Manitoway	13	6	30	13	8	57	13	18	30	13	20	30	Norwegian	Winge & Co.	360.7	52.2	23.0	San Antonio, Chile	English Channel	6,280	5,451	3,820
Manitoway	13	9	10	13	9	44	13	19	30	13	19	30	Norwegian	Fred Olsen & Co.	425.5	55.0	28.9	Vancouver, B. C.	Oslø, Norway	9,057	7,505	5,627
Manitoway	13	9	40	13	10	23	13	18	45	13	11	05	American	U. S. Army	448.0	58.0	25.4	Balboa, C. Z.	New York, N. Y.	68	...	...
Manitoway	13	12	30	13	13	14	13	20	30	13	20	30	Yugoslav	Baburizza & Co.	433.3	56.0	25.6	Antofagasta, Chile	Azores	9,301	6,561	4,701
Manitoway	13	15	00	13	15	40	13	21	30	13	21	30	British	United Fruit Co.	320.0	44.5	19.5	San Francisco, Cal.	Port Limon, C. R.	793	3,675	2,229
Manitoway	13	23	50	14	6	39	14	13	40	14	15	55	British	King Line, Ltd.	400.0	54.5	23.3	Vancouver, B. C.	Cape Horn, So. Am.	6,144	6,329	4,445
Manitoway	13	23	50	14	6	40	14	16	45	14	16	45	Colombian	National Navigation Co.	116.0	21.1	9.6	Buenaventura, Col.	Cristobal, C. Z.	229	211	124
Manitoway	14	8	15	14	9	00	14	16	55	14	18	15	Spanish	Sota & Aznar	363.8	52.9	24.0	Tacopilla, Chile	Azores	8,080	5,977	4,396
Manitoway	14	9	40	14	10	23	14	19	40	14	18	50	American	The Texas Co.	416.8	51.5	25.8	Los Angeles, Calif.	New York, N. Y.	7,984	7,150	5,320
Manitoway	14	9	50	14	10	24	14	19	40	14	19	20	American	Pan-Am. Pac. & Tr. Co.	429.3	50.2	26.9	Los Angeles, Calif.	Baltimore, Md.	8,000	7,705	5,517
Manitoway	14	1	50	14	12	28	14	20	15	14	20	German	North German Lloyd	429.8	53.5	27.0	San Antonio, Chile	Hamburg, Germany	8,255	7,533	5,413	
Manitoway	14	1	45	14	12	28	14	21	30	15	21	10	French	French Line	413.0	38.2	25.0	Tacopilla, Chile	Le Havre, France	7,503	8,822	4,122
Manitoway	14	3	07	14	13	45	14	22	05	14	22	05	American	Amer-Hawaiian Line	404.6	53.9	27.9	San Francisco, Cal.	Boston, Mass.	5,289	6,700	4,450
Manitoway	14	15	20	14	16	12	15	11	25	15	11	25	British	R. Chapman & Son	39.2	53.0	24.6	Vancouver, B. C.	London, England	7,380	5,707	4,212
Manitoway	14	14	30	14	16	33	15	12	55	15	12	55	American	McCormick S. S. Co.	401.4	53.2	27.6	Portland, Oreg.	Baltimore, Md.	8,278	7,082	5,167
Manitoway	15	1	40	15	5	45	15	16	45	15	16	45	American	Ore S. S. Corp.	370.3	72.2	33.6	Cruz Grande, Chile	New York, N. Y.	21,000	15,351	4,297
Manitoway	14	20	20	15	6	35	15	14	10	15	19	20	German	Hamburg-American Line	554.2	53.6	19.7	Los Angeles, Calif.	Hamburg, Germany	3,152	5,425	3,508
Manitoway	15	5	00	15	6	59	15	18	48	15	18	48	American	Atlantic Refining Co.	425.0	57.2	27.0	Los Angeles, Calif.	Philadelphia, Pa.	9,191	7,204	4,769
Manitoway	15	7	10	15	8	44	15	18	45	16	1	15	British	Pacific Steam Nav. Co.	520.0	66.3	29.0	Tacopilla, Chile	Liverpool, England	10,241	14,827	10,640
Manitoway	14	20	20	15	9	05	15	19	25	15	19	25	Yugoslav	Yugoslav-Amer. Nav.	430.2	54.5	26.3	Los Angeles, Calif.	Azores	8,200	6,362	4,722
Manitoway	15	30	30	15	9	43	15	20	00	15	21	35	Japanese	Kokusa Kisen Kaisha	425.0	53.8	27.4	Prince Rupert, B.C.	San Francisco, Cal.	8,955	7,798	5,174
Manitoway	15	4	50	15	9	58	15	21	00	15	22	35	British	Thomas Dunlop & Sons	400.0	52.8	24.6	Tacopilla, Chile	Savannah, Ga.	7,503	5,808	4,058
Manitoway	15	7	00	15	11	20	15	21	10	15	21	10	American	Quaker Line	376.4	52.3	23.6	Aberdeen, Wash.	New York, N. Y.	6,050	5,455	3,902
Manitoway	15	11	30	15	12	30	15	22	25	15	23	55	Greek	Rethymnis & Kulak's dis	394.0	51.0	26.0	Iquique, Chile	Azores	7,923	6,141	4,591
Manitoway	15	11	50	15	12	51	15	23	20	15	23	20	American	Isthmian S. S. Lines	400.0	55.1	26.8	Wilmington, Calif.	Boston, Mass.	7,087	7,047	5,132
Manitoway	15	15	45	15	16	44	16	12	03	16	12	03	Norwegian	Wilhelmsen Line	395.0	53.9	25.0	Iquique, Chile	Wilmington, Del.	7,440	...	...
Manitoway	14	13	30	15	7	05	15	...	...	...	...	...	Panama	United Fruit Co.	...	...	...	Balboa, C. Z.	Gatun Lake, C. Z.	...	...	...
Manitoway	14	13	30	15	7	05	15	...	...	...	...	...	Panama	United Fruit Co.	...	...	...	Balboa, C. Z.	Gatun Lake, C. Z.	...	...	...

23 Towed by *Doris*.

2 Towing barge.

21 Barge.

20 Launch

1917. U. S. Army transport.

18 Submarine

Tanker

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.				* DEPARTURES.			
* ARRIVALS.		From—		Vessel.		Line.	
Date.	Vessel.	Line.		Date.	Vessel.	Line.	For—
December 9.	Calamares.	United Fruit Co.	Port Limon, Costa Rica.	December 9.	Calamares.	United Fruit Co.	New York via Habana.
December 10.	Perou.	French Line	St. Nazaire and wayports.	December 10.	Heredia.	United Fruit Co.	New Orleans and wayports.
December 10.	Pastores.	United Fruit Co.	New York and Habana.	December 10.	Ancon.	Panama R. R. S. S. Line.	New York via Haiti.
December 10.	Wawa.	Standard Fruit & S. S. Co.	Puerto Cabezas.	December 11.	Wawa.	Standard Fruit & S. S. Co.	La Colba.
December 12.	Granada.	Standard Fruit & S. S. Co.	New Orleans, La.	December 11.	Perou.	French Line	Havre via wayports.
December 12.	Sixola.	United Fruit Co.	New York via Kingston.	December 12.	Pastores.	United Fruit Co.	Port Limon, Costa Rica.
December 13.	Antillan.	United Fruit Co.	New Orleans, La.	December 12.	Wanks.	Standard Fruit & S. S. Co.	San Blas, R. P.
December 13.	Suriname.	Leyland Line	Liverpool via wayports.	December 13.	Sixola.	United Fruit Co.	New York via wayports.
December 13.	Macabi.	United Fruit Co.	Boston, Mass.	December 13.	Suriname.	United Fruit Co.	Puerto Colombia.
December 13.	Coppename.	United Fruit Co.	Bocas del Toro, R. P.	December 13.	Anachucuna ²¹ .	United Fruit Co.	Colon, R. P.
December 13.	Anachucuna ²¹ .	United Fruit Co.	Colon, R. P.	December 14.	El Panquiao ²⁵ .	Panaman Government	Colon, R. P.
December 14.	Northav.	Anglo-Saxon Petroleum Co.	Curacao, D. W. I.	December 14.	Granada.	Standard Fruit & S. S. Co.	New Orleans and wayports.
December 14.	El Panquiao ²⁵ .	Panaman Government	Colon, R. P.	December 14.	Coppename.	United Fruit Co.	New Orleans, La.
December 14.	Wanks.	Standard Fruit & S. S. Co.	San Blas, R. P.	December 15.	Macabi.	United Fruit Co.	Puerto Colombia.
December 14.	Tentonia.	Hamburg-American Line.	Tampico via wayports.	December 15.	Tentonia.	Hamburg-American Line.	Hamburg via wayports.
December 15.	Manauqui.	United Fruit Co.	New York via wayports.	December 15.	Wanks.	Standard Fruit & S. S. Co.	Perme, R. P.
December 15.	Cartago.	United Fruit Co.	New Orleans via Habana.	December 15.	Anachucuna ²¹ .	United Fruit Co.	Colon, R. P.
December 15.	Impero ²⁶ .	Colon Import & Export Co.	Colon, R. P.				
December 15.	Anachucuna ²⁴ .	United Fruit Co.	Colon, R. P.				
²⁴ Motor boat.				PORT OF BALBOA.			
				²⁵ Transport.		²⁶ Motor schooner.	
December 9.	Citicuola ²⁷ .	Chiriqui Land Co.	Puerto Armuelles, R. P.	December 12.	Grant ²⁸ .	U. S. Army	San Francisco, Calif.
December 11.	Grant ²⁸ .	U. S. Army	San Francisco, Calif.	December 12.	Des Hermanos ²⁹ .	A. Valdez	Bayano River, R. P.
December 11.	Mojave.	General Petroleum Co.	Los Angeles, Calif.	December 13.	Mojave.	General Petroleum Co.	Los Angeles, Calif.
December 12.	Des Hermanos ²⁹ .	A. Valdez	Bayano River, R. P.	December 13.	A. B. de Obarrio ²⁹ .	Pacific Petroleum Co.	Bayano River, R. P.
December 14.	A. B. de Obarrio ²⁹ .	Pacific Fruit Co.	Bayano River, R. P.	December 14.	El Colon ²⁹ .	H. Elliot.	El Real, R. P.
December 14.	El Colon ²⁹ .	H. Elliot.	El Real, R. P.	December 14.	Nina ²⁹ .	H. Elliot.	El Real, R. P.
December 14.	Nina ²⁹ .	H. Elliot.	El Real, R. P.	December 14.	Des Hermanos ²⁹ .	A. Valdez	Bayano River, R. P.
December 14.	Des Hermanos ²⁹ .	A. Valdez	Bayano River, R. P.				
December 15.	Nora.	Grace Line	Los Angeles, Calif.				

* Other than ships passing through the Canal.

²⁷ Motor ship. ²⁸ U. S. Army transport. ²⁹ Motor schooner.

New Turbo-Electric Liner "Virginia" Transits Canal.

The turbo-electric liner *Virginia*, of the Panama Pacific Line, transited the Canal December 14, 1928, en route from New York to San Francisco, via Habana, San Diego, and Los Angeles, on her maiden voyage in the United States intercoastal service. The *Virginia* is the second of the three new vessels which the Panama Pacific Line announced some time ago they would place in the intercoastal service. The first of these three vessels, the *California*, transited the Canal on her initial voyage last February, and the third liner is now under construction at Newport News and will be placed in service in late 1929.

The *Virginia*, which is similar to the *California*, although slightly larger, is said to be the largest commercial vessel to have been built in the United States. She is 586.4 feet long, 80.3 feet beam, and of 20,733 gross tons. She carried 584 passengers and 3,824 tons of general cargo on her initial trip through the Canal. Tolls were \$15,210.

Cargo Through Canal During November, 1928.

On pages 282 and 283 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in November 1928. This cargo, segregated according to direction, as compared with November, 1927, and the differences, are shown in the following tabulation:

	November, 1928.	November, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	780,752	597,434	+183,318
Pacific to Atlantic.....	1,720,878	1,891,448	-170,570
Totals.....	2,501,630	2,488,882	+12,748

It will be noted from the above that the Atlantic to Pacific tonnage increased 183,318 tons over that in November, 1927, while that from the Pacific to the Atlantic showed a decrease of 170,570 tons a net increase of cargo tonnage in both directions over November, 1927, of 12,748 tons. A feature of the past month's traffic was the amount of cargo in transit from the east coast of the United States to Asia which totaled 236,012 tons, the largest amount of cargo shipped in this trade since May, 1922.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Over 69 per cent of the cargo moving from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 24.5 per cent in Europe. Cargo originating in the United States was 151,692 tons, or 38.8 per cent, greater than the amount coming from that area in November, 1927. Tonnage from Europe showed an actual increase of 40,649 tons over November last year, although the percentage of the total in November of both years was about the same. The actual increase amounted to 27 per cent over the amount shipped in November last year.

Destination.—Over 39 per cent of the Pacific-bound cargo was destined to the United States; 30.6 per cent to Asia (including the Philippines); 15.2 per cent to South America; and 9.9 per cent to Australasia. Tonnage to all of these areas, with the exception of Australasia, showed actual as well as relative increases over the corresponding month a year ago. The actual increase to the United States

amounted to 95,638 tons, or 45.1 per cent; that to Asia an increase of 107,838 tons, or 82.8 per cent; and that to South America 31,979 tons, or 36.7 per cent. Cargo to Australasia showed a relative as well as an actual decrease of 36,735 tons, or 32.1 per cent under that in November, 1927.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 55.4 per cent originated on the west coast of the United States; 24.6 per cent in South America; 15.3 per cent in Canada; 2.7 per cent in Australasia; and 1.9 per cent in Asia. Cargo from the United States and South America showed decreases in actual tonnage under November, 1927, of 196,346 tons, or 17 per cent, and 81,237 tons, or 16.0 per cent, respectively. Cargo tonnage from Canada increased 104,793 tons, or 65.6 per cent, and at the same time showing a heavy increase in percentage of the total cargo. Cargo from Asia and Australasia also showed small actual and relative increases.

Destination.—Segregated according to destination, 50.3 per cent of the cargo in this direction went to the United States, and 43.9 per cent to Europe. Tonnage to the United States showed a small increase of less than 5,000 tons, as well as a relative increase, over November, 1927, while that to Europe decreased 78,797 tons, or 9.4 per cent, although the percentage of the total cargo in the two months was approximately the same.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify over 86 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 14 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic to Pacific-bound commodities which aggregated more than 10,000 tons for November, 1928, or November, 1927, are listed in the following tabulation, together with the totals for the first 11 months of the calendar years 1928 and 1927:

Commodity.	November, 1928.	November, 1927.	First 11 months in—	
			1928.	1927.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Automobiles.....	21,500	10,358	166,451	108,961
Cement.....	25,060	19,129	258,962	224,548
Coal and coke.....	30,825	12,045	282,890	193,476
Cotton.....	58,635	37,302	251,539	353,146
Manufactured goods:				
Iron and steel.....	187,726	123,395	1,966,590	1,815,423
Machinery.....	15,022	17,938	164,997	192,245
Railroad material.....	15,346	13,778	216,893	146,329
Tinplate.....	21,059	4,560	172,964	180,996
Textiles.....	12,052	13,999	112,443	99,032
Miscellaneous.....	16,019	23,822	137,470	80,504
Mineral oils.....	62,136	53,183	677,683	602,085
Paper.....	13,707	19,686	176,531	155,783
Phosphates.....	13,946	7,137	224,882	150,468
Salt.....	11,340	2,255	46,753	34,128
Silversand.....	10,250	3,080	40,051	43,784
Tobacco.....	22,131	6,109	123,882	67,207

The above 16 commodity groups comprise almost 69 per cent of the cargo moving from the Atlantic to the Pacific during November, 1928. It will be noted that 12 of these items showed increases while in the other four slight decreases were noted. Comparing the same items for the first 11 months of the calendar years 1928 and 1927, 12 of the items for 1928 show increases over 1927.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 99 per cent of all cargo moving from the Pacific to the Atlantic during the month of November, 1928. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month a year ago are listed below together with the totals for the first 11 months of the calendar years 1928 and 1927:

Commodity.	November, 1928.	November, 1927.	First 11 months in—	
			1928.	1927.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	22,352	18,588	238,469	302,294
Beans.....	13,437	13,645	139,436	73,606
Canned goods (fish, fruit, vegetables, etc.).....	105,665	98,870	779,418	642,073
Cold storage (food products) ¹	22,300	21,590	282,708	238,192
Flour.....	11,621	9,871	116,438	78,457
Fruit, dried.....	45,104	60,122	272,613	202,615
Fruit, fresh.....	28,094	12,442	110,169	83,419
Lumber.....	251,668	224,572	3,304,068	3,162,665
Metals, various.....	60,643	45,948	601,556	520,856
Nitrates.....	213,033	228,659	2,133,627	1,724,464
Oils, mineral.....	436,749	484,147	4,382,784	6,442,074
Ores (principally iron).....	95,134	148,439	1,463,671	1,553,607
Rice.....	9,097	14,962	72,309	60,354
Sugar.....	32,847	40,067	525,792	513,264
Wheat.....	256,583	351,224	2,519,865	1,641,097

¹ Does not include fresh fruit.

The above 15 commodity groups comprise 94 per cent of the cargo moving from the Pacific to the Atlantic during November, 1928. Seven of the items show increases and 8 decreases. A comparison of the first 11 months, however, show substantial increases in all items with the exception of barley, mineral oils, and ores.

(Continued on next page.)

Heavy Day's Traffic.

Thirty-one commercial vessels, having an aggregate net tonnage of 138,124, transited the Canal on December 8, 1928. Combined tolls on the day's traffic totaled \$120,507.28, and cargo carried amounted to 107,786 tons. This day's traffic falls short by two transits of equaling the record traffic for one day established on October 1, 1927. Of the 31 transits on December 8, 22 were passed from the Atlantic to the Pacific and 9 from the Pacific to the Atlantic. In point of number of transits, net tonnage, and tolls collected, the Atlantic to Pacific traffic sets a new record for traffic in one direction, the previous high mark having been established on October 1, 1927, when 19 vessels were passed from the Atlantic to the Pacific.

The following is a statement showing the commercial traffic of December 8, 1928, by direction:

	Number of transits.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Atlantic to Pacific.....	22	103,531	\$86,224.78	46,992
Pacific to Atlantic.....	9	37,593	34,282.50	60,794
Totals.....	31	141,124	120,507.28	107,786

In addition to the commercial vessels as above, an Army transport, a cruiser of the United States Navy, and an Army tug, made the passage from the Pacific to the Atlantic.

In connection with the total transits made on December 8, 1928, 32 lockages were made at Gatun and 33 each at Pedro Miguel and Miraflores, establishing new records for lockages at all locks.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, November, 1928.—Continued from page 281.
(Figures represent tons of 2,240 pounds.)

From—	South America.					North America.							Asia.						AUSTRALASIA.			Grand totals.	Per cent of total cargo.		
	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	West coast of United States.	West coast of Canada.	West coast of Central America.	West coast of North America. ²	Palbo, C. Z. ³	Hawaii.	Total, North America.	Japan.	China.	Philippines.	Far East. ⁴	Total, Asia.	Australia.	New Zealand.	Australasia. ⁵			Total, Australasia.	
NORTH AMERICA:																									
UNITED STATES—																									
North Atlantic ports	18,924	986	420	6,330	5,884	32,544	210,149	8	913	19	7,258	218,347	35,092	23,864	12,690	39,434	111,080	23,584	2,045	131	25,760	387,731	49.8		
South Atlantic ports.	2,033	433	594	1,112	471	4,643	22,928	52	1,774	1,774	3,628	1,680	80,076	33,336	661	11,100	115,173	9,759	.....	.....	.....	11,533	1.4		
Gulf ports.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	142,796	18.3		
Totals, U. S.....	20,957	1,419	1,014	7,442	6,355	37,187	234,851	60	913	19	7,258	243,101	118,796	48,880	15,151	53,183	236,012	23,584	2,045	131	25,760	542,060	69.5		
Cristobal, C. Z. ²	760	3,015	1,139	702	1,492	7,108	3,876	12	3,534	.....	.....	12,422	4,600	1,563	.....	.....	1,563	5,506	6,605	.....	.....	19,530	2.5		
East coast of Canada.....	.....	.....	.....	53	.....	53	2,000	4,600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18,274	2.3		
West Indies.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,053	0.3		
East coast of Mexico and Cen. America.....	.....	.....	.....	.....	.....	.....	2,108	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,108	0.3		
Totals, N. America ..	21,717	4,434	2,153	8,107	7,847	44,348	242,835	4,672	9,147	19	7,258	264,231	120,359	48,880	15,151	53,183	237,575	29,090	8,650	131	37,871	584,025	74.9		
Europe:																									
British Isles.....	15,716	.....	.....	3,726	7,132	26,574	6,933	3,272	.....	.....	.....	3,868	14,073	.....	.....	.....	.....	.....	.....	.....	.....	74,423	9.5		
Belgium.....	1,740	6,275	544	993	694	10,126	91,147	684	16	.....	.....	19,847	686	.....	686	.....	.....	.....	.....	.....	5,834	36,493	4.7		
France.....	2,073	.....	.....	38	1,032	4,326	4,970	500	.....	.....	.....	5,470	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,796	1.3		
Germany.....	77	180	486	204	2,090	2,937	5,928	100	.....	.....	.....	3,835	9,863	.....	.....	.....	.....	.....	.....	.....	.....	12,800	1.6		
Holland.....	4	68	.....	21	112	205	3,369	237	.....	.....	.....	.....	3,606	.....	.....	.....	.....	.....	.....	.....	.....	3,811	0.5		
Italy.....	110	.....	.....	30	1,475	1,615	1,142	.....	338	.....	.....	1,480	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,005	0.4		
Norway and Sweden.....	3,294	1,474		611		5,379	6,827	295				5	7,462									36	12,877	1.7	
Spain and Portugal.....	259	.....	.....	85	467	811	7,250	.....	.....	.....	.....	.....	7,250	.....	.....	.....	.....	.....	.....	.....	.....	8,061	1.0		
Europe ¹	709	8	431	21,271	22,419	4,334	2,926	2,926	.....	.....	.....	7,260	.....	.....	.....	.....	.....	.....	.....	.....	.....	29,679	3.8		
Totals, Europe.....	23,982	8,035	1,068	6,074	35,263	74,392	59,900	8,014	354	335	7,708	76,311			686					5,870	28,854	4,922	39,646	191,035	24.5
East coast of S. America.	.....	384	.....	.....	.....	384	4,891	147	.....	.....	.....	5,038	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,662	0.6		
Grand totals.....	45,639	12,823	3,221	14,271	43,110	119,124	307,626	12,833	9,811	354	14,966	345,580	120,629	49,566	15,151	53,183	238,531	34,960	37,504	5,053	77,517	780,752	100.0		
Per cent of total cargo:																									
November, 1928.....	5.9	1.6	0.4	1.8	5.5	15.2	39.5	1.6	1.3			1.9	44.3	15.5	6.4	1.9	6.8	30.6	4.5	4.8	0.6	9.9	100.0		
November, 1927.....	7.3	1.2	0.8	3.0	2.3	14.6	35.5	4.2	3.7	0.2	0.9	0.9	43.5	12.5	4.1	3.2	2.0	21.8	14.6	4.2	0.3	19.1	100.0		
November, 1926.....	2.7	0.9		1.0	7.3	11.9	38.1	0.9	2.0	1.9		0.9	43.8	11.2	2.5	1.3	6.7	21.7	9.7	9.7	3.2	22.6	100.0		

¹ General cargo not routed so as to allow aggregation between definite ports.

² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, November, 1928.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.												Grand totals.	Per cent of total cargo.		
	UNITED STATES.					CENTRAL AMERICA.					EUROPE.															
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States.	East coast of Canada.	West Indies.	East coast of Central America.	Cuba, C. Z.	Total, North America.	British Isles.	Belgium.	Danzig.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe, 1	Total, Europe.	East coast of South America.			Egypt.	
SOUTH AMERICA:																										
Chile.....	125,195	7,327	27,813	160,335	.....	71	6,886	167,292	18,836	5,418	.....	.....	.....	3,440	8,276	10,949	3,749	349	1,046	116,920	108,983	3	.....	336,278	19.6	
Colombia.....	2,029	.....	.....	2,029	.....	.....	3,339	5,368	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44	.....	.....	5,714	0.3	
Ecuador.....	7,463			7,463		6	2,035	9,510	62	16										109	126	1,090	54		10,654	0.6
Peru.....	5,573	.....	80	5,653	15,181	25	4,184	25,046	8,990	3,928	.....	.....	858	28,122	12,880	1,050	.....	5,275	.....	12,722	45,741	.....	.....	70,787	4.1	
W. coast of S. Amer. ²	24	.....	.....	24	.....	.....	261	288	.....	.....	.....	.....	.....	.....	.....	.....	38	.....	.....	88	126	.....	.....	411	.....	
Totals, S. America.	140,220	7,327	27,893	175,510	15,181	102	10,765	207,501	27,888	9,362	.....	.....	862	3,476	21,318	12,036	4,397	5,624	1,155	129,860	215,984	359	.....	423,844	24.6	
NORTH AMERICA:																										
West coast, Canada.	22,129	.....	276	22,405	2,654	7,825	32	243	33,153	114,155	4,190	.....	.....	4,496	15,729	28,322	4,590	4,380	37,949	16,206	229,927	1,326	.....	264,412	15.3	
W. coast Cen. Amer.	14	.....	.....	14	.....	.....	1,146	1,160	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,160	0.1	
W. coast of U. S.	698,628	3,036	26,825	638,489	5,864	21,519	8,425	3,762	678,056	153,875	9,856	.....	608	29,756	12,992	11,794	1,854	4,374	7,572	35,460	268,141	7,369	.....	953,569	55.4	
Totals, N. America.	630,771	3,036	27,101	660,908	8,518	29,344	8,457	5,154	712,378	208,030	14,046	.....	608	34,252	28,721	40,110	6,354	8,754	45,521	51,666	498,068	695	.....	1,219,141	70.8	
ASIA:																										
China.....	1,610	49	.....	1,659	.....	.....	363	2,022	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,022	0.1	
Japan.....	555	.....	.....	555	.....	.....	31	586	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	586	.....	
Philippines	19,710	.....	943	20,653	.....	.....	20,653	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20,653	1.2	
Far East ¹	1,715	.....	.....	1,715	.....	7,125	8,840	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,840	0.6	
Totals, Asia.....	23,590	49	943	24,582	.....	7,125	394	32,101	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	32,101	1.9	
AUSTRALASIA:																										
Australia.....	4,360	.....	.....	4,360	25	.....	65	4,450	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,450	0.3	
New Zealand.....	.....	.....	.....	.....	.....	.....	.....	.....	29,916	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29,916	.....	.....	29,916	1.7	
Australasia ²	.....	.....	.....	.....	.....	.....	.....	.....	7,550	.....	.....	.....	.....	3,876	.....	.....	.....	.....	.....	.....	11,426	.....	.....	11,426	0.7	
Totals, Australasia	4,360	.....	.....	4,360	25	.....	65	4,450	37,466	.....	.....	.....	.....	3,876	.....	.....	.....	.....	.....	.....	41,342	.....	.....	45,792	2.7	
Grand totals.....	799,011	10,412	55,837	865,300	23,727	36,571	8,457	22,315	956,430	333,384	23,408	.....	1,470	41,604	50,089	52,152	10,751	14,378	46,076	181,582	755,394	9,054	.....	1,720,878	.....	
Per cent of total cargo:																										
November, 1928.....	46.4	0.6	3.3	50.3	1.4	2.1	0.5	1.3	55.6	19.4	1.4	.....	0.1	2.4	2.9	3.0	0.6	0.8	2.8	10.5	43.9	0.5	.....	.....	100.0	
November, 1927.....	41.5	1.9	2.2	43.6	1.4	2.4	0.1	3.4	52.9	13.5	1.2	0.3	0.6	1.9	3.7	1.3	2.5	1.5	1.8	15.8	44.1	2.3	0.7	.....	100.0	
November, 1926.....	54.4	1.8	1.6	57.8	3.4	0.7	0.1	2.5	64.5	13.4	0.7	.....	0.1	2.0	2.8	0.5	1.1	1.1	0.7	10.8	33.2	1.4	0.9	.....	100.0	

¹ General cargo not routed so as to allow segregation between definite ports.² Includes both local and transit cargo.

Fresh Water in Gatun Lake.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 18, 1928.

MEMORANDUM TO ALL STEAMSHIP AGENTS:

1. The following is quoted from Chapter 15, paragraph 15 (page 67), of the Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters:

Fresh water in Gatun Lake.—Water in Gatun Lake between Gatun and Darien, is suitable for boiler use, but not for drinking, and can be taken in by vessels during transit, with the knowledge of the pilot, provided the trim of the ship is not altered materially thereby or the ship delayed.

2. Your attention is particularly invited to the statement that Gatun Lake water is not suitable for drinking purposes. This statement is of importance in view of the report by the Public Health Service of the United States that infectious diarrhea broke out on board a ship using Gatun Lake water, even though this water is said to have been distilled.

3. It is requested that this matter be brought to the attention of all masters of ships transiting The Panama Canal.

C. H. WOODWARD,
Marine Superintendent.

Approved:

J. L. SCHLEY
Acting Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 18, 1928.

No. 498.

The following was received by the Hydrographic Office through the Colon Radio:

Report received from Dutch steamship *Orespes*, December 14, 1928, Buenaventura River, Colombia. Wreck of Soldado Point N. 50° E., distance 1½ miles. Entering Buenaventura River without pilot at night is not advisable, dangerous to shipping.

(Signed) J. R. VANDERBEER, *Master, S. S. Orespes.*

J. L. SCHLEY,
Acting Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 18, 1928.

No. 499:

The Panama Canal established, December 12, 1928, spar buoys to mark the Pacheca and Contadora Channels, Saboga Anchorage, Pearl Islands, Panama Bay, as follows:

(a) Red Spar Buoy, marking northern limit of the long shoal extending north from Saboga Island, on the following bearings: Pacheca Island, left tangent, 25° 00' true; center of Bartholomew Island, 107° 00' true; church, Saboga Island, 172° 30' true.

(b) Red spar buoy, marking the northeastern limit of the above shoal, on the following bearings: Center of Bartholomew Islands, 91° 15' true; church, Saboga Island, 193° 30' true; Pacheca Island, left tangent, 344° 30' true.

(c) Red spar buoy, marking the southern limit of the shoal extending south from Bartholomew Island, on the following bearings: Center of Bartholomew Island, 11° 30' true; Contadora Island, left tangent, 135° 30' true; church, Saboga Island, 239° 00' true.

(d) Black spar buoy, marking the northern limit of the tip of shoal northeast of Contadora Island, on the following bearings: Contadora Island, left tangent, 176° 30' true; church, Saboga Island, 251° 00' true; center of Bartholomew Island, 326° 00' true.

J. L. SCHLEY,
Acting Governor.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., December 26, 1928. No. 21.

"Belgenland" Transits Canal on Cruise Around the World.

The British liner *Belgenland*, with 325 passengers aboard, transited the Canal from the Atlantic to the Pacific on December 25, 1928, on the first leg of her annual round-the-world cruise. The cruise, which is the fifth around the world by this vessel, is being conducted by the American Express Company. The vessel is owned by the Red Star Line and when not used for cruise purposes is operated by her owners in the transatlantic service.

The registered gross and net tonnages of this vessel, 27,132 and 15,352 respectively, are greater than those of any other vessel transiting the Canal to date. Tolls for transiting the Canal were \$16,412.50.

Supplement No. 12.—Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.

THE PANAMA CANAL, EXECUTIVE OFFICE
BALBOA HEIGHTS, C. Z., December 18, 1928.

Paragraph 15 of Chapter XV of the Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters is amended to read as follows:

"15. *Fresh Water in Gatun Lake:* Water in Gatun Lake between Gatun and Darien is suitable for boiler use, and can be taken in by vessels during transit, with the knowledge of the pilot, provided the trim of the ship is not altered materially thereby or the ship delayed. None of the water in Gatun Lake or in any other part of the Canal should be taken for drinking purposes, owing to the liability of its contamination by sewage from ships and from settlements within the watershed."

J. L. SCHLEY,
Acting Governor.

CANAL WORK IN NOVEMBER, 1928.

The following is the report of the Acting Governor to the Secretary of War, of Canal work in the month of November, 1928.

BALBOA HEIGHTS, C. Z., December 17, 1928.

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

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of November, 1928:

NUMBER OF TRANSITS.

During the month 527 commercial vessels passed through the Canal. In addition to these, 5 seagoing launches measuring under 20 tons, and 29 vessels belonging to or chartered by the United States Government transited the Canal. There were also two transits of Panaman Government vessels and one transit of a vessel solely for repairs on which no tolls were collected, making a total of 564 transits for the month or a daily average of 18.8.

Tolls on the 527 commercial vessels amounted to \$2,225,937.48, and on the launches to \$20.40, a total of \$2,225,957.88, or a daily average on all traffic of \$74,198.59.

Total commercial traffic for November was lower by 30 transits and about \$49,000 in tolls than that for the previous month, and lower by 32 transits and over \$143,000 in tolls than November, 1927. Traffic for the first 11 months of the current calendar year, however, shows a substantial increase over that for the same period in 1927.

The total numbers of craft of all kinds transiting the Canal during the month of November, 1928, as compared with the same month in 1927 and 1926, are shown in the following tabulation:

	November, 1928.	November, 1927.	November, 1926.
Commercial vessels.....	527	559	428
Noncommercial vessels (Army and Navy).....	29	36	33
Launches (under 20 tons).....	5	14	19
Panaman Government vessels.....	2		2
Colombian Government vessels.....		1	
Vessels for repairs.....	1		
Totals.....	564	610	482

In addition to the vessels listed above, Panama Canal equipment, consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Total.
Gatun.....	25	22	47
Pedro Miguel.....	33	29	62
Miraflores.....	34	30	64
Totals.....	92	81	173

COMMERCIAL TRAFFIC.*

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year 1928, to the end of November, 1928, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1927.	1928.	1927.	1928.	1927.	1928.	1927.	1928.
January ..	443	540	2,121,631	2,422,770	2,241,765	2,372,061	\$1,984,760.71	\$2,212,752.50
February..	449	547	2,201,328	2,460,111	2,230,107	2,660,425	1,994,860.82	2,253,755.37
March.....	496	542	2,413,999	2,441,077	2,533,525	2,428,662	2,217,913.20	2,223,370.57
April.....	464	531	2,234,500	2,384,491	2,429,807	2,473,884	2,065,206.62	2,187,607.82
May.....	471	508	2,248,892	2,274,612	2,379,713	2,497,588	2,066,070.73	2,118,969.83
June.....	455	481	2,152,926	2,227,865	2,229,097	2,139,565	1,970,377.97	2,016,211.09
July.....	509	509	2,406,955	2,318,395	2,450,468	2,291,955	2,215,515.99	2,109,083.19
August....	543	526	2,513,614	2,437,246	2,429,947	2,425,336	2,274,040.55	2,199,069.31
September	540	487	2,532,942	2,295,053	2,397,753	2,313,011	2,294,432.34	2,111,230.56
October....	567	557	2,585,752	2,515,380	2,717,646	2,582,477	2,380,115.97	2,274,945.30
November..	559	527	2,591,717	2,468,297	2,488,882	2,501,630	2,369,267.99	2,225,937.48
Totals.....	5,496	5,755	25,994,256	26,245,297	26,528,710	26,686,594	23,832,563.19	23,932,933.02

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States Government, including merchant vessels chartered by the Government, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for November, 1928, as compared with the corresponding month in 1927 and 1926, and the monthly averages for the fiscal year 1928:

	November, 1928.	November, 1927.	November, 1926.	Average per month for fiscal year
Number of vessels.....	527	559	428	538
Panama Canal net tonnage.....	2,468,297	2,591,717	2,032,488	2,454,886
United States net tonnage.....	1,877,058	2,014,863	1,591,593	1,905,316
Registered gross tonnage.....	3,078,578	3,252,509	2,583,361	3,100,230
Registered net tonnage.....	1,882,770	2,007,035	1,594,534	1,903,974
Tolls.....	\$2,225,937.48	\$2,369,267.99	\$1,889,001.11	\$2,245,374.98
Tons of cargo carried.....	2,501,630	2,488,882	2,272,449	2,469,225

The daily average number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year.
	November, 1928.	November, 1927.	November, 1926.	
Number of transits	17.57	18.63	14.27	17.63
Panama Canal net tonnage	82,276	86,391	67,750	80,488
Tolls	\$74,197.91	\$78,975.60	\$62,966.70	\$73,618.85
Tons of cargo carried	83,387	82,963	75,748	80,958

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of November, 1928, as compared with November, 1927 and 1926, are shown in the following tabulation:

	Average per vessel.		
	November, 1928.	November, 1927.	November, 1926.
Panama Canal net tonnage	4,683	4,636	4,749
United States net tonnage	3,562	3,604	3,719
Registered gross tonnage	5,842	5,818	6,036
Registered net tonnage	3,573	3,591	3,726
Tolls	\$4,223.79	\$4,238.40	\$4,413.55
Tons of cargo (including vessels in ballast)	4,747	4,452	5,309
Tons of cargo (laden vessels only)	5,698	5,593	6,312

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and 72 cents per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per ton nor be less than 75 cents per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage or vessels transiting the Canal be determined both in accordance with the Panama Canal and the United States rules of measurement.

Due to this limiting proviso the tolls actually collected on laden vessels averaged \$0.93 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.72 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of November, 1928, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1.00 laden and \$0.60 ballast. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden, and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
British	\$701,638.09	\$724,206.80	\$22,568.71	.....
Chilean	8,623.75	9,377.00	753.25	.....
Colombian	1,740.65	1,459.00	.....	\$281.65
Danish	31,186.00	31,460.00	274.00	.....
Danzig	22,058.72	19,905.60	.....	2,153.12
Dutch	56,748.87	61,962.60	5,213.73	.....
French	36,762.50	38,139.00	1,376.50	.....
German	98,585.01	110,240.80	11,655.79	.....
Greek	28,132.79	26,040.00	.....	2,152.79
Italian	27,107.20	29,352.00	2,244.80	.....
Japanese	75,651.45	72,286.00	.....	3,365.45
Norwegian	52,773.68	60,514.40	7,740.72	.....
Panaman	3,883.75	5,584.00	1,700.25	.....
Peruvian	6,260.00	10,728.00	4,468.00	.....
Spanish	33,270.19	30,988.20	.....	2,281.99
Swedish	48,174.27	52,746.60	4,572.33	.....
United States	976,382.09	997,318.80	20,936.71	.....
Yugoslav	16,898.47	16,874.60	.....	23.87
Totals	2,225,937.48	2,299,183.40	83,504.79	10,258.87
Net increase for all traffic .....	.....	.....	73,245.92	.....

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$14,165.64
United States foreign trade.....	7,012.82
United States-Canal Zone trade.....	* 241.75
Net increase.....	20,936.71

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in November, 1928, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
British.....	.76	1.45	1.15
Chilean.....	.49	1.02	.76
Colombian.....	2.33	1.31	1.43
Danish.....	1.37	1.70	1.54
Danzig.....		1.81	1.81
Dutch.....	.44	1.56	1.06
French.....	.41	1.42	1.07
German.....	.81	1.45	1.11
Greek.....	1.31	1.81	1.50
Italian.....	.19	1.04	.56
Japanese.....	1.12	1.51	1.25
Norwegian.....	1.05	1.62	1.27
Panamanian.....	1.37	.13	.77
Peruvian.....	.09	.73	.41
Spanish.....	.09	1.67	1.46
Swedish.....	1.29	2.38	2.01
United States.....	.89	1.55	1.26
Yugoslav.....	1.55	1.86	1.73
Averages, November, 1928.....	.85	1.53	1.22
Averages, November, 1927.....	.71	1.55	1.21
Averages, November, 1926.....	1.00	1.54	1.32

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of November, 1928, is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships	Panama Canal net tonnage.	Tolls.	No. of ships	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	1	6,727	\$7,132.50	44	233,612	\$241,705.35
Ballast.....	36	197,885	142,477.20			
General cargo ships:						
Laden.....	188	914,631	835,557.15	205	890,505	836,924.00
Ballast.....	48	220,341	158,747.83	2	4,037	2,906.64
Noncargo-carrying ships:						
Yachts.....	2	456	346.56			
Tugs.....				1	103	140.25
Totals.....	275	1,340,040	1,144,261.24	252	1,128,257	1,081,676.24
Method of propulsion:						
Steam.....	220	1,067,893	930,100.85	208	939,655	907,696.70
Motor.....	54	272,109	214,114.79	44	188,602	173,979.54
Motor (schooner).....	1	38	45.60			
Totals.....	275	1,340,040	1,144,261.24	252	1,128,257	1,081,676.24

Of the 428 steam-driven vessels, 252 were oil burning, 168 coal burning, and 8 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of November, 1928. If tolls had been assessed against these vessels at commercial rates, the amount would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Ammunition ships.....	1	³ 4,405	\$5,506.25			
Cruisers.....	2	² 6,400	3,200.00			
Minesweepers.....				1	² 950	\$475.00
Submarines.....	6	² 3,454	1,727.00	7	² 3,974	1,987.00
Supply ships.....	1	³ 3,434	4,292.50			
Tankers.....	1	² 5,121	3,840.75	2	² 11,379	13,654.80
Tugs.....	2	² 1,704	852.00	1	² 1,000	500.00
U. S. Army vessels:						
Launches.....	2	² 20	15.00			
Transports.....	1	³ 3,908	4,885.00			
Tugs.....	1	² 1,208	604.00	1	² 1,208	604.00
Totals, U. S. Government.....	17		24,922.50	12		17,220.80
Panaman Government vessels:						
Transports.....				1	² 98	73.50
Yachts.....				1	² 52	37.44
Vessels for repairs:						
Cable ships.....				1	² 875	630.00
Grand totals.....	17		24,922.50	15		17,961.74

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of November, 1928, carried cargo as follows: Atlantic to Pacific, 5,910 tons; Pacific to Atlantic, 17,956 tons; total, 23,866 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement transiting the Canal during the month of November, 1928. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	4	19	\$17.40
Pacific to Atlantic.....	1	4	3.00
Totals.....	5	23	20.40

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of November, 1928, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	114,109	47,796	161,905
Local cargo shipped..... tons..	12,861	1,129	13,990
Transit cargo arriving..... tons..	2,518,150	2,499,796	5,017,946
Transit cargo clearing..... tons..	2,539,964	2,518,083	5,058,047
Cargo received for transshipment..... tons..	41,403	1,435	42,838
Cargo transhipped..... tons..	36,082	439	36,521
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	65	27	92
Number of withdrawals.....	518	145	663
Tons received.....	2,674	3,280	5,954
Tons withdrawn.....	4,389	3,277	7,666
Packages received.....	7,007	237	7,244
Packages withdrawn.....	6,370	277	6,647

	Cristobal.	Balboa.	Total.
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	66	7	73
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons.	20,832	51	20,883
Coal issued, miscellaneous:			
Panama Canal departments..... tons.	62	7	69
U. S. Army, including vessels..... tons.	31	12	43
Individuals and companies..... tons.	173		173
Transferred to Navy..... tons.	70		70
Total sales and issues..... tons.	21,168	70	21,238
Coal on hand, November 1, 1928..... tons.	32,005		32,005
Coal on hand, December 1, 1928..... tons.	48,058		48,058
Coal received during month..... tons.	37,221		37,221
Coal received from Navy..... tons.		70	70
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls.	7,465.14	13,948.46	21,413.60
Panama Railroad Company..... bbls.	454.91		454.91
U. S. Army and Navy..... bbls.	579.90	123.57	703.47
Individuals and companies..... bbls.		192.55	192.55
Total sales and issues..... bbls.	8,499.95	14,264.58	22,764.53
Fuel oil on hand, December 1, 1928..... bbls.	58,004.54	56,684.19	114,688.73
Diesel oil received during November..... bbls.		39.29	39.29
Diesel oil sold during November..... bbls.	155.96		155.96
Diesel oil on hand, December 1, 1928..... bbls.	23,370.10	493.25	23,863.35
Miscellaneous transfers..... bbls.	410.60	4,263.22	4,673.82
Gasoline and kerosene pumped for The Panama Canal..... bbls.	1,448.78	15,381.79	16,830.57
Gasoline pumped for individuals and companies..... bbls.		5,260.78	5,260.78
Oil pumped for individuals and companies..... bbls.	539,758.94	523,881.52	1,063,640.46
Oil pumped for U. S. Shipping Board..... bbls.	110.00	2,824.00	3,234.00
Oil pumped for U. S. Navy..... bbls.	28,263.00	9,925.00	38,188.00
Total fuel oil, gasoline, and kerosene handled..... bbls.	578,937.23	575,840.18	1,154,877.41
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	36	5	41
Measured for Panama Canal net tonnage.....	6	2	8
Remeasured for Panama Canal net tonnage.....	36	3	39
Panama Canal net tonnage corrected.....	2	9	11
U. S. equivalent tonnage corrected.....	8	4	12
Services of harbor equipment:			
Tugs, total operating hours.....	476½	326½	802½
Launches, total operating hours.....	1,495	1,578	3,073
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	14,791.25	10,327.50	25,118.75
Pilotage.....	19,834.00	7,831.00	27,665.00
Seamen.....	12,800.00	11,536.00	24,336.00
Launch service.....	2,277.50	2,914.50	5,192.00
Wharfage.....	17,222.17	5,253.12	22,475.29
Ships measured.....	260.00	100.00	360.00
Miscellaneous.....	1,383.05	1,036.00	2,419.05
Ships repaired at Panama Canal shops:			
Commercial.....	51	11	62
U. S. Army and Navy.....	6	8	14
Panama Canal equipment.....	6	10	16
Totals.....	63	29	92
Vessels dry-docked:			
Commercial.....	1	1	2
U. S. Army and Navy.....	1	3	4
Panama Canal equipment.....	1	3	4
Totals.....	3	7	10
Clearances issued.....	307	289	596
Bills of health issued.....	302	289	591

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.	601	3,457,868	2,120,452	561	3,198,628	1,973,463
Vessels entering port but not transiting Canal.	70	301,902	182,377	16	55,902	40,019
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	124	702,986	426,195	94	660,957	355,430

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.	598	3,452,174	2,109,991	562	3,196,654	1,969,708
Vessels clearing port but not transiting Canal.	67	294,870	177,987	15	46,902	31,019
Vessels transiting Canal and handling passengers and cargo at terminal ports.	122	699,106	422,589	92	652,273	350,872

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.	1,423	741	2,164	106	170	276
From Pacific ports.	230	65	295	419	1,032	1,451
Total disembarking.	1,653	806	2,459	525	1,202	1,727
Embarking:						
For Atlantic ports.	1,106	559	1,665	46	31	77
For Pacific ports.	323	213	536	289	197	486
Total embarking.	1,429	772	2,201	335	228	563
Remaining on board:						
From Atlantic to Pacific ports.	2,324	3,082	5,406	2,391	2,741	5,132
From Pacific to Atlantic ports.	571	517	1,088	733	675	1,408
From Atlantic to Atlantic ports.	481	185	666			
From Pacific to Pacific ports.				21	361	382
Total remaining on board.	3,376	3,784	7,160	3,145	3,777	6,922
Total arriving.	5,029	4,590	9,619	3,670	4,979	8,649
Total departing.	4,805	4,556	9,361	3,480	4,005	7,485

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.	275	54	19.6
Pacific to Atlantic.	252	54	21.4
Totals.	527	108	20.5

In addition to the aforesaid, 60 passenger-carrying vessels called at the port of Cristobal, and 3 at Balboa without transiting the Canal, making a total of 171 passenger-carrying vessels calling at Canal ports during the month.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of November, 1928:

	Ice.	Groceries.	Cold Storage.	Laundry.	Miscellaneous.	Totals.
Sales at Cristobal to:						
Commercial vessels.	\$2,889.10	\$14,153.75	\$32,283.38	\$472.40	\$6,716.98	\$56,515.61
Government vessels.	178.20	1,820.46	11,149.62	38.26	1,057.85	14,244.39
Panama Railroad vessels.		8.41	1,636.98	821.51	359.54	2,826.44
Total sales, November, 1928.	3,067.30	15,982.62	45,069.98	1,332.17	8,134.37	73,586.44
Total sales, November, 1927.	2,117.80	12,068.52	32,321.47	893.48	7,384.59	54,785.86
Total sales, November, 1926.	1,931.96	11,593.52	33,386.21	950.40	4,919.17	52,781.26
Sales at Balboa to:						
Commercial vessels.	1,449.70	9,589.29	11,594.35	192.28	13,500.43	36,326.05
Government vessels.	137.93	2,055.66	7,673.17	528.51	216.82	10,612.09
Total sales, November, 1928.	1,587.63	11,644.95	19,267.52	720.79	13,717.25	46,938.14
Total sales, November, 1927.	2,226.41	13,449.86	32,417.26	527.14	5,207.66	53,828.33
Total sales, November, 1926.	585.07	10,004.97	19,990.19	644.54	2,845.63	34,070.40

The aggregate sales to Government vessels during the month was \$24,856.48; to Panama Railroad vessels, \$2,826.44; and to other commercial vessels, \$92,841.66; making the total sales to all vessels, \$120,524.58.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of November, 1928, as compared with the corresponding month in 1927 and 1926:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial.			Nov., 1928.	Nov., 1927.	Nov., 1926.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	239	265	504	8	5	13	517	547	418
Pedro Miguel.....	244	274	518	14	13	27	545	562	438
Miraflores.....	244	273	517	15	12	27	544	563	434
Number of vessels put through locks.									
Gatun.....	253	276	529	25	22	47	576	643	514
Pedro Miguel.....	253	278	531	51	45	96	627	666	521
Miraflores.....	253	278	531	52	46	98	629	668	521

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	33	29	29
Panama Canal equipment.....	6	62	64
Launches (under 20 tons).....	6	2	2
Panama Government vessels.....	1	2	2
Vessels for repairs.....	1	1	1

The total consumption of water for lockages, loss in leakage and maintenance was as follows in November, 1928, as compared with the preceding month and the corresponding month in 1927:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	2,142,490,000	1,731,440,000	1,631,910,000
Leakage.....	20,000,000	30,500,000	20,000,000
Maintenance.....	8,970,000		47,950,000
Totals, November, 1928.....	2,171,460,000	1,761,940,000	1,699,860,000
Totals, October, 1928.....	2,221,740,000	1,863,340,000	1,779,450,000
Totals, November, 1927.....	2,228,920,000	1,857,470,000	1,742,460,000

HYDROGRAPHY.

In the following tabulation the hydrographic conditions in the Canal Zone and vicinity during the month of November, 1928, are shown in comparative form:

	November.		November—Years of record.		
	1928.	1927.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	<i>C. f. s.</i> 5,933	<i>C. f. s.</i> 4,835	<i>C. f. s.</i> 11,300	<i>C. f. s.</i> 2,267	<i>C. f. s.</i> 4,586
Maximum momentary discharge.....	27,460	30,500	78,900		
Gatun Lake watershed, total yield.....	17,242	12,868	24,488	8,673	13,537
Gatun Lake watershed, net yield.....	16,732	12,396	23,950	7,995	13,029
Draft on Gatun Lake for lockages and power.....	2,954	3,006	3,006	1,006	2,279

* November 19, 1909.

* Does not include November, 1914.

The total yield of the Gatun Lake watershed for the month of November was 27 per cent above the 15-year November average, or 17,242 c. f. s. compared with an average of 13,537 c. f. s. It is also the highest November yield since 1917. Maximum and minimum November total yields of record are 24,488 c. f. s. in 1917 and 8,673

c. f. s. in 1919, respectively. The lake varied in elevation from 86.30 feet on the 23d to 86.72 feet on the 14th, averaged 86.55 feet, and ended at elevation 86.65 feet. Miraflores Lake varied from an elevation of 53.22 feet on the 15th to an elevation of 54.62 feet on the 27th, averaged 53.91 feet, and ended at elevation 54.30 feet.

SEISMOLOGY.

Seismic disturbances were recorded during the month on the 1st and 8th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 4,912,200 kilowatt hours, and the computed water consumption was 3,774,130,815 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 21,700 kilowatt hours, with a fuel oil consumption of 70.16 barrels.

In addition to the usual operating and maintenance work performed, 37 work orders, comprising 137 items of additions or repairs were completed on 23 vessels during the month. There were 378 work orders issued during the month, as compared with 457 for the previous month.

MECHANICAL DIVISION.

During the month miscellaneous repairs were made on 63 vessels at Cristobal and 29 at Balboa. Three vessels were dry-docked at Cristobal and 7 at Balboa. At Cristobal the annual overhaul of the United States Navy's submarine *S-15* and the overhaul of the machinery and repairs to deck and superstructure of The Panama Canal tug *Tavernilla* was continued during the month. At Balboa work was completed on the United States Army's mineplanter *General G. W. Getty*. The U. S. A. T. *Cambrai* was docked for inspection of hull damaged in running aground, and necessary temporary repairs made. Work was completed on the Navy's submarines *S-14* and *S-17*, and the lighthouse tender *Acacia* was docked for annual underwater work and inspection.

MUNICIPAL ENGINEERING DIVISION.

Work was carried forward on several improvement projects in the cities of Colon and Panama, and in the Canal Zone. At the site of the Alhajuela Dam, work was carried forward on the camp for housing of employees and other preliminary work in connection with the construction of the dam. Work was also continued on road leading to dam site.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 683,835,250 gallons.

DREDGING DIVISION.

South Cucaracha slide, after remaining quiescent from the 1st to the 9th, resumed movement and continued during the remainder of the month. Twenty-seven thousand three hundred cubic yards of material were removed in front of this slide.

On the 6th of the month, the high bank at the south end of the La Pita curve, west side, broke back about 180 feet from the prism line and fell to the 95-foot rock berm. A number of large boulders lodged upon the berm and were broken up in anticipation of their entering the channel at some future time. The quantity of material entering the Canal prism was negligible. There was no further movement of this slide.

East and West Culebra slides showed a slight general movement toward the Canal during the month. A movement occurred on the 15th of the month at the north end of West Culebra slide, the bank breaking back for a distance of 400 feet from the west prism line. The back break line is at elevation about 160 feet above mean lake level. This localized movement continued for two or three days and then became quiescent. The amount of material entering the Canal was small.

On the morning of the 29th, the rock point at West Lirio slide and part of the completed portion of Lirio Curve, broke up and pushed across the new prism line to the old prism line, with 42 feet on this line. The break line is about 150 feet back from the new prism line at an elevation 65 feet mean lake level. Another section of Lirio Curve shows a slight settlement on top, 400 feet back from the new prism line and at elevation 115 feet mean lake level.

Due to the unusually heavy rainfall during the month, there were many small bank breaks throughout the Cut. There were no delays to shipping during the month on account of slides.

The total excavation during November was 227,248 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gaillard Cut—			
Project No. 2, Lirio Curve.....	6,950	38,500	45,450
South Cucaracha slide.....	6,850	20,450	27,300
West Culebra slide.....	2,150	250	2,400
Balboa inner harbor—			
Project No. 1.....	11,700	39,200	50,900
Maintenance.....	9,800		9,800
Plant excavation:			
Naval air station fill, Coco Soio.....	88,500		88,500
Dredging sand at Chame.....	2,898		2,898
Totals.....	128,848	98,400	227,248

The ferry crossing at the north end of Pedro Miguel lock operated 30 days during the month. Four hundred and sixty-four trips were made, and 48 Panama Canal, 3 U. S. Army, and 1,446 other vehicles, a total of 1,497, were ferried across the Canal.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on November 30, 1928, totaled 21,614, composed of 7,507 Americans, 2,696 of whom were men, 2,262 women, and 2,549 children; 207 Europeans, 96 of whom were men, 32 women, and 79 children; and 13,900 West Indians, 4,075 of whom were men, 2,594 women, and 7,231 children. The total number of persons in quarters on November 30, 1927, was 21,272.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of November, 1928, with a comparison of the working force for the preceding month and for November, 1927:

	As of November 21, 1928.			Total employees.	
	Gold.	Silver.	Total.	October, 1928.	November, 1927.
Operation and Maintenance:					
Office.....	42	58	100	99	84
Electrical.....	157	152	309	329	326
Municipal Engineering.....	86	974	1,060	988	658
Lock Operation.....	231	689	920	909	828
Dredging.....	175	927	1,102	1,096	1,082
Mechanical.....	474	891	1,365	1,354	1,266
Marine.....	207	659	866	842	837
Fortifications.....	23	269	292	327	268
Totals.....	1,395	4,619	6,014	5,944	5,349
Supply Department:					
Quartermaster.....	198	1,807	2,005	2,112	1,904
Subsistence.....	7	104	111	107	104
Commissary.....	220	1,239	1,459	1,419	1,323
Cattle Industry.....	6	137	143	132	231
Hotel Washington.....	9	96	105	102	104
Transportation.....	53	205	258	265	253
Totals.....	493	3,588	4,081	4,137	3,919
Accounting Department.....	197	8	205	202	209
Health Department.....	272	843	1,115	1,158	1,069
Executive Department.....	515	301	816	818	791
Totals.....	984	1,152	2,136	2,178	2,069
Panama Railroad Company:					
Superintendent.....	51	281	332	318	272
Transportation.....	62	118	180	180	178
Receiving and Forwarding Agency.....	87	1,395	1,482	1,844	1,621
Coaling stations.....	48	311	359	319	312
Totals.....	248	2,105	2,353	2,661	2,383
Grand totals, November, 1928.....	3,120	11,464	14,584		
Grand totals, October, 1928.....	3,140	11,780		14,920	
Grand totals, November, 1927.....	2,951	10,769			13,720

Additions to the gold force on the Isthmus in November were as follows: Employed in the United States, 12; reemployed in the United States, 10; employed on the Isthmus, 14; reemployed on the Isthmus, 4; total 40. Separations from the gold force totaled 34, as follows: Resigned, 18; discharged, 12; retired, 2; died, 2. At the end of the month there were on file 153 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 190 deaths occurred during the month of November, 1928, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 17.60 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 30; pneumonia (broncho and lobar), 30; diarrhea and enteritis, 17; organic diseases of the heart, 14; and nephritis (acute and chronic), 11. There were 8 deaths from syphilis, 7 from cancer, 4 from apoplexy, 2 from amebic dysentery, and 1 from leprosy. There were 11 deaths among nonresidents. These are not included in the above statistics.

There were 294 live births, and 22 stillbirths, reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 29.28 per 1,000 population. Deaths among children under 1 year of age numbered 47, giving an infant mortality rate of 159.86.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during November was 87, of whom 12 were employees (1 white and 11 colored), 3 were members of employees' families (all colored), 15 were Canal Zone agriculturists, 31 were other civilian nonemployees, and 26 were Army and Navy personnel. Of the 15 employees and members of employees' families, 12 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There was 1 death from malaria, a native residing in Panama City who acquired his infection in Juan Diaz.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions and received on the Isthmus during the month totaled \$418,341.76, of which \$384,824.97 was for the Department of Operation and Maintenance and \$33,516.79 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap and obsolete and second-hand material amounted to \$37,760.08.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of October, 1928, as compared with October, 1927, with the figures for the first four months of the current fiscal year as compared with the same period in the fiscal year 1928.

It is impossible to submit the figures for the month of November at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	October, 1928.	October, 1927.	To end of October.	
			This year.	Last year.
Tolls.....	\$2,274,601.05	\$2,380,174.47	\$8,692,364.99	\$9,164,441.07
Other receipts.....	304,684.58	293,436.40	1,262,868.75	1,152,569.03
Total transit revenues.....	2,579,285.63	2,673,610.87	9,955,233.74	10,317,010.10
Total transit expenses.....	1,082,823.40	1,033,906.14	4,200,617.13	3,922,511.40
Net transit revenues.....	1,496,462.23	1,639,704.73	5,754,616.61	6,394,498.70
Three per cent capital charge.....	615,210.45	612,643.23	2,463,122.85	2,442,368.21
Transit surplus.....	881,251.78	1,027,061.50	3,291,493.76	3,952,130.49
Business revenues.....	1,257,014.11	1,220,232.04	5,067,570.89	5,049,692.69
Business expenses.....	1,193,230.35	1,139,028.29	4,808,002.79	4,717,279.50
Net business revenues.....	63,783.76	81,203.75	259,705.10	332,413.19
Three per cent capital charge.....	60,893.58	59,838.61	255,645.80	253,433.44
Business surplus.....	2,890.18	21,365.14	4,059.30	78,979.75
Combined revenues.....	3,836,299.74	3,893,842.91	15,022,941.63	15,366,702.79
Combined expenses.....	2,276,053.75	2,172,934.43	9,008,619.92	8,639,790.90
Net revenues.....	1,560,245.99	1,720,908.58	6,014,321.71	6,726,911.89
Three per cent capital charge.....	676,104.03	672,481.84	2,718,768.65	2,695,801.65
Combined surplus.....	884,141.96	1,048,426.64	3,295,553.06	4,031,110.24

Respectfully,

J. L. SCHLEY,
Acting Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, December 22, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Nct.
Katondo	15	13	20	16	16	12	57	16	14	20	389	8	Arica, Chile	Ballast	.....	5,601	3,877
San Eduardo	15	18	55	16	6	12	16	13	46	16	51	0	Los Angeles, Calif.	Ballast	.....	6,391	4,382
Alaska	16	6	38	16	7	25	16	13	46	16	410	0	Valparaiso, Chile	General	1,780	6,563	4,799
Proditas	16	6	05	16	7	35	16	15	21	16	385	7	Seattle, Wash.	Ballast	.....	5,657	4,069
Arato	17	17	55	16	7	15	16	15	21	16	94	0	Buenaventura, Col.	General	160	160	92
Melpomene	16	7	48	16	8	15	16	16	08	16	425	8	Los Angeles, Calif.	Ballast	.....	7,685	5,050
Acapulca	17	16	35	16	9	25	16	17	13	16	33	5	Champetico, Guat.	General	1,123	1,273	706
Kentuckian	16	10	08	16	10	25	16	17	38	16	215	7	Portland, Oreg.	General	2,782	7,049	4,941
J. W. Van	15	5	55	16	11	15	16	18	40	16	364	9	Boston, Mass.	Ballast	.....	5,174	3,528
Dyke	16	11	03	16	12	20	16	19	37	17	416	9	Los Angeles, Calif.	Ballast	.....	6,717	4,778
Waterston	16	9	25	16	14	05	16	22	10	16	400	0	New Zealand	Phosphates	7,700	6,577	4,564
Kileredane	16	21	30	17	6	30	17	13	44	18	470	0	Talara, Peru	Ballast	.....	9,302	6,127
Pendope	16	21	30	17	6	30	17	13	44	18	470	0	San Francisco, Cal.	Bananas, coffee	575	3,675	2,229
Limon	17	3	30	17	6	25	17	13	08	17	330	0	Port Limon, C. R.	.....	.....	.....	.....
Munaster	17	5	25	17	7	23	17	14	28	17	428	0	Cebu, Philippines.	Case oil, general	5,800	7,596	5,159
Castle	17	7	00	17	7	30	17	15	15	17	420	0	Vancouver, B. C.	Ballast	.....	5,433	5,870
Romanstar	17	8	30	17	8	45	17	16	00	17	440	0	Yokohama, Japan	.....	6,843	8,439	6,157
Invincible	17	8	30	17	8	45	17	16	00	17	440	0	.....	.....	.....	.....	.....
Anglo-Aus-	17	9	35	17	9	55	17	16	46	17	426	0	Vancouver, B. C.	Ballast	.....	7,341	5,444
Irishian	17	10	10	17	10	30	17	17	34	17	390	0	Los Angeles, Calif.	Cement	6,600	5,889	4,274
Bridgepool	17	14	38	17	14	50	17	21	55	17	468	3	San Francisco, Cal.	Ballast	.....	10,084	7,426
Japan Arrow	17	14	38	17	14	50	17	21	55	17	468	3	Ballboa, C. Z.	Ballast	.....	10,084	7,426
El Panquiao	18	6	00	18	6	00	18	14	12	18	125	0	Shanghai, China	Sugar	7,450	6,753	4,833
Sibonia	17	15	12	18	6	15	18	14	17	18	420	0	Nuevitas, Cuba	General	2,471	6,982	4,834
Zevoni	17	15	35	18	6	05	18	15	06	18	425	0	Vancouver, B. C.	General	3,318	6,138	4,354
Pacific Cedar	17	21	30	18	7	15	18	15	55	18	399	0	Seattle, Wash.	Steel, general	7,508	6,936	5,024
Maine	18	3	00	18	7	20	18	16	08	18	402	0	Los Angeles, Calif.	General	7,700	6,510	4,827
Willargo	18	3	25	18	8	07	18	17	05	18	409	5	Seattle, Wash.	General	7,700	6,510	4,827
Hayre Maru	18	4	55	18	8	25	18	17	55	18	407	0	Moli, Japan	General	6,731	6,339	4,773
Les Angeles	17	16	37	18	10	00	18	18	25	18	432	5	Vancouver, B. C.	Bananas, general	5,508	8,454	6,344
Prinipi	18	10	25	18	11	40	18	18	45	18	472	5	Adelaide, Australia	General	5,759	8,710	6,216
J. R. Gordon	18	14	10	18	14	20	18	21	04	18	409	8	Los Angeles, Calif.	Subport	7,213	6,581	4,784
Nebraska	18	14	18	18	14	35	18	21	58	18	471	0	Seattle, Wash.	General	2,951	9,032	6,655
Selota	18	18	15	18	18	15	18	17	39	18	149	3	Ballboa, C. Z.	.....	.....	.....	.....
Tut	18	18	15	18	18	15	18	17	39	18	149	3	Gatun, C. Z.	Ballast	.....	1	1
Lochgoil	17	15	23	19	6	14	19	13	10	19	485	0	Vancouver, B. C.	Bananas, general	2,604	10,803	7,606
Silverash	18	19	10	19	6	19	19	13	17	19	426	0	Singapore, Str. Set.	General	4,880	8,219	5,861
Garfield	18	19	15	19	7	05	19	15	17	19	299	4	Talcahuano, Chile	General	1,827	3,256	2,010

Towing barge.

Case oil, cotton, wax, and general.

Launch.

Tug.

Transport.

Motor ship.

Tanker.

	18	20	40	19	7	15	19	14	17	19	15	10	American	Arrow Line	415	55	6	20	0	Baltimore, Md	Portland, Oreg	General	7,704	5,707
Peter Kerr	18	20	40	19	7	15	19	14	17	19	15	10	American	Arrow Line	415	55	6	20	0	Baltimore, Md	Portland, Oreg	General	4,400	5,707
Papoose	18	23	15	19	7	30	19	16	00	19	17	15	American	Petroleum Nav. Co	412	53	2	17	0	New York, N. Y.	Los Angeles, Calif	Ballast	6,285	4,370
West Montop	19	00	45	19	8	15	19	16	42	19	17	45	American	Calif. & East'n S. S. Co.	410	54	6	18	0	New York, N. Y.	Seattle, Wash	General	3,163	6,484
Robert Luck-	19	00	45	19	8	15	19	16	42	19	17	45	American	Calif. & East'n S. S. Co.	410	54	6	18	0	New York, N. Y.	Seattle, Wash	General	3,163	6,484
enbach	18	20	45	19	9	05	19	17	32	19	18	35	American	Luckenbach Line	445	58	0	21	0	Boston, Mass	Portland, Oreg	General	4,425	8,695
Teano	18	20	45	19	9	05	19	17	32	19	18	35	American	South American Line	421	56	0	25	0	Brooklyn, N. Y.	Valparaiso, Chile	General	2,529	7,764
Valdres	19	00	45	19	8	45	19	10	05	19	19	50	Italian	Soc. Italiana de Nav.	385	52	0	13	0	Houston, Holland	Arica, Chile	Ballast	5,363	4,149
Dinar Koel	19	00	10	19	10	55	19	19	30	19	22	05	German	G. J. H. Siemens & Co.	400	53	0	24	0	Rouston, Texas	Kobe, Japan	General	5,583	5,785
Jayance	19	00	10	19	10	55	19	19	30	19	22	05	German	G. J. H. Siemens & Co.	400	53	0	24	0	Rouston, Texas	Kobe, Japan	General	5,583	5,785
Prince	19	05	19	11	12	19	19	19	52	19	21	00	British	Furness, Withy & Co.	411	60	0	24	0	New York, N. Y.	Manila, Philippines	General	5,783	9,240
Canadian	19	05	19	11	12	19	19	19	52	19	21	00	British	Furness, Withy & Co.	411	60	0	24	0	New York, N. Y.	Manila, Philippines	General	5,783	9,240
Scottish	19	05	19	11	12	19	19	19	52	19	21	00	British	Furness, Withy & Co.	411	60	0	24	0	New York, N. Y.	Manila, Philippines	General	5,783	9,240
Tithorn	19	10	30	19	12	30	19	20	12	19	21	47	British	Can. Nat. Steamships	399	52	2	23	6	Montreal, Canada	Adelaide, Australia	General	2,211	5,905
Gambazanshire	18	15	50	19	12	35	19	21	10	19	22	05	Norwegian	O. G. & T. H. Olsen	440	53	0	15	0	Newport News, Va.	Arica, Chile	Ballast	6,591	4,730
Fernhill	19	10	50	19	12	35	19	21	10	19	22	05	Norwegian	Royal Mail S. P. Co.	425	58	0	21	4	Antwerp, Belgium	Vancouver, B. C.	General	2,055	5,982
Clydefield	19	11	45	19	13	35	19	21	35	19	23	15	Norwegian	Fearnley & Eger	377	54	0	21	11	Galveston, Texas	Yokohama, Japan	General	4,725	6,031
Oreoma	19	11	45	19	13	35	19	21	35	19	23	15	Norwegian	Fearnley & Eger	377	54	0	21	11	Galveston, Texas	Yokohama, Japan	General	4,725	6,031
Kelsmoor	19	14	35	20	6	10	20	13	05	20	14	40	British	Anglo-Saxon Pet. Co.	420	57	6	20	0	River Tyne, Eng	Los Angeles, Calif	Ballast	7,132	4,538
Wardley	19	14	35	20	6	10	20	13	05	20	14	40	British	Anglo-Saxon Pet. Co.	420	57	6	20	0	River Tyne, Eng	Los Angeles, Calif	Ballast	7,132	4,538
Adra	19	16	18	20	7	25	20	14	20	20	15	50	British	Pacific Steam Nav. Co.	511	62	0	28	0	Liverpool, England	Talchuan, Chile	General	5,183	12,417
Seckonk	19	17	10	20	7	40	20	15	08	20	16	45	British	Moore Line	330	47	0	21	0	No. Shields, Eng	Acapulco, Salvador	Patent fuel	5,985	2,551
Nordbo	20	5	25	20	9	45	20	16	37	20	17	40	Danish	Isbrandtsen & Moller	380	53	0	24	0	Whitington, Del	Yokohama, Japan	General	7,500	6,190
Pacific Presi-	19	14	55	20	11	05	20	17	11	20	18	12	British	Furness Withy & Co.	450	60	6	20	9	Glasgow, England	Portland, Oreg	Bananas, general	1,649	10,086
dent	19	14	55	20	11	05	20	17	11	20	18	12	British	Furness Withy & Co.	450	60	6	20	9	Glasgow, England	Portland, Oreg	Bananas, general	1,649	10,086
Northmoor	20	6	35	20	11	33	20	18	28	20	22	45	British	Moore Line, Ltd	375	52	6	14	0	Newcastle, England	Vancouver, B. C.	Ballast	6,051	4,612
Cruspool	20	7	15	20	12	05	20	18	28	20	22	45	British	Sir. R. Ropner & Co.	419	54	0	15	0	Tyne, England	Portland, Oreg	Ballast	6,170	4,503
El Clervo	20	9	20	20	12	40	20	19	30	20	21	00	British	Anglo-Saxon Pet. Co.	407	52	2	19	0	Rouen, France	Los Angeles, Calif	Ballast	6,016	4,326
Legazpi	19	00	30	20	13	30	20	20	02	20	21	30	Spanish	Spanish Line	375	47	0	20	6	Barcelona, Spain	Valparaiso, Chile	General	232	4,506
Reedpool	20	12	22	20	13	30	20	20	50	20	23	15	British	Sir. R. Ropner & Co.	390	55	0	13	6	Hartlepool, Eng	Vancouver, B. C.	Ballast	5,890	4,199
Manizates	19	40	20	20	35	20	21	10	20	20	22	12	German	North German Lloyd	216	53	0	14	6	Cristobal, C. Z.	Guayaquil, Ecuador	General	427	1,132
Pont Gorda	20	20	10	20	20	35	21	14	25	21	11	39	American	Swayze & Hoyt	324	46	0	23	0	Tampa, Fla	Vancouver, B. C.	General	3,256	2,643
W. S. Rheem	20	22	00	21	6	25	21	13	25	21	19	20	American	Standard Oil Co.	500	68	0	18	0	London, England	Los Angeles, Calif	Phosphates, gen	427	1,132
Trekeve	20	23	00	21	6	38	21	14	12	21	15	10	British	Anger & Hoyt	400	62	4	19	0	New York, N. Y.	Dunedin, N. Z.	Ballast	11,224	7,895
Nudja	20	23	00	21	7	40	21	14	28	21	17	35	Swedish	Amers-Australian Line	410	55	7	15	0	Rotterdam, Holland	Vancouver, B. C.	General	2,115	7,265
West Nilus	21	2	10	21	10	21	21	16	29	21	17	35	American	Gangesberg & Co.	418	54	3	19	0	Buenos Aires, Arg	Vancouver, B. C.	Ballast	2,568	4,989
Caldas	14	16	45	21	10	10	21	18	10	21	22	05	Panamanian	McCormick S. S. Co.	410	54	3	19	0	Cristobal, C. Z.	Buenaventura, Col.	General	321	211
Adolf Von	20	3	50	21	10	50	21	17	45	22	16	22	German	National Navigation Co.	116	0	21	0	9	Cristobal, C. Z.	Buenaventura, Col.	General	321	211
Bayer	20	3	50	21	10	50	21	17	45	22	16	22	German	National Navigation Co.	116	0	21	0	9	Cristobal, C. Z.	Buenaventura, Col.	General	321	211
Swan	20	3	50	21	10	50	21	17	45	22	16	22	German	National Navigation Co.	116	0	21	0	9	Cristobal, C. Z.	Buenaventura, Col.	General	321	211
Quarrington	21	13	28	21	14	45	22	9	57	22	11	13	British	Hamburg-American Line	409	53	0	23	5	Hamburg, Germany	Valparaiso, Chile	General	4,921	5,514
Van	22	00	50	22	6	35	22	14	30	22	14	30	Belgian	U. S. Navy	180	0	35	6	0	Cristobal, C. Z.	Balboa, C. Z.	General	4,921	5,514
Carma	22	11	05	22	6	35	22	14	30	22	14	30	Belgian	Court Line, Ltd	420	56	0	16	0	Tyne, England	Vancouver, B. C.	Ballast	6,907	4,955
Ida	22	2	30	22	6	35	22	14	30	22	14	30	American	Cie. Int. de Com. de Arm.	460	58	2	19	0	Barry, England	Arica, Chile	Ballast	9,008	6,211
Myrtlebank	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	John Masury	123	25	0	15	0	Kingston, Jamaica	San Diego, Calif.	Ballast	103	129
M. D.	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42	2	18	0	Christiana, Norway	Antofagasta, Chile	General	2,400	6,300
	22	20	00	22	9	25	22	16	55	22	19	15	Norwegian	Scand.-So. Pacific Co.	267	42								

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	Water draft.			Nature.	Tons.	Gross.	Net.
Seattle ¹¹ .	15	17 15	16	6 18	16	14 15	16	15 45	German			Hamburg-American Line	Hamburg, Germany	General	7,909	9,267	6,834
Leona Luckenbach	7	9 00	16	7 21	16	18 15	22	16 40	American			Luckenbach Line	New Orleans, La.	General	5,382	7,217	5,295
San Ubaldo ¹ .	15	23 00	16	8 10	16	15 30	16	15 30	British			Anglo-Mexican Pet. Co.	Lizard Head, Eng.	Gasoline	7,174	5,976	4,069
Margaret Johnson ¹² .	16	1 30	16	8 40	16	16 15	16	20 50	Swedish			Johnson Line	Stockholm, Sweden	General	5,750	7,048	5,337
Lobos ¹² .	16	2 00	16	9 09	16	18 10	16	21 20	British			Pacific Steam Nav. Co.	Hull, England	General	8,357	7,151	4,756
Sutherland.	16	6 30	16	9 23	16	18 40	16	18 40	American			Charles Nelson & Co.	Baltimore, Md.	Lumber, general	5,853	5,654	4,123
Cedar Branch.	16	9 00	16	9 45	16	19 00	16	29 05	British			F. & W. Utsumi	Liverpool, England	General	3,267	4,927	3,397
Victorious	15	8 30	16	13 04	16	21 55	17	12 40	American			American-Pioneer Line	New York, N. Y.	General	8,833	8,328	6,056
Paraguay	16	13 30	16	14 05	16	23 20	19	17 25	German			Hamburg-American Line	Antwerp, Belgium	General	6,617	5,279	4,034
Canadian Importer	16	13 48	16	14 34	16	23 45	17	3 40	British			Can. Nat. Steamships	Halifax, N. S.	Lumber, general	6,500	5,891	4,186
San Salvador ¹ .	16	22 30	17	6 21	17	13 45	17	13 45	British			Anglo-Mexican Pet. Co.	Lizard Head, Eng.	Gasoline	7,359	6,157	4,137
Yankee Arrow ¹ .	16	22 15	17	6 58	17	14 50	17	14 50	American			Standard Transp. Co.	Providence, R. I.	Gasoline	11,319	9,841	6,946
Rimutaka	16	22 30	17	7 16	17	14 40	17	23 05	British			N. Z. Shipping Co.	London, England	Frozen, general	4,757	9,201	6,961
Port Darwin	16	28 10	17	7 31	17	15 50	17	19 40	British			Com'lth & Don. Line	London, England	Frozen, general	6,250	10,468	7,916
Pacific Fir	16	21 20	17	8 06	17	16 05	17	16 05	American			Dixon S. S. Corp.	Baltimore, Md.	Lumber	8,145	6,622	4,882
Isis rich	16	10 52	17	8 30	17	16 40	17	16 40	American			Argonaut S. S. Line	Baltimore, Md.	Lumber, general	6,802	6,616	4,614
Buenavies	16	21 30	17	9 16	17	18 00	17	18 00	British			Sir W. R. Smith & Sons.	Valencia, Spain	Wheat	7,700	6,656	4,964
Santa Elisa.	17	7 00	17	9 36	17	18 30	17	21 05	American			Grace Line	New York, N. Y.	General	3,920	5,957	4,235
Arana	17	7 00	17	10 08	17	19 25	18	8 15	British			Pacific Steam Nav. Co.	Callao, Peru	General	284	2,851	1,776
Seneca ¹³ .	17	10 08	17	18 10	17	18 10	17	19 33	American			U. S. Navy	Balboa, C. Z.	Gasoline	8,233	7,333	5,182
Paul Shoup ¹ .	17	7 30	17	10 23	17	19 33	17	19 33	American			Associated Oil Co.	San Francisco, Cal.	Gasoline	6,300	5,572	4,900
West Keats	17	12 40	17	13 25	17	20 55	17	20 55	American			Calif. & Pac. S. S. Co.	Philadelphia, Pa.	Lumber	7,000	4,751	3,160
Birk	17	14 30	17	15 09	17	22 20	18	2 05	Norwegian			Moore & McCormack	Pensacola, Fla.	Nitrates	21,506	15,425	4,121
Svealand ¹² .	17	15 42	17	17 38	18	13 20	18	13 20	Swedish			Ore S. S. Corp.	Baltimore, Md.	Iron ore	6,700	24,508	17,565
California	17	11 45	18	6 30	18	13 55	18	14 45	American			Panama-Pacific Line	New York, N. Y.	General	8,227	6,876	5,072
Lighthouse	17	15 50	18	6 33	18	14 57	18	15 40	American			The Texas Co.	New York, N. Y.	Gasoline	8,819	6,522	4,389
Glitter	17	19 50	18	7 34	18	16 15	18	16 15	Norwegian			Fearnley & Eger.	Hamburg, Germany	General	1,559	5,521	3,729
Leon XIII	17	15 00	18	7 45	18	15 35	19	21 25	Spanish			Spanish Line	Barcelona, Spain	General	7,006	6,006	4,287
Zacharica	17	16 20	18	8 13	18	19 50	18	19 50	Greek			G. Lykardopolos.	Azores ¹⁶	Nitrates	8,353	9,027	6,539
Paul Luckenbach	18	6 40	18	9 07	18	18 25	18	18 25	American			Luckenbach Line	Boston, Mass.	Lumber, general	5,577	6,576	4,734
Moveria ¹² .	18	3 25	18	10 12	18	18 50	18	18 50	British			Donaldson Line	Glasgow, Scotland	Fruit, general	6,937	5,524	3,612
Lithopa ¹ .	18	10 39	18	11 37	18	18 40	19	1 05	Norwegian			Anglo-Saxon Pet. Co.	Curacao, D. W. I.	Stove oil	6,547	6,392	46 06
Rigi	17	20 10	18	11 27	18	20 00	19	1 05	Norwegian			Camilo Eitzen & Co.	Liverpool, England	General	9,753	7,186	5,335
Comeric	18	11 20	18	12 08	18	22 25	19	5 50	British			Andrew Weir & Co.	London, England	Grain, general	890	780	
Martha ¹ .	18	12 40	18	13 22	18	21 25	19	5 50	Norwegian			Chr. Hansevig.	Cristobal, C. Z.	Coffee, hides			

¹² Motor ship.¹³ Towing barge.¹⁴ Cocoa, coffee, wood, and hides.¹⁵ Towing barge.¹⁶ For others.¹⁷ Towing barge.¹⁸ Towing barge.¹⁹ Towing barge.²⁰ Towing barge.²¹ Towing barge.²² Towing barge.²³ Towing barge.²⁴ Towing barge.²⁵ Towing barge.²⁶ For others.²⁷ Towing barge.²⁸ Towing barge.²⁹ Towing barge.³⁰ Towing barge.

Pacific	18	14	00	18	11	37	18	23	05	18	23	05	British	Furness, Withy & Co	435.1	60.2	27.1	Vancouver, B. C.	Glasgow, Scotland	8,032	9,644	6,967
Reliance 12	18	17	15	18	6	31	19	17	45	19	30	British	Sir R. Roper & Co.	405.0	53.6	24.0	Prince Rupert, B.C.	London, England	7,800	5,875	4,269	
Carberry	18	20	40	19	7	34	19	18	00	19	22	British	Sir R. Roper & Co.	405.0	53.6	24.0	Prince Rupert, B.C.	Hull, England	7,737	5,869	4,271	
Rockpool	18	21	45	19	7	34	19	18	33	19	18	American	Malison Line	445.0	53.7	29.6	Portland, Ore.	Boston, Mass.	6,591	7,072	4,944	
Maliko	18	22	40	19	8	07	19	19	35	19	19	American	Port Moor Co.	445.0	58.0	27.6	Vancouver, B. C.	Boston, Mass.	8,700	7,787	6,275	
East Indian 12	19	00	30	19	10	15	19	19	35	19	35	British	Anglo-Saxon Tel. Co	445.0	58.0	27.6	Vancouver, B. C.	Land's End, Eng	8,989	8,057	5,047	
Blimouth 12	19	00	30	19	10	15	19	19	35	19	35	British	Anglo-Saxon Tel. Co	445.0	58.0	27.6	Vancouver, B. C.	Land's End, Eng	8,989	8,057	5,047	
Scottish	19	11	45	19	12	15	19	20	10	19	22	35	British	British Tankers, Ltd.	425.3	57.0	29.2	Buenos Aires, Arg.	Curacao, D. W. I.	7,123	4,962	
Minstrel 12	19	12	49	19	13	30	19	21	20	24	6	00	Dutch	Royal Neth. S. S. Co.	202.9	33.1	15.0	Guayaquil, Ecuador	Cristobal, C. Z.	9,860	1,183	742
Barak	19	12	45	19	13	59	19	22	30	24	1	25	British	Royal Mail S. P. Co	485.0	62.0	29.0	Vancouver, B. C.	Rotterdam, Holland	9,260	10,802	7,955
Leckkatrine 12	19	12	45	19	13	59	19	22	30	24	1	25	British	Royal Mail S. P. Co	485.0	62.0	29.0	Vancouver, B. C.	Rotterdam, Holland	9,260	10,802	7,955
Hampden	19	13	55	19	14	44	20	11	35	20	11	35	American	Oil Transport Co.	431.0	59.2	26.6	La Libertad, Ecuador	Philadelphia, Pa.	10,086	8,093	5,347
Reads 1	19	15	50	19	16	40	20	12	50	20	14	55	American	Transmarine Lines	321.0	46.2	23.0	Everett, Wash.	New York, N. Y.	4,200	3,984	2,612
Suspenae	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
O-7 17	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
O-8 17	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
O-9 17	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
O-10 17	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Graduate 18	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
S-16 17	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Motor Sailor 19	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
West Lynn 12	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Edward Luck-	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
entech.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Santa Mateo.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Lauro 13	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Pardo.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Charles H.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Crump.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Manara.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Santa Eulalia.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Corinto.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Trunka.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Ashtunite.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Atlantic Sun.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Kross.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Chickasaw City	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Yone Maru.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Trontolite 112	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Point Montara	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Chadman	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Keowis 20	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Swan 18	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			
Mexican.	19	15	50	20	6	30	21	17	30	20	17	30	American	U. S. Navy	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.			

1. Tanker.

17 Submarine.

18 Submarine tender.

Launch.

U. S. Army transport.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	To—
December 16.	Pastores	United Fruit Co.	Port Limon, Costa Rica.	December 16.	Managua	United Fruit Co.	New York via Kingston.
December 16.	Killing ²¹	Merritt, Chapman & Lindsay	San Juan, Port Rico.	December 16.	Pastores	United Fruit Co.	New York and Habana.
December 17.	Ulua	United Fruit Co.	New York via Habana.	December 17.	Cartago	United Fruit Co.	New Orleans and wayports.
December 17.	Maravi	United Fruit Co.	New York, N. Y.	December 17.	Nordhav	Auzo-Saxon Petroleum Co.	Curacao, D. W. I.
December 17.	Linda S. ²²	Surgeon Brothers	Colon, R. P.	December 17.	Linda S. ²²	Surgeon Brothers	Bluefields, Nicaragua.
December 18.	Wanks	Standard Fruit & S. S. Co.	Pernu, R. P.	December 18.	Impeco ²²	Colon Import & Export Co.	Colon, R. P.
December 18.	Camito	Elders & Fyffes, Ltd	Avonmouth via wayports.	December 18.	Antillian	Legland Line	Puerto Colombia.
December 18.	All America ²³	All America Cables	Galveston, Texas.	December 19.	Camito	Elders & Fyffes, Ltd	Santa Marta, Colombia.
December 19.	Gatun	Standard Fruit & S. S. Co.	New Orleans, La.	December 19.	Ulua	United Fruit Co.	Port Limon, Costa Rica.
December 19.	Cristobal	Panama Railroad S. S. Line.	New York via Haiti.	December 19.	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.
December 19.	Zacapa	United Fruit Co.	New York via wayports.	December 19.	Killing ²¹	Merritt, Chapman, & Lindsay	Kingston, Jamaica.
December 19.	Saramacca.	United Fruit Co.	New Orleans, La.	December 19.	Maravi	United Fruit Co.	Cartagena and Puerto Colombia.
December 19.	Sangro	Nav. Gen. Italiana	Curacao, D. W. I.	December 20.	Zacapa	United Fruit Co.	New York via wayports.
December 19.	Galeia	Hamburg-American Line.	Hamburg and wayports.	December 20.	Saramacca	United Fruit Co.	Port Limon and Bocas del Toro.
December 20.	Anachucuna ²⁴	United Fruit Co.	Colon, R. P.	December 20.	Galeia	Hamburg-American Line	Colon, R. P.
December 21.	Suriname	United Fruit Co.	Bocas del Toro, R. P.	December 20.	Anachucuna ²⁴	United Fruit Co.	New Orleans and wayports.
December 21.	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.	December 21.	Gatun	Standard Fruit & S. S. Co.	New Orleans, La.
December 21.	William M. ²⁵	G. I. Bryan	Colon, R. P.	December 21.	Suriname	United Fruit Co.	Bluefields, Nicaragua.
December 21.	R. W. Wilmot ²¹	W. Bisso	New Orleans, La.	December 21.	William M. ²⁵	G. I. Bryan	New Orleans, La.
December 21.	Barranca ²¹	W. Bisso	New Orleans via Habana.	December 22.	R. W. Wilmot ²¹	W. Bisso	New Orleans, La.
December 22.	Parinama	United Fruit Co.	Puerto Cabeza, Nicaragua.	December 22.	Barranca ²¹	W. Bisso	New Orleans, La.
December 22.	Denver ²⁶	U. S. Navy.	Palo Alto.	December 22.	Merejan	Legland Line	

26 Cruiser.

22 Motor boat.

23 Cable ship.

22 Motor schooner.

21 Tug.

PORT OF BALBOA.

December 17.	Cathwood	Union Oil Co. of California.	Los Angeles, Calif.	December 16.	Nora	Grace Line	Los Angeles, Calif.
December 18.	San Luis ²⁷	Chiriqui Land Co	Panama Bay, R. P.	December 19.	Cathwood	Union Oil Co. of California.	Los Angeles, Calif.
December 21.	El Colon ²⁷	H. Elliot	Sambu River, R. P.	December 20.	San Luis ²⁷	Chiriqui Land Co	Puerto Armales, R. P.
December 20.	Big Bill ²⁷	H. Elliot	Sambu River, R. P.	December 20.	El Colon	H. Elliot	Panama Bay, R. P.
December 20.	A. B. de Obarrio ²⁷	Pacific Fruit Co	Bayano River, R. P.	December 20.	A. B. de Obarrio ²⁷	Pacific Fruit Co.	Bayano River, R. P.
December 20.	Dos Hermanos ²⁷ .	A. Valdez	Bayano River, R. P.	December 20.	Dos Hermanos ²⁷ .	A. Valdez	Bayano River, R. P.

* Other than ships passing through the Canal.

22 Motor schooner

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Cristobal, C. Z., for Two Weeks Ending December 15, 1928.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
San Pablo	United Fruit Co.		December 2.		2,894
Tolosa	United Fruit Co.	December 2.	December 2.	32	975
Parlsmina	United Fruit Co.		December 3.		43
Arkansas	French Line	December 3.	December 4.	293	18
Wanks	Standard Fruit & S. S. Co.		December 4.		4
Cerigo	Hamburg-American Line	December 3.		730	
Calamarcas	United Fruit Co.	December 3.	December 5.	1,042	126
Mercian	Leyland Line	December 3.	December 5.	1,764	(²)
Wm. M.	R. Feuillebois	December 4.	December 4.	(²)	28
K. R. Kingsbury	Standard Oil Co.	December 4.	December 4.	1,428	(²)
Guayaquil	Panama Railroad S. S. Line	December 4.	December 6.	182	(²)
Utacarbon	Union Oil Co.	December 4.	December 7.	9,467	(²)
Cah	North German Lloyd		December 5.		290
Jamaica	Pacific Steam Navigation Co.		December 5.		776
Van Rensselaer	Royal Netherlands S. S. Co.	December 5.	December 5.	74	(²)
Coppename	United Fruit Co.	December 5.	December 6.	729	169
Metapan	United Fruit Co.	December 5.	December 6.	425	429
Ancon	Panama R. R. S. S. Line	December 5.		4,757	
Gatun	Standard Fruit & S. S. Co.	December 5.	December 7.	319	751
Banan	United Fruit Co.	December 5.	December 7.	(²)	232
Mississippi	French Line	December 5.	December 7.	312	538
Axel Johnson	Johnson Line	December 5.	December 6.	225	(²)
Hidelford	C. Olsen	December 5.	December 8.	11,014	(²)
La Perla	United Fruit Co.	December 6.	December 6.	(²)	444
San Jose	United Fruit Co.	December 6.	December 7.	971	2
Perene	Peruvian Line	December 6.	December 7.	130	78
Cuba	Hamburg-American Line	December 6.	December 7.	(²)	621
Oroya	Pacific Steam Navigation Co.	December 6.	December 7.	161	217
Ebro	Pacific Steam Navigation Co.	December 6.	December 7.	35	(²)
Pacific Trader	Furness, Withy & Co.	December 6.	December 8.	10	400
Atrato	Colombian Transport Co.	December 7.		117	
Argun Maru	Csaka Shcen Kaisha	December 7.	December 7.	81	(²)
Arizona	French Line	December 7.	December 7.	2	2
Leme	Nav. Libera-Tristina	December 7.	December 7.	147	84
Wanks	Standard Fruit & S. S. Co.	December 7.		75	
Beskoop	Royal Netherlands S. S. Co.	December 7.	December 7.	162	46
Acajutla	Pacific Steam Navigation Co.	December 7.		259	
Canadian Victor	Canadian National Steamships	December 7.	December 7.	50	(²)
Saramacca	United Fruit Co.	December 7.	December 8.	11	300
Nienburg	Hamburg-American Line	December 7.	December 8.	289	26
Van Rensselaer	Royal Netherlands S. S. Co.	December 7.	December 8.	92	866
Radnorshire	Royal Mail S. P. Co.	December 7.	December 8.	34	4
Heredia	United Fruit Co.	December 8.		391	
Buenaventura	Panama R. R. S. S. Line	December 8.		282	
Linda S	R. Feuillebois	December 8.	December 8.	(²)	42
Cauca	National Navigation Co.		December 8.		407
Calamarcas	United Fruit Co.	December 9.	December 9.	34	810
Ancon	Panama Railroad S. S. Line		December 10.		2,757
Heredia	United Fruit Co.		December 10.		6
El Salvador	Panama Mail S. S. Co.	December 9.	December 10.	586	302
Ucayali	Peruvian Line	December 9.	December 11.	1,986	(²)
Essequibo	Pacific Steam Navigation Co.	December 10.	December 10.	61½	25
August Leonhardt	Colombian Transport Co.	December 10.	December 10.	45	(²)
Salvador	Pacific Steam Navigation Co.		December 11.		1,077½
Orestes	Royal Netherlands S. S. Co.	December 10.	December 11.	227	182
Idarwald	Hamburg-American Line	December 10.	December 11.	124	215
Perou	French Line	December 10.	December 12.	199	332
Pastores	United Fruit Co.	December 10.	December 13.	1,150	23
Stella	Panama Mail S. S. Co.	December 10.	December 14.	112	840
Moerdijk	Holland-American Line	December 11.	December 11.	2½	166
Ecuador	Panama Mail S. S. Co.	December 11.	December 12.	279	478
Santa Cecilia	Grace Line	December 11.	December 12.	230	(²)
Oklahoma	French Line	December 11.	December 12.	211	333
Wanks	Standard Fruit Co.		December 12.		9
Cerigo	Hamburg-American Line		December 12.		966
Knute Nelson	Fred Olsen & Co.	December 12.	December 12.	375	(²)
Nitro	Societa Nazionale di Nav.	December 12.	December 12.	39	(²)
Manizales	North German Lloyd	December 12.		340	
Rimac	Peruvian Line	December 12.	December 13.	(²)	5
Sivaola	United Fruit Co.	December 12.	December 13.	975	595
Alvarado	Pacific Steam Navigation Co.	December 12.	December 14.	669	54½
Granada	Standard Fruit Co.	December 12.	December 14.	311	607
La Paz	Pacific Steam Navigation Co.	December 12.	December 14.	445	176
Antillian	Leyland Line	December 13.		735	
Poljana	Winge & Co.	December 13.	December 13.	(²)	7
Suriname	United Fruit Co.	December 13.	December 13.	870	105
Albert Voegler	Hamburg-American Line	December 13.	December 14.	144	56
Ludwigshafen	North German Lloyd	December 13.	December 14.	70	134

* No cargo discharged.

* No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z.—Continued.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Macabi.....	United Fruit Co.....	December 13..	December 14..	12	683
Ucayali.....	Peruvian Line.....	December 13..	December 14..	(¹)	252
Limón.....	United Fruit Co.....	December 13..	December 15..	1,144	105
Tirso.....	Italian Line.....	December 13..	December 15..	194	(²)
Copenhagen.....	United Fruit Co.....	December 14..	December 14..	36	641
Nyanza.....	Wessel, Duval & Co.....	December 14..	December 15..	(¹)	300
Teletonia.....	Hamburg-American Line.....	December 14..	December 15..	³ / ₄	340
Vermont.....	French Line.....	December 14..	December 15..	684	(²)
Caldas.....	National Navigation Co.....	December 14..	December 12..	229	
Targis.....	North German Lloyd.....	December 14..		13	
Nordhav.....	Anglo-Saxon Petroleum Co.....	December 14..		7,600	
Wanks.....	Standard Fruit Co.....	December 14..	December 15..	70	(²)
Cartago.....	United Fruit Co.....	December 15..		619	
Phoenicia.....	Hamburg-American Line.....	December 15..	December 15..	4	(²)
Tongking.....	Danish East Asiatic Co.....	December 15..	December 15..	84	(²)
Manaquí.....	United Fruit Co.....	December 15..		342	
Oropesa.....	Pacific Steam Navigation Co.....	December 15..		162	

¹ No cargo discharged.² No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending December 15, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
El Salvador.....	Grace Line.....	December 10..	December 10..	9	
Acuador.....	Panama Mail S. S. Co.....	December 10..	December 11..	195	
St. Mihiel.....	U. S. Army.....	December 10..	December 13..	100	10
U. S. Grant.....	U. S. Army.....	December 11..	December 12..	91	1,268
Oriscas.....	Royal Netherlands S. S. Co.....	December 11..	December 12..	273	
Mojave.....	Standard Transportation Co.....	December 12..	December 13..	10,237	
Knutte Nelson.....	Peter Olsen.....	December 12..	December 13..	1,470	
La Paz.....	Pacific Steam Navigation Co.....	December 14..	December 14..		50
Targis.....	North German Lloyd.....	December 14..	December 14..	150	
President Hayes.....	Dollar Line.....	December 14..	December 14..		52
Virginia.....	Panama-Pacific Line.....	December 14..	December 14..		168
Ludwigshafen.....	North German Lloyd.....	December 14..	December 15..	295	
Tongking.....	East Asiatic Co.....	December 15..	December 16..	152	
Stella.....	Alf Tekhellen.....	December 15..	December 15..		297
Nura.....	Grace Line.....	December 15..	December 16..	13,686	
Victorious.....	U. S. Shipping Board.....	December 15..	December 16..	361	

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8 00
For steamships, including warships of all nations when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.....	11.00	14.00

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors. An illustrated pamphlet explaining in detail the arrangement may be had upon application to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

On general merchandise the rates are as follows:

(a) For handling cargo from ship's side to storage place, the customary inward local charge of \$1 per ton.

(b) For delivery or reforwarding, customary outward local charge of \$1 per ton. (Total of 20 cents per ton more than regular transfer charge.)

(c) For storage, 3 cents per ton per day, except that no charge will be made for the first 35 days.

The Panama Railroad Company stores this cargo in four fireproof warehouses, 160 feet by 850 feet, at Cristobal, and in one of the same dimensions at Balboa.

Cargo stored for orders can be reforwarded from the Isthmus—each carrier to collect its proportion of the through rate instead of the local. This means that should a shipment move from New York to the Canal Zone, it will of course pay regular local rate to Balboa or Colon, as the case may be—but should owner wish to reforward to, say, "Guayaquil," he can do so by paying the oncarrier's proportion of the through rate. Upon evidence that the shipment or any part of it moved beyond the Canal Zone, the initial carrier will refund the difference between the through and local rate.

Cargo intended for warehousing at Cristobal or Balboa should be so indicated on the bill of lading, thus "Cristobal for orders" or "Balboa for orders." When so consigned it is not necessary for shippers to secure consular papers at original point of shipment, nor to have bills of lading consulated. Cargo consigned to Canal Zone for orders may be delivered in the Republic of Panama in which case it is necessary to prepare an invoice on which duties can be paid. When evidence of payment of duty is presented to the Canal Zone customs officers they will issue the necessary release and delivery can be taken in the usual way. For those on the Canal Zone who are allowed to import goods duty free the Panama Canal customs release is all that is necessary. For reshipment from storage to a foreign country the shipper takes out bill of lading, consular invoice and sobordo if necessary and cargo is forwarded as regular outward local.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," are shown in the pamphlet referred to above.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 13 years of operation.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Notaries Public in the Canal Zone.

The following is a list of notaries public commissioned in the Canal Zone as of November 23, 1928. The list gives, by towns, the name, where stationed, and the date of expiration of commission:

ANCON.

Bowen, Vollie S., Land Office, February 27, 1930.
 Boyd, Oscar S., Municipal Division, July 30, 1931.
 French, A. W., Gorgas Hospital, May 14, 1929.
 Latimer, J. G., Ancon Laundry, April 30, 1930.
 McGahhey, J. T., Clubhouse, August 12, 1930.
 Ohlson, Elmer F., Gorgas Hospital, December 3, 1930.
 Russell, C. V., Gorgas Hospital, April 29, 1930.
 Shaeffer, L. E., Office J. O. Collins, April 6, 1929.
 Sheibley, F. H., District Court, October 27, 1929.
 Walker, J. J., District Court, November 22, 1931.

BALBOA.

Hyde, W. H., Port Captain's Office, March 6, 1930.
 Kalar, J. D., Port Captain's Office, April 13, 1929.
 Kelley, Thomas H., Mechanical Division, August 18, 1930.
 Lefever, John E., Fort Amador, February 28, 1931.
 Prager, J. F., Balboa storehouse, December 13, 1929.
 Smith, Walter R., Balboa storehouse, September 4, 1931.
 Stillwell, J. L., Fort Amador, April 20, 1931.

BALBOA HEIGHTS.

Attaway, E. F., Administration Building, room 343, October 28, 1930.
 Boggs, W. B., Administration Building, room 316, August 4, 1931.
 Buehler, G. H., Administration Building, room 205, August 17, 1931.
 Fenton, John A., Administration Building, room 203, July 28, 1930.
 Illwitzer, P. G., Administration Building, room 270, October 12, 1929.
 Schecker, C. A., Administration Building, room 244, January 19, 1930.
 Sims, Walter H., Quarry Heights, December 1, 1930.
 Taylor, R. G., Administration Building, room 318, April 30, 1930.
 Ungar, J., Administration Building, room 301, February 2, 1929.
 Wang, Frank H., Administration Building, room 305, April 29, 1929.

COROZAL.

Grimm, G. L., Corozal Hospital, October 6, 1929.
 Johnson, Mrs. Anna O., Panama Ordnance Depot, February 26, 1930.

CRISTOBAL.

Atwood, H. E., Commissary Division, April 8, 1930.
 Campbell, J. S., District Court, January 28, 1929.
 Clarke, V. J., Commissary Division, January 14, 1929.
 Cotton, Charles, Coaling Plant, March 20, 1929.
 Daly, E. J., United Fruit Co., May 26, 1929.
 Flood, Arthur, Customs office, November 15, 1931.
 Hargy, F. F., Port Captain's office, May 28, 1930.
 MacSparran, E. S., Receiving & Forwarding Agency, December 1, 1930.
 Murray, P. E., Magistrate, October 13, 1929.
 Scarborough, W. W., clubhouse, January 21, 1930.
 Slocum, E. L., Chase National Bank, August 10, 1929.
 Walsh, M. H., Customs Office, August 5, 1929.
 Ellis, Edward E., Coaling Plant, May 24, 1930.

GATUN.

P. L. Malone, Railroad Station, November 23, 1931.

PARAISO.

Holzapfel, A. F., Dredging Division, August 10, 1929.

PEDRO MIGUEL.

Norris, R. N., Municipal Division, August 11, 1930.
 Rader, T. C., Pacific Locks, January 21, 1930.
 Wright, A. M., Dredging Division, January 21, 1930.
 Cauthers, R. A., Municipal Division, June 16, 1930.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, \$0.50 per year; foreign, \$1.00; address

The Panama Canal Record, Balboa Heights, Canal Zone or

The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., January 2, 1929. No. 22.

Traffic Through the Panama Canal in December, 1928, and Calendar Year 1928—New High Record for Monthly Tolls Collection.

During the month of December, 1928, 579 commercial vessels and 11 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,443,029.39, and on the launches \$83.85, or a total tolls collection of \$2,443,113.24.

The daily average number of transits for the month was 18.67, and the average tolls collection, \$78,807.39. The average amount of tolls paid by each of the commercial transits was \$4,219.39, as compared with \$4,223.79, for the month of November, 1928.

The aggregate amount of tolls collected during the past month from commercial vessels, \$2,443,029.39, establishes a new high record for tolls collection in one month, exceeding the previous record, made in December, 1927, by almost \$45,000. The number of commercial transits, however, fell short by 10 of the record of 589 established in December, 1927.

During the calendar year ended December 31, 1928, a total of 6,334 commercial vessels, paying tolls aggregating \$26,375,962.41, transited the Canal. The daily average number of transits for the year was 17.31, and the daily average tolls collection \$72,065.46. In the number of commercial transits and the tolls collected, the year was second only to the fiscal year ended June 30, 1928, when 6,456 vessels transited, paying tolls of \$26,944,499.77.

In the following tabulation, the number of commercial transits and the amount of tolls collected are shown for the calendar year 1928, with the daily averages of transits and tolls, with comparative totals for the calendar years 1927 and 1926, and the fiscal year ended June 30, 1928:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January	540	\$2,212,752.50	17.42	\$71,379.20
February	547	2,253,755.37	18.86	77,715.70
March	542	2,223,370.57	17.48	71,721.63
April	531	2,187,607.82	17.70	72,914.55
May	508	2,118,969.83	16.38	68,353.86
June	481	2,016,211.09	16.03	67,206.43
July	509	2,109,083.19	16.41	68,034.94
August	526	2,199,069.31	16.97	70,937.72
September	487	2,111,230.56	16.23	70,374.35
October	557	2,274,945.30	17.97	73,385.33
November	527	2,225,937.48	17.57	74,197.91
December	579	2,443,029.39	18.67	78,807.39
Totals, calendar year, 1928	6,334	26,375,962.41	17.31	72,065.46
Totals, calendar year 1927	6,085	26,231,022.94	16.67	71,865.82
Totals, calendar year 1926	5,420	23,901,540.04	14.84	65,483.67
Totals, fiscal year 1928	6,456	26,944,499.77	17.63	73,618.85

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, December 29, 1928.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Kafiristan	22	22 40	23	6 25	23	14 00	23	15 02	British	Can. Amer. Ship. Co.	390 0	53.0	16.0	So. Shields, Eng.	Vancouver, B. C.	Ballast.		5,626	4,162
Hindutan	23	2 35	23	6 30	23	13 35	23	15 02	British	Hindustan S. S. Co.	400 0	52.0	16.0	Sunderland, Eng.	Vancouver, B. C.	Ballast.		5,826	4,154
Hans Leonhardt	22	23 00	23	7 20	23	14 15	23	19 43	German	Colombian Mar. Co.	230 0	36 0	13.0	New York, N. Y.	Buenaventura, Col.	General	188	1,568	909
Levant Arrow	23	3 30	23	8 25	23	14 36	23	15 55	American	Standard Oil Co.	468 3	62 7	20 6	New York, N. Y.	Los Angeles, Calif.	Ballast.		9,841	6,985
Steel Engineer	23	5 00	23	8 20	23	15 05	23	21 53	American	Isthmian S. S. Lines	424 0	56 0	25 0	New York, N. Y.	Tillamook, Ore.	(*)	7,759	7,611	5,450
Panama	23	6 15	23	8 25	23	15 30	23	17 00	American	Amer-Hawaiian Line	407 7	53 7	20 3	New York, N. Y.	Portland, Ore.	General	3,580	7,098	5,065
West Cactus	23	8 50	23	9 35	23	16 41	23	20 38	American	McCormick S. S. Co.	420 0	54 0	21 8	Santa Fe, Ariz.	San Francisco, Cal.	Sugar	8,000	6,625	5,047
Menden	22	11 30	23	9 50	23	17 30	23	18 45	German	North German Lloyd	360 0	51 0	21 10	Bremen, Germany	Champerico, Guat.	General	3,907	4,822	3,272
Sander	22	6 50	23	10 45	23	17 30	23	21 53	Norwegian	Halder Virik	451 9	59 2	17 0	Copenhagen, Den.	Los Angeles, Calif.	Ballast		7,944	5,408
Shedmount	23	10 10	23	10 58	23	18 22	23	19 40	British	Sleat S. S. Co.	420 0	54 0	23 0	Glasgow, Eng.	Iwakata, Japan	General	6,486	6,555	5,012
Gracefield	23	10 58	23	12 05	23	19 24	23	23 25	British	Empire Shipping Co.	390 0	53 6	16 0	Barry, England	Vancouver, B. C.	Ballast		5,732	4,181
Hindpool	23	12 20	23	13 23	23	21 20	23	23 45	British	Sir. R. Ropner & Co.	405 0	53 5	17 6	Oran, Algeria	Vancouver, B. C.	Ballast		5,878	4,281
Hadnot	23	14 10	23	14 20	23	21 15	23	22 52	American	Cities Service Trans. Co.	416 9	56 2	19 0	New York, N. Y.	Los Angeles, Calif.	Ballast		6,706	4,639
Edgar F. Luckenbach	23	19 45	23	20 15	24	11 13	24	12 15	American	Luckenbach Line	425 0	57 3	26 0	New Orleans, La.	Tacoma, Wash.	General	6,199	8,568	6,618
Sirius	23	10 15	24	6 05	24	13 02	26	1 37	American	U. S. Navy	401 0	54 0	20 6	Boston, Mass.	Bremerton, Wash.	General	3,527		
Barat	19	21 40	24	6 00	24	13 11	24	14 15	Dutch	Royal Neth. S. S. Co.	200 0	33 0	10 2	Christopol, C. Z.	Buenaventura, Col.	General	155	1,183	742
Kastalia	23	13 45	24	6 10	24	13 46	24	15 00	British	Donaldson Line	385 0	52 0	13 6	Liverpool, England	Vancouver, B. C.	Bananas	424	5,330	3,417
Ullmark	23	13 45	24	7 30	24	13 58	24	15 00	British	J. & J. Denholm	409 0	53 0	13 0	Glasgow-England	Iquique, Chile	Ballast		6,565	4,728
Ullmark	24	3 00	24	7 30	24	14 45	24	18 55	British	Sir. R. Ropner & Son	418 0	53 5	15 0	Pto. Ferrajo, Italy	Vancouver, B. C.	Ballast		5,876	4,327
San Mateo	24	3 10	24	7 30	24	14 45	24	18 55	American	United Fruit Co.	315 0	44 0	19 0	Port Limon, C. R.	San Francisco, Cal.	Bananas, coffee	770	3,496	2,141
Mitrobooka	24	00 15	24	8 30	24	15 37	24	18 55	Swedish	Trans. Pacific S. S. Co.	435 0	57 0	15 7	Bremen, Germany	Brisbane, Australia	Ballast		8,274	6,098
Steelmaker	24	15 15	24	15 20	24	22 00	25	3 20	American	Isthmian S. S. Lines	395 5	55 0	23 0	Baltimore, Md.	Tacoma, Wash.	Steel, general	8,755	7,330	5,245
Belgenland	25	5 45	25	6 15	25	15 08	25	23 55	British	Red Star Line	670 4	78 4	29 6	New York, N. Y.	Yokohama, Japan	Passengers only		28,913	18,874
Orazio	24	4 35	25	6 15	25	15 08	25	22 05	Italian	Nav. Gen. Italiana	484 0	62 0	24 9	Genoa, Italy	Valparaiso, Chile	General	1,378	12,977	9,373
Corinthie	24	6 05	25	7 15	25	15 33	25	16 10	British	White Star Line	500 3	63 3	30 1	London, England	Wellington, N. Z.	General	5,650	12,821	9,507
Lougar	24	6 40	25	7 15	25	15 56	25	16 50	French	Messageries Maritimes	447 3	58 0	25 6	Dunkirk, France	Noumea, N. Calif.	General	2,675	7,487	5,162
Corinto	21	18 20	25	12 15	25	20 40	26	00 16	American	Panama Mail S. S. Co.	261 0	40 0	18 5	Christopol, C. Z.	San Francisco, Cal.	General	2,373	2,352	1,949
L. A. Christensen	25	8 00	25	8 30	25	16 20	25	17 30	Norwegian	Fearnley & Eger	398 0	53 0	25 3	Tampa, Fla.	Kobe, Japan	(*)	7,324	6,118	4,245
Norkmar	24	20 00	25	9 55	25	17 11	25	18 55	American	Calmar S. S. Corp.	409 8	51 2	26 10	Baltimore, Md.	Seattle, Wash.	Steel, general	8,896	6,757	4,919
Colombia	24	6 10	25	15 37	25	22 10	25	16 30	American	Panama Mail S. S. Co.	379 0	48 7	24 1	New York, N. Y.	San Francisco, Cal.	General, coffee	3,126	6,015	4,281
El Lobo	25	15 42	25	18 00	26	8 55	26	10 27	British	Atlantic Refining Co.	325 2	51 0	17 0	Philadelphia, Pa.	Lobitos, Peru	Ballast		4,851	3,326
Siriche	25	17 55	25	19 30	26	9 49	26	11 07	American	Grace Line	384 0	46 0	20 6	Philadelphia, Pa.	Valparaiso, Chile	Iron, dynamite	3,000	3,984	2,628
Kurdistan	25	14 50	26	6 20	26	13 35	26	14 10	British	Common Brothers	420 0	51 0	17 0	Newcastle-on-Tyne	Vancouver, B. C.	Ballast		6,298	4,576
W. L. Steed	25	23 45	26	6 45	26	13 35	26	15 40	American	American Oil Co.	416 8	56 1	21 0	New Orleans, La.	Vancouver, B. C.	Ballast		6,751	4,785
Cornwall	26	00 05	26	7 30	26	15 26	27	3 55	British	Federal Steam Nav. Co.	495 0	63 1	28 6	Liverpool, England	Auckland, N. Z.	General	9,149	12,217	8,493

* Tanker.

* Steel and sulphate of ammonia.

* Motor ship.

* Auxiliary.

* Phosphates and cotton.

26	00.30	26	7.30	26	14.11	26	17.09	German.....	North German Lloyd	496.0	58.2	22.0	Hamburg, Germany	Vancouver, B. C.	3,249.1	7,816	5,755
26	00.30	26	8.30	26	17.05	26	18.00	American.....	Malun Transport Co.	334.0	48.0	22.0	Texas City, Texas	Dupont, Wash.	5,097.4	4,171	2,897
26	6.35	26	8.30	26	16.03	26	17.40	American.....	Munson S. S. Line	370.0	53.2	22.0	Taoma, Wash.	General, steel	6,100	5,668	4,297
26	5.00	26	8.45	26	17.58	26	19.00	American.....	Lockenbach Line	496.0	68.2	22.0	Boston, Mass	Seattle, Wash.	5,552.1	11,487	8,762
26	5.20	26	9.35	26	18.10	26	19.22	Swedish.....	Canadian Transp. Co.	392.0	53.0	24.0	Anilla, Cuba	Shanghai, China	6,797.7	5,706	4,084
26	7.00	26	10.40	26	18.55	26	20.05	American.....	Amer-Hawaiian Line	407.0	53.7	20.0	Boston, Mass	Taoma, Wash.	3,167.7	7,103	4,991
26	22.55	26	12.20	26	19.00	26	20.05	American.....	Ore S. S. Corp	449.0	57.0	19.1	Baltimore, Md	Crus Grande, Chile	3,153	7,808	5,139
26	5.20	26	16.45	27	8.52	27	10.10	American.....	Arrow Line	415.0	55.0	13.0	Baltimore, Md	Antofagasta, Chile	3,153	5,334	3,868
26	16.30	26	16.45	27	14.02	27	15.10	American.....	Royal Neth. S. S. Co.	447.0	62.9	20.0	Hamburg, Germany	Corral, Chile	3,596.7	7,043	5,647
26	8.20	26	6.36	27	13.14	27	14.20	American.....	Rosevelt S. S. Co.	402.0	54.0	20.0	Philadelphia, Pa.	Adelaide, Australia	5,043	9,505	6,654
27	4.35	27	6.30	27	13.14	27	14.20	American.....	Grace Line	466.0	64.0	23.0	London, England	Taleahuano, Chile	3,289	7,097	5,268
27	5.00	27	8.55	27	14.50	28	00.15	American.....	Caucasian Oil Co	380.7	55.0	18.6	Baltimore, Md	Kobe, Japan	5,951	3,921	3,921
27	8.50	27	9.05	27	16.19	27	19.50	Norwegian.....	Nippon Yusen Kaisha	445.0	58.0	26.1	Christchurch, N.Z.	Buenaventura, Col.	8,316	7,972	5,687
27	9.45	27	10.05	27	16.49	27	18.00	Norwegian.....	H. C. Stevens & Co.	183.2	30.1	12.2	Christchurch, N.Z.	Corral, Chile	650	780	504
27	18.15	27	17.40	28	9.15	28	10.59	Norwegian.....	Scand-Sov. Pacific Line	381.5	53.1	12.4	Savona, Italy	Vancouver, B. C.	5,906	5,616	3,879
27	18.00	27	18.10	28	10.15	28	16.45	British.....	Common Brothers	390.0	53.5	24.0	New York, N. Y.	San Francisco, Cal.	5,612	4,119	9,254
28	5.15	28	6.25	28	13.06	28	21.30	British.....	Dollar Line	502.0	62.2	28.0	New York, N. Y.	San Francisco, Cal.	4,587	12,660	9,254
28	1.50	28	9.55	28	15.10	28	16.05	American.....	Tide-water Oil Co	495.0	57.2	15.0	Christchurch, N.Z.	Guayaquil, Ecuador	7,227	4,827	4,827
28	18.00	28	9.25	28	19.44	28	21.00	American.....	Hamburg-American Line	227.0	34.0	13.0	Halifax, N. S.	Dunedin, N. Z.	544	1,633	1,041
28	9.45	28	13.10	28	20.23	28	21.30	British.....	Can. Nat. Steamships	400.0	52.3	17.1	Halifax, N. S.	Pto. Armines, R.P.	1,826	5,734	4,080
28	16.35	28	16.40	29	11.21	29	12.30	British.....	Akenselskabet Ryv.	255.0	33.5	16.9	New Orleans, La.	Adelaide, Australia	1,376	1,686	892
27	19.10	28	10.20	28	11.21	29	12.30	British.....	Com. Itch & Dom. Line	501.0	63.0	20.0	New York, N. Y.	Buenaventura, Col.	2,850	11,931	9,063
28	18.35	29	6.10	29	14.11	29	15.30	Colombian.....	National Navigation Co	107.2	22.0	8.0	Christchurch, N.Z.	Manila, Philippines	82	338	363
28	18.35	29	6.05	29	14.19	29	15.30	Danish.....	Isbrandt Moller & Co	302.0	44.0	18.4	New York, N. Y.	San Francisco, Cal.	2,670	3,212	2,206
28	19.05	29	6.05	29	15.19	29	16.20	American.....	Transmarine Lines	324.0	46.2	23.3	Newark, N. J.	San Francisco, Cal.	3,000	3,984	2,628
29	6.25	29	7.25	29	15.05	29	23.35	American.....	Panama-Pacific Line	600.0	65.3	25.0	New York, N. Y.	Vancouver, B. C.	2,241	17,011	4,426
28	22.45	29	7.35	29	15.28	29	17.15	British.....	Common Brothers	381.0	51.3	14.0	So. Shields, Eng.	Yokohama, Japan	5,293	3,933	3,933
29	6.20	29	8.10	29	17.10	29	18.28	Japanese.....	Kokusei Kisen Kaisha	385.0	51.0	26.4	Boca Grande, Fla.	Tacoma, Wash.	6,717	5,914	4,388
29	8.42	29	9.00	29	17.21	29	18.34	American.....	Charles Nelson & Co.	324.0	46.2	22.0	Baltimore, Md.	Crus Grande, Chile	3,425	3,983	2,629
28	12.50	29	9.50	29	18.00	30	2.40	American.....	Ore S. S. Corp	550.3	72.2	22.0	Newport News, Va.	General	15,551	4,297	4,297
28	23.10	29	10.15	29	18.53	29	20.00	Norwegian.....	T. Hansen	357.0	51.0	22.9	Casilda, Cuba	San Francisco, Cal.	6,431		
29	13.53	29	14.00	29	22.00	29	23.05	American.....	Union Sulphur Co.	335.0	51.6	25.10	Galveston, Texas	Vancouver, B. C.	6,446	5,367	2,925
29	16.35	29	20.15	30	10.27	30	11.30	American.....	Amer-Hawaiian Line	407.0	53.0	22.9	Boston, Mass	Portland, Oreg.	3,865	7,150	5,024

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

* Tanker. * Creosoted ties and general. 7 Phosphates and cotton.

22	22.45	23	6.06	23	14.20	23	14.20	American.....	Atlantic Refining Co.	435.0	56.0	27.0	Los Angeles, Calif.	Philadelphia, Pa.	9,193	7,461	5,159
22	19.55	23	6.54	23	15.45	23	17.10	British.....	Haldin & Co.	400.0	51.0	25.0	Vancouver, B. C.	Gibraltar	6,219	6,213	4,352
22	16.20	23	8.47	23	18.00	23	18.00	American.....	N. O. & S. A. S. S. Co.	280.6	40.0	22.0	Tocopilla, Chile	New Orleans, La.	2,527	2,832	1,803
23	1.00	23	8.51	23	18.00	23	9.55	German.....	Hamburg-American Line	447.0	34.5	13.4	Guayaquil, Ecuador	Cristobal, C. Z.	670	1,633	1,041
22	17.00	23	9.12	23	16.50	24	00.40	Japanese.....	Nippon Yusen Kaisha	225.0	58.0	22.0	Manila, Philippines	Cebu, Mass.	8,567	8,058	5,743
23	1.50	23	9.55	23	18.15	23	20.30	British.....	C. T. Bowring & Co.	440.0	57.5	26.4	Cabo Blanco, Peru	Halifax, N. S.	10,200	7,555	5,049
23	8.05	24	9.28	24	13.12	24	20.00	American.....	Panama Mail S. S. Co.	380.0	48.7	26.3	San Francisco, Cal.	New York, N. Y.	1,811	6,033	
23	23.00	24	7.25	24	14.08	24	15.45	Norwegian.....	Fern Line	382.7	53.4	26.3	Kolschichang, Siam	Habana, Cuba	7,515	6,082	4,292
24	1.00	24	7.46	24	14.40	24	16.10	Chilean.....	Chilean Line	422.8	56.2	26.6	Valparaiso, Chile	New York, N. Y.	4,568	7,764	4,705
24	16.50	24	17.36	25	11.40	25	11.40	British.....	Can. Nat. Steamships	399.2	52.8	15.0	Adelaide, Australia	Halifax, N. S.	1,080	5,885	4,073

* Tanker. * For orders.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Salt water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	Draft.			Nature.	Tons.	Gross.	Net.
C. O. Stillman ¹⁰	24	21	20	5	20	25	15	10	British	Inter. Petroleum Co.	555.7	75	6	33	0	Crude oil	20,626	16,780	9,885
Atlas ¹⁰	24	19	15	25	6	39	25	16	00	Standard Transp. Co.	430.0	58	2	27	0	Kerosene	10,339	7,348	5,164
Herman Franch	24	23	00	25	7	11	25	16	25	Ameyan	356.0	51	6	26	6	Lumber	5,300	5,349	2,950
Brielle	25	3	00	25	7	30	25	18	58	Dutch	400.0	58	0	2	0	Lumber	8,859	7,322	4,782
Manzano	25	4	00	25	8	24	25	19	40	Peruvian	367.3	46	0	21	0	General	3,114	4,838	2,959
Dorothy Luckenbach	25	00	25	8	52	25	17	20	25	American	449.0	60	0	29	0	Lumber, general	9,000	9,294	6,861
Banan	25	1	30	25	9	27	19	35	26	Norwegian	236.0	34	7	16	8	General	730	1,080	985
Buffalo Bridge	25	9	00	25	9	34	25	13	25	American	334.0	46	2	23	0	Lumber, general	4,300	3,985	2,680
Willisolo	25	11	45	25	12	34	25	20	35	American	435.0	57	5	26	0	Lumber, general	8,911	7,983	5,882
Amerikaland ¹⁰	25	11	00	25	15	11	26	13	25	Swedish	561.0	72	2	33	6	Iron ore	21,500	15,560	4,496
Penelope ¹⁰	26	5	06	26	6	12	26	14	23	Danzig	489.0	63	0	26	9	Gasoline	11,100	9,302	6,137
Camden ¹⁰	26	6	36	26	7	45	26	15	45	American	419.5	56	5	26	3	Fuel oil	9,185	6,977	4,959
Theodoros	26	5	30	26	8	15	26	16	52	Greek	420.0	51	2	26	0	Nitrates	8,428		
Andaluza	26	6	30	26	8	57	26	17	50	Italian	385.2	50	1	23	5	Nitrates	6,613	4,971	3,035
Franklin K. Lane ¹⁰	26	11	35	26	12	32	26	19	58	American	435.0	56	2	26	0	Gasoline	9,778	7,405	5,131
Nordpall ¹⁰	26	12	15	26	13	23	26	20	15	Danish	330.8	63	9	27	2	Nitrates	8,700	6,252	4,519
Murla	26	12	37	26	13	47	26	21	55	German	450.0	58	0	26	3	Nitrates, general	7,872	7,756	5,378
Virgilio ¹⁰	26	13	15	26	14	21	26	23	05	Italian	502.9	61	8	25	4	General	4,124	12,941	9,329
Orkidd ¹⁰	26	17	20	27	6	30	27	13	55	American	107.0	22	9	11	0	Ballast	282	328	163
Cauca ¹⁰	26	17	20	27	6	30	27	13	55	Colombian	405.0	53	6	23	6	Wheat	7,649	5,858	4,300
Asbury	26	20	30	27	7	04	27	14	00	French	388.9	54	1	27	0	Copper, general	8,130	6,394	4,424
Sonora	27	1	00	27	8	17	27	16	50	French	413.0	53	0	28	9	Wheat, lumber	9,900	7,407	5,661
Peru ¹⁰	27	3	00	27	8	46	27	16	55	Danish	388.2	48	2	23	0	Lumber, general	5,091	4,606	3,271
Walter D. Munson	26	20	00	27	9	10	27	16	20	American	336.6	46	6	17	0	General	730	6,474	2,367
Esparita	27	8	35	27	9	28	27	17	30	American	423.5	56	0	24	9	Nitrates	8,820	6,449	4,659
Holmпарк	27	9	15	27	9	56	27	18	05	British	380.8	52	1	23	0	Nitrates	7,700		
George M. Livanos	27	10	45	27	11	33	27	19	30	Greek	445.0	58	0	20	6	Wheat	9,929	8,015	5,849
Lisbon Maru	27	11	45	27	14	21	27	21	15	Japanese	405.0	52	3	24	9	General	7,599	5,823	4,293
Kirkpool	27	17	30	27	18	28	27	18	28	British	416.8	56	1	26	6	Gasoline	9,100	6,763	4,759
George W. Barnes ¹⁰	27	20	00	28	6	13	28	15	06	American	407.7	53	7	29	0	General	9,399	7,156	5,094
Dakotan	28	2	48	28	6	40	28	13	30	American	436.0	55	3	26	4	Wheat, general	8,940	77,190	6,094
Celina	28	4	55	28	7	21	28	15	08	Italian	296.9	46	0	15	0	Nitrates, copper	934	3,948	2,603
City of Panama ¹⁰	26	16	40	28	9	29	28	16	05	Panamanian	330.7	51	5	22	2	Nitrates, copper	6,040	4,788	3,347
Nyhaug ¹⁰	28	8	15	28	12	22	28	19	40	Norwegian	236.9	46	0	15	0	Nitrates, copper	6,040	4,788	3,347

¹⁰ Motor ship.¹¹ Nitrates, wool, and general.¹² For orders.¹³ Coffee, hides, and general.¹⁴ Launch.¹⁵ Tanker.

United States Fleet Concentration, Panama Bay.

The United States Fleet (175 vessels) will concentrate in Isthmian waters during the period January 17 to March 10, 1929. The first section, due to arrive at Cristobal on January 17, will be composed of the Scouting Fleet, Control Force, and Train Squadron No. 1, consisting of the following units: Five battleships, 5 cruisers, 32 destroyers, 24 submarines, 3 mine layers, 7 mine sweepers, 2 eagle boats, 1 aircraft tender, 7 auxiliaries.

These vessels will transit the Canal between the 17th and 22d of January and then engage in a strategic problem in the Pacific with the Battle Fleet (consisting of 9 battleships, 1 cruiser, 3 aircraft carriers, 40 destroyers, 12 submarines, 2 mine layers, and 22 auxiliaries)—southbound from San Pedro, Calif.—until January 30, at which time the combined fleet will base at Panama Bay until early March. Various units of the fleet will be under way in Panama Bay for tactical exercises between February 7 and 8, and February 11 and 15; and the combined fleet will engage in tactical maneuvers between February 25 and March 1. The Scouting Fleet, Train Squadron No. 1, and Battleship Division No. 3 (Battle Fleet) will transit the Canal between March 2 and 7, and on March 8 sail for Guantanamo, Cuba, while the vessels of the Battle Fleet will remain in Panama Bay until March 11, on which day they are scheduled to depart for San Pedro, Calif.

Overhaul of Pacific Locks.

Work on the quadrennial overhaul of the locks at Pedro Miguel and Miraflores will be commenced January 3, 1929, and completed in about four months. The work involved will be essentially the same as in previous overhauls except the additional item of complete installation of 60 new cylindrical valves, and the removal, inspection, and repair of a pair of miter gates on the east side of Pedro Miguel.

At each of the Pacific locks, the side which is in service will be manned by one crew of 10 operators from 7 a. m. to 11 p. m., and one crew of 8 operators from 11 p. m. to 7 a. m.

The overhaul will call for an additional force of 68 gold and 400 silver men. A separate force will be organized to carry on the work of examination of the pair of miter gates, which personnel will probably be taken from the overhaul force when the bulk of the work is completed.

Supplement No. 10—Tariff No. 9.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., *December 31, 1928.*

ITEM 17—MEDICAL AND HOSPITAL TREATMENT.
(Effective January 1, 1929.)

Paragraph 4—Add the following:

When a physician has to remain on a ship while it transits Miraflores Lake due to inability to complete his services while at Miraflores or Pedro Miguel Locks, a charge of \$7.50 will be made in addition to the regular charge for the visit of a physician to vessels transiting the Canal.

J. L. SCHLEY,
*Acting Governor, The Panama Canal,
Second Vice President, Panama Railroad Company.*

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending December 22, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Targis.	North German Lloyd.		December 16.		237
Manaquí.	United Fruit Co.		December 16.		609
Atrato.	Colombian Transport Co.		December 16.		162
Acajutla.	Pacific Steam Navigation Co.		December 16.		1,106½
Lobos.	Pacific Steam Navigation Co.	December 16.	December 16.	108	1
Margaret Johnson.	Johnson Line.	December 16.	December 16.	(¹)	107
Pastores.	United Fruit Co.	December 16.	December 16.	51	508
Victorious.	American-Pioneer Line.	December 16.	December 17.	390	(²)
Paraguay.	Hamburg-American Line.	December 16.	December 19.	13	12
Cartago.	United Fruit Co.		December 17.		38
Santa Elisa.	Grace Line.	December 17.	December 17.	4	124
Linda S.	R. Feuillebois.	December 17.	December 17.	(¹)	14½
Zenon.	French Line.	December 17.	December 18.	35	26
Los Angeles.	Hamburg-American Line.	December 17.	December 18.	7	374
Arana.	Pacific Steam Navigation Co.	December 17.	December 18.	48	108
Antillian.	Leyland Line.		December 18.		2,500
Maravi.	United Fruit Co.	December 17.	December 19.	237	235
Ulua.	United Fruit Co.	December 17.	December 19.	690	33
Locheoll.	Pacific Steam Navigation Co.	December 17.	December 19.	20	382
Leon XIII.	Spanish Line.	December 18.	December 19.	91	305
Camito.	Elders & Fyffes, Ltd.	December 18.	December 19.	3	(¹)
Glamorganshire.	Pacific Steam Navigation Co.	December 18.	December 19.	637	(²)
Wanks.	Standard Fruit & S. S. Co.	December 18.	December 19.	80	26
Garfield.	N. O. & S. A. S. S. Line.	December 18.	December 19.	20	192
Martha.	Ch. Hannevig.	December 18.		1,005	
Saramacca.	United Fruit Co.	December 19.	December 20.	663	64
Zacapa.	United Fruit Co.	December 19.	December 20.	706	126
Manizales.	Roland Line.		December 20.		423
Cristobal.	Panama Railroad S. S. Line.	December 19.	December 20.	6,691	
Baralt.	Royal Netherlands S. S. Co.	December 19.		588	
Legazpi.	Spanish Line.	December 19.	December 20.	228	22
Galicía.	Hamburg-American Line.	December 19.	December 20.	281	228
Orcoma.	Pacific Steam Navigation Co.	December 19.	December 20.	105	175
Gatun.	Standard Fruit & S. S. Co.	December 19.	December 21.	443	630
Adolf von Baeyer.	Hamburg-American Line.	December 20.	December 21.	28	266
Suriname.	United Fruit Co.	December 21.	December 21.	66	393
West Nilus.	McCormick S. S. Co.	December 21.	December 21.	66	(¹)
Corinto.	Panama Mail S. S. Co.	December 21.	December 21.	684	
Wanks.	Standard Fruit & S. S. Co.	December 21.	December 21.	75	
William M.	R. Feuillebois.	December 21.	December 21.	(¹)	16½
Caldas.	National Navigation Co.		December 21.		321
San Mateo.	United Fruit Co.	December 21.	December 22.	601	337
Minden.	North German Lloyd.	December 22.	December 22.	88	
Parismina.	United Fruit Co.	December 22.	December 22.	514	

¹ No cargo discharged.² No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending December 29, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Leon XIII.	Spanish Line.	December 17.	December 18.	116	
Cathwood.	Union Oil Co.	December 17.	December 19.	10,275	6
Willango.	Babeck S. S. Corp.	December 18.	December 18.	7	
Corinto.	Panama Mail S. S. Co.	December 20.	December 21.	27	
Kenowis.	U. S. Government.	December 20.	December 22.	2,299	133
Caldas.	National Navigation Co.	December 21.	December 21.		5
Adolf Von Baeyer.	Hamburg-American Line.	December 21.	December 22.	819	19
Toba Maru.	Nippon Yusen Kaisha.	December 22.	December 23.	113	
Venezuela.	Panama Mail S. S. Co.	December 23.	December 24.	150	
Sirius.	U. S. Government.	December 24.	December 25.	7	25
Colombia.	Panama Mail S. S. Co.	December 25.	December 26.	106	64
City of Panama.	Panama Mail S. S. Co.	December 26.	December 28.	119	
Lisbon Maru.	Nippon Yusen Kaisha.	December 27.	December 27.	68	
Santa Maria.	Grace Line.	December 27.	December 27.		95

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Diesel oil is sold by The Panama Canal at Cristobal at \$1.80 per barrel.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.25 per barrel at Balboa and Cristobal. Diesel oil, Balboa only, \$1.80 per barrel.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers at \$8.00 per ton of 2,240 pounds at Cristobal, and \$11.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, \$8.00 per ton at Balboa. When coal is delivered from lighters in quantities of 50 tons or more, the price is \$9.00 per ton at Cristobal, \$12.00 at Balboa. If less than 50 tons is taken from lighters, prices are \$11.00 per ton at Cristobal and \$14.00 per ton at Balboa with minimum charge for 20 tons and maximum charge not to exceed that for 50 tons at \$9.00 Cristobal and \$12.00 Balboa. For furnishing lump coal for galley use, or run of mine coal, in sacks, \$6.00 additional per ton; but if vessel furnishes sacks \$3.00 additional per ton.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

For trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, when requested, an additional charge of 90 cents per ton will be made for extra handling.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Tolls Charges for Transit of The Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity \$1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity .72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton. .50
4. Army and navy transports, colliers, hospital ships, and supply ships, the vessels to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton. 1.20
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton.
6. Vessels returning from Gatun Lake to original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage in such cases, as provided in Paragraph 4, Item 3, of the tariff, and for handling lines in accordance with Item 4 of the tariff.

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Panacanal, Panama;" in the United States, "Panacanal, Washington."

MOVEMENTS OF OCEAN VESSELS.—Continued from page 309.

PORT OF BALBOA.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
December 23.	El Panquiao ²⁰	Panamá Government.	Panama Bay, R. P.	December 25.	Cricamola ²²	Chiriqui Land Co.	Pto. Armuelles, R. P.
December 24.	Cricamola ²¹	Chiriqui Land Co.	Pto. Armuelles, R. P.	December 26.	El Panquiao.	Panamá Government.	Panama Bay, R. P.
December 27.	A. B. de Obarrío ²²	Pacific Fruit Co.	Bayano River, R. P.	December 27.	A. B. de Obarrío ²²	Pacific Fruit Co.	Bayano River, R. P.
December 27.	Dos Hermanos ²²	A. Valdez	Bayano River, R. P.	December 27.	Dos Hermanos ²²	A. Valdez	Bayano River, R. P.
December 27.	El Colón ²²	H. Elliot.	Sambu River, R. P.	December 27.	El Colón ²²	H. Elliot.	Panama Bay, R. P.
December 27.	Big Bill ²²	H. Elliot.	Sambu River, R. P.	December 27.	Big Bill ²²	H. Elliot.	Panama Bay, R. P.

* Other than ships passing through the Canal.

²⁰ Revenue cutter. ²¹ Motor ship. ²² Motor schooner.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., January 9, 1929. No. 23.

Tanker Traffic Through the Panama Canal in December, 1928.

During the month of December, 1928, 81 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 424,650, on which tolls of \$369,831.11 were collected. Cargo amounted to 360,704 tons. In point of net tonnage, tanker traffic for the past month showed a decrease of 22.2 per cent under the same traffic for the corresponding month of the preceding year, while cargo tonnage decreased 32.9 per cent under the cargo tonnage of December, 1927.

Tank ships comprised 14.1 per cent of the total commercial transits through the Canal during the month; made up 15.7 per cent of the total Panama Canal net tonnage; were the source of 15.1 per cent of the tolls collected; and carried 13.3 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of December, 1928, segregated by direction of transit and nationality of vessels, are shown in the following tabulations, with comparative totals for the two preceding months and for December, 1927:

Nationality.	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
Belgian	1	4,976	55,710.00	8,100
British	8	32,906	23,692.32	
Danish	2	11,822	8,511.84	
French	2	9,685	6,973.20	
German	1	4,186	3,013.92	
Norwegian	3	13,140	9,460.80	
Panaman	1	6,650	4,788.00	
United States	26	146,382	109,013.39	7,600
Totals, December, 1928	44	229,747	171,163.47	15,700
Totals, November, 1928	37	204,612	149,609.70	9,244
Totals, October, 1928	48	246,410	181,883.99	32,050
Totals, December, 1927	48	265,281	196,036.57	26,347
<i>Pacific to Atlantic.</i>				
British	9	45,477	47,190.14	76,894
Danzig	1	6,127	6,585.00	11,100
Norwegian	4	18,481	19,930.00	35,895
Swedish	1	6,295	6,486.25	11,872
United States	22	118,523	118,476.25	209,243
Totals, December, 1928	37	194,903	198,667.64	345,004
Totals, November, 1928	44	233,612	241,705.35	424,708
Totals, October, 1928	34	198,107	200,340.90	358,076
Totals, December, 1927	52	280,619	289,307.60	511,710

Of the total tanker traffic shown above, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, with the totals for the two preceding months and for December, 1927:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
December, 1928.....	38	201,765	\$151,016.43	15,700
November, 1928.....	29	160,638	115,659.36	.....
October, 1928.....	36	186,866	135,890.77	7,124
December, 1927.....	35	197,812	143,525.88	12,230
<i>From Los Angeles.</i>				
December, 1928.....	26	136,116	137,683.75	243,385
November, 1928.....	33	174,578	180,329.10	317,050
October, 1928.....	23	134,002	131,918.40	232,617
December, 1927.....	39	213,489	218,011.85	395,186

Peruvian Naval Vessels at Balboa.

Seven units of the Peruvian Navy arrived at Balboa on January 8 for a 10-day visit to the Isthmus as a part of their annual practice cruise. The vessels are the cruisers *Almirante Grau*, *Coronel Bolognesi*, submarine tender *Lima*, and submarines *R-1*, *R-2*, *R-3*, and *R-4*. The combined crews of these vessels total 1,200 men and there are also a number of midshipmen from the Peruvian Naval Academy. The *Almirante Grau* and four submarines are to spend several days in dry dock for the purpose of cleaning bottoms.

Supplement No. 13.—Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 28, 1928.

Regulations 47.8, contained in Supplement No. 2 of May 12, 1926, to the "Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters," which prohibits loaded oil tankers from passing through Gaillard Cut during darkness, is hereby canceled, effective January 1, 1929.

J. L. SCHLEY,
Acting Governor.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.....	11.00	14.00

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending December 29, 1928.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal.	Panama Railroad S. S. Line		December 23.		465
Minden.	North German Lloyd		December 23.		323
Toba Maru.	Nippon Yusen Kaisha	December 23.	December 23.	478	(²)
Ulua.	United Fruit Co.	December 23.	December 23.	9	471
Baralt.	Royal Netherlands S. S. Co.		December 24.		154
Parismina.	United Fruit Co.		December 24.		120
Kastalia.	Donaldson Brothers		December 24.		355
Palatia.	Hamburg-American Line.	December 23.	December 25.	295	(²)
Durazzo.	Hamburg-American Line.	December 23.	December 28.	760	548
Aeonecagua.	Chilean Line.	December 24.	December 24.	$\frac{1}{2}$	(²)
Corinto.	Panama Mail S. S. Co.		December 25.		2,259
Colombia.	Panama Mail S. S. Co.	December 24.	December 25.	845	520
Orazio.	Italian Line.	December 24.	December 25.	374	93
San Pablo.	United Fruit Co.	December 24.	December 26.	969	148
Tolosa.	United Fruit Co.	December 24.	December 26.	1,243	3
Venezuela.	Panama Mail S. S. Co.	December 24.	December 26.	328	568
Brielle.	Royal Netherlands S. S. Co.	December 25.	December 25.	86	(²)
Banan.	United Fruit Co.	December 25.	December 26.	541	7
Alkmaar.	United Fruit Co.	December 25.	December 26.	430	235
Granada.	Standard Fruit & S. S. Co.	December 25.	December 28.	362	351
Mantaro.	Peruvian Line.	December 25.	December 29.	3,114	(²)
Murla.	North German Lloyd	December 26.	December 26.	38	15
Santa Cruz.	Grace Line.	December 26.	December 26.	1	50
Saramacca.	United Fruit Co.	December 26.	December 26.	(²)	294
Santa Marta.	United Fruit Co.	December 26.	December 27.	1,018	132
Virgilio.	Italian Line.	December 26.	December 27.	50	629
Coppename.	United Fruit Co.	December 27.	December 27.	716	45
Santa Maria.	Grace Line.	December 27.	December 27.	(²)	6
Martha.	Chr. Hannevig		December 27.		719
Esparta.	United Fruit Co.	December 27.		1,077	
Sonora.	French Line.	December 27.	December 28.	359	204
Lisbon Maru.	Nippon Yusen Kaisha	December 27.	December 28.	89	(²)
Hvoslef.	United Fruit Co.	December 27.	December 28.	(²)	540
Pellerin de LaTouche.	French Line.	December 28.	December 28.	270	625
Wanks.	Standard Fruit & S. S. Co.	December 28.		70	
Simon Bolivar.	Royal Netherlands S. S. Co.	December 28.	December 29.	162 $\frac{1}{2}$	1,028
City of Panama.	Panama Mail S. S. Co.	December 29.		1,003	
Orbita.	Pacific Steam Navigation Co.	December 29.	December 29.	5 $\frac{1}{2}$	7
Linda S.	R. Feuillebois	December 29.	December 29.	(²)	29
Irons.	United Fruit Co.	December 29.	December 29.	(²)	725
Havel.	North German Lloyd	December 29.	December 29.	(²)	130
Heredia.	United Fruit Co.	December 29.		580	
Wasgenwald.	Hamburg-American Line.	December 29.		45	
Orinoco.	Hamburg-American Line.	December 29.		456	
Calí.	North German Lloyd	December 29.		620	
Cauca.	National Navigation Co.	December 27.	December 29.	312	82

* No cargo discharged.

* No cargo laded.

New Dollar Liners to Have Electric Propulsion.

Supplementing the article in THE PANAMA CANAL RECORD of December 12, 1928, concerning the expansion program of the Dollar Steamship Line, it has been announced that the specifications for the new tonnage to be constructed for the company's around-the-world service designate electric drive propulsion similar to that specified for the turbo-electric liners *California* and *Virginia* of the Panama Pacific Line. Designs are now being worked out for the first liner, which will cost approximately \$7,000,000. It is stated that the issuance of plans for the 3 new liners has been delayed somewhat in an effort to anticipate the trend of propulsion and ship design for the next 10 years, and to plan the new tonnage so as best to meet the demands that will be made of ocean liners in that period.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, January 5, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.							Nature.	Tons.		Gross.	Net.
Wasgenwald	29	7 15	30	6 08	30	13 10	31	3 55	German	Hamburg-American Line	399 0	54 0	23 0	Hamburg, Germany	Valparaiso, Chile	(*)	4,998	6,536	4,516
Redwing	29	17 00	30	6 20	30	11 54	1-3	11 26	American	U. S. Navy	186 0	30 0	12 0	Norfolk, Va.	Astoria, Wash.	Refined oil	5,130	5,552	3,757
Galena	29	17 38	30	6 20	30	13 26	30	15 05	American	Texas S. S. Co.	391 8	51 3	22 6	Port Arthur, Tex.	Los Angeles, Calif.	General	5,132	9,881	6,915
Port Pirie	29	24 00	30	7 18	30	14 59	30	16 10	British	Com'ith & Dom. Line	470 0	58 0	23 6	Barry, England	Dunedin, N. Z.	General	8,928	10,084	7,796
Port Alma	29	24 00	30	11 20	30	17 41	31	1 00	British	Com'ith & Dom. Line	477 0	63 0	28 0	Antwerp, Belgium	Dunedin, N. Z.	General	2,643	5,798	4,118
Woodfield	30	19 25	30	20 10	31	9 56	31	11 07	British	Anglo-Chilean Nite Co.	400 0	53 0	14 0	Philadelphia, Pa.	Tocopilla, Chile	Ballast	4,605	3,984	2,612
Batona	30	19 10	31	6 00	31	14 17	31	15 30	British	Pacific Steam Nav. Co.	400 0	52 0	22 0	Hull, England	Corral, Chile	General	2,643	5,798	4,118
Sutropeco	31	00 15	31	6 25	31	15 14	31	16 35	American	Transmarine Line	324 0	46 0	23 0	Mobile, Ala.	Corral, Chile	General	4,605	3,984	2,612
East York	31	4 25	31	7 25	31	15 19	31	21 40	British	Texas S. S. Co.	409 0	54 0	24 6	Port Arthur, Tex.	Seattle, Wash.	Case oil	6,914	6,927	4,802
Toledo	31	4 25	31	7 30	31	16 08	31	20 35	British	Sir W. R. Smith & Sons	401 0	54 0	24 6	Glasgow-England	Adelaide, Australia	General	4,312	5,491	4,011
Elmhurst	31	8 18	31	8 35	31	17 44	31	22 20	British	Bank Line, Ltd	376 2	52 5	19 9	New York, N. Y.	Vancouver, B. C.	Ballast	4,312	5,491	4,011
Apple Branch	31	8 35	31	9 40	31	18 37	31	19 45	British	F. & W. Rutson	420 0	53 9	23 0	New York, N. Y.	Shanghai, China	General	5,682	7,097	4,994
Saramacca	31	8 45	31	9 50	31	18 37	31	19 45	American	United Fruit Co.	376 0	51 7	21 0	Liverpool, England	Corral, Chile	General	3,355	5,112	3,511
Dramatist	30	8 45	31	11 00	31	19 20	31	20 35	British	T. & J. Harrison	336 7	42 0	20 0	Port Limon, C. R.	San Francisco, Cal.	(*)	676	3,668	2,308
Fernita	31	8 30	31	11 40	31	20 30	31	23 35	Swedish	Comyn & Co.	410 0	52 0	20 0	Liverpool, England	Vancouver, B. C.	Ballast	2,253	4,952	3,532
Canadian Ranger	31	10 10	31	12 40	31	20 30	31	22 00	British	Can. Nat. Steamships	350 0	50 0	15 0	Antwerp, Belgium	Los Angeles, Calif.	Sand and rags	2,253	4,952	3,532
City of Winchester	31	10 42	31	14 05	31	21 22	31	22 55	British	Can. Nat. Steamships	400 0	52 0	24 0	Sydney, C. B.	Vancouver, B. C.	General	6,361	5,879	4,121
Kattegat	31	10 42	31	14 05	31	21 22	31	22 55	British	Ellerman Lines	455 5	57 9	26 10	New York, N. Y.	Fremantle, Aust'lia	General	6,496	8,796	6,600
Finn	31	20 47	1-1	6 40	1-1	13 12	1-1	19 02	German	Atlantic Tank Co.	410 0	55 8	19 0	Rouen, France	Los Angeles, Calif.	Ballast	521	6,389	4,133
Sun	31	20 50	1	6 35	1	17 00	1	18 05	American	Colombian Mari. Co.	271 0	41 0	14 0	New York, N. Y.	Buenaventura, Col.	(*)	521	2,472	1,513
Virginian	31	23 30	1	7 15	1	16 50	1	17 50	American	Sun Oil Co.	480 6	66 0	22 0	Chester, Pa.	Los Angeles, Calif.	Ballast	9,620	6,424	
Atlantic	1-1	5 00	1	8 25	1	17 45	1	21 46	American	Amer-Hawaiian Line	491 5	58 2	19 0	Boston, Mass.	Tacoma, Wash.	General	2,400	10,491	7,601
Romsdalsfjorden	1	5 50	1	8 40	1	18 27	1	19 35	Norwegian	Argonaut S. S. Co.	410 5	54 3	23 0	Baltimore, Md	Vancouver, B. C.	Steel, general	7,035	6,567	4,917
Parana	1	1 20	1	9 30	1	19 22	1	20 35	Danish	Jacob R. Olson	420 0	53 0	15 0	Newport News, Va.	Arica, Chile	Ballast	6,562	4,733	
Tiberton	1	8 50	1	9 40	1	19 35	1	20 35	British	Canadian Transp. Co.	398 0	55 0	16 0	Newcastle-on-Tyne	Col. River, Wash.	Ballast	7,088	5,219	
Iloilo Siemers	1	14 05	1	17 25	2	21 00	2	10 15	German	L. Dreyfus & Co.	400 1	52 3	16 11	Cardiff, England	Vancouver, B. C.	Ballast	5,699	4,266	
Dean Emery	1	20 25	1	20 45	2	23 09	2	11 59	American	G. I. H. Siemers	332 0	45 0	16 11	Philadelphia	Vancouver, B. C.	General	1,500	3,472	2,159
J. L. Luckenbach	1	20 47	2	6 50	3	00 15	3	1 15	American	Huacata Petroleum Co.	429 3	59 2	21 0	Baltimore, Md	Los Angeles, Calif.	Ballast	7,709	5,517	
Oran	2	2 15	2	6 40	2	22 12	2	23 10	American	Luckenbach Line	448 9	60 2	23 0	Boston, Mass.	Seattle, Wash.	General	4,000	9,294	6,861
Huguenot	2	6 40	2	8 40	3	1 30	3	9 01	American	Oriental Navigation Co.	409 0	54 2	23 0	Wilmingon, Del.	Seattle, Wash.	General	4,834	7,355	4,887
Lio	2	9 45	2	10 00	3	2 25	3	3 53	American	B. L. Shipping Co.	434 8	56 2	24 0	Amst'dam, Holland	Vancouver, B. C.	Cresosote	8,663	7,394	5,099
Manaro	1	13 53	2	10 20	3	3 55	3	5 20	Peruvian	Standard Transp. Co.	431 0	49 2	22 0	Providence, R. I.	Los Angeles, Calif.	Ballast	7,846	5,112	
Aghios Marcus	2	7 25	2	12 25	3	4 00	3	5 20	Greek	Peruvian Line	367 3	46 0	19 11	Covanas, Colombia	Callao, Peru	General, cattle	244	4,838	2,959
Balboa	1	16 05	2	12 35	3	5 13	3	9 50	Swedish	Margaronis Brothers	400 0	54 0	16 0	Pto. Cabello, Ven.	Arica, Chile	Ballast	6,319	4,655	
Tanker.										Johnson Line	426 0	56 0	21 5	Gothenburg, Swed.	San Francisco, Cal.	(*)	5,665	7,480	5,533
Coast guard cutter.																			
Motor ship.																			
Cement, gun, paper, and general.																			
Bananas, coffee, and cocoa.																			
Automobiles, cement, wheat, and general.																			
Paper, cement, and general.																			

1 Tanker.

2 Motor ship.

3 Coast guard cutter.

4 Cement, iron, paper, and general.

5 Bananas, coffee, and cocoa.

6 Automobiles, cement, wheat, and general.

7 Paper, cement, and general.

Tahchee ¹	2	10.30	2	13.30	3	6.06	3	7.13	British	Standard Transp. Co.	420.5	54.4	18.0	Baltimore, Md.	Los Angeles, Calif	Ballast	5,039	6,672	4,623
Orita	2	15.35	3	6.25	3	18.28	3	19.20	British	Pacific Steam Nav. Co.	485.0	58.0	25.0	Liverpool, England	Tacahano, Chile	General	9,336	9,336	6,561
Chilore	1	8.40	3	6.15	3	19.29	3	20.40	American	Ore S. S. Corp.	549.0	72.0	22.0	Norfolk, Va.	Cruz Grande, Chile	Ballast	14,538	9,348	
Bant	2	11.10	3	7.15	3	21.05	4	12.10	American	Isthmian S. S. Lines	360.0	47.0	27.0	New York, N. Y.	Tacorral, Chile	Steel, general	4,986	4,607	3,032
Point Reyes	2	21.20	3	7.30	3	21.25	4	22.00	American	Swayne & Hoyt	324.0	46.2	24.0	Lake Charles, La.	Tacorral, Wash.	Ballast	4,298	3,984	2,617
San Ugon ¹	3	3.25	3	7.25	3	22.20	4	00.12	British	Anglo-Mex. Pet. Co.	413.0	53.4	19.0	London, England	Los Angeles, Calif	Ballast	9,734	8,533	4,069
Hecira	3	3.25	3	8.40	3	22.58	4	5.47	American	Norton, Lilly & Co.	440.0	56.0	27.8	Baltimore, Md.	Seattle, Wash.	Steel	9,734	8,533	6,113
Hardanger	3	6.20	3	10.05	4	00.01	4	5.50	Norwegian	Westfal Larsen & Co.	375.0	52.3	14.4	Santos, Brazil	Vancouver, B. C.	Bones, general	2,256	5,977	4,375
Pacific Spruce	3	8.35	3	10.05	4	02.08	4	3.36	American	Dimon S. S. Corp.	409.0	54.0	20.0	New York, N. Y.	Tacoma, Wash.	General	4,678	6,624	4,757
Iauri	2	5.00	3	11.45	4	3.05	5	1.00	German	Hamburg-American Line	438.0	55.0	19.7	Hamburg, Germany	Valparaiso, Chile	General	3,041	7,004	5,017
Santa Veronica	3	5.05	3	12.50	4	4.48	4	4.48	American	Isthmian S. S. Lines	251.0	43.0	25.7	Baltimore, Md.	Honolulu, T. H.	(*)	3,191	2,823	1,740
St. Michel ¹	3	10.45	3	14.45	4	00.58	4	13.40	American	U. S. Army	436.0	58.0	24.0	New York, N. Y.	San Francisco, Cal.	Army supplies	400		
Steel Voyager	3	14.45	3	15.05	4	4.26	4	13.10	American	Isthmian S. S. Lines	395.0	55.0	27.5	Mobile, Ala.	Ossaka, Japan	(*)	8,471	7,330	5,249
Anderby	3	16.35	3	16.55	4	18.00	4	21.20	British	Empire Shipping Co.	390.0	55.0	15.0	Tyne, England	Vancouver, B. C.	Ballast	5,937	4,263	
Essequibo ¹	3	19.00	4	6.05	4	19.12	4	20.15	Peruvian	Pacific Steam Nav. Co.	450.0	57.8	25.10	New York, N. Y.	Tacahano, Chile	General	2,861	9,156	6,176
Nordsee ¹	3	9.15	4	6.20	4	19.12	4	20.15	Peruvian	Plagto	108.0	26.0	8.6	Hamburg, Germany	Callao, Peru	Ballast	144		
Florena ⁹	1-2	18.21	4	6.20	4	20.40	5	7.47	Colombian	Colombian Transp. Co.	150.0	27.0	8.5	Pto. Colombia, Col.	Buenaventura, Col.	General	411	410	307
Bohemian Club ¹	1-3	23.10	4	6.30	4	20.25	4	22.40	American	Atlantic Refining Co.	425.0	57.2	22.0	Philadelphia, Pa.	Los Angeles, Calif	Ballast	7,204	4,769	
Uganda	3	23.20	4	7.15	4	21.37	4	22.50	British	Wessel, Duval & Co.	405.0	52.5	16.0	Cristobal, C. Z.	Arica, Chile	Ballast	5,993	4,069	
Henri Desmarais ¹	4	1.50	4	7.35	4	22.45	5	3.43	French	Co. Fran. Mag. & Trans	400.5	51.2	16.6	Hayre, France	Los Angeles, Calif	Ballast	5,930	4,178	
Stedore ¹	3	11.15	4	8.45	4	23.48	5	1.10	American	Ore S. S. Corp.	550.2	72.2	21.7	Norfolk, Va.	Cruz Grande, Chile	Ballast	15,551	4,297	
Jamaica	1-2	31.18	30	4	10.10	4	22.55	British	British	Pacific Steam Nav. Co.	220.0	34.0	13.6	Cristobal, C. Z.	Champertco, Guat.	General	784	1,187	622
Pacific Enter-prise ³	1-2	14.50	4	11.08	5	00.50	5	3.15	British	Furness, Withy & Co.	435.0	60.1	20.5	Glasgow-England	Vancouver, B. C.	General, bananas	1,433	9,641	6,989
Nicolas	4	16.45	4	20.50	5	5.54	5	18.20	Greek	Zafrafrakis & Co.	348.0	46.0	14.0	Piraeus, Greece	Arica, Chile	Ballast	3,984	2,958	
Royalslar	4	19.05	5	6.25	5	15.47	5	17.30	British	Blue Star Line	450.0	58.0	20.0	Newcastle-on-Tyne	Vancouver, B. C.	Ballast	8,561	5,815	
Joseph Steep ¹	5	00.45	5	7.15	5	16.48	5	18.20	American	Standard Shipping Co.	429.0	59.0	20.6	Baytown, Texas	San Francisco, Cal.	Ballast	7,825	5,616	
Dunrobin	1	4.40	5	7.45	5	17.50	5	19.00	British	Anglo-Chinese N. E. Co.	404.0	53.0	14.7	Norfolk, Va.	Tecopilla, Chile	Ballast	5,651	4,076	
Paul Shoup ¹	5	6.00	5	8.20	5	18.50	5	19.50	American	Atlantic Refining Co.	424.4	58.2	23.0	Philadelphia, Pa.	San Francisco, Cal.	Ballast	7,333	5,182	
Welsh City	5	6.15	5	8.35	5	19.52	5	21.00	British	Readon Smith Line	411.0	54.5	15.3	Barry, England	Vancouver, B. C.	Ballast	6,957	5,133	
Vinland ³	5	7.35	5	10.58	5	21.15	6	7.46	Norwegian	O. A. Knutsen	368.5	53.7	22.0	Aalborg, Denmark	Buenaventura, Col.	Ballast	6,999	5,413	3,965
Orion ¹	5	4.15	5	11.15	5	21.17	5	22.15	Danish	Orion S. S. Co.	303.0	43.0	15.6	Port Limon, C. R.	Puntarenas, C. R.	General	998	2,800	1,723
Galveston ¹⁰	5	9.08	5	12.15	5	22.35	5	23.38	American	U. S. Navy	292.0	44.0	17.4	Cristobal, C. Z.	Balboa, C. Z.	General	1,087	1,680	987
Banan	5	4.35	5	12.10	5	22.30	5	23.38	Norwegian	United Fruit Co.	230.0	34.7	17.2	Port Limon, C. R.	Puntarenas, C. R.	General	1,838	1,406	855
Virgils	3	22.15	5	13.15	5	23.37	6	1.04	German	Roland Line	251.2	37.8	16.8	Emden, Germany	Valparaiso, Chile	General	612	3,819	2,632
Jan Van Nassau	5	8.05	5	14.08	5	23.50	6	1.04	Dutch	Royal Neth. S. S. Co.	346.0	44.0	15.0	Amsterdam, Holland	Vancouver, B. C.	Ballast	6,510	4,711	
Antar	5	14.25	5	14.25	6	00.40	6	5.47	British	J. Langdon Rees	420.0	54.0	14.0	Algiers, Algeria	Los Angeles, Calif	Ballast	7,150	5,330	
Illinois ¹	5	15.35	5	15.45	6	1.47	6	3.49	American	Texas S. S. Co.	416.0	56.0	21.10	New York, N. Y.	Manila, Philippines	Ballast	7,445	7,983	5,882
Dryden	5	16.25	5	17.00	6	12.56	6	14.15	American	Tampa Intercean Co.	434.0	57.6	25.4	Houston, Texas	Balboa, C. Z.	Ballast			
Caroni ¹¹	5	18.00	5	18.25	6	2.25	6	14.15	Venezuelan	Venezuela Gulf Oil Co.	325.0	55.2	9.6	Maracaibo, Venez.		Ballast			

¹ Tanker.⁸ U. S. Army transport.⁹ Motor schooner.¹⁰ Cruiser.¹¹ To Balboa for dry-docking.¹² Lumber, sulphur, rice, and general.¹³ Sulphate, ammonia, tinplate, and general.¹⁴ Pig iron, steel, and cotton.¹⁵ Cement, paper, and explosives.¹⁶ Cotton, iron, and sulphur.

MOVEMENTS OF CCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Benjamin Franklin ¹⁷ .	29	21 15	30	6 14	30	13 30	30	17 45	Norwegian.	Norway-Pacific Line.	452 0	59.2	27.9	Vancouver, B. C.	Oslo, Norway.	Grain, general.	8,150	9,082 6,140
El Panquaco.	29	14 04	30	7 20	30	13 50	30	13 50	Panamanian.	Panamá Government.	125 6	23.5	14.6	Balboa, C. Z.	Cristobal, C. Z.			
Garcachina ¹⁸ .	29	14 04	30	7 20	30	13 50	30	13 50	Panamanian.	Panamá Gulf Oil Co.	49 0	13.6	5.4	Balboa, C. Z.	Cristobal, C. Z.			27 10
Ore-leas.	30	1 10	30	8 00	30	15 30	30	15 30	American.	Quaker Line.	395 0	55.0	27.4	San Francisco, Cal.	Wilmington, Del.	Lumber, general.	7,818	7,330 5,233
Brittle.	30	11 30	30	11 45	30	19 32	31	1 00	Swedish.	Cia. Maritime Colombia.	256 0	39.5	13.7	Buenaventura, Col.	New York, N. Y.	Coffee, hides.	639	7,114 1,078
Jadden.	30	00 24	30	12 14	30	20 23	30	20 47	American.	Rosevelt Line.	410 5	55.0	25.6	Melbourne, Austr. ^a .	Baltimore, Md.	Iron ore, wool.	5,470	7,496 5,823
Pomona.	30	13 30	30	13 38	30	21 30	30	21 30	American.	Pomona S. S. Co.	440 0	55.0	25.6	Everett, Wash.	Baltimore, Md.	Lumber	9,000	8,324 6,036
Hedgehope.	30	13 30	30	14 03	30	22 15	30	23 18	British.	F. Garrick & Co.	385 6	52.5	23.3	Vancouver, B. C.	Faya ¹⁹ .	Wheat	7,130	5,590 4,055
Santa Barbara ¹⁷ .	30	14 00	31	6 14	31	13 20	31	19 05	American.	Grace Line.	486 0	64.0	25.3	Talcahuano, Chile	New York, N. Y.	General.	5,822	
Larry Doheny.	30	21 15	31	6 46	31	14 43	31	14 43	American.	Richfield Oil Co.	430 0	59.0	27.6	Los Angeles, Calif.	Baltimore, Md.	Gasoline	10,500	7,494 5,198
Nevada.	30	21 31	31	7 07	31	16 20	1	00 25	French.	Richfield Line.	419 0	54.0	26.0	Vancouver, B. C.	Le Havre, France.	General	7,784	7,500 5,196
Texmar.	30	21 45	31	8 37	31	17 10	31	17 10	American.	Calmar S. S. Corp.	410 5	54.3	25.0	Port Alberni, B. C.	Boston, Mass.	Lumber	7,263	6,567 4,909
Edwin.	30	22 00	31	9 19	31	17 35	31	17 35	American.	Arrow Line.	410 0	54.2	24.0	Portland, Oreg.	Baltimore, Md.	Lumber	7,597	6,603 4,932
Christenson.	30	23 30	31	9 27	31	18 30	1	10 10	British.	Pacific Steam Nav. Co.	220 0	34.0	11.8	Champerico, Guat.	Cristobal, C. Z.	Coffee, general.	605	1,157 622
Jamaica.	30	3 45	31	10 36	31	19 05	1	4 30	Dutch.	N. Pacific Coast Serv.	470 0	58.3	24.0	Vancouver, B. C.	Antwerp, Belgium.	General	8,816	8,514 6,066
Tendjick.	31	3 45	31	10 36	31	19 05	1	4 30	Dutch.	N. Pacific Coast Serv.	470 0	58.3	24.0	Vancouver, B. C.	Antwerp, Belgium.	General	8,816	8,514 6,066
King Neptune ¹⁷ .	31	17 25	1	6 07	1	13 30	1	14 50	British.	Dodd-Thomson & Co.	400 7	54.8	24.0	Portland, Oreg.	Queenstown, Ire.	Wheat	7,450	6,279 4,336
Magdala.	31	22 05	1	7 20	1	15 00	1	15 00	British.	McClay & McIntire.	400 0	52.0	23.9	Toconilla, Chile.	New Orleans, La.	Nitrates	7,050	5,486 4,050
Canadian.	1	4 50	1	7 45	1	15 25	1	23 10	British.	Can. Nat. Steamships.	400 0	52.4	14.0	Auckland, N. Z.	Halifax, N. S.	General	2,328	6,192 4,402
Highlander.	1	6 04	1	9 11	1	16 15	1	16 15	American.	Gulf-Pacific Line.	324 0	46.2	21.6	Powell River, Wash.	New Orleans, La.	General	3,473	3,984 2,612
Point Sur.	1	11 30	1	12 07	1	19 30	1	23 30	British.	Argonaut Bros., Ltd.	357 0	53.7	26.6	Victoria, B. C.	Glasgow, Scotland	General	5,672	6,719 4,979
Madavia.	1	11 30	1	12 07	1	19 30	1	23 30	British.	Argonaut Bros., Ltd.	357 0	53.7	26.6	Victoria, B. C.	Glasgow, Scotland	General	5,672	6,719 4,979
Sagadahoc.	1	6 21	1	13 16	1	20 40	1	20 40	American.	Argonaut S. S. Lines.	420 5	54.2	26.0	Portland, Oreg.	Baltimore, Md.	Lumber	7,245	7,340 5,360
Katrina.	1	6 21	1	13 16	1	20 40	1	20 40	American.	Argonaut S. S. Lines.	420 5	54.2	26.0	Portland, Oreg.	Baltimore, Md.	Lumber	7,245	7,340 5,360
Lukenbach.	1	13 00	1	13 57	1	21 00	1	21 00	American.	Luekenbach Line.	446 0	51.1	30.6	Portland, Oreg.	Boston, Mass.	General	9,033	8,508 6,179
Skagen ¹⁷ .	1	19 30	2	5 53	2	13 10	2	13 10	German.	Atlantic Tank Rhederei	411 6	55.1	26.0	Los Angeles, Calif.	Land's End, Eng. ¹⁹ .	Gasoline	8,245	6,412 4,186
K. R. Kingsbury ¹⁷ .	1	23 30	2	7 17	2	16 10	2	16 10	American.	Standard Oil Co. of Cal.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
Sunol ¹⁷ .	2	3 30	2	7 27	2	17 20	2	17 20	American.	Sun Oil Co.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
Sunbelt ¹⁷ .	2	3 30	2	7 27	2	17 20	2	17 20	American.	Sun Oil Co.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
Sunbelt ¹⁷ .	2	3 30	2	7 27	2	17 20	2	17 20	American.	Sun Oil Co.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
Sunbelt ¹⁷ .	2	3 30	2	7 27	2	17 20	2	17 20	American.	Sun Oil Co.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
Sunbelt ¹⁷ .	2	3 30	2	7 27	2	17 20	2	17 20	American.	Sun Oil Co.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
Sunbelt ¹⁷ .	2	3 30	2	7 27	2	17 20	2	17 20	American.	Sun Oil Co.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
Sunbelt ¹⁷ .	2	3 30	2	7 27	2	17 20	2	17 20	American.	Sun Oil Co.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
Sunbelt ¹⁷ .	2	3 30	2	7 27	2	17 20	2	17 20	American.	Sun Oil Co.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
Sunbelt ¹⁷ .	2	3 30	2	7 27	2	17 20	2	17 20	American.	Sun Oil Co.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
Sunbelt ¹⁷ .	2	3 30	2	7 27	2	17 20	2	17 20	American.	Sun Oil Co.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
Sunbelt ¹⁷ .	2	3 30	2	7 27	2	17 20	2	17 20	American.	Sun Oil Co.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
Sunbelt ¹⁷ .	2	3 30	2	7 27	2	17 20	2	17 20	American.	Sun Oil Co.	440 0	58.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,552	9,083 5,938
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Sunbelt ¹⁷ .	2	3 30	2	7 27	2	17 20												

	2	1 30	2	12 02	2 22 20	2 22 20	2 22 20	Amer-Hawaiian Line	404.6	53.9 28.6	Portland, Oreg	Boston, Mass	General	8,195	6,779	4,927
Kauai	1	21.50	2	14.33	3 00.45	3 00.45	3 00.45	Shaw, Savill & Albion	483.0	61.2 27.0	Portland, Oreg	London, England	Frozen, general	8,280	11,729	8,373
Karama 17	2	00.10	2	15.56	3 11.50	2	2	Furness, Withy & Co	435.9	60.2 27.0	Vancouver, B. C.	London, England	General	8,367	9,633	6,998
Pacific	2	00.10	2	15.56	3 11.50	2	2	U. S. Army	435.9	60.2 27.0	Balboa, C. Z.	Gatun Lake, C. Z.	General	8,367	9,633	6,998
Exporter 17	2	00.10	2	15.56	3 11.50	2	2	U. S. Army	435.9	60.2 27.0	Balboa, C. Z.	Gatun Lake, C. Z.	General	8,367	9,633	6,998
Crowl 22	2	00.10	2	15.56	3 11.50	2	2	U. S. Army	435.9	60.2 27.0	Balboa, C. Z.	Gatun Lake, C. Z.	General	8,367	9,633	6,998
Pacific Red-wood	2	5.45	3	4.50	3 13.50	3	3	Dimon S. S. Corp	409.0	54.2 24.0	Tacoma, Wash	New York, N. Y.	Lumber	7,092	6,537	4,840
Nebaska	2	6.01	3	6.11	3 14.10	3	3	Royal Mail S. P. Co.	450.2	58.3 26.3	Vancouver, B. C.	Rotterdam, Holland	General	6,571	8,878	6,583
Flensburg	2	20.15	3	7.41	3 15.40	3	3	Haley S. S. Co.	454.7	60.1 25.6	Vancouver, B. C.	Rotterdam, Holland	Wheat	9,650	8,068	5,983
Greylock	2	21.30	3	8.30	3 16.50	3	3	Scas Shipping Co.	430.7	54.3 28.0	Vancouver, B. C.	Avonmouth, Eng.	General	9,343	7,946	5,698
Atreus	3	5.00	3	8.23	3 18.10	3	3	Rethymis & Kuluklis	370.3	50.3 25.2	Iquique, Chile	Azores 19	Nitrates	6,500	5,069	3,698
Portland 17	3	5.30	3	9.50	3 19.15	3	3	Hamburg-American Line	462.2	51.2 26.0	Vancouver, B. C.	Hamburg, Germany	General	7,316	9,179	6,666
Pat Doherty 1	3	5.30	3	9.50	3 21.05	3	3	Richfield Oil Co.	430.2	59.2 27.2	Los Angeles, Calif	New York, N. Y.	Gasoline	9,138	7,978	5,840
Atlantic City	3	6.00	3	11.58	3 21.00	4	4	W. R. R. Smith & Sons	411.7	54.5 27.8	Vancouver, B. C.	Hamburg, Germany	Wheat	9,020	6,555	4,659
Harry Luckenbach	3	10.30	3	13.30	3 21.00	3	3	Luckenbach Line	448.9	60.2 29.0	Seattle, Wash	Mobile, Ala	Lumber, general	8,300	9,282	6,853
Wilbaeoe	3	14.00	3	14.50	3 23.05	3	3	Williams S. S. Line	468.3	58.5 28.6	Portland, Oreg	Charleston, S. C.	Lumber, general	9,416	8,460	6,162
Forthbridge	3	16.15	4	3.25	4 11.47	4	4	Seaboard Sales Corp	390.0	54.8 25.0	Vancouver, B. C.	New York, N. Y.	Lumber	7,500	6,246	4,627
Sutemco	3	18.10	4	3.35	4 12.40	4	4	Transmarine Lines	324.0	46.2 23.2	Vancouver, B. C.	New York, N. Y.	Lumber	3,900	3,984	2,628
Caldas 17	3	18.00	4	4.20	4 13.50	4	4	National Navigation Co.	116.0	21.0 10.0	Buenaventura, Col	Cristobal, C. Z.	General	247	211	124
El Lobo 1	3	17.50	4	5.18	4 14.10	6	8	C. T. Bowring & Co.	385.2	51.0 23.0	Lobitos, Peru	Philadelphia, Pa.	Crude oil	6,217	4,851	3,326
Erica	2	21.25	4	5.49	4 15.55	4	4	A. Lauro	384.7	48.6 24.6	Antofagasta, Chile	Azores 19	Nitrates	6,891		
Plow City	4	00.20	4	5.54	4 14.55	4	4	Charles Nelson & Co.	324.0	46.2 24.6	Seattle, Wash	Baltimore, Md	Lumber, general	4,645	3,983	2,621
Sylvania 17	2	9.30	4	6.56	4 16.35	4	4	Hunting & Son	395.0	52.5 25.0	Los Angeles, Calif	Rouen, France	Benzine	7,507	5,900	2,993
Francis E.	4	3.35	4	8.06	4 18.00	4	4	Atlantic Refining Co.	431.0	59.2 26.6	Los Angeles, Calif	Philadelphia, Pa.	Gasoline	9,554	7,899	5,101
George H.	4	3.50	4	9.15	4 19.15	4	4	Standard Shipping Co.	429.0	59.2 26.6	Los Angeles, Calif	New York, N. Y.	Gasoline	10,808	7,689	5,667
M. F. Elliott 1	4	5.55	4	10.17	4 19.50	4	4	Standard Shipping Co.	425.0	57.2 27.0	Los Angeles, Calif	New Orleans, La	Gasoline	9,238	7,481	4,946
Poseidon	4	7.30	4	11.40	4 21.25	5	11	Hamburg-American Line	450.7	57.2 26.9	Talcahuano, Chile	Hamburg, Germany	General	8,790	7,684	5,234
Canadian	3	17.00	4	13.48	4 23.10	4	4	Can. Nat. Steamships	413.0	52.0 27.0	Sydney, Australia	Halifax, N. S.	Lumber, general	4,427	5,853	4,058
Explorer	4	21.20	5	9.08	5 12.15	5	12	U. S. Navy	292.0	44.0	High seas	Cristobal, C. Z.	General	6,730	6,754	4,800
Galveston 21	4	17.00	5	9.08	5 12.15	5	12	Amer-Hawaiian Line	404.6	54.0 27.0	Seattle, Wash	Boston, Mass	General	8,216	10,862	8,192
Oregon	4	22.55	5	2.02	5 13.20	5	13	Cunard Line	480.8	62.4 27.0	Hobart, Tasmania	London, England	Frozen, general	8,216	10,862	8,192
Port Auckland	5	7.00	5	7.43	5 14.28	7	12	United Fruit Co.	255.1	35.5 14.0	Pro. Arnuelles R.P.	Cristobal, C. Z.	Ballast	1,686	892	
Hvostef	5	8.15	5	9.06	5 18.00	5	18	United Fruit Co.	325.2	48.1 19.1	San Francisco, Cal	Port Limon, C. R.	General	688	4,033	2,361
La Perla	5	7.45	5	11.54	5 19.15	5	19	Federal Steam Nav. Co.	520.7	64.2 21.2	Lyttleton, N. Z.	Liverpool, England	Frozen, general	5,908	12,933	9,264
Hartford	5	7.45	5	13.00	5 20.35	5	20	Pacific Steam Nav. Co.	215.0	33.5 17.7	Champerico, Guat	Cristobal, C. Z.	(24)	928	1,270	735

21 Cruiser, silver, and general.

22 Cruiser.

23 Launch.

24 Tanker.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.					* DEPARTURES.				
* ARRIVALS.			PORT OF BALBOA.		* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—		
December 30...	Tolosa	United Fruit Co.	Port Limon, Costa Rica.	December 30.	Duchess of Bedford	Canadian Pacific S. S. Co.	New York via wayports.		
December 30...	Bowden	United Fruit Co.	Mobile, Ala.	December 30.	Orinoco	Hamburg-American Line.	Cartagena, Colombia.		
December 31...	Fylgia ²⁵	Swedish Government	Karlskrona and wayports	December 30.	Tolosa	United Fruit Co.	New York via Habana.		
December 31...	Calamares	United Fruit Co.	New York via Habana.	December 30.	Catherine	Bull Insular Line.	New York via Habana.		
December 31...	Macabi	United Fruit Co.	Puerto Colombia.	December 31.	Denver ²⁵	U. S. Navy	Bluefields, Nicaragua.		
January 1...	Aucion	Panama Railroad S. S. Line.	New York via Haiti.	December 31.	Heredia	United Fruit Co.	New Orleans and wayports.		
January 2...	Gatun	Standard Fruit & S. S. Co.	New Orleans, La.	December 31.	Bowden	United Fruit Co.	Perme, R. P.		
January 2...	Ariguaní	Elders & Fyffes, Ltd	Avonmouth via wayports.	January 2	Merdian	Leyland Line	Cartagena, Colombia.		
January 2...	Metapan	United Fruit Co.	New York via Kingston.	January 2	Wanks	United Fruit Co.	Port Limon, Costa Rica.		
January 3...	Marga	Colombus S. S. Co.	Baltimore, Md.	January 2	Macabi	United Fruit Co.	San Blas, R. P.		
January 3...	Inapaquina ²⁶	United Fruit Co.	Colon, R. P.	January 2	Inapaquina ²⁶	United Fruit Co.	New York via Kingston.		
January 4...	Suriname	United Fruit Co.	New Orleans, La.	January 3	Metapan	United Fruit Co.	Colon, R. P.		
January 4...	Coppename	United Fruit Co.	Puerto Colombia.	January 3	Ariguaní	Elders & Fyffes, Ltd	New York via wayports.		
January 4...	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.	January 3	Marga	Colombus S. S. Co.	Avonmouth and wayports		
January 5...	Nevisian	Leyland Line	Liverpool via wayports.	January 3	Coppename	United Fruit Co.	Maracaibo, Venezuela.		
January 5...	Cartago	United Fruit Co.	New Orleans and Habana.	January 4	Gatun	Standard Fruit & S. S. Co.	New Orleans and Puerto Cabelgas.		
January 5...	Bowden	United Fruit Co.	Perme, R. P.	January 4	Suriname	United Fruit Co.	Port Limon and Bocas.		
January 5...	Anachucuna ²⁶	United Fruit Co.	Colon, R. P.	January 4	Anachucuna ²⁶	United Fruit Co.	Colon, R. P.		
January 5...				January 5	Bowden	United Fruit Co.	Mobile, Ala.		
* ARRIVALS.					* DEPARTURES.				
* ARRIVALS.			PORT OF BALBOA.		* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—		
January 1...	Bokuyo Maru	Nippon Yusen Kaisha	Valparaiso, Chile.	January 2	Bokuyo Maru	Nippon Yusen Kaisha.	Hongkong, China.		
January 2...	Big Bill ²⁷	H. Elliot	Darien, R. P.	January 2	Big Bill ²⁷	H. Elliot	Panama Bay, R. P.		
January 2...	A. B. de O'Barrio ²⁷	Pacific Fruit Co.	Bayano River, R. P.	January 2	A. B. de O'Barrio ²⁷	Pacific Fruit Co.	Bayano River, R. P.		
January 2...	Dos Hermanos ²⁷	A. Valdez	Bayano River, R. P.	January 2	Dos Hermanos ²⁷	A. Valdez	Bayano River, R. P.		
January 2...	H. M. Storey	Standard Oil Co. of California.	Los Angeles, Calif.	January 4	H. M. Storey	Standard Oil Co. of California.	Los Angeles, Calif.		
January 3...	Rakuyo Maru	Nippon Yusen Kaisha	Hongkong, China.	January 4	Rakuyo Maru	Nippon Yusen Kaisha	Valparaiso, Chile.		
January 3...	John Barrymore	John Barrymore	Los Angeles, Calif.						
January 4...	San Luis ²⁷	Chiriqui Land Co.	Puerto Armuelles, R. P.						

* Other than ships passing through the Canal.

²⁵ Motor schooner.²⁶ Yacht.²⁷ Motor schooner.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., January 16, 1929. No. 24.

Canal Traffic During the First Fifteen Days of January.

During the first 15 days of January, 289 commercial vessels and 6 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,192,037.39, and on the launches, \$79.50, or a total tolls collection of \$1,192,116.89.

The daily average of transits of commercial vessels was 19.26 and the daily average tolls collection, \$79,469.16. The average amount of tolls paid by each of the commercial transits was \$4,124.70, as compared with \$4,229.70 for the first 15 days of December.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the $6\frac{1}{2}$ months of the current fiscal year, with the daily averages of transits and tolls:

	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July	509	\$2,109,083.19	16.41	\$68,034.94
August	526	2,199,069.31	16.97	70,937.72
September	487	2,111,230.56	16.23	70,374.35
October	557	2,274,945.30	17.97	73,385.33
November	527	2,225,937.48	17.57	74,197.91
December	579	2,443,029.39	18.67	78,807.39
January (first 15 days)	289	1,192,037.39	19.26	79,469.16
Totals	3,474	14,555,332.62	17.47	73,142.38

Night Transits Through Canal During Lock Overhaul.

BALBOA HEIGHTS, C. Z., January 7, 1929.

MEMORANDUM FOR ALL STEAMSHIP AGENTS:

The regular periodic overhaul of Miraflores and Pedro Miguel Locks began on January 2, and will continue until completed, about May 7. During this period the Canal will be in operation 24 hours daily, necessitating night transits for such vessels as can not be accommodated during daylight hours.

It has come to the attention of this office, during the first few days of continuous operation, that Masters of several vessels (scheduled to make night transits), after beginning of transit have refused to proceed through Gaillard Cut, making it necessary for the vessel either to anchor in Gatun Lake, if southbound, or tie up at Pedro Miguel or one of the nearby mooring stations, if northbound, thus not only confusing prearranged schedules and delaying through traffic by these partial transits, but also in some instances causing congestion of the available space in the Canal prism.

In view of the above situation, notice is hereby given that effective January 14, and until the completion of lock overhaul, no vessel will be scheduled for night transit unless the Agent of same assures the Port Captain, in writing, that the vessel will complete her transit as scheduled.

Vessels desiring only partial transit will be handled as previously, after all through traffic has been dispatched.

C. H. WOODWARD,
Marine Superintendent.

Approved:

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, January 12, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Julia Luckenbach	5	21 58	6	6 30	6	13 52	American.	Lockenbach Line	436 0	57 2	23 0	New Orleans, La.	Tacoma, Wash.	General	5,268	8,543	6,402
Willwello	12	29 9 30	6	6 35	6	16 17	American.	Williams S. S. Line.	409 8	54 2	23 5	New York, N. Y.	Seattle, Wash.	General	8,158	6,821	4,927
American	1	6 3 50	6	7 35	6	15 45	American.	Amer-Hawaian Line	504 6	53 9	19 0	Boston, Mass.	Portland, Ore.	General	3,011	6,777	4,761
Sweland	6	3 40	6	8 23	6	17 18	Swedish.	Ore S. S. Corp.	561 0	72 0	20 3	Baltimore, Md.	Oriz Grande, Chile	Ballast	15,425	4,421	
Agwistone	6	6 00	6	8 40	6	18 22	Swedish.	Standard Oil Co.	509 0	68 1	21 0	New York, N. Y.	Los Angeles, Calif.	Ballast	10,633	7,801	
Atlant	6	7 65	6	9 50	6	19 30	Swedish.	Axel Briest, m & Son	388 8	52 3	18 0	So. Shields, Eng.	Arica, Chile	Ballast	5,631	3,343	
Doehet	6	8 42	6	11 25	6	20 33	American.	Redwood Line	386 8	52 0	23 8	New Orleans, La.	Los Angeles, Calif.	General	6,500	8,705	4,167
Kinderdijk.	5	15 45	6	12 38	6	22 38	Dutch.	Holland-American Line.	460 4	58 1	19 11	Antwerp, Belgium	Vancouver, B. C.	Bananas, general	2,089	5,515	6,060
Cal	12	28 12 05	6	14 00	6	21 50	German	North German Lloyd	216 5	39 3	13 0	Cristobal, C. Z.	Buenaventura, Col.	General	398	1,105	698
Paris City	1	6 55	6	13 50	6	22 45	British	Empire Shipping Co.	412 2	55 0	17 0	Hull, England	Vancouver, B. C.	Ballast	3,293	7,765	6,041
Falre	5	13 55	6	14 49	6	23 40	Italian	Nav. Libera-Frisina	430 0	55 5	20 0	Trieste, Italy.	Vancouver, B. C.	General			
Mayabashi	6	10 48	6	15 30	7	00 51	Japanese.	Nippon Yusen Kaisha.	445 0	58 0	24 8	Boston, Mass.	Kobe, Japan	(s)	7,352	8,012	5,749
Maru	6	14 25	6	16 03	7	1 45	British.	Wess J. Duval & Co.	402 0	52 2	17 0	Philadelphia, Pa.	Callao, Peru	Coal and coke.	2,373	5,634	4,172
Indiana	6	18 10	6	19 29	7	3 00	American.	Union Oil Co.	265 9	39 2	19 0	Philadelphia, Pa.	San Francisco, Cal.	(s)	1,936	1,304	
R. D. Leonard	6	17 50	6	21 05	7	6 01	American.	Rosevelt S. S. Co., S. B.	456 0	56 0	27 0	New York, N. Y.	Honolulu, T. H.	General	7,456	8,308	5,855
Courages	6	23 25	7	6 35	7	13 09	Norwegian.	Westfal, Larsen & Co.	457 0	59 10	20 0	Avenmouth, Eng.	Los Angeles, Calif.	Ballast	8,291	5,822	
Orkanger	7	6 10	7	6 10	7	14 10	Norwegian.	Panama Government	125 0	43 6	18 8	Cristobal, C. Z.	Bahoa, C. Z.	Ballast	666	288	101
El Panalao	7	4 49	7	6 35	7	14 12	American.	United Fruit Co.	330 6	46 0	18 8	Port Limon, C. R.	San Francisco, Cal.	Bananas, coffee.			
Isparita	7	8 50	7	10 05	7	18 08	British.	R. S. Dalgleish & Co.	401 5	53 5	15 0	Port Shields, Eng.	Vancouver, B. C.	Ballast	5,580	3,673	2,367
Karnworth	7	10 08	7	10 20	7	19 20	British.	R. Chapman & Son	409 0	54 0	18 0	Pto. Ferrajo, Italy	San Francisco, Cal.	Ballast	5,761	4,129	
Riverton	7	10 15	7	11 15	7	21 35	British.	Andrew Weir & Co.	405 2	52 0	25 0	Philadelphia, Pa.	Shanghai, China	General	6,824	6,565	5,141
Roserie	7	10 15	7	11 15	7	21 35	British.	Andrew Weir & Co.	405 2	52 0	25 0	Philadelphia, Pa.	Shanghai, China	General	6,824	6,565	5,141
Hvdsaf	5	14 28	7	12 00	7	20 45	Norwegian.	Aktaselskabet Hav.	255 0	35 6	15 3	Cristobal, C. Z.	Puntarenas, C. R.	General	1,200	1,686	892
Leander	6	4 35	7	12 23	7	21 45	American.	Panama Mail S. S. Co.	389 6	48 7	24 11	New York, N. Y.	San Francisco, Cal.	General	2,512	5,926	4,178
Canadian	7	11 55	7	16 00	7	23 06	British.	Can. Nat. Steamships	400 0	52 0	21 3	Halifax, N. S.	Adelaide, Australia	General	3,558	5,914	4,195
Commander,	7	18 15	7	20 30	8	3 32	American.	Atlantic Refining Co.	430 0	59 2	19 0	Philadelphia, Pa.	La Libertad, Ecuador	Ballast		8,093	5,347
Hampton Roads	7	18 15	7	20 30	8	3 32	American.	Atlantic Refining Co.	430 0	59 2	19 0	Philadelphia, Pa.	La Libertad, Ecuador	Ballast			
Gen. Wm. M.	7	9 30	7	9 30	7	18 10	American.	U. S. Army	156 0	32 0		Cristobal, C. Z.	Bahoa, C. Z.	Ballast			
Graham	7	19 35	8	6 20	8	17 54	American.	Baltic-Amer. Pet. Co.	468 0	54 4	20 0	Rotterdam, Holland	Talara, Peru	Ballast	9,336	6,338	
Persphone	7	23 05	8	6 30	8	19 05	Danish.	Calif. & East'n S. S. Co.	410 0	54 4	20 0	Philadelphia, Pa.	Seattle, Wash.	Ballast	3,661	6,476	4,082
West Mingo	7	23 40	8	7 25	8	21 08	American.	Rosevelt S. S. Co., S. B.	410 0	54 0	22 10	New York, N. Y.	Fremantle, Austl	General	6,486	6,736	4,880
Steel Sealcar	8	5 40	8	7 15	8	22 05	American.	Isthmian S. S. Lines	425 0	55 0	25 4	Philadelphia, Pa.	Singapore, S. R. Set.	(r)	8,015	7,611	5,454
Missourian	8	6 15	8	8 25	8	23 06	American.	Amer-Hawaian Line	445 0	59 8	20 0	Boston, Mass.	Tacoma, Wash.	General	2,005	8,567	6,020
Robin Good-fellow	8	8 20	8	9 35	9	7 49	American.	Seas Shipping Co.	420 0	55 0	27 0	Baltimore, Md.	Tacoma, Wash.	General	8,893	7,473	5,536
Lina L. D.	8	9 35	8	10 45	9	1 18	French.	Flood Brothers	420 0	54 0	26 0	Antwerp, Belgium	Seattle, Wash.	General	9,019	7,075	5,301
* Tanker.							* Motor ship.	* Mine plunger.				* Steel shebs, cotton, and general.	* 13,787 barrels of lubricating oil.				* Case oil and general.

* Tanker.

* Motor ship.

* U. S. Army transport.

* Mine planter.

* Steel sheets, cotton, and general.

* 13,787 barrels of lubricating oil.

* Case oil and oil.

Port	8	8 30	8 14 05	9 2 22	9 3 30	British	Com'lth & Dom. Line.	480.0	62.0	30 4	Glasgow-England.	Pt. Chalmers, N. Z.	General	7,960	10,745	7,849
Doris	8	8	8	8 16 06		American	United Fruit Co.				Cristobal, C. Z.	Gatun, C. Z.	Unknown	7	7	7
Gen. G. W.																
Getty	8	7 30	8 17 52			American	U. S. Army	89.0	22.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast	3,056	7,384	4,769
Breda	6 08	9 6 20	9 13 58	9 1 25		Dutch	Royal Neth. S. S. Co.	407.6	53.3	20 0	Hamburg, Germany	Corral, Chile	General		1,159	556
Hofburg	7 1 50	9 6 15	9 17 24	11 10 10	11 10 10	British	Santa Maria S. S. Co.	207.5	38.3	14 0	Rotterdam, Holland	Los Angeles, Calif.	Ballast	4,763	7,334	5,037
Loreto	8 6 55	9 6 10	9 18 06	10 00 35		British	Pacific Steam Nav. Co.	405.0	72.0	21 5	Hull, England	Valparaiso, Chile	(*)		15,476	4,354
Bethore	8 7 30	9 7 10	9 16 56	9 19 00		American	Ore S. S. Corp	550.0	54.0	22 0	Newport News, Va	Cruz Grande, Chile	Ballast			
Theodore																
Rosevelt	8 17 20	9 7 30	9 19 16	11 13 42		Norwegian	Fred Olsen & Co.	425.0	55.0	18 3	Oslo, Norway	Vancouver, B. C.	Cement, general	3,460	7,593	5,637
Ellstrand	8 21 20	9 8 20	9 20 57	10 2 23		British	Texas Oil Co.	317.0	50.0	25 0	Port Arthur, Texas	Shanghai, China	(*)	6,909	5,202	3,840
Osterland	9 7 00	9 8 35	9 20 28	9 21 34		Swedish	Avel Brostrom & Son.	346.0	51.0	13 6	Tyne, England	Vancouver, B. C.	Ballast	4,716	3,359	
Americusstar	9 3 20	9 10 50	9 22 14	9 23 30		American	Charles Nelson & Co.	386.8	52.2	21 1	Charleston, S. C.	Tacoma, Wash	General	5,196	5,699	4,107
Princess North.	9 7 55	9 11 05	9 22 44	10 7 28		British	Can-Pacific R. R. Co.	250.0	48.0	16 0	Glasgow-England	Victoria, B. C.	Ballast	1,190	1,642	
K. I. Lucken-																
bach	9 4 15	9 11 05	9 23 17	10 00 30		American	Loekenhach Line	446.0	56.0	24 0	New York, N. Y.	Tacoma, Wash	General	3,939	8,552	6,256
Masmar	9 8 00	9 13 20	10 00 25	11 3 30		American	Calmar S. S. Co.	385.0	51.0	26 0	Philadelphia, Pa.	Seattle, Wash	Steel, general	7,634	6,242	4,471
Pakinski	9 11 35	9 14 50	10 1 30	10 3 00		British	Norton, Lilly & Co.	471.0	60.0	23 6	New York, N. Y.	Adelaide, Australia	General	5,085	9,150	6,886
Kalyina	9 17 50	9 17 45	10 3 34	10 4 20		British	General S. S. Co.	435.6	57.7	17 0	No. Shields, Eng.	Los Angeles, Calif.	Ballast	7,858	5,517	
Mystio	9 17 50	9 17 45	10 3 34	10 4 20		British	Munster, McCork Line.	400.7	54.2	23 0	Baltimore, Md.	Los Angeles, Calif.	General	6,030	6,623	4,688
Kia Ora	9 14 35	9 20 55	10 5 12	10 6 25		British	Shaw, Savill & Albion	448.3	56.0	28 8	Antwerp, Belgium	Auckland, N. Z.	Rustic slag	4,980	8,237	5,771
Santa Elisa	9 21 20	10 6 20	10 12 58	10 17 00		Norwegian	Grace Line	300.8	51.7	23 11	New York, N. Y.	Talcahuano, Chile	General	2,527	1,857	4,325
Mimer	9 13 15	10 6 20	10 14 09	10 17 20		Norwegian	Thorvik & Gjorpen	228.8	53.2	17 0	Tampico, Mexico	Valparaiso, Chile	Asphalt	1,428	1,368	887
Dereche	9 00 05	10 6 00	10 17 27	10 18 25		American	Union Oil Co.	435.0	56.0	20 3	Cristobal, C. Z.	Los Angeles, Calif.	Ballast	7,452	5,199	
Wilthoro	10 3 05	10 7 20	10 18 30	10 20 00		American	Williams S. S. Line.	414.7	55.6	23 0	New London, Conn	Seattle, Wash	General	8,050	7,717	5,763
San Manuel	10 6 12	10 7 20	10 19 45	11 00 02		British	Anglo-Mexican Pet. Co.	407.0	52.3	21 0	Falmouth, England	Los Angeles, Calif.	Ballast	6,183	4,343	
Ani	10 7 28	10 8 30	10 22 10	11 00 02		Belgian	Brit. & So. Pac. Tr. Co.	400.0	52.1	18 0	Cardiff, England	Arica, Chile	Ballast	6,617	4,792	
Quebec City	9 21 50	10 8 45	10 21 18	10 22 25		British	Reardon Smith Line.	415.0	54.3	14 0	Lisbon, Portugal	Vancouver, B. C.	Ballast	7,004	5,405	
Panama	1 2-28	16 05	10 10 10	10 19 45	10 22 52	Panaman	Panama Mail S. S. Co.	286.9	46.0	22 8	Cristobal, C. Z.	San Francisco, Cal.	General	3,204	3,818	2,603
Feodasia	1-10	00 45	10 10 10	10 21 01	10 22 00	German	Hamburg-American Line	337.0	48.3	23 0	Hamburg, Germany	Champetec, Guat.	General	4,883	4,316	3,142
Bolivia	10 8 45	10 11 20	10 23 20	11 00 30		Danish	Orient S. S. Co.	398.7	56.0	16 0	Rotterdam, Holland	Vancouver, B. C.	Ballast	7,133	5,293	
Narenia	8 11 43	10 13 11	11 00 26	11 1 42		British	Royal Mail S. P. Co.	450.0	58.0	23 7	Rotterdam, Holland	Vancouver, B. C.	Bananas, general	4,504	8,850	6,559
Holystone	10 10 10	10 14 26	11 1 35	11 3 03		British	Common Brothers	397.3	54.0	15 0	Genoa, Italy	Vancouver, B. C.	Ballast		5,843	4,268
Henry S.																
Grove	10 14 35	10 14 30	11 2 42	11 2 42		American	Arcanton, S. S. Co.	404.0	54.0	17 8	Baltimore, Md	Seattle, Wash	General	7,879	6,755	4,688
Mayari	10 14 35	10 20 25	11 5 28	11 6 55		Panaman	United Fruit Co.	303.0	47.0	28 0	Becua del Toro	Pro. Arushes R. P.	General	2,069	3,014	1,742
Ryofuku Maru	10 18 05	10 20 23	11 4 26	11 6 07		Japanese	Kokusa Kaisha	385.0	51.0	25 0	Galveston, Texas	Yokohama, Japan	General	5,575	5,919	4,400
Caris	11 1 05	11 6 15	11 17 58	11 21 25		German	Hamburg-Germany	376.0	51.0	23 0	Hamburg, Germany	Portland, Ore	General	5,351	5,788	4,023
Tier	11 5 40	11 6 40	11 18 58	11 20 00		American	Standard Transp. Co.	110.0	56.8	22 0	New York, N. Y.	Los Angeles, Calif.	Ballast	8,901	6,207	
Caldas	4 14 10	11 0 07	11 14 45	11 21 25		Colombian	National Transp. Co.	116.0	61.0	12 8	Cristobal, C. Z.	Buenaventura, Col.	General	181	8,211	124
California	11 6 15	11 7 15	11 14 42	11 1 47		American	Panama-Pacific Line	374.4	80.3	27 5	New York, N. Y.	San Francisco, Cal.	General	1,913	24,506	17,565
Rochester	10 22 35	11 8 05	11 20 00			American	U. S. Navy	389.0	64.0	26 8	Cristobal, C. Z.	Balboa, C. Z.	Ballast			
W. H. Libby	11 11 30	11 11 38	11 21 05	11 22 30		American	Standard Shipping Co.	462.0	60.2	20 0	New York, N. Y.	San Francisco, Cal.	Ballast	8,461	6,104	
Parthenia	10 11 20	11 13 50	11 22 21	11 23 30		British	Donaldson Bros, Ltd	300.0	52.0	19 3	Glasgow-England	Vancouver, B. C.	Bananas, general	1,806	5,831	4,341
Lycia	11 12 10	11 14 05	11 22 26	12 7 49		British	Canadian Transp. Co.	400.5	44.2	22 0	Santiago, Cuba	San Francisco, Cal.	Sugar	4,270	3,333	2,207
Cerigo	9 17 05	12 6 05	12 16 01	12 22 10		German	Hamburg-American Line	227.0	31.4	14 6	Cristobal, C. Z.	Guayaquil, Ecuador	General	223	1,572	1,011
Charles																
Christenson	11 21 30	12 6 25	12 15 59	12 17 20		American	Arrow Line	409.7	54.0	19 0	Jacksonville, Fla.	Portland, Ore	General	4,280	6,693	4,915
Sagama River	11 21 30	12 7 25	12 17 53	12 19 10		British	Holder Brothers	385.0	52.0	14 0	Manchester, Eng.	Arica, Chile	Ballast		5,237	3,837

**Cruiser.

** Case oil, and general.

** Iron, cement, and general.

*Tug.

* Launch.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.					* DEPARTURES.					
* ARRIVALS.			From —		Vessel.		Line.		For —	
Date.	Vessel.	Line.	From —		Date.	Vessel.	Line.	For —		
January 6.....	Calamarcos	United Fruit Co.	Port Limon, Costa Rica.		January 6.....	Nevisian	United Fruit Co.	New Orleans, La.		
January 7.....	Annetta ³²	L. Galasso.	New York, N. Y.		January 6.....	Calamarcos	United Fruit Co.	New York via Habana.		
January 7.....	Mayari	United Fruit Co.	New York via wayports.		January 7.....	Aue m.	Panama R. R. S. S. Line.	New Orleans and wayports		
January 7.....	Pastores	United Fruit Co.	New York via Habana.		January 7.....	Cartago	United Fruit Co.	Mobile, Ala.		
January 7.....	Resolute ³³	D. L. Lynton.	Colon, R. P.		January 7.....	Fylgia ³⁵	Swedish Government.	San Blas, R. P.		
January 9.....	Granada	United Fruit Co.	New Orleans, La.		January 8.....	Wauks	Standard Fruit & S. S. Co.	Almirante, R. P.		
January 9.....	Cryssen	Standard Fruit & S. S. Co.	New Orleans, La.		January 9.....	Irtina	United Fruit Co.	Pto. Colombia and Bocas.		
January 9.....	Abessina	Royal Netherlands S. S. Co.	Amsterdam and wayports.		January 9.....	Mayari	United Fruit Co.	Port Limon, Costa Rica.		
January 9.....	Puerto Rico	Hamburg-American Line.	Hamburg via wayports.		January 9.....	Pastor ⁹	United Fruit Co.	Curacao, D. W. I.		
January 9.....	St. Nazaire via wayports.	St. Nazaire via wayports.	St. Nazaire via wayports.		January 9.....	Abessina	Hamburg-American Line	Colon, R. P.		
January 10.....	Mayan	Gulf Caribbean S. S. Co.	New York via Kingston.		January 10.....	Inapaquina ³⁴	United Fruit Co.	Colombian ports.		
January 10.....	Skada	Gulf Caribbean S. S. Co.	New Orleans, La.		January 10.....	Cryssen ³¹	United Fruit Co.	Amsterdam via wayports.		
January 10.....	Inapaquina ³⁴	United Fruit Co.	Colon, R. P.		January 10.....	Linda S. ³⁵	Royal Netherlands S. S. Co.	Bluefields, Nicaragua.		
January 10.....	Anachueina ³⁴	United Fruit Co.	Colon, R. P.		January 11.....	Anachueina ³⁴	Surgeon Brothers	Colon, R. P.		
January 11.....	Surgeon Brothers	United Fruit Co.	Colon, R. P.		January 11.....	Resolute ³³	D. L. Lynton	Colon, R. P.		
January 11.....	United Fruit Co.	United Fruit Co.	Colon, R. P.		January 11.....	Inapaquina ³⁴	United Fruit Co.	Colon, R. P.		
January 11.....	Standard Fruit & S. S. Co.	Standard Fruit & S. S. Co.	Port Limon, Costa Rica.		January 11.....	Mayan	Gulf Caribbean S. S. Co.	Lake Charles, La.		
January 11.....	All America	All America Cables	High seas.		January 11.....	Puerto Rico	French Line	Havre via wayports.		
January 11.....	Barrenfork ³⁵	Marine Transp. & Towing Co.	Norfolk, Va.		January 11.....	Granada	Standard Fruit & S. S. Co.	New Orleans via wayports.		
January 11.....	Golah ³⁵	Wood Towing Corp	Norfolk, Va.		January 12.....	Suriname	United Fruit Co.	New Orleans, La.		
January 11.....	San Pablo	United Fruit Co.	New York via wayports.		January 12.....	Reliance	Hamburg-American Line	New York via wayports.		
January 12.....	Parissima	Hamburg-American Line	New York via Kingston.		January 12.....	William M. ³⁷	G. I. Bryan	Bluefields, Nicaragua.		
January 12.....	Galecia	United Fruit Co.	Colon, R. P.		January 12.....	William M. ³⁷	G. I. Bryan	Bluefields, Nicaragua.		
January 12.....	Hamburg-American Line.	Hamburg-American Line.	Tampico via wayports.		January 12.....	William M. ³⁷	G. I. Bryan	Bluefields, Nicaragua.		
12 Yacht					13 Motor schooner.					
14 Motor boat.					15 Tug.					
16 Motor schooner.					17 Schooner.					
18 Motor schooner.					19 Motor ship.					
19 Motor schooner.					20 Yacht.					
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Commercial Traffic Through the Panama Canal in December, 1928, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of December, 1928, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for December, 1927 and 1926. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	77	401,362	307,670	493,936	306,409	\$348,593.21	256,242
Europe to west coast Canada:							
British	31	146,047	110,091	173,758	107,269	114,431.11	10,524
Danish	1	5,389	3,675	6,415	3,508	3,889.08	
French	2	9,770	6,461	10,788	6,507	8,076.25	5,191
German	2	12,599	8,223	13,341	8,238	10,278.75	6,134
Italian	1	6,497	4,905	8,124	5,128	6,131.25	2,429
Swedish	1	5,199	4,148	6,864	4,997	3,743.28	
Totals	38	185,501	137,503	219,290	135,563	146,540.72	26,278
Europe to west coast of South America:							
Belgian	1	6,211	4,522	7,130	4,013	4,471.92	
British	10	50,630	40,446	65,705	40,646	46,174.27	23,654
Danzig	1	6,127	5,268	8,939	5,007	4,411.44	
Dutch	2	9,727	5,873	9,611	5,749	7,341.25	7,812
French	2	9,461	7,105	11,373	7,067	8,881.25	5,604
German	4	19,162	14,235	21,649	12,994	17,793.75	19,183
Greek	2	7,575	6,064	9,156	5,638	5,454.00	
Italian	4	21,890	16,249	26,401	15,933	19,449.13	3,413
Norwegian	3	10,083	7,516	12,447	7,545	9,395.00	10,086
Spanish	1	2,827	2,459	4,349	2,565	3,073.75	232
Yugoslav	3	11,587	8,778	13,736	8,777	8,839.50	5,315
Totals	33	155,282	118,515	190,496	115,934	135,285.26	75,299
East coast of United States to Far East:							
British	10	53,078	36,192	57,086	35,221	45,240.00	67,336
Danish	1	4,569	2,709	4,472	2,732	3,386.25	7,500
German	1	4,035	4,117	5,088	3,156	4,866.00	5,583
Japanese	6	28,810	26,034	36,987	25,595	31,882.50	38,882
Norwegian	5	20,813	12,376	20,981	12,392	15,470.00	28,657
United States	3	16,708	12,879	20,516	12,885	16,098.75	21,745
Totals	26	128,033	94,307	145,130	91,981	116,913.50	169,703
Europe to west coast of United States:							
Belgian	1	4,976	4,568	7,138	3,988	5,710.00	8,100
British	11	51,534	40,141	65,759	40,170	37,969.48	8,249
Danish	2	11,012	8,947	14,336	8,957	9,374.15	3,070
French	2	9,685	8,380	13,488	7,477	6,973.20	
German	2	10,530	7,401	12,824	7,457	7,796.42	5,598
Norwegian	4	18,994	15,942	26,347	14,895	15,309.55	6,001
Panamanian	1	6,650	5,650	8,947	5,651	4,788.00	
Swedish	2	8,392	5,192	9,026	6,809	6,490.00	6,955
United States	1	7,895	6,052	9,838	6,019	5,684.40	
Totals	26	129,668	102,273	167,703	101,423	100,095.20	37,973
East coast of United States to west coast of South America:							
British	5	19,566	14,731	25,032	15,378	16,830.93	6,818
Chilean	1	4,672	3,433	7,310	3,976	4,291.25	2,529
German	1	909	689	1,314	681	861.25	188
Italian	1	4,104	4,101	5,240	3,362	3,075.75	
Norwegian	1	4,730	4,105	6,583	4,119	3,405.60	
Peruvian	1	1,529	1,483	2,155	1,169	1,834.80	1,671
Swedish	2	5,574	4,729	17,020	5,611	4,469.62	566
United States	13	49,060	39,383	67,127	38,895	41,119.17	24,264
Totals	25	90,144	72,654	131,781	73,191	75,888.37	36,036

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to Australasia:							
British.....	9	52,211	35,027	56,163	35,149	\$43,783.75	39,662
United States.....	2	10,585	7,559	11,758	7,378	9,448.75	5,922
Totals.....	11	62,796	42,586	67,921	42,527	53,232.50	45,584
Europe to Australasia:							
British.....	9	71,655	53,054	82,595	51,809	66,317.50	53,213
French.....	1	5,162	4,357	6,889	4,446	5,446.25	2,675
Swedish.....	1	6,098	3,286	6,059	4,311	4,107.50	.....
Totals.....	11	82,915	60,697	95,543	60,566	75,871.25	55,888
Cristobal, C. Z., to west coast South America:							
Colombian.....	3	418	409	619	400	492.45	650
Dutch.....	2	1,484	588	1,560	646	735.00	426
German.....	4	3,491	2,260	4,347	2,334	2,825.00	2,013
Norwegian.....	1	504	423	732	391	528.75	650
Panaman.....	1	124	113	207	109	141.25	321
Totals.....	11	6,021	3,793	7,465	3,880	4,722.45	4,060
East coast of Canada to Aus- tralasia:							
British.....	5	21,519	16,984	25,012	15,401	21,027.50	13,172
East coast of Central America to west coast United States:							
United States.....	5	11,292	10,250	16,694	10,129	12,759.45	2,972
Around the world:							
British.....	1	18,874	13,130	27,132	15,352	16,412.50	.....
United States.....	3	23,653	18,010	28,735	18,099	22,512.50	15,640
Totals.....	4	42,527	31,140	55,867	33,451	38,925.00	15,640
East coast of United States to west coast Canada:							
British.....	1	4,524	3,520	5,608	3,546	3,257.28	.....
Swedish.....	1	4,029	3,279	5,655	4,150	2,900.88	.....
United States.....	2	5,568	4,768	7,723	4,735	5,960.00	9,702
Totals.....	4	14,121	11,567	18,986	12,431	12,118.16	9,702
Europe to west coast Central America:							
British.....	2	6,132	5,065	7,711	4,752	6,331.25	11,485
German.....	1	3,272	2,517	4,165	2,547	3,146.25	3,907
Spanish.....	1	3,357	2,672	4,324	2,675	2,417.04	.....
Totals.....	4	12,761	10,254	16,200	9,974	11,894.54	15,392
West Indies to west coast of United States:							
British.....	1	4,514	3,560	5,587	3,513	4,450.00	7,544
French.....	1	.....	.....	.....	.....	6,608.50	.....
Norwegian.....	1	3,489	3,276	4,265	2,501	4,095.00	6,431
United States.....	1	129	119	149	119	92.88	.....
Totals.....	4	8,132	6,955	10,001	6,133	15,246.38	13,975
Cristobal, C. Z., to west coast Central America:							
British.....	3	2,063	1,900	3,436	1,906	2,353.90	3,028
Norwegian.....	1	606	485	855	482	606.25	840
Totals.....	4	2,669	2,385	4,291	2,388	2,960.15	3,868
East coast United States to Philippine Islands:							
British.....	2	11,304	7,095	12,587	7,291	8,868.75	11,583
Danish.....	1	2,206	1,741	2,925	1,748	2,176.25	2,670
Totals.....	3	13,510	8,836	15,512	9,029	11,045.00	14,253
West Indies to Far East:							
British.....	1	4,823	3,492	6,646	4,201	4,365.00	7,450
Swedish.....	1	4,084	2,932	5,025	3,822	3,665.00	6,767
Totals.....	2	8,907	6,424	11,671	8,023	8,030.00	14,217

* Naval vessel of 13,217 displacement tons.

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of South America to west coast of Canada:							
Norwegian.....	1	4,722	2,728	4,624	2,765	\$3,410.00	2,990
United States.....	1	4,989	3,517	5,550	3,517	4,396.25	2,508
Totals.....	2	9,711	6,245	10,174	6,282	7,806.25	5,498
Canadian intercoastal:							
British.....	2	8,307	6,857	11,191	6,887	8,571.25	13,241
Cristobal, C. Z., to west coast United States:							
United States.....	2	6,758	5,494	9,050	5,520	5,209.23	2,273
Egypt to west coast of South America:							
Yugoslav.....	2	8,505	6,725	10,640	6,758	6,123.60	.....
Africa to west coast Canada:							
British.....	2	9,187	6,431	10,484	6,441	6,614.64	.....
Foreign vessels in ballast— U. S. intercoastal:							
Italian.....	1	4,069	3,347	5,488	3,276	2,929.68	.....
East coast of United States to west coast of Central America:							
Norwegian.....	1	892	824	1,630	892	1,030.00	1,376
East coast of United States to Hawaiian Islands:							
United States.....	1	5,450	3,465	5,687	3,451	4,331.25	7,759
East coast of Canada to west coast of U. S.:							
Danish.....	1	4,583	2,651	4,454	2,694	3,313.75	4,497
Central American intercoastal:							
Norwegian.....	1	986	964	1,581	977	1,183.20	1,269
East coast of Central America to Australasia:							
British.....	1	3,985	2,777	4,437	2,769	3,471.25	5,225
South American intercoastal:							
Peruvian.....	1	2,405	989	3,305	1,514	1,236.25	412
East coast of South America to west coast of U. S.:							
United States.....	1	5,047	3,587	5,580	3,541	4,483.75	8,000
Egypt to west coast of Canada:							
British.....	1	4,548	2,930	4,856	2,936	3,274.56	.....
Africa to west coast of U. S.:							
United States.....	1	3,528	3,057	4,929	3,046	2,540.16	.....
Africa to west coast of South America:							
Greek.....	1	3,936	2,650	4,229	2,605	2,833.92	.....
Africa to Australasia:							
British.....	1	4,564	4,457	6,180	4,490	5,476.80	7,700
Grand totals, Dec., 1923.	315	1,463,621	1,108,243	1,797,394	1,102,512	1,261,608.18	867,504
Grand totals, Dec., 1927..	301	1,356,467	1,049,619	1,710,285	1,046,591	1,159,285.15	676,601
Grand totals, Dec., 1926..	245	1,131,568	887,718	1,456,403	888,878	1,003,121.38	734,448

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	74	373,637	286,777	462,944	286,851	\$358,471.25	528,347
West coast Canada to Europe:							
British.....	27	127,721	93,379	147,290	91,487	116,723.75	204,435
Danish.....	1	5,660	5,233	6,919	5,223	6,541.25	9,893
Dutch.....	3	20,673	15,186	24,364	15,108	18,982.50	27,780
French.....	3	15,223	10,579	17,301	10,755	13,223.75	24,909
German.....	5	30,443	20,234	34,025	20,642	25,292.50	40,087
Italian.....	2	12,089	10,086	14,121	8,920	12,607.50	18,080
Japanese.....	4	20,172	19,593	26,177	19,423	23,943.40	34,852
Norwegian.....	3	16,373	13,410	21,417	13,455	16,762.50	23,754
Swedish.....	2	10,351	6,199	10,601	7,795	7,748.75	14,306
United States.....	2	10,687	7,314	11,883	7,299	9,142.50	16,028
Totals.....	52	269,392	201,213	314,068	200,107	250,968.40	414,124

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to Europe:							
British.....	9	60,859	46,895	78,826	48,698	\$58,618.75	73,399
Danzig.....	1	6,127	5,268	8,939	5,007	6,585.00	11,100
Dutch.....	2	10,895	7,185	12,446	7,244	8,981.25	16,694
French.....	2	8,506	7,908	11,060	7,501	9,753.25	15,486
German.....	5	23,701	16,095	25,734	15,803	20,118.75	34,858
Greek.....	12	47,202	34,571	53,722	33,797	43,213.75	85,857
Italian.....	2	12,964	8,511	16,217	9,557	10,638.75	10,737
Norwegian.....	2	7,167	4,722	7,930	4,642	5,902.50	12,320
Peruvian.....	1	5,415	4,338	7,073	4,373	5,422.50	6,819
Spanish.....	3	12,176	10,044	16,454	10,098	12,555.00	17,654
Yugoslav.....	5	22,998	17,367	27,820	17,506	21,708.75	44,116
Totals.....	44	218,010	162,904	266,221	164,226	203,498.25	329,040
West coast of South America to east coast United States:							
British.....	7	33,362	27,172	47,507	28,689	33,965.00	53,767
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	5,568
Danish.....	1	4,519	3,595	5,886	3,658	4,493.75	8,700
German.....	1	2,817	1,545	2,593	1,526	1,931.25	545
Norwegian.....	2	7,661	4,812	7,997	4,801	6,015.00	14,440
Panaman.....	1	4,897	4,014	6,386	4,067	5,017.50	8,897
Swedish.....	3	9,995	8,472	32,359	9,988	10,590.00	43,645
United States.....	12	60,305	51,657	90,522	50,714	64,305.85	144,812
Totals.....	28	128,261	104,733	200,560	107,419	130,650.85	280,374
West coast of United States to Europe:							
British.....	8	35,126	26,970	44,428	27,120	33,712.50	51,971
German.....	1	3,508	2,296	4,124	2,234	2,757.50	3,160
Japanese.....	1	4,381	4,349	5,873	4,254	5,257.20	7,452
Norwegian.....	3	14,869	12,743	21,485	12,696	15,928.75	28,958
Swedish.....	1	6,295	5,189	8,945	6,592	6,486.25	11,872
Totals.....	14	64,179	51,457	84,855	52,896	64,142.20	103,413
West coast of South America to Cristobal:							
Colombian.....	3	379	358	593	343	439.30	628
Dutch.....	1	742	294	780	323	367.50	580
German.....	4	3,491	2,260	4,347	2,334	2,825.00	2,372
Norwegian.....	1	504	423	732	391	528.75	890
Peruvian.....	1	2,959	1,515	4,617	2,427	1,898.75	3,114
Totals.....	10	8,075	4,850	11,069	5,818	6,054.30	7,584
Australasia to Europe:							
British.....	5	39,833	29,634	48,977	30,403	37,042.50	30,152
West coast of United States to east coast Central America:							
United States.....	5	14,049	12,382	19,760	12,213	15,477.50	11,865
Philippine Islands to east coast of United States:							
Japanese.....	2	11,592	8,809	14,033	8,625	11,011.25	11,166
United States.....	2	10,366	7,913	12,628	7,859	9,891.25	15,031
Totals.....	4	21,958	16,722	26,661	16,484	20,902.50	26,197
West coast of Central America to Cristobal, C. Z.:							
British.....	3	2,063	1,900	3,436	1,906	2,375.00	1,012
Norwegian.....	1	606	485	855	482	606.25	101
Totals.....	4	2,669	2,385	4,291	2,388	2,981.25	1,113
West coast of Canada to east coast of United States:							
British.....	1	59	51	120	83	43.92	.....
United States.....	2	8,903	7,188	11,414	7,137	8,985.00	12,700
Totals.....	3	8,962	7,239	11,534	7,220	9,028.92	12,700
West coast of United States to Cristobal, C. Z.:							
Panaman.....	1	2,603	1,383	3,644	2,594	1,728.75	934
United States.....	2	6,758	5,494	9,050	5,520	6,867.50	10,167
Totals.....	3	9,361	6,877	12,694	8,114	8,596.25	11,101

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Australasia to east coast of Canada:							
British	3	12,384	9,798	16,384	10,051	\$12,247.50	3,739
Far East to Europe:							
British	2	6,591	4,904	7,673	4,841	6,130.00	9,490
Danish	1	5,588	4,473	7,014	4,470	5,591.25	9,355
Totals	3	12,179	9,377	14,687	9,311	11,721.25	18,845
West coast of South America to east coast Canada:							
British	2	9,698	8,321	14,318	8,325	10,401.25	19,179
Far East to east coast United States:							
Japanese	1	5,294	4,181	6,609	4,040	5,226.25	5,151
United States	1	6,036	4,828	7,597	4,753	6,035.00	9,217
Totals	2	11,330	9,009	14,206	8,793	11,261.25	14,368
West coast of United States to West Indies:							
Norwegian	1	3,612	3,201	5,313	3,005	4,001.25	6,937
Canadian intercoastal:							
British	1	4,186	3,322	5,465	3,400	4,152.50	6,500
West coast Canada to Africa:							
British	1	4,345	3,181	5,274	3,171	3,976.25	6,144
Central American intercoastal:							
Norwegian	1	987	964	1,581	977	1,184.40	790
South American intercoastal:							
Peruvian	1	2,405	989	3,305	1,514	1,236.25	1,986
West coast of South America to West Indies:							
British	1	4,962	4,188	6,998	4,026	3,572.64	.....
Australasia to east coast of United States:							
United States	1	5,823	5,395	6,870	5,259	6,743.75	5,470
Far East to West Indies:							
Norwegian	1	4,222	2,487	4,302	2,450	3,108.75	7,515
Grand totals, Dec., 1928.	264	1,234,519	947,405	1,562,337	954,421	1,181,421.21	1,847,483
Grand totals, Dec., 1927.	288	1,260,261	994,257	1,604,265	989,978	1,239,174.60	1,897,227
Grand totals, Dec., 1926.	213	1,003,434	797,192	1,303,755	798,518	992,915.34	1,575,822

Gatun Lake Water Supply in Calendar Year, 1928.

A statement issued by the Section of Surveys contains the information that the total yield from the Gatun Lake watershed during the calendar year 1928 was 6 per cent above the average for the past 15 years. The total yield from the 1,320 square miles of watershed was 217.56 billion cubic feet. This is about one and one-eighth times the capacity of the lake. About two-fifths of this came from above Alhajuela, another two-fifths from the land area below Alhajuela, and the remaining one-fifth from direct rainfall on the surface of the lake.

Nearly one-half of this run-off was wasted over the spillway. Gatun Lake lockages took about one-fifth, and the hydroelectric station used slightly more than was consumed in lockages. Nearly one-tenth of the water disappeared in evaporation from the lake surface. Leakages and the use of water for municipal purposes used less than 1 one-hundredth of the inflow.

The net yield of Gatun Lake for the year 1928 was 196.76 billion cubic feet, or approximately 4.5 billion cubic feet more than would have been necessary to fill the lake from elevation 0 to its normal maximum elevation of 87 feet above sea level.

Further details of the Gatun Lake water supply are published each year in the annual report of the Governor.

Grounding of "President Adams" off Cristobal.

The passenger steamship *President Adams* of the Dollar Line, bound for Cristobal from New York via Habana in the regular around-the-world service of the line, grounded on a reef outside of the West Breakwater at approximately 5.55 a. m., January 11. A Navy tug and tugs of The Panama Canal went to the assistance of the *President Adams*, the 90 passengers were transferred to land, and the ship was pulled off of the reef about 9.30 p. m. same date, subsequent to which she was towed to Cristobal and tied up alongside Pier 6. On January 14 the *President Adams* was towed through the Canal to Balboa, to be placed in dry dock.

The master of the *President Adams* advised the Canal authorities that The Panama Canal was in no way responsible for the accident, and accordingly no investigation was made by the Board of Local Inspectors.

New Street Improvement Between Panama and Balboa.

Work has been begun by forces of the Municipal Engineering Division of The Panama Canal on an extension of Avenue "A" in Panama City, to join Balboa Road at Chorillo. It is expected that the new street will greatly reduce the congestion in traffic between Balboa and Panama which is now confined to "B" Street. There are three streets which are to be joined in the extension of Avenue "A," all of which will be improved before joining the principal thoroughfare.

Traffic by Nationality for December, 1928.

The following tabulation shows the commercial traffic through the Canal during the month of December, 1928, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, with corresponding totals for December, 1927 and 1926:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	11,187	9,090	14,268	8,001	\$10,181.92	8,100
British.....	108	549,065	407,880	656,965	405,117	465,221.72	289,884
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	2,529
Colombian.....	3	418	409	619	400	492.45	650
Danish.....	6	27,759	19,723	32,602	19,639	22,130.48	17,737
Danzig.....	1	6,127	5,268	8,939	5,007	4,411.44	.....
Dutch.....	4	11,211	6,461	11,171	6,335	8,076.25	8,238
French.....	8	34,078	26,303	42,538	25,413	35,985.45	13,470
German.....	15	54,018	39,442	62,728	37,407	47,567.42	44,606
Greek.....	3	11,511	8,714	13,385	8,243	8,287.92	.....
Italian.....	7	36,560	28,602	45,253	27,699	31,585.81	5,842
Japanese.....	6	28,810	26,034	36,987	25,595	31,882.50	38,882
Norwegian.....	19	65,821	48,639	80,045	46,959	54,433.35	58,300
Panaman.....	2	6,774	5,763	9,154	5,760	4,929.25	321
Peruvian.....	2	3,934	2,472	5,460	2,683	3,071.05	2,083
Spanish.....	2	6,184	5,131	8,673	5,240	5,490.79	232
Swedish.....	8	33,376	23,566	49,649	29,700	25,376.28	14,288
United States.....	113	552,024	425,810	687,272	423,743	483,229.75	357,027
Yugoslav.....	5	20,092	15,503	24,376	15,535	14,963.10	5,315
Totals, December, 1928	315	1,463,621	1,108,243	1,797,394	1,102,512	1,261,608.18	867,504
Totals, December, 1927	301	1,356,467	1,049,619	1,710,285	1,046,591	1,159,285.15	676,601
Totals, December, 1926	245	1,131,568	887,718	1,456,433	888,878	1,003,121.38	734,448

* Includes naval vessel of 13,217 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	70	341,189	259,715	426,666	262,200	\$322,961.56	459,788
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	5,568
Colombian.....	3	379	358	593	343	439.30	628
Danish.....	3	15,767	13,301	19,819	13,351	16,626.25	27,948
Danzig.....	1	6,127	5,268	8,939	5,007	6,585.00	11,100
Dutch.....	6	32,310	22,665	37,590	22,675	28,331.25	45,054
French.....	5	23,729	18,487	28,361	18,256	22,977.00	40,395
German.....	16	63,960	42,340	70,823	42,539	52,925.00	81,022
Greek.....	12	47,202	34,571	53,722	33,797	43,213.75	85,857
Italian.....	4	25,053	18,597	30,338	18,477	23,246.25	28,817
Japanese.....	8	41,439	36,932	52,692	36,342	45,438.10	58,621
Norwegian.....	15	56,001	43,247	71,161	42,899	54,038.15	95,705
Panamanian.....	2	7,500	5,397	10,030	6,661	6,746.25	9,831
Peruvian.....	3	19,779	6,842	14,995	8,314	8,552.50	11,919
Spanish.....	3	12,176	10,044	16,454	10,098	12,555.00	17,654
Swedish.....	6	26,641	19,860	51,905	24,375	24,825.00	69,823
United States.....	101	496,564	388,948	632,668	387,605	485,919.60	753,637
Yugoslavian.....	5	22,998	17,367	27,820	17,506	21,708.75	44,116
Totals, December, 1928..	264	1,234,519	947,405	1,562,337	954,421	1,181,421.21	1,847,483
Totals, December, 1927..	288	1,260,261	994,257	1,604,265	989,978	1,239,174.60	1,897,227
Totals, December, 1926..	213	1,003,434	797,192	1,303,755	798,518	992,915.34	1,575,822

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	11,187	9,090	14,268	8,001	\$10,181.92	8,100
British.....	178	890,254	667,595	1,083,631	667,317	788,183.28	749,672
Chilean.....	2	9,377	6,899	14,620	7,952	8,623.75	8,097
Colombian.....	6	797	767	1,212	743	931.75	1,278
Danish.....	9	43,526	33,024	52,421	32,990	38,756.73	45,685
Danzig.....	2	12,254	10,536	17,878	10,014	10,996.44	11,100
Dutch.....	10	43,521	29,126	48,761	29,070	36,407.50	53,292
French.....	13	57,807	44,790	70,899	43,669	58,962.45	53,865
German.....	31	117,978	81,782	133,551	79,946	100,492.42	125,628
Greek.....	15	58,713	43,285	67,107	42,040	41,501.67	85,857
Italian.....	11	61,613	47,199	75,591	46,176	54,832.06	34,659
Japanese.....	14	70,249	62,966	89,679	61,937	77,320.60	97,503
Norwegian.....	34	121,822	91,886	151,657	89,858	108,471.50	154,005
Panamanian.....	4	14,274	11,160	19,184	12,421	11,675.50	10,152
Peruvian.....	5	14,713	9,314	20,455	10,997	11,623.55	14,002
Spanish.....	5	18,360	15,175	25,127	15,338	18,045.79	17,886
Swedish.....	14	60,017	43,426	101,554	54,075	50,201.28	84,111
United States.....	214	1,048,588	814,758	1,319,940	811,348	969,149.35	1,110,66
Yugoslav.....	10	43,090	32,870	52,196	33,041	36,671.85	49,431
Totals, December, 1928..	579	2,698,140	2,055,648	3,359,731	2,056,933	2,443,029.39	2,714,987
Totals, December, 1927..	589	2,616,728	2,043,876	3,314,550	2,036,569	2,398,459.75	2,573,828
Totals, December, 1926..	458	2,135,002	1,684,910	2,760,158	1,687,396	1,996,036.72	2,310,270

* Includes naval vessel of 13,217 displacement tons.

Geologists Arrive to Begin Surveys at Alhajuela Dam Site.

Geological surveys to determine the type of dam to be constructed at Alhajuela, the methods to be used in preventing leakage under the dam, and where saddle dams must be placed, will be made by two geologists from the Geological Survey in Washington, who arrived on the Isthmus on January 16. Their work will include a thorough inspection of the Alhajuela basin as well as of the dam site.

Arrival of New Diesel-electric Dredge for Panama Canal.

The new pipe line dredge *Las Cruces*, which was recently completed at the works of the Ellicott Machine Corporation, Baltimore, Md., for The Panama Canal, arrived at Cristobal on January 11, 1929, in tow of the tugs *Goliah* and *Barrenfork*.

The *Las Cruces*, which is one of the largest and most powerful hydraulic dredges ever constructed, is of the Diesel-electric type. Four Fulton engines are directly connected to generators and form the main power units, while the main pump and all auxiliaries are driven by electric motors.

The dredge is capable of pumping through a pipe line over 2 miles in length, and has a capacity of 500 to 1,000 cubic yards per hour, depending upon the kind of material dredged. The displacement in working condition is about 2,500 tons. The hull, which has a length of 226 feet, width of 50 feet, and depth of 14 feet, is built of steel, with numerous water-tight bulkheads to insure the safety of the dredge in case of collision. In addition, both engine rooms and the motor room have a double bottom $2\frac{1}{2}$ feet deep, thus making it practically unsinkable. The agitating ladder is capable of digging to a depth of 60 feet. It is 90 feet long, and weighs approximately 400,000 pounds. The motor for the agitating machinery is mounted directly on the ladder and is of 350 horsepower.

The lower deck house is of steel, extending practically the full length of the dredge and 36 feet wide. Traveling cranes are provided over all the machinery. Above the deck house are living quarters of steel, for 80 men. These quarters include separate staterooms for the officers, recreation rooms, mess rooms, a completely equipped galley and cold storage equipment.

The *Las Cruces* is now at Paraiso, headquarters of the Dredging Division, where final adjustments are being made, and it is expected that the dredge will be put to work within 10 days, in the Pacific sea level channel.

United Fruit Steamers to Call at Puerto Armuelles.

A regular steamship service between Puerto Armuelles, in Chiriqui Province of Panama, and Balboa, started on January 14, when the steamer *San Jose* of the United Fruit Company called at the Chiriqui port en route from San Francisco to Balboa. The new service will serve to augment the recently established service of the Panama Mail Line, which makes occasional calls at Puerto Armuelles as cargo and passengers are offered. The first trip from Balboa to Chiriqui by United Fruit Company steamers is to be made on January 20 and a regular weekly service will be maintained thereafter.

It is understood that the steamers of the United Fruit Company will make the trip from Balboa to Puerto Armuelles in 24 hours and that special railway arrangements will be made to establish connections with all steamers calling at Puerto Armuelles.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., *January 10, 1929.*

No. 504.

The following was received by the Hydrographic Office from the Lighthouse Sub-division, The Panama Canal:

PANAMA CANAL—GATUN LAKE.

A flashing white light has been established on each of the range beacons marking the center line of the channel through Bohio Reach. Characteristics: One-half second light, $1\frac{1}{2}$ seconds eclipse. These are Rear Range Beacon No. 5 and Front Range Beacon No. 6, used by northbound traffic, and Front Range Beacon No. 9 and Rear Range Beacon No. 10, used by southbound traffic, as shown on H. O. Chart No. 5000.

(Signed) F. KARIGER, *Pilot in Charge.*

H. BURGESS,
Governor.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.....	11.00	14.00

Tolls Charges for Transit of The Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity..... \$1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity..... .72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton..... .50
4. 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
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton.
6. Vessels returning from Gatun Lake to original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending January 5, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Wasgenwald	Hamburg-American Line		December 30.		378
Orinoco	Hamburg-American Line		December 30.		737
Benjamin Franklin	Norway-Pacific Line	December 30.	December 30.	(1)	10
Britte	Colombian Maritime Co.	December 30.	December 31.	188	(2)
Tolao	United Fruit Co.	December 30.	December 30.	42	761
Dramatist	T. & J. Harrison	December 30.	December 31.	727	(2)
Ballena	Pacific Steam Navigation Co.		December 31.		310
Heredia	United Fruit Co.		December 31.		37
Jamaica	Pacific Steam Navigation Co.	December 31.	January 4.	605	783½
Santa Barbara	Grace Line	December 31.	December 31.	(3)	5
Saramacca	United Fruit Co.	December 31.	December 31.	(1)	56
Nevada	French Line	December 31.	January 1.		32
Macabi	United Fruit Co.	December 31.	January 2.	145	521
Calamares	United Fruit Co.	December 31.	January 2.	1,617	49
Eemdjik	Holland-American Line		January 1		105
Ancon	Panama Railroad S. S. Line	January 1		3,526	
Mercian	Leyland Line		January 2		1,956½
Wanks	Standard Fruit & S. S. Co.		January 2		6
Balboa	Johnson Line	January 1	January 2	561	(2)
Mantaro	Peruvian Line	January 1	January 2	(1)	157
Ariguani	Elders & Fyfes, Ltd.	January 2	January 2	1½	989
Orita	Pacific Steam Navigation Co.	January 2	January 3	59	55
Cid	Pacific Steam Navigation Co.	January 2	January 3	255	8
Itauri	Hamburg-American Line	January 2	January 3	143	185
Metapan	United Fruit Co.	January 2	January 3	618	544
Pacific Enterprise	Furness, Witley & Co.	January 2	January 4.	8	477
Gatun	Standard Fruit Co.	January 2	January 4	328	379
Eparta	United Fruit Co.		January 4		214
Portland	Hamburg-American Line	January 3	January 3	(1)	83
Marga	Colombian S. S. Co.	January 3	January 3		20
Esequibo	Pacific Steam Navigation Co.	January 3	January 4	105	5½
Caldas	National Navigation Co.	January 4		247	
Coppename	United Fruit Co.	January 4	January 4	226	117
Suriname	United Fruit Co.	January 4	January 4	900	91
Posidon	Hamburg-American Line	January 4	January 5	160	(2)
Wanks	Standard Fruit Co.	January 4		88	
La Perla	United Fruit Co.	January 5		450	
Cartago	United Fruit Co.	January 5		245	
Bowden	United Fruit Co.	January 5	January 5	(1)	365½
Jan Van Nassau	Royal Netherlands S. S. Co.	January 5	January 5	20	4½
Kinderdijk	Holland-American Line	January 5		562	
Feltre	Nav. Libera-Tristina	January 5		218	
Nevisian	Leyland Line	January 5		650	
Salvador	Pacific Steam Navigation Co.	January 5		929	
Floreana	Colombian Transport Co.		January 4		326

¹ No cargo discharged.

² No cargo laded.

³ One case.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending January 12, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Wasgenwald	Hamburg-American Line	December 30.	December 31.	468	
H. M. Storey	Standard Oil Co.	January 2	January 4	15,105	
Rakuyo Maru	Nippon Yusen Kaisha	January 3	January 4	46	
Itauri	Hamburg-American Line	January 3	January 5	681	
St. Mihiel	U. S. Government	January 3	January 4	106	33
Svealand	Axel Brostrom & Sons	January 6	January 6	5	
Ecuador	Panama Mail S. S. Co.	January 7	January 7		17
Guatemala	Panama Mail S. S. Co.	January 7	January 7	35	20
Deroche	Union Oil Co.	January 8	January 8	5	
Breda	Royal Netherlands S. S. Co.	January 9	January 9	187	
West Katon	California & Eastern S. S. Co.	January 9	January 11	512	
Theodore Roosevelt	Fred Olsen & Co.	January 9	January 11	1,003	
California	American Line	January 11	January 11		197
Caldas	National Navigation Co.	January 11	January 12		25
Acajutla	Pacific Steam Navigation Co.	January 12	January 12	2	

THE PANAMA CANAL RECORD

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Nitrate Shipments Through Canal in December Establishes New Record for Month.

Shipments of Chilean nitrates through the Canal in December, 1928, totaled 315,670 tons, establishing a new high monthly record for this commodity through the Canal. The previous high record for this item was established in March, 1927, when 276,837 tons passed through the Canal.

Data on Chilean nitrate shipments through the Canal in the past 8 calendar years are given in the tabulations and graph shown below, which show also, in percentages, the distribution to the chief regions of destination:

Calendar year.	Long tons.		Percentage destined to—		
			United States.	Europe.	Miscellaneous
1921....	991,698		40.6	55.6	3.8
1922....	982,090		49.9	44.1	6.0
1923....	1,814,491		43.9	49.7	6.4
1924....	1,886,864		46.9	47.3	5.8
1925....	2,122,480		49.9	45.9	4.2
1926....	1,376,181		51.6	37.2	11.2
1927....	1,961,698		31.5	54.0	4.5
1928....	2,448,852		38.8	56.6	4.6

Nitrate shipments are an important element in the traffic passing through the Canal. During the past calendar year they comprised approximately 12 per cent of the total cargo tonnage passing through the Canal from the Pacific to the Atlantic, and in volume of cargo tonnage were exceeded only by mineral oils, lumber, and wheat.

Tug "Porto Bello" Sold.

The tug *Porto Bello*, which has been in service for The Panama Canal since 1907, has been sold and the vessel will be turned over to the purchaser, the Reichert Towing Line, Inc., of Brooklyn, N. Y., this month. Formerly the *Robert H. Smith*, the tug was built in 1906 by the Spedden Shipbuilding Company, and was purchased by the Isthmian Canal Commission from the American Towing and Lightering Company in 1907, arriving at Cristobal on November 17, 1907.

A short account of the history of this vessel with the Canal appeared in THE PANAMA CANAL RECORD of November 7, 1928.

Tanker Traffic Through the Panama Canal During Calendar Year 1928.

During the calendar year 1928, 981 tank ships transited the Canal, carrying a total of 4,954,422 tons of cargo, principally crude petroleum and gasoline. These vessels had a combined net tonnage of 5,306,038 Panama Canal measurement, on which tolls of \$4,639,012.34 were paid.

Tank ships comprised 15.5 per cent of the total commercial transits during the year; 18.3 per cent of the total Panama Canal net tonnage; paid 17.6 per cent of the total tolls collected; and carried 16.9 per cent of the total cargo carried in commercial vessels.

Tanker traffic declined heavily as compared with the previous calendar year owing to the development of producing areas on the Atlantic seaboard.

Expressed in terms of percentage, the following tabulation shows the volume of tanker traffic through the Canal during the past 5 years:

	Per cent of total traffic.			
	Number of transits.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Calendar year 1924	31.1	32.7	31.2	31.1
Calendar year 1925	20.4	25.1	23.6	22.5
Calendar year 1926	23.1	28.3	26.9	25.7
Calendar year 1927	21.9	26.6	25.4	24.3
Calendar year 1928	15.5	18.3	17.6	16.9

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the calendar year 1928, segregated by direction of transit and nationality of vessels, are shown in the following tabulations, with comparative totals for the previous four calendar years:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
Belgian	2	9,952	\$9,292.72	8,100
British	121	596,639	443,262.94	68,528
Danish	4	23,469	16,897.68	.....
Danzig	14	89,566	64,509.12	.....
Dutch	5	19,720	15,512.86	7,124
French	8	36,969	26,617.68	.....
German	5	22,248	16,018.56	.....
Italian	1	3,961	3,107.25	.....
Norwegian	20	95,690	72,745.07	19,917
Panamanian	1	6,650	4,788.00	.....
Swedish	2	10,792	7,770.24	.....
United States	318	1,770,291	1,301,255.20	123,426
Totals, calendar year 1928	501	2,685,977	1,981,777.32	227,095
<i>Pacific to Atlantic.</i>				
Belgian	1	4,976	5,710.00	9,500
British	109	569,429	576,694.71	968,379
Danish	1	5,623	5,837.50	10,800
Danzig	14	90,542	92,486.25	162,048
Dutch	4	14,685	15,651.25	26,132
French	5	23,500	25,530.00	40,597
German	4	18,062	19,072.50	33,287
Italian	1	3,961	4,753.20	7,222
Norwegian	20	94,076	101,210.00	179,807
Swedish	2	10,792	11,278.75	20,013
United States	319	1,784,415	1,799,010.86	3,269,542
Totals, calendar year, 1928	480	2,620,061	2,657,235.02	4,727,327
Grand totals, calendar year 1928	981	5,306,038	4,639,012.34	4,954,422
Grand totals, calendar year 1927	1,336	7,641,345	6,659,189.94	7,083,480
Grand totals, calendar year 1926	1,262	7,323,942	6,447,399.40	7,117,408
Grand totals, calendar year 1925	977	5,758,799	5,046,080.70	5,337,398
Grand totals, calendar year 1924	1,320	7,991,887	7,127,218.93	8,050,846

It will be noted that tanker cargoes declined 2,129,058 tons in a comparison of 1928 with 1927. All other cargo in 1927 amounted to 22,019,058 tons and in 1928 to 24,447,159 tons. This was an increase in general cargoes of 2,428,101 tons while tanker cargoes declined over 2,000,000 tons.

CANAL WORK IN DECEMBER, 1928.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of December, 1928.

BALBOA HEIGHTS, C. Z., January 18, 1929.

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

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of December, 1928. In it have been incorporated the summaries of the traffic through the Canal during the past calendar year.

TRAFFIC FOR CALENDAR YEAR 1928.

Commercial transits for the calendar year ended December 31, 1928, aggregated 6,334, as compared with 6,085 for the calendar year 1927, and 5,420 for the calendar year 1926. The daily average number of commercial transits for the past calendar year was 17.31.

In addition to the 6,334 commercial transits, 513 noncommercial ships, principally United States Army and Navy vessels, and 124 small nonseagoing launches transited the Canal, making the total number of transits for the calendar year, 6,971.

Tolls on the 6,334 commercial vessels transiting the Canal during the past calendar year aggregated \$26,375,962.41, or a daily average of \$72,065.46.

With respect to the number of transits, Panama Canal net tonnage, tolls collected, and tons of cargo carried, traffic for the calendar year 1928, exceeded that of any previous calendar year, and was the second largest of any calendar or fiscal year since the opening of the Canal, being surpassed only by that during the fiscal year ended June 30, 1928.

The following tabulation gives a ready comparison of the number of vessels, Panama Canal net tonnage, tolls collected, and tons of cargo passing through the Canal during the calendar years 1927 and 1928, by months:

COMMERCIAL TRAFFIC THROUGH THE CANAL DURING THE CALENDAR YEARS 1927 AND 1928, BY MONTHS.¹

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1927.	1928.	1927.	1928.	1927.	1928.	1927.	1928.
January...	443	540	2,121,631	2,422,770	2,241,765	2,372,061	\$1,984,760.71	\$2,212,752.50
February...	449	547	2,201,328	2,460,111	2,230,107	2,060,425	1,994,860.82	2,253,755.37
March.....	496	542	2,413,999	2,441,077	2,533,525	2,428,662	2,217,913.20	2,223,370.57
April.....	464	531	2,224,500	2,384,491	2,429,807	2,473,884	2,065,206.92	2,187,607.82
May.....	471	508	2,248,892	2,274,612	2,379,713	2,497,583	2,066,070.73	2,118,969.83
June.....	455	481	2,152,926	2,227,865	2,229,097	2,139,565	1,970,377.97	2,016,211.09
July.....	509	509	2,406,955	2,318,395	2,450,468	2,291,955	2,215,515.99	2,109,083.19
August.....	543	526	2,513,614	2,437,246	2,429,947	2,425,336	2,274,040.55	2,199,069.31
September...	540	487	2,532,942	2,295,053	2,397,753	2,313,011	2,294,432.34	2,111,230.56
October.....	567	557	2,585,752	2,515,389	2,717,646	2,582,477	2,380,115.97	2,274,945.30
November...	559	527	2,591,717	2,468,297	2,488,882	2,501,630	2,369,267.99	2,225,937.48
December...	589	579	2,616,728	2,698,140	2,573,828	2,714,987	2,398,459.75	2,443,029.39
Totals.	6,085	6,334	28,610,984	28,943,437	29,102,538	29,401,581	26,231,022.94	26,375,962.41

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States Government, including merchant vessels chartered by the Government, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

COMMERCIAL TRAFFIC BY CALENDAR YEARS, 1914 TO 1928.

The following statement is a summary of the traffic through the Canal by calendar years since its opening:

Calendar year.	No. of ships.	United States net tonnage.	Panama Canal net tonnage.	Registered.		Tolls.	Tons of cargo.
				Gross.	Net.		
1914	350	(3)	1,284,293	1,789,721	(3)	\$1,508,737.56	1,758,625
1915	1,154	(3)	3,992,512	(1)	(3)	4,297,467.11	4,893,422
1916	1,217	3,078,623	3,817,704	(3)	(3)	3,671,162.68	4,774,822
1917	1,969	5,116,001	6,217,054	(3)	(3)	6,107,696.63	7,443,610
1918	2,070	5,369,341	6,409,886	(3)	(3)	6,317,455.39	7,284,159
1919	2,130	5,828,118	6,932,984	7,719,306	4,919,189	6,973,095.30	7,463,151
1920	2,814	8,543,408	10,378,265	13,300,887	8,458,401	10,295,362.21	11,236,119
1921	2,783	9,303,687	11,435,811	14,451,830	9,225,519	11,261,098.80	10,707,095
1922	2,997	10,375,771	12,932,573	16,315,147	10,310,113	12,573,407.77	13,710,556
1923	5,037	19,979,623	24,737,437	31,058,095	19,931,570	22,966,838.18	25,160,545
1924	4,893	19,414,771	24,411,769	31,127,724	19,440,024	22,809,416.34	25,892,134
1925	4,774	18,141,695	22,958,158	29,363,840	18,228,704	21,380,759.70	23,701,277
1926	5,420	29,254,503	25,836,211	33,044,274	20,329,791	23,921,540.04	27,586,951
1927	6,085	22,360,998	28,610,981	36,381,124	22,353,512	26,231,022.94	29,102,538
1928	6,334	22,217,674	28,943,437	38,359,701	22,266,643	26,375,562.41	29,401,581
Totals	59,018		218,859,099			236,671,023.06	239,115,595

* Canal opened to traffic August 15, 1914. * Canal opened to traffic for approximately 8½ months only. * Indicates tonnage figures are not available.

NUMBER OF VESSELS TRANSITING CANAL IN 1928.

The total number of vessels and craft of all kinds transiting the Canal during the calendar year 1928, by months, is shown in the following tabulation:

	Commercial.	Noncommercial.				Launches.*	Total.
		United States Army-Navy.	For repairs.	Panaman Government.	Colombian Government.		
January	540	38	2			12	592
February	547	40	2			8	597
March	542	62	4	3		13	624
April	531	58	3			16	608
May	508	35	8	1	2	12	566
June	481	39	6	3		10	539
July	506	28	8	3		10	553
August	526	24	6		1	6	563
September	487	17	3	2	1	11	521
October	557	30	4	1		10	602
November	527	29	1	2		5	561
December	579	45		2		11	637
Totals	6,334	445	47	17	4	124	6,971

* Miscellaneous small nonseagoing craft which, although paying tolls, are excluded from the statement of commercial traffic.

CANAL TRAFFIC FOR DECEMBER, 1928.

During the month of December, 1928, 579 commercial vessels and 11 small launches passed through the Canal. In addition to these, there were 45 transits of vessels belonging to or chartered by the United States Government, and 2 transits of a Panaman Government vessel, on which no tolls were charged, making a total of 637 transits for the month, or a daily average of 20.55.

Tolls on the commercial vessels amounted to \$2,443,029.39, and on the launches, \$83.85, a total of \$2,443,113.24, or a daily average on all traffic of \$78,810.11.

The amount of tolls collected on commercial vessels during December, 1928, establishes a new high record for tolls collection in one month, exceeding the previous record made in December, 1927, by some \$45,000. The number of commercial transits, 579, during the past month, while the highest for the calendar year and the second highest in the history of the Canal to date, fell short by 10 of the record of 589 established in December, 1927.

The total numbers of craft of all kinds transiting the Canal during the month of December, as compared with the same months in 1927 and 1926, is shown in the following tabulation:

	December, 1928.	December, 1927.	December, 1926.
Commercial vessels	579	589	458
Noncommercial vessels (Army and Navy).	45	28	42
Launches (under 20 tons)	11	14	22
Panaman Government vessels	2		
Colombian Government vessels		1	2
Vessels for repairs		4	3
Totals	637	636	527

In addition to the vessels listed above, Panama Canal equipment, consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

Locks.	North-bound.	South-bound.	Total.
Gatun	10	17	27
Pedro Miguel	31	38	69
Miraflores	33	40	73
Totals	74	95	169

The following is a summary of the commercial traffic for December, 1928, as compared with the corresponding month in 1927 and 1926, and the monthly average for the calendar year 1928:

	December, 1928.	December, 1927.	December, 1926.	Average per month for calendar year.
Number of vessels	579	589	458	528
Panama Canal net tonnage	2,698,140	2,616,728	2,135,002	2,411,953
United States net tonnage	2,055,648	2,043,876	1,684,910	1,851,471
Registered gross tonnage	3,359,731	3,314,550	2,760,158	3,029,975
Registered net tonnage	2,056,933	2,036,569	1,687,396	1,855,554
Tolls	\$2,443,029.39	\$2,398,459.75	\$1,996,036.72	\$2,197,996.86
Tons of cargo carried	2,714,987	2,573,828	2,310,270	2,450,132

The average daily number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per vessel.			Average per day for calendar year.
	December, 1928.	December, 1927.	December, 1926.	
Number of transits	18.67	19.00	14.77	17.31
Panama Canal net tonnage	87,037	84,411	68,871	79,080
Tolls	\$78,807.39	\$77,369.67	\$64,388.28	\$72,065.47
Tons of cargo carried	87,580	83,027	74,524	80,332

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of December, 1928, as compared with December, 1927 and 1926, are shown in the following tabulation:

	Average per vessel.		
	December, 1928.	December, 1927.	December, 1926.
Panama Canal net tonnage	4,660	4,443	4,661
United States net tonnage	3,550	3,470	3,678
Registered gross tonnage	5,803	5,610	6,026
Registered net tonnage	3,553	3,457	3,684
Tolls	\$4,219.39	\$4,072.09	\$4,358.15
Tons of cargo (including vessels in ballast)	4,689	4,370	5,044
Tons of cargo (laden vessels only)	5,740	5,465	6,079

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and 72 cents per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per ton nor be less than 75 cents per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined both in accordance with the Panama Canal and the United States rules of measurement.

Due to this limiting proviso the tolls actually collected on laden vessels averaged \$0.943 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.72 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of December, 1928, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$10,181.92	\$8,702.60		\$1,479.32
British.....	788,183.28	809,956.40	\$21,773.12	
Chilean.....	8,623.75	9,377.00	753.25	
Colombian.....	931.75	797.00		134.75
Danish.....	38,756.73	39,092.40	335.67	
Danzig.....	10,996.44	9,833.20		1,193.24
Dutch.....	36,407.50	43,521.00	7,113.50	
French.....	58,962.45	60,541.50	1,579.05	
German.....	100,492.42	116,303.60	15,811.18	
Greek.....	51,501.67	54,108.60	2,606.93	
Italian.....	54,832.06	55,684.20	1,852.14	
Japanese.....	77,320.60	70,249.00		7,071.60
Norwegian.....	108,471.50	114,674.00	6,202.50	
Panaman.....	11,675.59	11,614.00		61.50
Peruvian.....	11,623.55	14,713.00	3,089.45	
Spanish.....	18,045.79	17,017.20		1,028.59
Swedish.....	50,201.28	52,088.20	1,886.92	
United States.....	969,119.35	983,619.20	14,469.85	
Yugoslav.....	36,671.85	36,648.00		23.85
Totals.....	2,443,029.39	2,509,510.10	77,473.56	10,992.85
Net increase for all traffic.....			66,480.71	

* Includes \$6,608.50 collected for naval vessel at 50 cents per displacement ton.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$17,547.34
United States foreign trade.....	* 2,433.16
United States-Canal Zone trade.....	* 644.33
Net increase....	14,469.85

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in December, 1928, is shown in the following tabulation segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Belgian.....	1.62		1.62
British.....	.87	1.35	1.12
Chilean.....	.54	1.18	.86
Colombian.....	1.55	1.66	1.60
Danish.....	1.06	1.77	1.41
Danzig.....		1.81	1.81
Dutch.....	.74	1.40	1.22
French.....	.55	1.70	1.12
German.....	.90	1.27	1.10
Greek.....		1.82	1.82
Italian.....	.24	1.15	.70
Japanese.....	1.35	1.41	1.39
Norwegian.....	1.21	1.71	1.48
Panaman.....	2.59	1.31	1.33
Peruvian.....	.53	1.10	.95
Spanish.....	.08	1.45	1.19
Swedish.....	1.06	2.62	2.09
United States.....	.92	1.52	1.25
Yugoslav.....	1.33	1.92	1.83
Average, December, 1928.....	.87	1.50	1.23
Average, December, 1927.....	.81	1.55	1.24
Average, December, 1926.....	.94	1.57	1.29

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of December, 1928, is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tanks ships:						
Laden	3	14,671	\$16,308.75	36	189,941	\$195,095.00
Ballast	41	215,076	154,854.72	1	4,962	3,572.64
General cargo ships:						
Laden	208	947,001	874,583.45	226	1,039,557	982,709.65
Ballast	59	267,595	192,549.38			
Noncargo-carrying ships:						
Naval	1		6,608.50			
Passenger	1	18,874	16,412.50			
Yachts	2	404	290.88	1	59	43.92
Totals	315	1,463,621	1,261,608.18	264	1,234,519	1,181,421.21
Method of propulsion:						
Steam	246	1,144,533	1,008,116.66	218	1,002,795	960,096.74
Motor	68	318,959	253,398.64	45	231,665	221,280.55
Motor (schooner)	1	129	92.88	1	59	43.92
Totals	315	1,463,621	1,261,608.18	264	1,234,519	1,181,421.21

* Vessel carrying tourists.

Of the 464 steam-driven vessels, 258 were oil burning, 201 coal burning, and 5 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of December, 1928. If tolls had been assessed against these vessels at commercial rates, the amount would have been approximately as follows:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Cargo ships	1	3,415	\$4,268.75			
Cruisers	1	3,200	1,600.00	1	3,200	\$1,600.00
Mine sweepers	1	950	475.00	1	950	475.00
Motor sailers	1	10	7.50			
Submarines	6	3,454	1,727.00	6	3,454	1,727.00
Tugs	4	3,279	1,639.50	5	4,279	2,139.50
U. S. Army vessels:						
Launches	2	20	15.00			
Mine planters				1	1,208	604.00
Transports	1	3,908	4,885.00	4	15,632	19,540.00
Tugs	1	46	34.50	1	46	34.50
U. S. Treasury Department vessels:						
Coast Guard	1	2,075	1,037.50			
Cutters	7	2,590	1,235.00			
Totals, U. S. Government	26		16,984.75	19		26,120.00
Panaman Government vessels:						
Transports	1	98	73.50	1	98	73.50
Grand totals	27		17,058.25	20		26,193.50

* Indicates displacement tonnage. * Indicates Panama Canal net tonnage. * Indicates United States net tonnage

The foregoing noncommercial vessels transiting the Canal during the month of December, 1928, carried cargo as follows: Atlantic to Pacific, 4,067 tons; Pacific to Atlantic, 1,020 tons; total, 5,087.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement transiting the Canal during the month of December, 1928. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Atlantic to Pacific.....	5	35	\$34.80	.....
Pacific to Atlantic.....	6	54	49.05	20
Totals.....	11	89	83.85	20

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of December, 1928, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons.	68,256	44,921	113,177
Local cargo shipped..... tons.	9,653	1,261	10,914
Transit cargo arriving..... tons.	2,723,013	2,706,706	5,429,719
Transit cargo clearing..... tons.	2,704,168	2,700,654	5,404,822
Cargo received for transshipment..... tons.	46,917	319	47,236
Cargo transhipped..... tons.	40,435	1,161	41,596
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	83	26	109
Number of withdrawals.....	481	152	633
Tons received.....	3,732	398	4,130
Tons withdrawn.....	2,705	167	2,872
Packages received.....	12,877	4,331	17,208
Packages withdrawn.....	5,814	1,897	7,711
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	92		92
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons	29,446		29,446
Coal issued, miscellaneous:			
Panama Canal departments..... tons	108	10	118
U. S. Army, including vessels..... tons	266	1	267
Individuals and companies..... tons	111		111
Panama Railroad Company..... tons		1	1
Transferred to Navy..... tons	12		12
Total sales and issues..... tons.	29,943	12	29,955
Coal on hand, December 1, 1928..... tons	48,058		48,058
Coal on hand, January 1, 1929..... tons	38,261		38,261
Coal received during month..... tons	20,146		20,146
Coal received from Navy..... tons		12	12
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls	6,318.32	13,422.56	19,740.88
Panama Railroad Company..... bbls	518.66		518.66
U. S. Army and Navy..... bbls		793.52	793.52
Individuals and companies..... bbls		123.15	123.15
Total sales and issues..... bbls	6,836.98	14,339.23	21,176.21
Fuel oil received during December, 1928..... bbls		60,896.10	60,896.10
Fuel oil on hand, January 1, 1929..... bbls	51,167.56	92,044.14	143,211.70
Diesel oil received during December, 1928..... bbls		131.66	131.66
Diesel oil sold during December, 1928..... bbls	134.90	131.66	266.56
Diesel oil on hand, January 1, 1929..... bbls	23,235.20	493.25	23,728.45
Miscellaneous transfers..... bbls	15,878.40	972.89	16,851.29
Gasoline and kerosene pumped for The Panama Canal..... bbls	9,202.94	2,823.12	12,026.26
Gasoline pumped for individuals and companies..... bbls	10,535.42	24,348.72	34,884.14
Oil pumped for individuals and companies..... bbls	504,715.38	388,876.00	893,591.38
Oil pumped for U. S. Shipping Board..... bbls		3,549.00	3,549.00
Oil pumped for U. S. Navy..... bbls	1,287.00	3,243.00	4,530.00
Total fuel oil, gasoline, and kerosene handled..... bbls.	548,561.02	499,179.92	1,047,740.94
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	37	7	44
Measured for Panama Canal net tonnage.....	10	4	14
Re-measured for Panama Canal net tonnage.....	32	5	37
Panama Canal net tonnage corrected.....	1	9	10
U. S. equivalent tonnage corrected.....	19	14	33
Services of harbor equipment:			
Tugs, total operating hours.....	589½	418	1,007½
Launches, total operating hours.....	1,649½	1,702	3,351½

	Cristobal.	Balboa.	Total.
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	17,437.50	13,691.50	31,129.00
Pilotage.....	21,425.00	8,518.00	29,943.00
Seamen.....	14,720.00	12,390.00	27,110.00
Launch service.....	2,434.00	3,179.50	5,613.50
Wharfage.....	18,307.08	6,074.73	24,381.81
Ships measured.....	409.00	165.00	565.00
Miscellaneous.....	978.00	1,255.50	2,233.50
Ships repaired at Panama Canal shops:			
Commercial.....	54	15	69
U. S. Army and Navy.....	4	6	10
Panama Canal equipment.....	8	7	15
Totals.....	66	28	94
Vessels dry-docked:			
Commercial.....	7	1	8
U. S. Army and Navy.....	2	4	6
Panama Canal equipment.....	1	4	5
Totals.....	10	9	19
Clearances issued.....	327	320	647
Bills of health issued.....	327	327	654

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.....	665	3,846,680	2,353,243	618	3,475,891	2,141,324
Vessels entering port but not transiting Canal.....	68	373,299	219,844	17	49,804	34,730
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	128	721,044	430,529	98	601,694	358,973
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.....	663	3,824,191	2,345,232	616	3,477,861	2,143,763
Vessels clearing port but not transiting Canal.....	70	375,531	221,920	17	58,793	43,719
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	130	727,818	434,596	100	610,378	363,531

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,804	1,189	2,993	193	441	634
From Pacific ports.....	207	137	344	346	245	591
Total disembarking.....	2,011	1,326	3,337	539	686	1,225
Embarking:						
For Atlantic ports.....	1,294	935	2,229	53	360	413
For Pacific ports.....	356	191	547	402	976	1,378
Total embarking.....	1,650	1,126	2,776	455	1,336	1,791
Remaining on board:						
From Atlantic to Pacific ports.....	1,829	2,046	3,875	1,994	1,576	3,570
From Pacific to Atlantic ports.....	1,034	1,587	2,621	1,209	1,552	2,761
From Atlantic to Atlantic ports.....	2,360	158	2,518			
From Pacific to Pacific ports.....				136	47	183
Total remaining on board.....	5,223	3,791	9,014	3,339	3,175	6,514
Total arriving.....	7,234	5,117	12,351	3,878	3,861	7,739
Total departing.....	6,873	4,917	11,790	3,794	4,511	8,305

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	315	64	20.3
Pacific to Atlantic.....	264	66	25.0
Totals.....	579	130	22.4

In addition to the aforesaid, 67 passenger-carrying vessels called at the port of Cristobal and 2 at Balboa without transiting the Canal, making a total of 199 passenger-carrying vessels calling at Canal ports during the month.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of December, 1928:

	Ice.	Groceries.	Cold Storage.	Laundry.	Miscellaneous.	Totals.
Sales at Cristobal to:						
Commercial vessels	\$3,801.17	\$16,088.74	\$44,613.94	\$355.25	\$8,009.66	\$72,868.76
Government vessels	258.75	1,535.10	11,376.76	6.91	687.51	13,865.03
Panama Railroad vessels		42.94	1,691.34	762.98	419.78	2,917.04
Total sales, December, 1928.	4,059.92	17,666.78	57,682.04	1,125.14	9,116.95	89,650.83
Total sales, December, 1927.	2,418.19	12,368.62	33,935.66	977.92	6,337.90	56,038.29
Total sales, December, 1926.	2,056.28	11,870.53	38,797.07	1,010.15	5,041.46	58,775.49
Sales at Balboa to:						
Commercial vessels	1,480.06	8,325.61	23,769.81	400.46	3,276.36	37,252.30
Government vessels	1,617.70	2,598.91	16,349.85	261.87	490.16	21,228.49
Panama Railroad vessels				74.80		74.80
Total sales, December, 1928.	3,097.76	10,834.52	40,119.65	737.13	3,766.52	58,555.59
Total sales, December, 1927.	2,128.87	12,592.94	28,884.47	1,028.67	3,644.56	48,279.51
Total sales, December, 1926.	1,116.73	13,322.19	19,671.13	270.19	4,080.87	38,461.11

The aggregate sales to Government vessels during the month was \$35,093.52; to Panama Railroad vessels, \$2,991.84; and to other commercial vessels, \$110,121.06; making the total sales to all vessels, \$148,206.42.

LOCK OPERATION.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of December, 1928, as compared with the corresponding month in 1927 and 1926:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial.					
	North.	South.	Total.	North.	South.	Total.	Dec., 1928.	Dec., 1927.	Dec., 1926.
Gatun	254	294	548	11	9	20	568	563	441
Pedro Miguel	256	309	565	16	20	36	601	597	482
Miraflores	255	303	558	14	18	32	590	592	475
Number of vessels put through locks.									
Gatun	265	315	580	40	52	92	672	652	566
Pedro Miguel	265	314	579	61	75	136	715	677	592
Miraflores	265	314	579	64	78	142	721	678	588

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels	51	53	55
Panama Canal equipment	27	69	73
Launches (under 20 tons)	12	12	12
Panama Government vessels	2	2	2

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in December, 1928, as compared with the preceding month and the corresponding month in 1927:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	2,261,230,000	2,041,870,000	1,827,580,000
Leakage.....	20,000,000	30,500,000	20,000,000
Maintenance.....	9,770,000		32,450,000
Totals, December, 1928.....	2,291,000,000	2,072,370,000	1,880,030,000
Totals, December, 1928.....	2,171,460,000	1,761,940,000	1,699,860,000
Totals, December, 1927.....	2,287,520,000	1,989,370,000	1,843,600,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of December, 1928, are shown in comparative form in the following tabulation:

	December.		December—Years of record.		
	1928.	1927.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	3,884	5,444	17,300	1,265	3,792
Maximum momentary discharge for the month.....	16,517	31,182	154,000		
Gatun Lake watershed, total yield.....	10,959	10,436	10,959	3,005	7,405
Gatun Lake watershed, net yield.....	10,370	9,883	10,370	2,158	6,778
Draft on Gatun Lake for lockages and power.....	3,054	2,984	3,054	1,091	2,326

* December 26, 1909.

* Does not include December, 1914.

The total yield of the Gatun Lake watershed for the month of December was 48 per cent above the 15-year December average, or 10,959 c. f. s., compared with an average of 7,405 c. f. s. It is the highest total yield on record for December and was due primarily to storms of the semi-norther type that occurred over the lower Gatun Lake region on December 9 and 21. The minimum total yield of record for December is 3,005 c. f. s. in 1918. The lake varied in elevation from 86.40 feet on the 9th to 87.12 feet on the 8th and 19th; averaged 86.95 feet, and ended at an elevation of 87.02 feet. Miraflores Lake varied from an elevation of 53.40 feet on the 1st to 54.48 feet on the 6th, averaged 53.99 feet, and ended at an elevation of 53.88 feet.

SEISMOLOGY.

Seismic disturbances were recorded during the month on the 1st, 2d, 3d, 4th, 12th, 16th, 19th, and 26th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,094,400 kilowatt hours, and the computed water consumption was 3,868,585,535 cubic feet. Continuous service was maintained through the month. The Miraflores Diesel-electric station had a gross generator output of 1,100 kilowatt hours, with a fuel oil consumption of 15.10 barrels.

In addition to the usual operating and maintenance work performed, 44 work orders, comprising 57 items of additions or repairs were completed on 33 vessels during the month. There were 355 work orders issued during the month, as compared with 378 for the previous month.

MECHANICAL DIVISION.

During the month miscellaneous repairs were made on 66 vessels at Cristobal and 28 at Balboa. Ten vessels were dry-docked at Cristobal and 9 at Balboa. Repairs were completed on the United States Army transport *Somme*, and work was carried forward on the submarines *S-14* and *S-17*.

MUNICIPAL ENGINEERING DIVISION.

Work was carried forward on several improvement projects in the cities of Colon and Panama, and in the Canal Zone. On the new Alhajuela road, 1,000 linear feet of road were cleared during the month and 8,360 cubic yards were excavated. Engineering work was continued in final road location. Preliminary work at Alhajuela in connection with the construction of the dam was continued during the month.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 732,555,250 gallons.

DREDGING DIVISION.

South Cucaracha slide continued to show a slight general movement throughout the month. A dredge worked 7 days in front of this slide, removing 16,850 cubic yards from the Canal prism. The rock point at West Lirio slide continued to break up during the month and push across the new prism line. One section of Lirio Curve showed a general movement toward the Canal. A dredge worked at both the latter places during the month, removing 64,000 cubic yards of slide material. East Culebra slide showed a slight general movement toward the Canal but there was no encroachment in channel limits. West Culebra slide showed no movement during the month.

There were no other slides and no delays to shipping during the month.

The total excavation during December, 1928, was 235,150 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gaillard Cut—			
Project No. 2, Lirio curve.....		7,200	7,200
West Lirio slide.....	9,600	54,400	64,000
South Cucaracha slide.....	4,250	12,600	16,850
Project No. 9, West Culebra basin.....	600	3,500	4,100
Canal prism, Pacific entrance—			
Maintenance.....	61,000		61,000
Balboa inner harbor—			
Project No. 1.....		28,600	28,600
Maintenance.....	400		400
Plant excavation:			
Naval Air Station fill, Coco Solo.....	15,500	34,000	49,500
Mechanical Division, Coco Solo.....		500	500
Mechanical Division, Balboa.....	2,000		2,000
Dredging sand at Chame.....	1,000		1,000
Totals.....	94,350	140,800	235,150

The ferry crossing at the north end of Pedro Miguel locks operated 31 days during the month. Four hundred and ninety-four trips were made, and 410 Panama Canal, 9 U. S. Army, and 2,072 other vehicles, a total of 2,491, were ferried across the Canal.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on December 31, 1928, totaled 20,935, composed of 6,982 Americans, 2,705 of whom were men, 2,366 women, and 1,911 children; 216 Europeans, 76 of whom were men, 36 women, and 104 children; and 13,737 West Indians, 3,958 of whom were men, 2,589 women, and 7,190 children. The total number of persons in quarters on December 31, 1927, was 21,077.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of December 19, 1928, with a comparison of the working force for the preceding month and for December, 1927:

	As of December 19, 1928.			Total employees.	
	Gold.	Silver.	Total.	November, 1928.	December, 1927.
Operation and Maintenance:					
Office.....	43	52	95	100	78
Electrical.....	160	170	330	309	330
Municipal Engineering.....	166	1,127	1,233	1,060	675
Lock Operation.....	238	761	999	920	875
Dredging.....	175	904	1,079	1,102	1,026
Mechanical.....	465	874	1,339	1,365	1,329
Marine.....	208	749	957	866	782
Fortifications.....	23	277	300	292	237
Totals.....	1,418	4,914	6,332	6,014	5,332

	As of December 19, 1928.			Total employees.	
	Gold.	Silver.	Total.	November, 1928.	December, 1927.
Supply Department:					
Quartermaster.....	194	1,767	1,961	2,005	1,837
Subsistence.....	8	102	110	111	103
Commissary.....	220	1,269	1,489	1,459	1,323
Cattle Industry.....	6	144	150	143	252
Hotel Washington.....	9	102	111	105	107
Transportation.....	57	211	268	258	250
Totals.....	494	3,595	4,089	4,081	3,927
Accounting Department.....	195	9	204	205	208
Health Department.....	268	837	1,075	1,115	1,071
Executive Department.....	511	299	813	816	791
Totals.....	977	1,115	2,092	2,136	2,070
Panama Railroad Company:					
Superintendent.....	50	303	353	332	279
Transportation.....	63	118	181	189	181
Receiving & Forwarding Agency.....	91	1,684	1,775	1,482	1,371
Coaling stations.....	48	245	293	359	318
Totals.....	252	2,350	2,602	2,353	2,149
Grand totals, December, 1928.....	3,141	11,974	15,115		
Grand totals, November, 1928.....	3,120	11,464		14,584	
Grand totals, December, 1927.....	2,979	10,499			13,473

Additions to the gold force on the Isthmus in December were as follows: Employed in the United States, 15; reemployed in the United States, 2; employed on the Isthmus, 17; reemployed on the Isthmus, 10; total, 44. Separations from the gold force totaled 37; as follows: Resigned, 19; discharged, 15; retired, 1; died, 2. At the end of the month there were on file 162 applications from residents of the Isthmus for employment.

VITAL STATISTICS:

A total of 217 deaths occurred during the month of December, 1928, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 20.11 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 43; tuberculosis (various organs), 34; diarrhea and enteritis, 19; organic diseases of the heart, 12; and syphilis, 9. There were 7 deaths from cancer, 6 from nephritis (acute and chronic), 5 from apoplexy, 2 from diphtheria, 2 from meningococcus meningitis, and 1 each from paratyphoid fever, measles, erysipelas, and tetanus. There were 10 deaths among nonresidents. These are not included in the above statistics.

There were 320 live births, and 16 stillbirths, reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 31.13 per 1,000 population. Deaths among children under 1 year of age numbered 63, giving an infant mortality rate of 196.88.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during December was 97, of whom 16 were employees (2 white and 14 colored), 7 were members of employees' families (2 white and 5 colored), 12 were Canal Zone agriculturists, 20 were other civilian nonemployees, and 42 were Army and Navy personnel. Of the 23 employees and members of employees' families, 17 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There were 2 deaths from malaria, both children of Zone farmers.

A case of smallpox was admitted to hospital from Colon on December 31. This is the first case of smallpox originating in either of the terminal cities on the Canal Zone since August, 1922.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions and received on the Isthmus during the month totaled \$316,941.20, of which \$294,967.85 was for the Department of Operation and Maintenance and \$21,973.35 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material amounted to \$48,467.60.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of November, 1928, as compared with November, 1927, and the figures for the first five months of the current fiscal year as compared with the same period in the fiscal year 1928.

It is impossible to submit the figures for the month of December at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	November, 1928.	November, 1927.	To end of November.	
			This year.	Last year.
Tolls	\$2,225,957.88	\$2,369,385.80	\$10,918,322.87	\$11,533,826.87
Other receipts	326,229.90	283,475.01	1,589,098.65	1,436,044.04
Total transit revenues	2,552,187.78	2,652,860.81	12,507,421.52	12,969,870.91
Total transit expenses	1,037,992.72	1,010,334.33	5,238,609.85	4,932,845.73
Net transit revenues	1,514,195.06	1,642,526.48	7,268,811.67	8,037,025.18
Three per cent capital charge	615,967.41	611,042.69	3,079,090.26	3,053,410.90
Transit surplus	898,227.65	1,031,483.79	4,189,721.41	4,983,614.28
Business revenues	1,443,894.85	1,142,283.06	6,511,602.74	6,191,975.75
Business expenses	1,372,195.88	1,115,362.85	6,180,198.67	5,832,642.35
Net business revenues	71,698.97	26,920.21	331,404.07	359,333.40
Three per cent capital charge	61,003.64	60,418.14	316,649.44	313,851.58
Business surplus	10,695.33	33,497.93	14,754.63	45,481.82
Combined revenues	3,996,082.63	3,795,143.87	19,019,024.26	19,161,846.66
Combined expenses	2,410,185.60	2,125,697.18	11,418,808.52	10,765,488.08
Net revenues	1,585,897.03	1,669,446.69	7,600,215.74	8,396,358.58
Three per cent capital charge	676,971.05	671,460.83	3,395,739.70	3,367,262.48
Combined surplus	908,925.98	997,985.86	4,204,476.04	5,029,096.10

* Indicates deficit.

Respectfully,

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending January 19, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Ancon	Panama Railroad S. S. Line		January 6		2,982
Kinderdijk	Holland-American Line		January 6		120
Feltre	Nav. Libera-Triestina		January 6		49
Cali	North German Lloyd		January 6		402
Calamares	United Fruit Co	January 6	January 6	28½	315
Saint Jean	French Line	January 6	January 7	450	(²)
Ecuador	Panama Mail S. S. Co.	January 6	January 7	625	233
Hvoslef	United Fruit Co		January 7		1,063
Cartago	United Fruit Co		January 7		2
Wanks	Standard Fruit & S. S. Corp.		January 7		18½
Ebro	Pacific Steam Navigation Co	January 7	January 8	12	
Mayari	United Fruit Co	January 7	January 8	674	(²)
Guatemala	Panama Mail S. S. Co.	January 7	January 8	845	973
Pastores	United Fruit Co	January 7	January 9	1,250	98
Theodore Roosevelt	Fred Olsen & Co	January 8	January 9	209	(²)
Breda	Royal Netherlands S. S. Co.	January 8	January 9	290	136
Perene	Peruvian Line	January 8	January 9	266	161
Spreewald	Hamburg-American Line	January 8	January 9	22	34
Saint Joseph	French Line	January 8	January 9	764	(²)
Loreto	Pacific Steam Navigation Co	January 8	January 9	416	210½
Deroche	Union Oil Co	January 8	January 10	11,000	(²)
Narenta	Pacific Steam Navigation Co	January 8	January 10	17	252
Iriona	United Fruit Co	January 9	January 9	631	67
Almelo	Royal Netherlands S. S. Co.	January 9	January 9	70	(²)
Crijnsen	Royal Netherlands S. S. Co.	January 9	January 10	62	538
Granada	Standard Fruit & S. S. Corp.	January 9	January 11	423	490

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Sixaola	United Fruit Co.	January 9	January 10	680	976
Guayaquil	Panama Railroad S. S. Line	January 9	January 11	235	
Cerigo	Hamburg-American Line	January 9	January 12	681	245
City of Panama	Panama Mail S. S. Co.		January 10		3,265
Mayan	Gulf-Caribbean S. S. Co.	January 10	January 10	164	(²)
Mayari	United Fruit Co.	January 10	January 10	(¹)	22
Cauca	National Navigation Co.	January 10		264	
Linda S.	R. Feuillebois	January 10	January 10	(¹)	36
Parthenia	Donaldson Line	January 10	January 11	(¹)	315
Suriname	United Fruit Co.	January 11	January 11	47	164
President Adams	Dollar Line	January 11		100	
Hans Leonhardt	Colombian Transport Co.	January 11	January 12	99	(²)
Wanks	Standard Fruit & S. S. Corp.	January 11		81	
San Pablo	United Fruit Co.	January 11		405	
Acajutla	Pacific Steam Navigation Co.	January 12		911	
Oroya	Pacific Steam Navigation Co.	January 12	January 12	$\frac{1}{2}$	212
Galicia	Hamburg-American Line	January 12		38	
Rapot	North German Lloyd	January 12		54	
William M.	R. Feuillebois	January 12	January 12	(¹)	32
Stella	Panama Mail S. S. Co.	January 12		603	
Baralt	Royal Netherlands S. S. Co.	January 12		884 $\frac{1}{2}$	
Parismina	United Fruit Co.	January 12		381	
Puerto Rico	French Line	January 9	January 11	312	1,016
Caldas	National Navigation Co.		January 11		180
La Perla	United Fruit Co.		January 10		250
San Pablo	United Fruit Co.		January 13		455
Galicia	Hamburg-American Line		January 13		1,264
Rapot	North German Lloyd		January 13		277
Pastores	United Fruit Co.	January 13	January 13	23 $\frac{1}{2}$	57
Antillian	Leyland Line	January 13		59	
Santa Tecla	N. O. & S. A. S. S. Line	January 14	January 14	105	180
Gracia Teresa	Grace Line	January 14	January 14	(¹)	160
Baralt	Royal Netherlands S. S. Co.		January 14		61
Parismina	United Fruit Co.		January 14		188
Salvador	Pacific Steam Navigation Co.		January 14		1,132
Stella	Panama Mail S. S. Co.		January 15		1,341
San Pedro	Hammond Lumber Co.	January 14	January 16	1,191	(²)
Nike	Anglo-Saxon Petroleum Co.	January 14	January 16	13,513	(²)
Manaquí	United Fruit Co.	January 14	January 16	7	1,152
Buenos Aires	Johnson Line	January 15	January 16	(¹)	243
Minnesota	French Line	January 15	January 16	70	19
Saint Louis	French Line	January 15	January 16	354	131
Wanks	Standard Fruit & S. S. Co.		January 16		6 $\frac{1}{2}$
Manizales	North German Lloyd	January 15	January 18	731	284
Cristobal	Panama Railroad S. S. Line	January 16		4,202	
Coppename	United Fruit Co.	January 16	January 17	1,858	109
San Jose	United Fruit Co.	January 16	January 17	1,457	230
Carare	Elders & Fyffes, Ltd.	January 16	January 17	12 $\frac{1}{2}$	989
London Importer	Furness, Witly & Co.	January 16	January 17	(¹)	315
Gatun	Standard Fruit & S. S. Corp.	January 16	January 18	471	509
Ucayali	Peruvian Line	January 16		2,170	
Alvarado	Pacific Steam Navigation Co.	January 16	January 18	679	831
Sixaola	United Fruit Co.	January 17	January 17	2 $\frac{1}{2}$	330 $\frac{1}{2}$
Buenaventura	Panama Railroad S. S. Line	January 17	January 18	445	129
Zacapa	United Fruit Co.	January 17	January 18	779	699
Ulúa	United Fruit Co.	January 17	January 18	907	324
Martha	Chr. Hannevig	January 18		961	
Iriona	United Fruit Co.	January 18	January 18	144	287
Wanks	Standard Fruit & S. S. Corp.	January 18		75	
Carl Legien	Hamburg-American Line	January 18	January 19	44	368
Finn	Colombian Transport Co.	January 19	January 19	39	(²)
Venezuela	Panama Mail S. S. Co.	January 19		803	
Heredia	United Fruit Co.	January 19		463	
Legazpi	Spanish Line	January 19		89	
Sosua	United Fruit Co.	January 19	January 19	(¹)	349
Oranian	Leyland Line	January 19		591	

¹ No cargo discharged.² No cargo laded.

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average tempera- ture, Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9)	1018	1020	1013	84.0
Balboa (dock 18)	1011	1021	1005	83.0

(NOTE—The above is based on two months observations at Cristobal, and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, January 19, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Net.
Curacao	12	18.33	13	6.15	13	13.28	American	Grace Line	403.0	52.0	16.2	New York, N. Y.	Valparaiso, Chile	General	1,773	6,804	4,897
Camadolite ^{1 2}	12	23.35	13	7.15	13	14.31	British	Imperial Oil Co.	510.0	68.0	29.6	Newport News, Va.	Talara, Peru	Ballast	11,556	6,772	
Montanan	13	2.00	13	8.25	13	15.37	American	Amer.-Hawaiian Line	404.0	53.0	18.0	Boston, Mass.	Portland, Oreg.	General	2,654	6,756	4,775
Japanese	13	5.40	13	9.30	13	17.52	British	Prince Line, Ltd.	441.0	60.0	25.0	New York, N. Y.	Manila, Philippines	General	7,029	9,240	6,152
Surailco	13	11.10	13	11.25	13	19.10	American	Transmarine Lines	324.0	46.0	19.6	New York, N. Y.	San Francisco, Cal.	(7)	2,084	3,984	2,628
Indien	13	17.15	13	17.30	14	00.44	Danish	Canadian Transp. Co.	390.0	53.2	24.0	New York, N. Y.	Yokohama, Japan	Fertilizer	6,000	6,173	4,418
Rapote	12	23.26	13	20.55	14	4.52	German	North German Lloyd	393.0	54.0	26.2	Hamburg, Germany	San Antonio, Chile	General	7,029	6,583	4,626
Bagadue ³	14	6.00	14	17.17	15	2.42	American	U. S. Navy	149.3	30.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
President	11	22.05	14	6.15	14	20.45	American	Dollar Line	502.0	62.2	27.0	New York, N. Y.	San Francisco, Cal.	General	3,561	12,057	8,457
Adams	14	6.00	14	17.15	15		American	U. S. Navy	231.0	21.10		Cristobal, C. Z.	Balboa, C. Z.				
S-15 ⁴	14	6.00	14	17.15	15		American	U. S. Navy	231.0	21.10		Cristobal, C. Z.	Balboa, C. Z.				
O-6 ⁴	14	6.00	14	17.15	15		American	U. S. Navy	172.4	18.0		Cristobal, C. Z.	Balboa, C. Z.				
O-8 ⁴	14	6.00	14	17.15	15		American	U. S. Navy	172.4	18.0		Cristobal, C. Z.	Balboa, C. Z.				
O-9 ⁴	14	6.00	14	17.15	15		American	U. S. Navy	172.4	18.0		Cristobal, C. Z.	Balboa, C. Z.				
O-10 ⁴	14	6.00	14	17.15	15		American	U. S. Navy	172.4	18.0		Cristobal, C. Z.	Balboa, C. Z.				
Barat	12	21.55	14	7.20	14	18.25	Dutch	Royal Neth. S. S. Co.	210.0	33.0	11.7	Cristobal, C. Z.	Guayaquil, Ecuador	General	61	1,183	742
La Perla	14	4.25	14	7.25	14	18.20	American	United Fruit Co.	325.2	48.1	21.4	Port Limon, C. R.	San Francisco, Cal.	Bananas, coffee.	765	4,033	3,268
Marsadak	14	5.50	14	7.52	14	21.20	American	Charles Nelson & Co.	321.0	46.0	20.0	Baltimore, Md.	San Francisco, Cal.	General	3,500	3,984	2,628
Salvador	5	20.35	14	9.00	14	21.30	British	Pacific Steam Nav. Co.	215.0	33.5	16.5	Cristobal, C. Z.	Champerico, Guat.	General	1,050	1,270	735
Antares ⁵	14	6.10	14	11.20	14	22.47	American	U. S. Navy	401.0	54.0	19.3	Norfolk, Va.	Balboa, C. Z.	Naval supplies	4,072	8,216	6,037
Silverguaya ²	14	11.10	14	11.45	14	23.44	British	Kerr S. S. Co.	425.6	58.3	20.5	New York, N. Y.	Singapore, St. Set.	General	1,867	2,832	1,803
Santa Tecla	14	2.55	14	13.40	14	23.54	American	N. O. & S. A. S. S. Co.	298.0	40.0	18.4	New Orleans, La.	Talcahuano, Chile	General	3,476	10,173	7,354
Hawaii Maru	14	10.40	14	13.40	15	1.18	Japanese	Osaka Shosen Kaisha	475.0	61.0	21.0	Buenos Aires, Arg.	Kobe, Japan	(8)	7,226	4,649	
Trontolite ^{1 2}	13	21.50	14	14.58	15	2.19	British	Imperial Oil Co.	420.8	57.0	22.9	Halifax, N. S.	Los Angeles, Calif.	Ballast	115	1,345	806
Bienvenido	14	12.35	14	15.15	15	1.13	British	P. N. & J. N. Carranza.	210.3	32.0	13.0	Guanta, Venezuela.	Buenaventura, Col.	Cattle	7,808	5,139	
Sancora	14	4.10	14	15.30	15	3.20	American	Ore S. S. Corp.	449.0	57.2	20.8	Baltimore, Md.	Cruz Grande, Chile	Ballast	2,436	7,473	5,644
Silverpine ²	14	18.55	14	20.05	15	4.19	British	Kerr S. S. Co.	490.3	55.3	16.0	Baltimore, Md.	Shanghai, China.	General	1,337	985	606
Stella	12	9.10	15	6.05	15	19.08	Norwegian	Panama Mail S. S. Co.	195.1	32.9	15.2	Cristobal, C. Z.	Puntarenas, C. R.	General			
Birmingham	15	00.50	15	6.35	15	19.05	American	Isthmian S. S. Lines	395.5	55.0	25.0	Baltimore, Md.	Vancouver, B. C.	(9)	7,356	7,304	5,188
C. O. Stillman ^{1 2}	14	23.40	15	6.55	15	20.35	British	Inter Petroleum Co.	565.7	75.6	28.0	New York, N. Y.	Los Angeles, Calif.	Ballast	16,780	9,885	
Witram	15	4.20	15	7.25	15	21.23	German	North German Lloyd	449.1	58.0	20.6	Bremen, Germany	Los Angeles, Calif.	General	3,122	7,820	5,661
Oterpool	15	6.35	15	7.35	15	22.25	British	Continental Grain Co.	390.0	55.0	15.0	Norfolk, Va.	San Francisco, Cal.	Ballast	5,926	4,262	
Vesal ⁶	15	6.27	15	11.18	15	23.30	American	U. S. Navy	450.0	60.0	20.7	Guantanamo, Cuba	Balboa, C. Z.	Ballast			
Atlantic Sun ¹	15	10.35	15	12.15	16	00.38	American	Sun Oil Co.	429.0	59.2	19.0	Providence, R. I.	Los Angeles, Calif.	Ballast	7,568	5,283	
Tanker.																	
													</				

¹ Tanker.

² Motor ship.

³ Tug.

⁴ Submarine.

⁵ Auxiliary.

⁶ Repair ship.

⁷ Steel rails and pipes.

⁸ Cotton, wax, general, etc.

⁹ Steel, tinplate, and general.

Canadian	15	7 55	13 25	16	1 50	2 53	British	Can. Nat. Steamships	400.0	52.0	22.8	Halifax, N. S.	Auckland, N. Z.	General	3,500	5,954	4,139
Conqueror	15	11 37	13 33	16	2 58	10	4 00	Sir R. Roper & Co.	415.0	55.5	23.0	Antwerp, Belgium	Los Angeles, Calif.	Cement clinkers	7,123	6,611	4,812
Sedgwick	15	9 05	16	6 20	17 33	16	18 39	French Line	397.0	50.0	20.0	Havre, France	Valparaiso, Chile	General	2,705	5,857	4,166
Saint Louis	15	9 05	16	6 05	16 30	16	18 39	U. S. Navy	231.0	50.0	20.0	Cristobal, C. Z.	Balboa, C. Z.	General	3,037	6,283	4,441
Munro	15	13 33	16	6 10	16 32	16	17 30	French Line	412.0	50.0	23.11	Havre, France	Vancouver, B. C.	Iron, general	3,037	6,283	4,441
Aluna Mendi	15	16 50	16	7 25	16 18	16	20 12	Sofa and Aznar	400.0	52.0	16.0	Gibraltar	Caleta Colosa, Chile	Ballast	6,427	4,751	
Bobolink	14	22 15	16	8 45	16 18	16	18 51	U. S. Navy	180.0	35.6	14.0	United States	Balboa, C. Z.	Ballast	3,091	7,107	5,041
Wando	14	22 15	16	8 45	16 18	16	18 51	U. S. Navy	123.6	26.7	14.0	United States	Balboa, C. Z.	Ballast	3,091	7,107	5,041
Columbia	15	20 55	16	9 15	16 19	16	22 47	Orlent S. S. Co.	235.0	51.0	14.0	Naksoy, Denmark	Gray's Har., Wash.	Ballast	6,427	4,751	
Pennsylvania	16	2 00	16	10 30	16 20	16	21 40	Amor-Hawaiian Line	407.7	53.7	20.0	Boston, Mass.	Seattle, Wash.	General	3,091	7,107	5,041
H. C. Folger	16	3 25	16	11 10	16 21	16	22 47	Atlantic Refining Co.	435.0	56.0	22.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	7,401	5,159	
Lillian Lucken-	16	3 35	16	11 55	16 22	16	22 47	Luckenbach Line	448.0	60.2	22.0	Boston, Mass.	Seattle, Wash.	General	3,000	9,294	6,865
bach	16	3 35	16	11 55	16 22	16	22 47	Luckenbach Line	448.0	60.2	22.0	Boston, Mass.	Seattle, Wash.	General	3,000	9,294	6,865
Rokes	15	13 45	16	12 53	17 00	17	11 15	Vergottis S. S. Co.	400.0	52.4	16.0	Rotterdam, Holland	Arica, Chile	Ballast	5,819	4,230	
Vergetia	15	13 45	16	12 53	17 00	17	11 15	Vergottis S. S. Co.	400.0	52.4	16.0	Rotterdam, Holland	Arica, Chile	Ballast	5,819	4,230	
Victor	16	6 35	16	14 09	17 1	16	17 27	Can. Nat. Steamships	400.0	52.0	20.0	Halifax, N. S.	Brisbane, Australia	General	2,710	5,956	4,172
Aconagua	16	6 47	16	14 50	17 1	16	17 27	South American Line	422.8	56.2	25.10	New York, N. Y.	Valparaiso, Chile	General	2,847	7,764	4,705
Cedarhurst	16	7 05	16	16 01	17 3	16	17 49	T. P. Gallagher & Co.	390.0	54.0	16.0	New York, N. Y.	Los Angeles, Calif.	Ballast	6,209	4,303	
King Alfred	16	16 15	16	17 20	17 5	16	17 49	King Line, Ltd.	403.0	52.0	16.0	Algiers, Algeria	Portland, Ore.	Ballast	5,790	4,061	
San Pedro	14	7 05	16	17 30	17 5	16	17 49	Hammond Lumber Co.	289.0	44.0	15.8	Savannah, Ga.	Gray's Har., Wash.	Rails	1,101	2,637	1,701
Falcon	15	23 50	16	13 50	17 09	16	17 09	U. S. Navy	180.0	35.6		United States	Balboa, C. Z.	General	7,750	12,623	8,763
Texas	17	5 45	17	6 09	17 14	17	14 57	U. S. Navy	565.0	105.0		Hampton R'ds, Va.	Balboa, C. Z.	General	7,750	12,623	8,763
Hororata	16	17 50	17	5 38	17 13	17	17 15	N. Z. Shipping Co.	511.1	104.2	30.10	London, England	Bluff, N. Z.	General	7,750	12,623	8,763
Wyoming	16	15 35	17	7 20	17 18	17	18 25	U. S. Navy	554.0	104.0		Hampton R'ds, Va.	Balboa, C. Z.	General	7,750	12,623	8,763
Richmond	16	14 10	17	7 45	17 16	17	16 52	U. S. Navy	550.0	55.0		Yorktown, Va.	Balboa, C. Z.	General	7,750	12,623	8,763
Arkansas	16	15 45	17	8 15	17 20	17	18 48	U. S. Navy	554.0	104.0		Hampton R'ds, Va.	Balboa, C. Z.	General	7,750	12,623	8,763
Cincinnati	16	14 10	17	8 35	17 18	17	18 56	U. S. Navy	550.0	55.0		Yorktown, Va.	Balboa, C. Z.	General	7,750	12,623	8,763
Sancstad	17	6 10	17	9 50	17 23	17	20 18	Fern Line	381.6	53.3	24.6	Houston, Texas	Osaka, Japan	General	6,400	6,100	4,210
Robin	16	16 15	17	9 50	17 23	17	20 18	U. S. Navy	180.0	35.6		Yorktown, Va.	Balboa, C. Z.	General	6,400	6,100	4,210
Marblehead	16	14 10	17	10 10	17 21	17	21 53	U. S. Navy	550.0	55.0		Yorktown, Va.	Balboa, C. Z.	General	6,400	6,100	4,210
Concord	16	14 25	17	11 35	18 00	17	21 53	U. S. Navy	550.0	55.0		Yorktown, Va.	Balboa, C. Z.	General	6,400	6,100	4,210
Daghd	17	7 05	17	12 40	18 1	17	3 10	Dominion Coal Co.	455.0	58.0	17.0	Norfolk, Va.	Mejillones, Chile	Ballast	8,002	5,606	
Trojanstar	17	8 35	17	13 45	18 2	17	3 55	Blue Star Line	463.0	59.0	24.0	Newcastle-on-Tyne	Vancouver, B. C.	Ballast	10,405	7,401	
London Im-	16	12 50	17	14 35	18 4	17	5 15	Furness, Withy & Co.	450.0	57.0	17.6	Glasgow-England	Vancouver, B. C.	General, bananas	1,362	8,529	5,093
porter	16	12 50	17	14 35	18 4	17	5 15	Furness, Withy & Co.	450.0	57.0	17.6	Glasgow-England	Vancouver, B. C.	General, bananas	1,362	8,529	5,093
Laurel	17	15 50	17	16 05	18 5	17	6 42	States S. S. Co.	410.0	54.0	19.0	Wilmington, Del.	Portland, Ore.	General, steel	3,093	6,756	4,874
Scota	16	15 45	17	6 20	17 15	17	6 42	U. S. Navy	149.3	30.0		Cristobal, C. Z.	Balboa, C. Z.	General	3,093	6,756	4,874
Florida	16	15 45	17	6 15	18 19	18	6 42	U. S. Navy	510.0	85.2		Hampton R'ds, Va.	Balboa, C. Z.	General	3,093	6,756	4,874
Whitney	16	15 10	18	6 15	18 20	18	6 42	U. S. Navy	460.0	61.0		Yorktown, Va.	Balboa, C. Z.	General	3,093	6,756	4,874
Dublin	16	15 10	18	7 25	18 21	18	6 42	U. S. Navy	460.0	61.0		Yorktown, Va.	Balboa, C. Z.	General	3,093	6,756	4,874
No. 199	16	13 00	18	7 25	18 23	18	6 42	U. S. Navy	310.0	30.0		Hampton R'ds, Va.	Balboa, C. Z.	General	3,093	6,756	4,874
No. 249	16	13 00	18	7 25	18 23	18	6 42	U. S. Navy	310.0	30.0		Yorktown, Va.	Balboa, C. Z.	General	3,093	6,756	4,874
No. 290	16	13 00	18	7 25	18 23	18	6 42	U. S. Navy	310.0	30.0		Yorktown, Va.	Balboa, C. Z.	General	3,093	6,756	4,874
No. 293	16	13 00	18	7 25	18 23	18	6 42	U. S. Navy	310.0	30.0		Yorktown, Va.	Balboa, C. Z.	General	3,093	6,756	4,874
Alvarado	16	15 00	18	7 40	18 23	18	6 42	U. S. Navy	310.0	30.0		Yorktown, Va.	Balboa, C. Z.	General	3,093	6,756	4,874
Birk	16	17 20	18	8 25	19 00	19	1 15	Pacific Steam Nav. Co.	303.0	43.0	17.10	Cristobal, C. Z.	Puntarenas, C. R.	General	831	2,844	1,748
No. 287	17	21 10	18	8 50	19 1	19	2 00	Anglo-Chilean Nit. Co.	359.0	52.0	12.6	Mobile, Ala.	Tocopilla, Chile	Ballast	4,751	3,160	
No. 287	16	15 00	18	8 35	19 1	19	2 00	U. S. Navy	310.0	30.0		Yorktown, Va.	Balboa, C. Z.	General	4,751	3,160	
No. 292	16	15 00	18	8 35	19 1	19	2 00	U. S. Navy	310.0	30.0		Yorktown, Va.	Balboa, C. Z.	General	4,751	3,160	

15 Towing raft.

16 Destroyer.

17 Destroyer tender.

18 Cruiser.

19 Battleship.

20 Mine sweeper.

21 Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.—Continued.

Ship.	Arrived at port.		Completed transit.	Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.								Nature.	Tons.	
No. 250 ¹⁶	16	15.00	18	9.05	19	1.57	U. S. Navy	310 0	30 0		Yorktown, Va.	Balboa, C. Z			
No. 233 ¹⁶	16	15.00	18	9.05	19	1.57	U. S. Navy	310 0	30 0		Yorktown, Va.	Balboa, C. Z			
Winthrop	17	1.20	18	10.00	19	3.05	Strass & Co.	400 0	52 3	17 0	Leith, England	Balboa, C. Z	Ballast	5,721	4,058
Firmore	17	19.10	18	11.10	19	4.25	On-S. S. Corp	449 1	57 2	20 1	Baltimore, Md	Cruz Grande, Chile	Ballast	7,817	5,185
Willolo	18	6.50	18	12.20	19	6.53	William S. S. Co	386 8	52 2	20 7	Tampico, Mexico	Seattle, Wash.	General	3,700	5,680
Jacob Maersk	18	6.20	18	12.40	19	5.40	Maersk S. S. Co	284 9	42 4	20 7	Philadelphia, Pa.	Puerto Rico, C. R.	General	2,993	4,080
Lobor	18	7.30	18	13.30	19	7.14	Ore S. S. Corp	429 0	54 3	26 0	New York, N. Y.	Yokohama, Japan	General	14,325	4,635
City of Dunkirk	18	7.00	18	13.10	19	7.48	Ellerman & Bucknall	540 0	72 0	24 10	Philadelphia, Pa.	Cruz Grande, Chile	Ballast	7,108	5,420
Geo. W. Barnes	18	8.50	18	16.05	19	19.06	Huasteca Petroleum Co.	416 8	53 1	19 2	Norfolk, Va.	Los Angeles, Calif.	General	6,685	7,759
Sydney	18	10.28	18	17.10	19	22.00	Avet Bros & Sons	431 0	54 0	18 0	London, England	Vancouver, B. C.	Ballast	6,771	4,861
Edward P. Jersey City	18	12.30	18	18.15	19	23.58	Sir W. L. Smith & Sons	411 8	55 0	16 3	Birkenhead, Eng.	Vancouver, B. C.	Ballast	6,952	5,005
Nones ¹⁷	18	.....	18	.....	18	.....	U. S. Army	101 0	23 5		Cristobal, C. Z	Balboa, C. Z			
Gen. Wm. M. Graham ¹⁸	18	.....	18	18.10	18	.....	U. S. Army	156 0	32 0		Cristobal, C. Z	Balboa, C. Z			
Utah ¹⁹	18	20.00	19	5.45	19	23.52	U. S. Navy	510 0	85 2		Hampton, Va.	Balboa, C. Z			
No. 231 ¹⁶	16	15.00	19	6.21	19	20.50	U. S. Navy	310 0	30 0		Yorktown, Va.	Balboa, C. Z			
No. 235 ¹⁶	16	15.00	19	6.21	19	20.50	U. S. Navy	310 0	30 0		Yorktown, Va.	Balboa, C. Z			
No. 236 ¹⁶	16	15.00	19	6.21	19	22.05	U. S. Navy	310 0	30 0		Yorktown, Va.	Balboa, C. Z			
No. 240 ¹⁶	16	15.00	19	6.21	19	22.05	U. S. Navy	310 0	30 0		Yorktown, Va.	Balboa, C. Z			
Manizales	18	18.28	19	7.55	20	00.55	North German Lloyd	310 0	30 0		Yorktown, Va.	Balboa, C. Z			
Heracles	18	18.05	19	7.55	20	00.55	Brunsard Line	216 0	33 0	13 0	Cristobal, C. Z	Buenaventura, Col.	General	169	1,132
No. 237 ¹⁶	18	18.05	19	7.55	20	00.55	Brunsard Line	389 8	54 0	21 6	Norfolk, Va.	Los Angeles, Calif.	General	3,000	5,680
No. 238 ¹⁶	16	15.00	19	7.25	20	2.20	U. S. Navy	310 0	30 0		Yorktown, Va.	Balboa, C. Z			
No. 239 ¹⁶	16	15.00	19	7.25	20	2.20	U. S. Navy	310 0	30 0		Yorktown, Va.	Balboa, C. Z			
No. 241 ¹⁶	16	15.00	19	7.25	20	2.20	U. S. Navy	310 0	30 0		Yorktown, Va.	Balboa, C. Z			
Marte	18	16.45	19	9.10	20	00.58	Anglo-Saxon Pet. Co	465 0	62 0	18 0	Liverpool, England	Los Angeles, Calif.	Ballast	8,645	6,054
Maersk ¹⁹	18	22.05	19	9.50	20	4.55	Venezuela Gulf Oil Co.	305 4	50 2	13 0	Venezuela	Balboa, C. Z	Ballast		
Monagas ¹⁹	18	22.05	19	9.50	20	4.55	Venezuela Gulf Oil Co.	305 4	50 2	13 0	Venezuela	Balboa, C. Z	Ballast		
No. 217 ¹⁶	16	15.00	19	9.45	20	3.25	U. S. Navy	310 0	30 0		Yorktown, Va.	Balboa, C. Z			
Mersey ²¹	19	6.40	19	10.35	20	3.37	U. S. Navy	413 0	50 2		Yorktown, Va.	Balboa, C. Z			
Buenaventura	17	18.55	19	12.53	20	6.28	Panama R. R. S. S. Line	251 0	48 0	29 6	New York, N. Y.	Guayaquil, Ecuador	General	1,358	2,873
Carl Legion	18	12.12	19	13.00	20	6.31	Hamburg-American Line	419 0	54 0	22 4	Hamburg, Germany	Valparaiso, Chile	General	3,912	1,776
Ogala ²²	19	11.45	19	16.30	20	7.21	U. S. Navy	375 0	52 0		Yorktown, Va.	Balboa, C. Z			

* Tanker.

* Destroyer.

* Tug.

* Mine planter.

* Battleship.

* Motor ship.

* Hospital ship.

* Mine layer.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.	Completed transit.	Cleared for sea.	Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.	Panama Canal tonnage.
Willfaro	12 19 10	13 00 55	13 9 12	American	Williams S. S. Line	386 8	52 2	23 0	Seattle, Wash.	New York, N. Y.	Lumber, general	5,980
West Cape	12 22 35	13 02 00	13 10 23	American	McCormick S. S. Co	499 5	54 2	24 1	San Francisco, Cal.	New York, N. Y.	Lumber, general	8,500
Romany	12 13 00	13 2 49	13 12 05	British	Sir. R. Ropner & Sons.	390 0	55 0	23 4	Vane auver, B. C.	London, England	Wheat	7,773

Melpomene ¹	13	00	03	13	4	30	13	13	13	13	18	10	French	Cie. Aux. de Navigation	425.8	56.9	27.0	Los Angeles, Calif	Sete, France.	(²⁷)	9,222	7,085	5,050
Waterton ¹	12	20	23	13	5	12	13	14	10	13	17	10	American	Cities Service Trans. Co.	416.9	50.2	27.4	Baltimore, Md.	Baltimore, Calif.		11,105	6,716	4,778
Unbe Mendi ¹	13	8	00	13	9	15	13	16	30	13	14	10	Spanish	Sota & Aznar	365.0	56.3	21.0	Bilbao, Spain			5,000	4,654	3,357
Gen. Wm. M. Graham ²³																							
Georgian	13	05	13	14	31	13	23	10	14	16	10		American	U. S. Army	160.2	32.0		Balboa, C. Z.	Cristobal, C. Z.		6,178	5,719	4,023
Ternier	13	18	45	14	3	25	14	12	05	14	13	20	Norwegian	Amer-Hawalian Line	386.8	52.2	23.6	Vancouver, B. C.	Hamburg, Germany		8,000	5,639	4,161
Stegness	13	19	45	14	4	56	14	12	35	14	15	00	British	Wilhelmsen Line	400.0	52.2	24.6	Calela Colosa, Chile	Savannah, Ga.		7,627	6,621	4,916
Dio	14	6	55	14	7	49	14	15	25	14	15	25	American	Sir W. R. Smith & Sons	386.8	54.3	23.0	Vancouver, B. C.	Manchester, Eng.		5,580	5,708	4,131
Sciotia ²⁴														Redwood Line	401.8	54.3	23.0	Los Angeles, Calif	New Orleans, La.				
S-14 ²⁵													American	U. S. Navy	155.0	30.0		Balboa, C. Z.	Cristobal, C. Z.	(²⁸)			
Santa Teresa	14	7	20	14	9	13	14	16	55				American	U. S. Navy	231.0	30.0		Talcahuano, Chile	Cristobal, C. Z.	(²⁹)	3,254	5,726	5,886
Glenworth	14	11	00	14	11	39	14	21	48	15	2	00	British	Grace Line	360.2	51.5	22.0	Vancouver, B. C.	New York, N. Y.	(³⁰)	7,920	7,998	5,869
Hawaiian	14	12	15	14	12	44	14	20	00	14	22	45	American	R. S. Delglish & Co.	450.0	55.0	27.0	Portland, Ore.	Rotterdam, Holland		6,036	6,766	4,767
Ferlane ²⁶	14	12	30	14	13	24	14	21	40	14	21	40	Norwegian	Amer-Hawalian Line	404.0	54.0	27.0	Vancouver, B. C.	Boston, Mass.		7,000	6,264	4,481
Chileop	14	14	55	15	2	35	15	11	50	15	1	55	American	Fearnley & Eger	376.5	53.8	25.0	Adriavostok, Sib.	Aarhus, Denmark		8,067	6,609	4,973
Seapool	14	15	50	15	4	28	15	13	30	15	15	05	British	Chile S. S. Corp.	414.5	54.1	24.6	New York, N. Y.	New York, N. Y.		5,907	5,521	4,078
Myrtle	14	16	20	15	5	15	15	13	30	15	15	05	American	Sir R. Koppner & Sons	373.0	56.0	22.7	Portland, Ore.	New York, N. Y.		6,761	6,755	4,865
Tsuyama Maru	14	14	15	15	6	25	15	16	05	15	14	20	Japanese	Forrest Transport Co.	410.5	54.0	25.2	Manila, Philippines	Boston, Mass.		9,932	7,956	5,881
San Eduardo ¹	15	6	25	15	7	13	15	16	55	15	22	30	British	Nippon Yusen Kaisha	425.0	58.0	23.1	London, England	Lizard's Head, Eng.		8,241	6,390	4,381
Bynmoor	15	7	10	15	8	27	15	18	00	15	19	00	Swedish	Anglo-Amer. Pct. Co.	420.3	54.6	25.6	Vancouver, B. C.	Rotterdam, Holland		9,495	6,973	5,068
Buenos Aires ²⁶	15	9	45	15	10	29	15	18	25	16	3	20	British	W. Runciman & Co.	426.9	56.0	26.0	San Francisco, Cal.	London, England		7,591	7,591	5,061
Chincha	15	10	05	15	10	58	15	19	15	15	19	50	American	Planet Line	403.0	52.3	28.0	Los Angeles, Calif	Portland, Maine		7,141	6,872	4,973
Horse Luckenbach	15	11	15	15	12	34	15	20	05	15	20	50	American	Luckenbach Line	445.0	58.0	27.0	Portland, Ore.	Boston, Mass.		6,564	8,699	6,363
Hilda	15	11	20	15	13	39	15	21	50	15	21	50	Norwegian	K. Knudsen	470.0	62.9	27.0	Los Angeles, Calif	London, England		12,153	9,474	6,480
Manitales ²⁶	15	10	40	15	14	37	15	22	55	15	7	25	German	Roland Line	216.5	32.9	15.0	Guayaquil, Ecuador	Cristobal, C. Z.		661	1,132	741
Pacific																							
Pioneer ²⁶	15	14	40	15	15	17	16	00	05	16	00	05	British	Furness Withy & Co.	435.5	60.2	27.3	Victoria, B. C.	Glasgow, Scotland		8,222	9,630	6,943
Great City	15	1	00	16	3	19	16	11	20	16	12	10	British	Sir W. R. Smith & Sons	420.6	56.9	25.0	Vancouver, B. C.	Falmouth, England		9,026	7,029	5,478
Mimeda	15	21	45	16	2	01	16	12	35	16	10	10	American	N. O. & S. A. S. Co.	298.6	40.0	21.0	Quique, Chile	New Orleans, La.		3,529	2,835	1,805
San Jose	16	4	10	16	4	56	16	12	35	16	1	30	American	United Fruit Co.	330.0	44.6	18.6	San Francisco, Cal.	Port Limon, C. R.		1,288	3,970	2,353
Jugoslavija	16	5	55	16	7	12	16	16	05	16	17	30	Yugoslav	Baburizza & Co.	410.1	49.3	26.0	Talca, Chile	Hamburg, Germany		7,789	5,686	4,188
Uyayali	16	2	20	16	9	38	16	17	18	22	6	15	Peruvian	Peruvian Line	374.7	46.3	21.0	Callao, Peru	Cristobal, C. Z.		2,170	4,466	2,405
Alvarado	16	9	00	16	9	49	16	17	20	16	8	20	British	Pacific Steam Nav. Co.	303.0	40.3	14.7	Callao, Peru	Cristobal, C. Z.		574	2,844	2,405
Feltore	16	10	10	16	11	05	16	19	30	16	19	30	American	Ore S. S. Corp.	449.1	57.2	31.0	Cruz Grande, Chile	Baltimore, Md.		11,122	7,803	5,139
King Arthur ²⁶	16	1	45	16	11	38	16	20	30	16	22	30	British	Dodd, Thomson & Co.	400.7	54.8	24.0	Vancouver, B. C.	Valencia, Spain		7,416	6,284	4,335
Vers Rodcliffe	16	12	10	16	12	57	16	23	30	17	1	00	British	Evan T. Rodcliffe	415.5	55.5	23.6	Vancouver, B. C.	Aronmouth, Eng.		8,250	6,791	4,906
Orehead ²⁶	16	20	00	17	3	29	17	15	35	17	16	30	Swedish	Trif A. B. Grangesberg	393.7	53.4	25.2	Vancouver, B. C.	Queensdown, Ire.		6,300	6,061	4,029
Martha ²⁶	17	14	15	18	5	24	18	17	30				Norwegian	Chr. Hansevig, St.	183.2	30.0	14.0	Buenaventura, Col.	Cristobal, C. Z.	(³¹)	961	780	504
Russington	17	17	00	18	4	20	18	14	15	18	14	15	British	Haldin & Co.	410.0	56.5	26.7	Prince Rupert, B. C.	Falmouth, England		9,930	6,963	4,959
Concor	17	17	20	18	5	30	18	17	25	18	20	55	Chile	R. W. James Co.	365.4	45.3	24.0	Valparaiso, Chile	New York, N. Y.		4,000		
Marore	18	3	15	18	6	37	18	18	40	18	18	40	American	Ore S. S. Corp.	550.3	72.2	34.6	Cruz Grande, Chile	New York, N. Y.		21,553	15,551	4,297
Papoose ²⁶	17	18	30	18	7	29	18	19	45	18	19	45	American	Petroleum Nav. Co.	412.0	53.2	26.2	Los Angeles, Calif	New York, N. Y.		8,753	8,285	4,370
Saudar ²⁶	17	20	50	18	8	14	18	20	50	18	20	50	Norwegian	Haldor Virik	450.0	59.0	27.6	Land's End, Eng.	Land's End, Eng.		10,359	7,944	5,408
Persphone ²⁶	18	5	35	18	9	04	18	21	55	18	21	55	Danzig	Baltic-Amer. Pct. Co.	468.6	53.0	26.3	Talara, Peru	Hamburg, Germany		11,400	9,336	6,334
Nevadan	17	120	02	18	10	08	18	22	30	18	22	30	American	Amer-Hawalian Line	460.0	57.0	25.5	Seattle, Wash.	Boston, Mass.		7,620	6,829	4,627

³⁰ Copper, nitrates, and cotton.

³¹ Towed by tug *Scotia*.

³² Towing submarine *S-4*.

³³ Coffee, hides, and beans.

³⁴ Motor ship.

³⁵ Submarine.

³⁶ Tender.

³⁷ Mine planter.

³⁸ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Tejon ¹	17	21.00	18	11.34	18	23.10	American	General Pet. Corp.	425	8	57	0	Los Angeles, Calif.	Gas oil	10,057	7,218	4,953
Nicola Miha-																	
novic.....	17	21.15	18	12.26	19	00.50	Yugoslav	Baburizza & Co.	400	5	52	2	Antofagasta, Chile.	Nitrates	7,558	5,826	3,969
Vulcan City.....	17	23.50	18	13.14	19	2.10	British	Sir W. R. Smith & Sons	430	4	54	5	Portland, Oreg.	Wheat	7,568	6,870	5,043
Handicap ³²	18	6.30	19	5.49	19	13.50	Norwegian	Brusgaard Line.	415	3	51	7	Vancouver, B. C.	General	8,028	7,206	5,445
Finn ³²	18	11.00	19	6.07	19	14.40	Swedish	Colombia Maritime Co.	271	2	41	14	Buenaventura, Col.	(34)	371	2,472	1,513
Epidauro.....	18	5.30	19	6.55	19	16.40	Yugoslav	Baburizza & Co.	360	0	48	0	Antofagasta, Chile.	Nitrates	6,945	4,617	3,412
Point Arena.....	18	23.06	19	7.02	19	15.10	American	Swayne & Hoyt	324	0	46	2	Portland, Oreg.	General	3,298	3,081	2,612
Eastern City.....	18	10.40	19	7.57	19	17.55	British	Sir W. R. Smith & Sons.	400	3	53	0	Vancouver, B. C.	Wheat	7,250	6,204	4,328
Buenavendo.....	19	4.55	19	8.04	19	16.45	British	P. N. & J. N. Carranza.	210	3	32	1	Buenaventura, Col.	Ballast	7,650	1,345	806
Mariva.....	18	11.35	19	9.20	19	17.50	Spanish	Royal Mail S. P. Co.	430	4	61	3	Vancouver, B. C.	(35)	5,862	9,319	5,854
Legazpi.....	18	12.30	19	10.24	19	18.25	Spanish	Spanish Line	375	6	47	0	Valparaiso, Chile.	General	873	4,506	2,827
Hermes.....	19	7.20	19	11.06	19	19.45	Norwegian	Brusgaard Line	346	0	49	5	Vancouver, B. C.	Lumber, general.	6,107	7,209	5,182
Glan Alpine.....	18	15.10	19	11.12	19	20.05	British	Cayser Irvine & Co.	410	0	52	5	Bay N'Go, N. Cal.	(36)	7,028	3,975	2,628
Tasimoo.....	19	8.40	19	11.37	19	20.30	American	Charles Nelson & Co.	324	0	46	2	Los Angeles, Cal.	Lumber, general.	6,900	5,371	3,936
Markakis.....	18	19.10	19	12.34	19	23.05	Greek	Emmanuel Markov.	375	7	48	7	Tocopilla, Chile.	Nitrates	7,580	6,630	4,878
Pacific Hemlock	18	22.00	19	13.40	19	23.30	American	Dimon S. S. Corp.	499	7	54	2	Olympia, Wash.	Lumber			

* Tanker.

32 Motor ship.

33 For orders.

34 Coffee, hides, and tubs.

35 Frozen and canned goods.

36 Copra, cotton, and rubber.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.										* DEPARTURES.									
Date.		Vessel.		Line.		From—		Date.		Vessel.		Line.		For—					
January 13.....		Antillian		Leyland Line		Puerto Colombia.		January 13.....		Pastores		United Fruit Co.		New York via Habana.					
January 13.....		Pastores		United Fruit Co.		Port Limon, Costa Rica.		January 13.....		Gaitia		Hamburg-American Line.		Europe via waypoints.					
January 14.....		Manauqui		United Fruit Co.		New York, N. Y.		January 13.....		Sau Pablo		United Fruit Co.		New York via Kingston.					
January 14.....		Nike		Anglo-Saxon Petroleum Co.		Curacao, D. W. I.		January 14.....		Parismina		United Fruit Co.		New Orleans via waypoints					
January 14.....		Gatun		Standard Fruit & S. S. Co.		New Orleans via waypoints		January 14.....		Barnesford		Marine Transp. & Towing Co.		Charleston, S. C.					
January 16.....		Cristobal		Panama R. R. S. S. Line.		New York via Haiti.		January 14.....		Goliah		Wood Towing Corporation		Maribel, Cuba.					
January 16.....		Carare		Elders & Fryles, Ltd.		Avonmouth via waypoints.		January 16.....		Manauqui		United Fruit Co.		Puerto Colombia.					
January 16.....		Seythia		United Fruit Co.		New York via waypoints.		January 16.....		Nike		Anglo-Saxon Petroleum Co.		Curacao, D. W. I.					
January 16.....		Coppanema		United Fruit Co.		New Orleans, La.		January 16.....		Wants		Standard Fruit & S. S. Co.		San Blas, R. P.					
January 16.....		Anachucuna ³⁷		United Fruit Co.		Colon, R. P.		January 17.....		Anachucuna		United Fruit Co.		Colon, R. P.					
January 17.....		Ulua		United Fruit Co.		Santa Marta, Colombia.		January 17.....		Carare		Elders & Fryles, Ltd.		Avonmouth via Kingston.					
January 17.....		Sixta		United Fruit Co.		New York via Habana.		January 17.....		Sixta		United Fruit Co.		New York via Kingston.					

37 Motor boat.

* Other than ships passing through the Canal

(Continued on page 360, column 2.)

United States Intercoastal Traffic by Commodities for December, 1928.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for December, 1928, and the totals for December, 1927 and 1926. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the destination of "General cargo." These statistics are accordingly not precise but they are indicative of the kind and quantity of the cargo in transit through the Canal. The figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Aeroplanes.....	84		84
Agricultural implements.....	1,641		1,641
Alfalfa.....		135	135
Alfalfa meal.....		2,136	2,136
Ammonia.....	75		75
Asbestos.....	103		103
Asphalt.....	459	159	618
Automobiles.....	2,179	125	2,304
Automobile accessories.....	750	29	779
Bamboo.....		47	47
Beans.....	11	6,414	6,425
Borax.....		1,380	1,380
Bran.....		463	463
Bricks.....	342		342
Burlap.....	78	434	512
Camphor.....		11	11
Canned goods:			
Fish.....	177	11,458	11,635
Fruit.....	280	34,517	34,797
Meat.....	254	12	266
Milk.....		811	811
Soup.....	1,880		1,880
Vegetables.....	1,112	5,949	7,061
Miscellaneous.....	3,588	5,782	9,370
Carbon black.....	10	70	80
Celite filtercel.....	622	645	1,267
Charcoal.....	237	63	300
Chemicals.....	1,973	335	2,308
China and fire clay.....	495		495
Coal.....	700		700
Cocoa.....	25	200	225
Coconuts.....		366	366
Coffee.....	41	254	295
Coke.....	50		50
Cold storage:			
Cheese.....	34		34
Lard.....	266		266
Other.....	126		126
Confectionery.....	390		390
Cork.....	32		32
Corn.....	99		99
Cotton.....	840	2,334	3,174
Drugs.....	841	7	848
Earthenware.....	62	29	91
Eggs, dried.....		75	75
Explosives.....	31		31
Fertilizer.....	100		100
Flour.....	431	6,070	6,501
Fruit:			
Dried.....		15,559	15,559
Fresh.....		125	125
Fuller's earth.....	1,025		1,025
Furniture.....	382		382
General.....	27,145	5,269	32,414
Glass and glassware.....	1,864	186	2,050
Glue.....	10		10
Hair.....	10	119	129
Hardwoods.....	274		274
Hay.....		647	647
Hemp.....		262	262
Honey.....		69	69
Hops.....		15	15
Jute.....	40		40
Kapok.....		36	36
Lineoleum.....	998		998

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Liquors	107		107
Lumber	4,307	176,174	180,481
Malt	177		177
Manufactured goods:			
Iron and steel	116,357	373	116,730
Machinery	5,863	572	6,435
Railroad material	4,741		4,741
Tinplate	8,514		8,514
Textiles	4,672	224	4,896
Miscellaneous	5,338	4,460	9,798
Marble	200		200
Matches	239	13	252
Metals:			
Antimony		100	100
Copper	106	6,232	6,338
Iron	2,209		2,209
Lead	94	220	314
Scrap	350	149	499
Tin	58	253	311
Zinc		850	850
Other	63		63
Milk, powdered	49	333	382
Molasses	151		151
Musical instruments	25		25
Nitrates		29	29
Nuts		85	85
Oats	26		26
Oils:			
Coconut		28	28
Cottonseed	15		15
Gas oil, fuel oil		8,340	8,340
Gasoline, benzine, naphtha	1,058	149,526	150,584
Kerosene		22,639	22,639
Lubricating and greases	8,337	60	8,397
Vegetable	135	2	137
Wood	33		33
Other		47	47
Ores:			
Magnesite		1,510	1,510
Manganese	71	100	171
Zinc	25	1,020	1,045
Other	159	60	219
Paint	207	152	359
Paper	5,893	4,697	10,590
Paper pulp	14	4,652	4,666
Peanuts	81		81
Peas		90	90
Phosphates	1,104		1,104
Plaster	52		52
Porcelain	303	591	894
Quicksilver		2	2
Rags	32	338	370
Rice	1,760	75	1,835
Rope	293	95	388
Rosin	470		470
Rubber:			
Manufactured	1,734	28	1,762
Raw	50		50
Scrap		221	221
Salt	244	35	279
Seeds:			
Grass		55	55
Other		228	228
Shells	145	135	280
Silk		356	356
Skins and hides		4,834	4,834
Slag	1,370		1,370
Slate	100		100
Snap	3,138	289	3,427
Soda	311		311
Soda, ash	1,393		1,393
Soda, bicarbonate	169		169
Soda, caustic	866		866
Starch	27		27
Sugar	141	8,880	9,021
Sulphur	16,468		16,468
Syrup	40		40
Talc	53	30	83
Tallow		470	470
Tar	158		158
Tea	73	202	275
Tobacco	2,345	138	2,483
Toys	545	35	580
Turpentine	145		145
Waste	51	248	299

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Wax.....	87	36	123
Wheat.....		4,317	4,317
Wine.....	40	93	133
Wool.....	18	1,211	1,229
Totals, December, 1928.....	255,565	508,529	764,094
Totals, December, 1927.....	192,733	563,716	756,449
Totals, December, 1926.....	233,678	692,041	925,719

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal- Colon.	Balboa.
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.....	11.00	14.00

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Diesel oil is sold by The Panama Canal at Cristobal at \$1.80 per barrel.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.25 per barrel at Balboa and Cristobal. Diesel oil, Balboa only, \$1.80 per barrel.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers at \$8.00 per ton of 2,240 pounds at Cristobal, and \$11.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, \$8.00 per ton at Balboa. When coal is delivered from lighters in quantities of 50 tons or more, the price is \$9.00 per ton at Cristobal, \$12.00 at Balboa. If less than 50 tons is taken from lighters, prices are \$11.00 per ton at Cristobal and \$14.00 per ton at Balboa with minimum charge for 20 tons and maximum charge not to exceed that for 50 tons at \$9.00 Cristobal and \$12.00 Balboa. For furnishing lump coal for galley use, or run of mine coal, in sacks, \$6.00 additional per ton; but if vessel furnishes sacks \$3.00 additional per ton.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

For trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, when requested, an additional charge of 90 cents per ton will be made for extra handling.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide the means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective, in the course of handling large traffic through the Canal in over 13 years of operation.

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

MOVEMENTS OF OCEAN VESSELS.—Continued from page 356.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 17.....	Sosua	United Fruit Co.	New Orleans, La.	January 17.....	Sosua	United Fruit Co.	Perme, R. P.
January 17.....	Zacapa	United Fruit Co.	New York via Kingston.	January 17.....	Seythia	Cunard Line	New York via wayports.
January 18.....	Iruana	United Fruit Co.	Puerto Colombia.	January 18.....	Inapaquina ³⁷	United Fruit Co.	Colon, R. P.
January 18.....	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.	January 18.....	Coppaname	United Fruit Co.	Port Limon via Bocas.
January 18.....	Inapaquina ³⁷	United Fruit Co.	Colon, R. P.	January 18.....	Zacapa	United Fruit Co.	New York via wayports.
January 19.....	Oranien	Leyland Line	Liverpool via wayports.	January 18.....	Iruana	United Fruit Co.	New Orleans, La.
January 19.....	Sosua	United Fruit Co.	Perme, R. P.	January 18.....	Uba	United Fruit Co.	New Orleans via wayports.
January 19.....	Hereda	United Fruit Co.	New Orleans via Habana.	January 18.....	Gatun	Standard Fruit & S. Corp.	New York via wayports.
January 19.....	Mandeville.	United Fruit Co.	Kingston, Jamaica.	January 19.....	Sosua	United Fruit Co.	Mobile, Ala.
PORT OF BALBOA.							
January 16.....	Frost ³⁹	Svea S. S. Co.	Talara, Peru.	January 17.....	Frost ³⁹	Svea S. S. Co.	Champerico, Guatemala.
January 17.....	A. B. de Obarrrio ⁴⁰	Pacific Fruit Co.	Bayano River, R. P.	January 17.....	A. B. de Obarrrio	Pacific Fruit Co.	Panama Bay, R. P.
January 17.....	Big Bill ³⁹	H. Elliot & Co.	Darien, R. P.	January 17.....	Des Hermanos ⁴⁰	A. Valdez	Panama Bay, R. P.
January 17.....	Des Hermanos ⁴⁰	A. Valdez	Bayano River, R. P.				
January 17.....	Kelvinia	John Black & Co.	High seas.				
January 17.....	Chiriqui Land Co	Puerto Armuelles, R. P.					
January 16.....	Cricamola ³⁹						

³⁹ Motor ship.

⁴⁰ Motor schooner.

* Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, \$0.50 per year; foreign, \$1.00; address
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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office
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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., January 30, 1929. No. 26.

Panama Canal Traffic During Calendar Year 1928, Segregated by Nationality of Vessels.

Vessels of 23 nationalities made up the total commercial traffic through the Panama Canal during the calendar year 1928. Forty-one and eight-tenths of the total commercial transits were vessels of the United States; 28.7 per cent were British vessels; and the remaining 29.5 per cent were distributed among the other 21 nationalities.

The following tabulation shows the total commercial traffic through the Canal during the calendar year 1928, segregated according to the nationality of vessels, together with corresponding totals for the calendar years 1927, 1926, and 1925. A similar table for the calendar year 1927 was published in THE PANAMA CANAL RECORD of January 25, 1928:

Nationality.	No. of ships.	Tonnage.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered.			
				Gross.	Net.		
Argentine...	* 1					\$1,274.50	
Belgian.....	15	74,950	61,122	96,397	56,689	69,201.43	83,006
British.....	* 1,816	8,961,796	6,761,405	10,982,161	6,773,172	8,014,548.86	8,184,083
Chilean.....	* 30	126,355	94,399	196,081	106,796	118,449.20	87,911
Colombian...	104	42,044	37,482	61,937	38,319	44,500.57	37,898
Costa Rican	2	108	108	201	111	81.00	
Cuban.....	1	194	194	176	136	242.50	20
Danish.....	79	335,226	256,594	399,579	254,318	308,408.57	402,210
Danzig.....	29	186,265	151,347	256,222	144,294	161,406.81	162,048
Dutch.....	143	647,417	455,057	756,078	454,611	558,596.04	650,235
Finnish.....	6	13,680	13,643	14,537	11,340	15,585.00	19,594
French.....	* 119	553,950	436,467	698,805	428,595	549,516.28	552,583
German.....	377	1,262,714	893,959	1,475,300	884,960	1,102,157.76	1,363,110
Greek.....	42	163,574	121,634	187,806	117,607	136,094.14	179,477
Italian.....	87	478,979	373,754	617,066	376,434	447,230.43	376,616
Japanese.....	180	890,460	782,083	1,134,688	763,954	916,602.27	1,046,930
Norwegian...	307	1,178,383	889,747	1,442,958	877,405	1,047,772.82	1,341,844
Panamanian	84	84,572	55,955	108,439	69,112	64,579.41	62,715
Peruvian....	* 51	127,757	74,716	185,665	98,074	93,271.55	83,241
Spanish.....	41	151,403	125,757	206,481	126,601	149,741.20	117,014
Swedish....	124	550,015	393,117	1,010,596	481,214	456,052.00	797,717
United States....	2,648	12,911,765	10,076,204	16,278,254	10,046,686	11,933,682.74	13,558,338
Yugoslav....	48	201,830	157,910	250,274	158,078	186,937.33	294,991
Totals, 1928	6,334	28,943,437	22,217,654	36,359,701	22,268,506	26,375,962.41	29,401,581
Totals, 1927	6,085	28,610,984	22,360,998	36,381,124	22,353,512	26,231,022.94	29,102,538
Totals, 1926	5,420	25,836,241	20,254,503	33,044,274	20,329,791	23,901,540.04	27,586,051
Totals, 1925	4,774	22,958,158	18,141,695	29,368,840	18,228,704	21,380,759.70	23,701,277

* Naval vessel of 2,549 displacement tons. * Includes 13 naval vessels with total displacement of 60,911 tons.
* Includes 2 naval vessels with total displacement of 4,174 tons. * Includes 3 naval vessels with total displacement of 35,400 tons. * Includes 2 naval vessels with total displacement of 1,000 tons.

RELATION SHOWN BY PERCENTAGE.

The proportions of the traffic by vessels of various nationalities are indicated in the following tabulation in which percentages of the total traffic are shown instead of the actual figures, for the calendar

years 1928 and 1927. In this table percentages are shown only for those nationalities having 75 or more transits during either 1928 or 1927:

Nationality.	No. of vessels.		Panama Canal net tonnage.		Tolls.		Tons of cargo.	
	1928.	1927.	1928.	1927.	1928.	1927.	1928.	1927.
United States.....	41.8	46.0	44.6	50.0	45.0	50.1	46.1	50.3
British.....	28.7	26.5	30.9	28.2	30.6	27.8	27.8	23.9
German.....	6.0	4.1	4.4	2.9	4.2	2.8	4.6	3.7
Norwegian.....	4.9	4.9	4.1	3.8	4.0	3.7	4.6	3.9
Japanese.....	2.8	2.9	3.1	2.9	3.5	3.4	3.6	3.6
Dutch.....	2.3	1.9	2.2	2.1	2.1	2.1	2.2	2.1
French.....	1.9	2.0	1.9	1.9	2.1	2.6	1.9	2.9
Swedish.....	1.9	1.7	1.9	1.4	1.7	1.3	2.7	2.0
Colombian.....	1.6	1.2	0.1	0.1	0.2	0.1	0.1	0.1
Italian.....	1.4	1.7	1.7	1.7	1.7	1.9	1.3	1.4
Panamanian.....	1.3	2.1	0.3	0.3	0.2	0.3	0.2	0.3
Danish.....	1.2	0.9	1.2	0.8	1.2	0.9	1.4	1.1
All other.....	4.2	4.1	3.6	3.9	3.5	3.0	3.5	4.7
Totals.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

During the calendar year 1928 over 90 per cent of the total commercial transits of the Canal were vessels of 8 nationalities, and these vessels carried 93.4 per cent of the total cargo in transit through the Canal. With the exception of a decrease of 1 transit of French registry vessels and 151 transits of vessels of United States registry, all of these nationalities show increases in transits and all nationalities with the exception of United States, French, and Japanese an increase in cargo carried in 1928, as compared with the calendar year 1927. The figures are given in the following tabulation:

Nationality.	Total transits.		Tons of cargo.		Increase.	
	1928.	1927.	1928.	1927.	Transits.	Cargo.
United States.....	2,648	2,799	13,558,333	15,346,389	151	1,788,051
British.....	1,816	1,617	8,148,083	6,984,325	199	1,163,758
German.....	377	249	1,363,110	1,073,720	128	289,390
Norwegian.....	307	298	1,341,844	1,159,997	9	181,847
Japanese.....	180	176	1,046,930	1,055,047	4	8,117
Dutch.....	143	117	650,235	627,487	26	22,748
Swedish.....	124	102	797,717	630,282	22	167,435
French.....	119	120	552,583	571,524	1	18,941

1 Indicates decrease.

The heavy decrease of vessels of United States registry was caused by the decline of mineral oil shipments from the west coast. Transits of tankers of United States registry were 340 fewer in 1928 than in 1927, and cargoes carried in tankers of United States registry decreased in the amount of 2,112,224 tons. This heavy decrease in tanker transits and cargo was absorbed in part, however, by an increase in other classes of vessels.

Colliers "Achilles" and "Ulysses," and Barges "Mamei" and "Darien" Offered for Sale or Charter.

The colliers *Achilles* and *Ulysses* and the barges *Mamei* and *Darien*, now laid up in Gatun Lake, are being offered for sale or charter by The Panama Canal.

The *Achilles* and *Ulysses* were built in 1915 by the Maryland Steel Company at Sparrows Point, Maryland, and were engaged prior to their retirement from service in 1925 in the transportation of coal

from Norfolk to the Isthmus for the Panama Railroad Company. The vessels are each 536 feet in length, 65 feet beam, and have a coal-carrying capacity of 12,000 tons. They are oil-burning steam vessels, capable of a speed of $14\frac{1}{2}$ knots.

The barges *Mamei* and *Darien* were built in 1917, by the Alabama Dry Dock Company, of Mobile, and are 352 feet long, 52 feet beam, and have a coal-carrying capacity of 7,300 tons each.

Bids for this equipment are being received by the General Purchasing Officer, The Panama Canal, Washington, D. C., until February 28, 1929. Forms of proposal with full descriptions and particulars may be had upon application to that office.

Executive Order.

Amending Executive Order of February 26, 1921, Establishing Rates of Fare and Governing Transportation of Passengers for Hire in the Canal Zone.

By virtue of the authority vested in the President by the Act of Congress approved August 21, 1916, the Executive Order of February 26, 1921, establishing maximum rates of fare and governing transportation of passengers for hire in the Canal Zone, is hereby amended by inserting therein following Section XIV two sections numbered *XIVa* and *XIVb*, to read as follows:

SECTION *XIVa*. A willful neglect or refusal by any passenger in any vehicle for hire to pay the driver or operator of any such vehicle for hire the fare established by this order shall be deemed a violation of this order and be punishable accordingly.

SECTION *XIVb*. Any charge by the driver or operator of any vehicle for hire of a rate of fare in excess of the rates established by this order shall be deemed a violation of this order and be punishable accordingly.

This order shall take effect from and after this date.

By order of President.

(Signed) DWIGHT F. DAVIS.

WAR DEPARTMENT,

January 28, 1929.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending January 26, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Willwello.....	Williams Line.....	January 6.....		1,050	
Rapot.....	Roland Line.....	January 13.....	January 15.....	310	5
Tsuyama Maru.....	Nippon Yusen Kaisha.....	January 14.....	January 15.....	71	
Manizales.....	North German Lloyd.....	January 15.....	January 15.....	12	
Cedarhurst.....	T. P. Gallagher & Co.....	January 16.....	January 16.....		16
Frost.....	Svea S. S. Co.....	January 16.....	January 17.....	261	
Cari Legien.....	Hamburg-American Line.....	January 19.....	January 20.....	1,136	8
Turpin.....	Roland Line.....	January 21.....		1,323	
Venezuela.....	Panama Mail S. S. Co.....	January 22.....	January 22.....	54	
El Salvador.....	Grace Line.....	January 22.....	January 23.....	216	17
El Ciervo.....	Lobitos Oilfields, Ltd.....	January 22.....	January 24.....	2,431	
Nitro.....	U. S. Government.....	January 22.....	January 24.....	1	
Lippe.....	North German Lloyd.....	January 23.....	January 23.....		86
Santa Barbara.....	Grace Line.....	January 24.....	January 25.....		22
Vega.....	U. S. Government.....	January 25.....	January 25.....	3	
Virginia.....	Panama-Pacific Line.....	January 25.....	January 26.....		155
Robert E. Hopkins.....	Tidewater Oil Co.....	January 25.....	January 26.....	9,999	

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, January 26, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	Draft.			Nature.	Tons.	
Mahua ²	18	17	50	20	6	10	20	19	09	American	U. S. Navy	310	0	31	0	Yorktown, Va.	Balboa, C. Z.	
Maury ²	19	6	45	20	6	10	20	19	09	American	U. S. Navy	310	0	31	0	Yorktown, Va.	Balboa, C. Z.	
Sutherland	19	11	20	20	6	25	20	35	20	American	Charles Nelson & Co.	380	0	53	0	Baltimore, Md.	Seattle, Wash.	4,705
No. 326 ²	16	14	10	20	6	25	20	19	11	American	U. S. Navy	310	0	30	0	Yorktown, Va.	Yorktown, C. Z.	5,654
No. 327 ²	16	14	10	20	6	25	20	19	11	American	U. S. Navy	310	0	30	0	Yorktown, Va.	Balboa, C. Z.	4,123
No. 294 ²	16	14	10	20	6	30	20	23		American	U. S. Navy	310	0	30	0	Yorktown, Va.	Balboa, C. Z.	
No. 329 ²	16	14	10	20	6	30	20	23		American	U. S. Navy	310	0	30	0	Yorktown, Va.	Balboa, C. Z.	
Port																		
Fremantle ⁴	19	15	05	20	7	35	20	21	48	British	Com'th & Dom. Line.	475	0	63	0	London, England	Hawkes Bay, N. Z.	6,400
No. 281 ²	16	14	10	20	7	35	20	23	10	American	U. S. Navy	310	0	30	0	Yorktown, Va.	Balboa, C. Z.	1,652
No. 284 ²	16	14	10	20	7	35	20	23	10	American	U. S. Navy	310	0	30	0	Yorktown, Va.	Balboa, C. Z.	7,704
No. 285 ²	16	14	10	20	7	35	21	00	25	American	U. S. Navy	310	0	30	0	Yorktown, Va.	Balboa, C. Z.	
No. 283 ²	16	14	10	20	7	35	21	00	25	American	U. S. Navy	310	0	30	0	Yorktown, Va.	Balboa, C. Z.	
Columbian	19	19	40	20	8	30	20	23	15	American	Amer-Hawaiian Line	404	0	54	0	Boston, Mass.	Portland, Oreg.	2,442
No. 243 ²	16	14	10	20	9	05	21	1	54	American	U. S. Navy	310	0	30	0	Yorktown, Va.	Balboa, C. Z.	6,760
No. 244 ²	16	14	10	20	9	05	21	1	54	American	U. S. Navy	310	0	30	0	Yorktown, Va.	Balboa, C. Z.	4,450
No. 245 ²	16	14	10	20	9	15	21	00	25	American	U. S. Navy	310	0	30	0	Yorktown, Va.	Balboa, C. Z.	
No. 286 ²	16	14	10	20	9	15	21	00	25	American	U. S. Navy	310	0	30	0	Yorktown, Va.	Balboa, C. Z.	
Vredenburg	19	21	40	20	10	05	21	2	03	Dutch	Haleon Line	453	9	59	18	Rotterdam, Holland	Vancouver, B. C.	8,058
Larry Doherty ²	20	6	47	20	10	40	21	3	32	American	Aeswood Petroleum Co.	430	0	59	2	Baltimore, Md.	Los Angeles, Calif.	7,494
Heinrich Arrp.	20	7	20	20	10	30	21	3	25	German	Columbian Mar. Co.	237	0	12	0	Buenaventura, Col.	General	1,167
San Jose.	20	6	00	20	12	10	21	5	10	American	United Fruit Co.	330	0	44	6	Port Limon, C. R.	Bananas, coffee.	3,670
Manhattan Island	20	11	25	20	12	25	21	4	47	American	Redwood Line	386	0	52	2	Mobile, Ala.	Sulphur, general.	5,696
Pacific Fir	20	10	30	20	13	52	21	5	54	American	Dimon S. S. Corp.	410	5	54	0	New York, N. Y.	General	4,125
Yankee Arrow	20	13	05	20	13	10	21	7	12	American	Standard Transp. Co.	468	3	62	7	New York, N. Y.	General	6,622
Sandpiper ⁵	19	7	23	20	9	10	21	21	50	American	U. S. Navy	180	0	35	6	Yorktown, Va.	Ballast.	9,841
Camden ⁶	16	00	50	21	6	25	21	18	46	American	U. S. Navy	389	2	48	0	Norfolk, Va.	Ballast.	6,946
Wright ⁷	17	6	30	21	7	04	21	19	49	American	U. S. Navy	448	0	58	0	Norfolk, Va.	Ballast.	
Venezuela	19	20	00	21	7	04	21	20	58	American	Panama Mail S. S. Co.	380	0	48	7	New York, N. Y.	General	2,066
Mansepool	20	13	18	21	8	50	21	22	41	British	Can. Wheat Producers.	405	0	53	6	Oran, Algeria	General	6,033
S-18 ⁸	15	15	00	21	7	10	21	21	20	American	U. S. Navy	219	3	20	8	Norfolk, Va.	Ballast.	5,875
S-19 ⁸	15	15	00	21	7	10	21	21	20	American	U. S. Navy	219	3	20	8	Norfolk, Va.	Ballast.	4,288
S-23 ⁸	15	14	45	21	7	10	21	22	30	American	U. S. Navy	219	3	20	8	Norfolk, Va.	Ballast.	
S-12 ⁸	15	14	45	21	7	10	21	22	30	American	U. S. Navy	219	3	20	8	Norfolk, Va.	Ballast.	
S-13 ⁸	15	14	45	21	7	10	21	22	30	American	U. S. Navy	219	3	20	8	Norfolk, Va.	Ballast.	
S-10 ⁸	15	13	59	21	7	10	21	22	30	American	U. S. Navy	219	3	20	8	Norfolk, Va.	Ballast.	
S-6 ⁸	15	14	00	21	8	10	21	23	56	American	U. S. Navy	231	0	21	10	Norfolk, Va.	Ballast.	

² Tanker.

³ Destroyer.

⁴ Motor ship.

⁵ Mine layer.

⁶ Submarine tender.

⁷ Aircraft tender.

⁸ Submarine.

S-7 ^a	15	14	00	21	8	10	21	23	56	American	U. S. Navy	Standard Oil Co	440.0	58.2	21.0	Norfolk, Va.	Balboa, C. Z.			
S-8 ^a	15	14	00	21	8	10	22	1	55	American	U. S. Navy	Standard Oil Co	440.0	58.2	21.0	Norfolk, Va.	Balboa, C. Z.			
S-9 ^a	15	14	00	21	8	10	22	1	55	American	U. S. Navy	Standard Oil Co	440.0	58.2	21.0	Norfolk, Va.	Balboa, C. Z.			
K. R. Kingsbury	20	15	25	21	9	55	22	00	01	22	1	25	American	U. S. Navy	Standard Oil Co	440.0	58.2	21.0	New York, N. Y.	Los Angeles, Calif.
City of Canberra	20	23	20	21	10	40	22	1	45	22	3	19	British	Ellerman & Bucknall	453.0	57.0	23.0	New York, N. Y.	Adelaide, Australia	
Granley Hall	20	22	20	21	11	35	22	3	20	22	4	45	British	Cunard Line	412.0	56.0	21.0	Philadelphia, Pa.	Frankfurt, Aust'lia	
Buenos Aires	20	21	15	21	12	30	22	4	17	22	5	20	Spanish	Com. Tras. de Barcelona	407.5	48.0	21.0	Barcelona, Spain	Valparaiso, Chile	
Touraine	21	10	20	21	16	15	22	6	30	22	7	58	Norwegian	Barber Line	435.0	56.0	25.0	New York, N. Y.	Taku Bar, China	
Clan Matheson	21	7	45	21	14	05	22	5	19	22	6	20	British	Clan Line	400.0	51.0	17.0	Norfolk, Va.	Tucupilla, Chic.	
Teal	19	10	20	21	14	58	22	3	24				American	U. S. Navy	180.0	35.6		Norfolk, Va.	Balboa, C. Z.	
Lark	19	7	25	21	6	35	21	18	46				American	U. S. Navy	180.0	35.6		Norfolk, Va.	Balboa, C. Z.	
Edw. P. Notes ⁹	19	7	25	21	8	50	22	3	30				American	U. S. Army	101.0	23.5		Cristobal, C. Z.	Balboa, C. Z.	
L-23	21	00	15	22	6	15	22	12	36				American	U. S. Army	500.3	63.3	30.0	Cristobal, C. Z.	Gatun, C. Z.	
Ionie	16	17	18	22	6	15	22	19	36				Peruvian	Shaw, Savill & Albion	374.0	46.3	30.0	London, England	Port Chalmers, N. Z.	
Ucayali	16	17	18	22	6	15	22	20	47				Peruvian	Shaw, Savill & Albion	374.0	46.3	17.0	Cristobal, C. Z.	Callao, Peru	
Point Judith	20	19	45	22	7	15	22	21	54	23			American	Swayne & Hoyt	289.0	44.0	19.0	Cristobal, C. Z.	San Francisco, Cal.	
San Francisco	20	19	45	22	7	15	22	21	54	23			German	Hamburg-American Line	432.3	59.1	23.0	Hamburg, Germany	Vancouver, B. C.	
Lagarto	21	9	17	22	7	40	22	23	00	23			British	Pacific Steam Nav. Co.	385.0	52.0	19.0	Glasgow-England	Corral, Chile	
Detroit	22	7	20	22	8	00	22	23	00	23			American	U. S. Navy	550.0	55.0	52.0	Norfolk, Va.	Balboa, C. Z.	
Caradoc ¹¹	19	9	25	22	8	00	22	18	22				British	British Government	425.0	52.0	17.4	Port Limon, C. R.	Balboa, C. Z.	
Acadia	12	15	50	22	9	57	23	00	27	23			British	Pacific Steam Nav. Co.	215.0	34.0	17.0	Cristobal, C. Z.	Balboa, C. Z.	
Benckom	21	10	30	22	9	40	23	18	02	23			Dutch	Royal Neth. S. S. Co.	449.0	58.0	23.3	Hamburg, Germany	Champerico, Guat	
Chatham	21	1	20	22	10	35	23	1	25	23			American	U. S. Army	436.0	58.0	25.0	Brooklyn, N. Y.	Honolulu, T. H.	
Therby ¹²	21	1	20	22	10	35	23	1	25	23			American	U. S. Army	436.0	58.0	25.0	Brooklyn, N. Y.	Honolulu, T. H.	
Major Pullen ¹⁶	21	1	20	22	10	35	23	10	22				American	U. S. Army	180.0	35.6		Cristobal, C. Z.	Gatun, C. Z.	
Quail ⁵	21	1	20	22	10	35	23	10	22				American	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	
Buccaner ¹⁰	21	18	40	22	12	45	23	19	12	23	20	20	Japanese	Osaka Shosen Kaisha	415.0	55.0	24.0	New York, N. Y.	Shanghai, China.	
Argon Maru	21	18	40	22	12	45	23	19	12	23	20	20	Japanese	Osaka Shosen Kaisha	415.0	55.0	24.0	New York, N. Y.	Shanghai, China.	
Franklin K. Lane	21	20	40	22	14	10	23	20	40	23	21	45	American	Huasteca Petroleum Co.	435.0	56.2	22.0	New Orleans, La.	Los Angeles, Calif	
Santa Cecilia	21	22	50	22	15	50	23	21	45	23	23	30	American	Grace Line	408.0	55.2	19.0	New York, N. Y.	Chimboite, Peru.	
Sunbeam	22	2	45	22	16	50	23	22	50	23	23	55	American	Sun Oil Co.	429.3	59.2	21.3	Philadelphia, Pa.	Los Angeles, Calif	
Edward Lock-	22	5	20	23	6	30	23	23	46	24	00	45	American	Lockenbach S. Line	436.0	57.0	23.0	Houston, Texas	Los Angeles, Calif	
enbach	22	5	20	23	6	30	23	23	46	24	00	45	American	Lockenbach S. Line	436.0	57.0	23.0	Houston, Texas	Los Angeles, Calif	
Challenger ¹	22	7	00	23	7	30	24	1	20	24	2	05	American	Ischman S. S. Lines	410.0	56.0	27.8	Baltimore, Md.	Tacoma, Wash	
Plar de	22	7	00	23	7	30	24	1	20	24	2	05	American	Ischman S. S. Lines	410.0	56.0	27.8	Baltimore, Md.	Tacoma, Wash	
Larrinaga	22	8	40	23	9	30	24	1	55	24	2	55	British	Larrinaga S. S. Co.	445.0	58.0	19.0	No. Shields, Eng.	Vancouver, B. C.	
Maliko	22	11	20	23	10	40	24	2	55	24	4	00	American	Amer-Hawaiian Line	415.0	53.0	19.0	Boston, Mass	Seattle, Wash.	
Salmonpool	22	17	20	23	10	50	24	4	16	24	5	34	British	Sir. R. Ropner & Co.	389.0	55.0	15.6	Vradgnizzia, Yu. Sl	Vancouver, B. C.	
Antonios G.	22	17	20	23	10	50	24	4	16	24	5	34	British	Sir. R. Ropner & Co.	389.0	55.0	15.6	Vradgnizzia, Yu. Sl	Vancouver, B. C.	
Lemos	22	18	50	23	11	35	24	5	21	24	6	26	Greek	S. & P. Lemos	381.0	52.0	12.0	St. Thomas, V. I.	Arica, Chile	
Flotbek	23	4	15	23	12	05	24	5	21	24	9	52	German	Knohr & Burchard	280.0	40.0	13.0	Halifax, N. S.	Yavaca, Mexico	
Saxicava	22	19	55	23	13	40	24	6	17	24	7	33	British	Anglo-Saxon Pot. Co	411.7	53.2	20.0	New York, N. Y.	Los Angeles, Calif	
Swan	22	19	55	23	13	40	24	6	17	24	7	33	British	Anglo-Saxon Pot. Co	411.7	53.2	20.0	New York, N. Y.	Los Angeles, Calif	
Walter A.	22	18	50	23	11	35	24	5	21	24	6	26	Greek	S. & P. Lemos	381.0	52.0	12.0	St. Thomas, V. I.	Arica, Chile	
Lukenbach	22	20	27	23	15	45	24	20	00	24	8	55	American	Lukenbach Line	446.5	56.1	21.2	Boston, Mass	Seattle, Wash.	
Brazo ¹	22	12	15	23	16	20	24	18	46				American	U. S. Navy	455.0	56.0		Norfolk, Va.	Balboa, C. Z.	
										</										

3. Tinplate, cotton, etc.

Cruiser.

Launch.

Aug.

anker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.	Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.									Nature.	Tons.		Net.	
Denver ¹⁴	23	00.55	24	6.05	24	20.10	24	23.53	American	U. S. Navy	292.0	44.0		Bluefields, Nicaragua	Balboa, C. Z.	General	2,687	5,403	3,960
Cherry Branch	22	21.10	24	6.30	24	22.38	24		British	F. & W. Ritson.	400.5	51.9	18.0	Liverpool, England	Valparaiso, Chile	General			
Jefferson Myers	22	21.35	24	5.40	25	00.06	25	00.53	American	States S. S. Co	440.0	56.0	20.6	Jacksonville, Fla.	Portland, Oreg	General	4,027	8,300	6,020
Chas. R. McCormick	23	5.00	24	7.30	25	1.10	25	2.30	American	Munson, McCork's Line.	401.0	53.2	23.10	New York, N. Y.	Seattle, Wash.	General	6,000	7,082	5,167
Santa Eulalia	23	20.10	24	7.50	25	00.12	25	1.27	American	Isthmian S. S. Lines	251.0	43.0	25.2	Baltimore, Md.	Hilo, T. H.	General ^(*)	3,096	2,823	1,730
Myriam	23	7.18	24	7.42	25	2.17	25	3.40	French	Anglo-Saxon Pet. Co	425.0	57.0	26.0	Fall River, Mass	Los Angeles, Calif	Ballast	17,178	5,072	
Sylvian Arrow	23	11.30	24	8.45	25	3.35	25	4.42	American	Standard Oil Co	467.6	62.7	28.0	Beaumont, Texas	Hongkong, China.	Kerosene	11,760	9,698	6,900
Santa Barbara ¹⁵	24	1.55	24	9.38	24	21.16	25	2.55	American	Grace Line	466.0	64.0	23.7	New York, N. Y.	Valparaiso, Chile	General	2,601	10,687	6,633
King City	23	13.35	24	9.45	25	4.25	25	5.24	British	Reardon Smith Line	400.0	51.0	15.6	Manchester, Eng.	Vancouver, B. C.	Ballast	5,953	5,897	
Counselor	23	6.38	24	11.10	25	5.32	25	6.30	British	T. & J. Harrison.	395.5	52.5	18.0	Liverpool, England	Vancouver, B. C.	Ballast	5,753	3,857	
Indian City	23	22.24	24	13.20	25	20.06	25	21.20	British	St. Just S. S. Co., Ltd	411.0	45.0	17.0	Hull, England	Vancouver, B. C.	Ballast	6,512	4,655	
Durazo	20	14.20	24	13.45	25	1.29	25	2.30	German	Hamburg-American Line	226.0	34.0	15.4	Cristobal, C. Z.	Puntarenas, C. R.	General	1,680	1,633	1,041
Drechtidijk ¹⁵	23	6.20	24	16.55	25	21.24	26	00.44	Dutch	Holland-American Line	485.5	62.0	22.6	Rotterdam, Holland	Vancouver, B. C.	Bananas, general	2,357	10,793	7,619
Cuango	21	21.00	25	6.20	25	22.28	26	00.44	Italian	Parodi & Corrado.	440.0	51.6	15.0	Genoa, Italy	Arica, Chile	Ballast		7,274	5,213
Pajala ¹⁵	25	1.50	25	6.40	25	23.28	26	00.44	Swedish	Can-Amor Ship. Co	418.0	55.0	17.0	Hamburg, Germany	Vancouver, B. C.	Ballast	2,231		
Virginia	25	6.15	25	7.25	25	19.02	26	2.12	American	Panama-Pacific Line	613.0	80.0	26.6	New York, N. Y.	San Francisco, Cal.	General	3,821	6,572	4,900
West Keats	25	3.40	25	7.25	26	00.52	26	2.12	American	Calif. & East'n S. S. Co.	410.5	54.3	20.0	Philadelphia, Pa.	Seattle, Wash.	General	6,418	6,327	4,433
Oakmar	25	4.40	25	8.30	26	17.52	26	7.06	American	Calmar S. S. Corp	384.4	51.2	24.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	1,490	3,984	2,628
Sunungiteo	25	8.30	25	8.40	25	23.35	26	00.44	American	Transmarine Lines	324.0	46.0	19.0	Mobile, Ala.	Shanghai, China	General	8,100	7,611	5,450
Selma City	25	7.25	25	8.55	26	19.25	27	7.19	American	Isthmian S. S. Lines	424.0	56.0	25.0	Baltimore, Md	Balboa, C. Z.	General			
Galveston ¹⁴	24	18.00	25	10.10	27	19.46	26		American	U. S. Navy	292.0	44.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Mills	25	9.05	25	12.40	26	20.50	26	21.20	British	Royal Mail S. P. Co.	435.0	55.3	21.0	Barry, England.	Vancouver, B. C.	Ballast	5,023	3,984	2,617
Point Fernin	25	12.05	25	13.25	26	00.55	26	5.19	American	Swayne & Hoyt.	324.0	46.2	22.6	Tampa, Fla.	San Francisco, Cal.	General	3,145	5,146	4,460
Trepoint	25	13.20	25	15.25	26	21.34	26	23.21	British	Amer.-Australian Line.	400.0	53.0	22.0	New York, N. Y.	Dunedin, N. Z.	General			
West Ivis	25	13.25	25	16.00	26	22.55	27	2.42	British	Chas. McCormack Line	410.5	54.2	16.0	New Orleans, La.	San Francisco, Cal.	Ballast	600	1,154	663
Uribe	6	18.35	26	6.20	26	21.19	26	21.20	Colombian	Estrada G. Hernandez.	227.0	31.0	11.3	Cristobal, C. Z.	Buenaventura, Col.	General	1,380	3,984	2,612
Suspecco	25	20.25	26	6.30	26	19.06	26	20.09	American	Transmarine Lines.	324.0	46.2	18.0	New York, N. Y.	San Francisco, Cal.	General	712	6,809	4,842
Gracia	24	9.13	26	8.15	26	23.55	27	1.04	British	Donaldson Line.	415.0	54.0	19.10	Glasgow-England	Vancouver, B. C.	Bananas, general	651	7,004	4,849
Impero	25	8.47	26	9.50	27	2.07	27	3.05	Italian	Italian-Chilean Com. Co.	442.0	52.0	20.0	Naples, Italy	Valparaiso, Chile	General			
Agwinex ¹	25	23.45	26	10.50	27	3.09	27	4.00	American	Standard Oil Co.	480.5	66.0	22.0	New York, N. Y.	Los Angeles, Calif	Ballast	9,394	7,840	5,840
Pad Doheny	26	00.25	26	11.00	27	4.00	27	5.00	American	Richfield Oil Co.	430.2	59.2	19.0	New York, N. Y.	Los Angeles, Calif	Ballast	6,730	7,476	5,900
Edgeford	26	00.25	26	12.30	27	5.04	27	6.41	American	Tampa Intercean Co.	410.0	54.0	24.11	Mobile, Ala.	Manila, Philippines	General			
Montrolite ¹⁵	26	4.45	26	12.45	27	6.06	27	7.19	British	Imperial Oil Co.	510.0	68.0	22.0	New York, N. Y.	Talara, Peru	Ballast	1,907	9,760	6,236
Taormina	25	5.00	26	13.25	26	23.56	27	2.05	Italian	Nav. Gen. Italiana.	482.0	58.3	26.3	Genoa, Italy	Valparaiso, Chile	General	266	211	124
Caldas ¹⁵	23	11.35	26	13.25	26	23.56	27	16.30	Colombian	National Navigation Co	116.0	21.0	7.10	Cristobal, C. Z.	Buenaventura, Col.	General	10,432		
Salinas ¹	26	11.40	26	14.55	27	18.16			Colombian	U. S. Navy	463.0	60.0		Norfolk, Va.	Balboa, C. Z.	Fuel oil, d general.			

¹⁴ Cruiser. ¹⁵ Motor ship.

¹⁶ Sulphate ammonia, timplat, d general.

¹ Sulphate ammonia, triplute, and general.¹⁵ Motor ship.¹⁴ Cruiser.¹ Tanker.

Fennmore	18	23	00	20	6	24	20	14	19	20	23	05	20	23	05	American	Oil Transport Co.	431.0	59.2	27.0	La Libertad, Eed'r.	Hamburg, Germany	Wheat	7,916	5,959	4,246
Durazzo	19	14	40	20	6	25	20	14	20	23	05	20	23	05	20	British	W. Rundiman & Co.	399.9	52.9	27.0	Vancouver, B. C.	Cristobal, C. Z.	Coffee, cocoa	686	1,633	1,041
Filleigh	19	1	50	20	7	29	20	16	35	20	16	35	20	16	35	British	W. I. Taem, Ltd.	395.5	56.4	24.0	Guayaquil, Ecuador	Fayal	Wheat	8,142	6,427	4,548
El Panquanco	19	2	30	20	7	55	20	15	25	20	15	25	20	15	25	American	Panama Government	425.6	57.7	27.0	Balboa, C. Z.	Cristobal, C. Z.	General	8,909	7,935	5,841
Lancaster	19	2	30	20	8	02	20	17	45	20	23	30	20	23	30	American	Argonaut S. S. Co.	434.3	58.3	26.3	Seattle, Wash.	Avonmouth, Eng.	General	8,119	7,819	6,101
Baaru	19	2	30	20	9	34	20	19	15	21	2	35	20	2	35	Dutch	Royal Neth. S. S. Co.	400.0	58.3	26.3	Valparaiso, Chile	Hamburg, Germany	Nitrates	7,530	5,346	4,104
Abisla	19	7	30	20	10	46	20	19	35	20	20	30	20	20	30	Italian	Cor. Soc. Anon di Nav.	381.8	57.5	27.4	Tocopilla, Chile	Azores	General	9,600	7,615	4,876
Edgar Quinet	19	13	00	20	11	34	20	19	50	28	9	15	20	28	9	French	Frech Government	521.0	57.4	27.0	San Diego, Calif.	Cristobal, C. Z.	(*)	8,368	12,963	9,291
Labral	19	13	00	20	12	46	20	20	55	20	20	55	20	20	55	Belgian	Frech Anonyme D'Arm't	440.8	57.4	27.0	San Francisco, Cal.	Antwerp, Belgium	Frozen, general	10,200	8,093	5,347
Norfolk	19	14	05	20	13	39	20	21	50	20	21	50	20	21	50	British	N. Z. Shipping Co.	520.0	64.0	24.0	Lytleton, N. Z.	Liverpool, England	Wheat	6,826	5,578	3,685
Roads	19	16	15	20	14	19	20	14	19	20	23	05	20	23	05	American	Oil Transport Co.	431.0	59.2	27.0	La Libertad, Eed'r.	Philadelpia, Pa.	Crude oil	10,200	8,093	5,347
Warkworth	19	17	00	21	6	07	21	13	55	21	13	55	21	13	55	British	R. S. Dalglisb & Co.	401.2	53.4	23.1	Vancouver, B. C.	Lexceos, Portugal	Wheat	6,900	5,174	3,528
J. W. Van	14	1	24	21	6	48	21	15	40	21	15	40	21	15	40	American	Atlantic Refining Co.	364.9	52.9	25.5	Los Angeles, Calif.	Philadelpia, Pa.	Gasoline	10,200	6,591	4,730
Dyke	20	1	30	21	7	50	21	16	45	21	16	45	21	16	45	Norwegian	O. G. & L. H. Olsen	420.2	53.9	25.5	Iquique, Chile	Pensacola, Fla.	Nitrates	8,529	9,335	6,844
Tithorn	20	4	30	21	8	34	21	18	10	22	00	55	22	00	55	German	North German Lloyd	498.0	61.0	27.0	Vancouver, B. C.	Hamburg, Germany	General	9,600	7,406	5,111
Sale	20	6	35	21	9	07	21	18	25	21	18	25	21	18	25	American	Pan-Am. Pet. & Tr. Co.	435.0	56.2	26.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline	7,378	5,885	4,144
William H.	20	7	35	21	9	45	21	19	55	21	20	55	21	20	55	British	R. Chapman & Co.	400.0	56.3	24.0	Vancouver, B. C.	Rotterdam, Holland	Wheat	9,505	7,079	5,105
Doheny	20	10	15	21	11	02	21	21	50	21	21	50	21	21	50	Yugoslav	Baburizza & Co.	425.0	56.1	25.6	Antofagasta, Chile	Azores	Nitrates	9,553	7,488	5,042
Caraya Milica	20	10	25	21	12	09	21	21	00	22	19	00	22	19	00	Yugoslav	United Fruit Co.	303.0	57.0	27.0	Pto. Armuales, R.P.	New York, N. Y.	Ballast	8,000	7,091	5,062
Mary	20	15	25	21	13	51	21	23	00	21	23	50	21	23	50	British	C. T. Boyring & Co.	440.0	53.9	26.0	Los Angeles, Calif.	Halifax, N. S.	Crude oil	9,695	7,484	5,216
El Grillo	21	7	00	21	15	21	22	00	05	22	3	50	22	3	50	British	A. Weir & Co.	420.1	57.0	26.0	Vancouver, B. C.	Stettin, Germany	Soya beans	7,400	5,933	4,695
Weirbank	21	7	00	21	15	21	22	00	05	22	3	50	22	3	50	British	U. S. Navy	420.1	57.0	26.0	Vancouver, B. C.	Stettin, Germany	Soya beans	7,400	5,933	4,695
No. 5	21	3	30	22	5	44	22	14	15	22	14	15	22	14	15	American	Texas S. S. Co.	425.8	57.0	26.0	Los Angeles, Calif.	Stettin, Germany	Gasoline	7,400	5,933	4,695
Helen Olmsted	21	7	30	22	6	30	22	15	00	22	17	20	22	17	20	Japanese	Kokusai Kisen Kaisha	385.0	57.0	26.0	Los Angeles, Calif.	Philadelphia, Pa.	Sugar	6,753	5,633	4,122
Yafutan Maru	21	8	30	22	7	30	22	16	00	22	16	00	22	16	00	American	Charles Nelson & Co.	380.0	53.2	23.0	Los Angeles, Calif.	Boston, Mass	Lumber, general	7,857	7,079	5,028
Sacramento	21	8	30	22	7	30	22	16	00	22	16	00	22	16	00	American	Amer-Hawaiian Line	407.7	53.7	26.0	Los Angeles, Calif.	Boston, Mass	General	7,857	7,079	5,028
Iowa	21	10	35	22	9	59	22	16	35	22	16	35	22	16	35	British	A. Weir & Co.	400.3	52.7	26.0	Los Angeles, Calif.	Boston, Mass	Nitrates	7,900	6,076	4,463
Amyer	21	10	55	22	10	26	22	17	40	22	17	40	22	17	40	British	Standard Transp. Co.	408.3	52.7	26.0	Tocopilla, Chile	Mobile, Ala.	Nitrates	10,829	9,841	6,985
Levant Arrow	21	14	06	22	12	08	22	20	20	22	21	10	22	21	10	British	F. Carriek & Co.	385.0	52.6	25.6	Los Angeles, Calif.	New York, N. Y.	Wheat	6,876	5,195	3,515
Langleford	21	14	06	22	12	08	22	20	20	22	21	10	22	21	10	British	Gerhard Letzon	342.6	48.9	25.0	Vancouver, B. C.	Europe	(*)	6,876	5,195	3,515
Iskra	22	7	00	22	12	22	22	21	25	23	8	30	23	8	30	Yugoslav	Amstar Petroleum Co.	416.8	56.1	27.0	Los Angeles, Calif.	Azores	Nitrates	6,500	4,569	3,381
W. L. Sneed	21	15	00	22	14	12	22	23	40	22	23	40	22	23	40	American	Hunter Sugar & Refining	386.8	52.2	24.0	Los Angeles, Calif.	Baltimore, Md	Gasoline	8,800	6,751	4,795
Defacto	21	16	30	22	14	12	22	23	40	22	23	40	22	23	40	Greek	Mike Carvales	400.0	53.0	24.0	Los Angeles, Calif.	Wilmington, N. C	Nitrates	7,010	5,682	4,086
Okeania	20	23	30	23	1	25	23	8	40	23	8	40	23	8	40	German	Hamburg-Amerien-Line	376.1	51.7	25.0	Talpal, Chile	Falmouth, England	Nitrates	7,200	5,677	4,126
Isis	20	20	03	23	2	07	23	10	30	24	13	35	24	13	35	Colombian	Hamburg-Amerien-Line	376.1	51.7	25.0	Talpal, Chile	Falmouth, England	Nitrates	7,200	5,677	4,126
Caldas	22	19	20	23	3	00	23	11	35	23	11	35	23	11	35	Colombian	National Navigation Co.	115.0	53.0	25.0	Valparaiso, Chile	Cristobal, C. Z.	General	6,806	5,788	4,027
Orangemoor	22	4	25	23	3	05	23	11	40	23	12	45	23	12	45	British	Moor Line, Ltd.	399.6	53.0	25.0	Valparaiso, Chile	Cristobal, C. Z.	General	6,806	5,788	4,027
F. J. Lucken	22	4	25	23	3	05	23	11	40	23	12	45	23	12	45	British	Moor Line, Ltd.	399.6	53.0	25.0	Valparaiso, Chile	Cristobal, C. Z.	General	6,806	5,788	4,027
Isch	22	4	30	23	3	50	23	12	50	23	12	50	23	12	50	American	Luckenbach Line	446.0	56.1	28.0	Portland, Oreg	Cork, Ireland	Lumber, general	7,588	6,508	6,179
Chilone	22	9	30	23	5	17	23	16	25	23	16	25	23	16	25	American	Ore S. S. Corp	549.0	72.2	34.4	Portland, Oreg	Boston, Mass	Iron ore	20,000	14,538	9,348
Mongolia	22	13	10	23	6	39	23	14	35	23	14	35	23	14	35	American	Panama-Pacific Line	600.0	65.0	30.4	San Francisco, Cal	Baltimore, Md	Lumber	7,150	7,041	4,426
New Britain	22	13	40	23	8	05	23	17	50	23	17	50	23	17	50	American	Calif. & East'n S. S. Co.	386.8	52.2	24.3	San Francisco, Cal	Baltimore, Md	Lumber	6,990	5,684	4,082
Teno	22	15	40	23	9	11	23	18	00	23	18	00	23	18	00	Chilean	Chilean Line	412.9	56.2	26.0	Pto. Montt, Chile	New York, N. Y.	General	4,457	7,764	4,672
Canadaolt	22	4	50	23	10	17	23	21	30	24	17	00	24	17	00	Chilean	Imperial Oil Co., Ltd.	520.8	68.2	30.0	Pto. Montt, Chile	New York, N. Y.	Crude oil	15,785	11,556	7,658
El Salvador	22	15	30	23	11	23	23	19	30	25	6	00	25	6	00	American	Panama Mail S. S. Co.	360.2	51.6	25.4	Lobitos, Peru	New York, N. Y.	Crude oil	2,350	5,710	4,023
Kalado	22	14	30	23	11	25	23	21	30	25	22	15	25	22	15	Greek	George Assinonites	389.8	51.6	25.4	Tocopilla, Chile	Azores	Nitrates	7,400	5,601	3,877
Vikingsar	22	12	10	23	11	52	23	21	50	23	21	50	23	21	50	British	Blue Star Line	400.3	52.3	23.6	San Francisco, Cal	Glasgow, Scotland	General	4,800	6,870	4,909

* Canned goods and general.

** Lubricating and gas oil.

** For orders.

** Motor ship.

** Cruiser.

** Coast guard.

** Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Zrinski	22	8:30	23	13:55	24	00:55	24	8:40	Yugoslav	Baburizza & Co.	400.0	53.0	26.4	Antofagasta, Chile.	Alexandria, Egypt.	Nitrates	8,471	6,207	4,536
Limon	23	12:50	23	14:28	23	12:10	23	5:30	American	United Fruit Co.	336.6	44.5	20.0	San Francisco, Cal.	Port Limon, C. R.	General	1,265	3,075	2,229
Nitro ²⁵	22	14:15	24	6:03	24	12:45	26	23:10	American	U. S. Navy	400.0	61.0	23.3	Bremerton, Wash.	Hampton R. ds, Va.	General	7,701		
Hague Maru	22	17:10	24	6:43	24	14:55	24	21:30	Japanese	Oakea Shosen Kaisha.	407.2	50.8	22.6	Hongkong, China.	New York, N. Y.	General	6,555	6,533	4,772
Monagas ²⁶	20	4:55	24	6:41	24	15:35	24	15:35	Venezuelan	Venezuela Gulf Oil Co.	305.0	50.2	9.6	Bahia, C. Z.	Amay, Venezuela.	Ballast			
Robin Gray	22	18:00	24	8:13	24	16:40	24	16:45	American	Sea Shipping Co.	421.8	54.2	25.0	Seattle, Wash.	Baltimore, Md.	(*)	7,332	7,274	5,542
Galveston ²⁷	22	18:00	24	8:13	24	16:40	25	10:10	American	U. S. Navy	292.0	44.0		Bahia, C. Z.	Cristobal, C. Z.				
Radnorshire	22	18:30	24	9:27	24	18:20	25	15:15	British	Royal Mail S. P. Co.	412.5	55.5	28.6	Vancouver, B. C.	Rotterdam, Holland	General	8,523	6,898	4,887
Antinous	22	19:30	24	10:40	24	19:05	24	20:30	British	Andrew Weir & Co.	401.6	54.3	23.5	N. Westminster	Belfast, Ireland.	(*)	7,496	6,314	4,637
E. Clervo	23	00:55	24	11:30	24	19:55	25	17:07	British	C. T. Bowring & Co.	407.7	52.2	22.7	San Francisco, Cal.	Land's End, Eng.	Gasoline	5,198	6,046	4,326
Radio Australian	23	00:55	24	12:31	24	21:10	24	21:10	American	Cities Service Trans. Co.	416.9	58.0	22.6	Los Angeles, Calif.	New York, N. Y.	Gasoline	8,900	6,706	4,639
Anglo	23	1:00	24	13:30	24	23:00	25	4:55	British	Lawther, Latta & Co.	426.0	56.0	24.0	Vancouver, B. C.	London, England	Wheat	9,130	7,341	5,444
Iskol	23	1:30	24	14:25	25	00:15	25	3:05	Yugoslav	Baburizza & Co.	423.5	56.0	27.7	Antofagasta, Chile.	Azores ²²	Nitrates	9,072	6,446	4,741
Willapo	23	4:30	25	4:55	25	12:30	25	12:30	American	Williams S. S. Line	415.0	55.7	27.3	Seattle, Wash.	New York, N. Y.	(*)	8,538	7,731	5,805
Eugenia	23	8:00	25	5:45	25	14:10	25	15:55	Greek	Livanos Brothers	335.0	51.6	29.0	Liquine, Chile.	Azores ²²	Nitrates	6,500	4,504	3,285
Calmar	23	12:15	25	6:47	25	14:20	25	14:20	American	Calmar S. S. Corp.	334.6	51.2	23.8	Vancouver, B. C.	Boston, Mass.	Lumber	6,000	6,347	4,453
R. J. Hanna	23	14:10	25	7:58	25	15:35	25	15:35	American	Standard Oil Co. of Cal.	435.0	56.2	28.6	Los Angeles, Calif.	New York, N. Y.	Gasoline	8,875	7,639	5,166
York City	23	14:15	25	9:02	25	17:00	25	18:00	British	Sir W. R. Smith & Co.	411.8	50.1	28.4	Vancouver, B. C.	Genoa, Italy	Wheat	9,020	7,038	5,166
Massburg	23	14:25	25	9:54	25	18:05	25	18:05	Dutch	Knut Knutsen	434.7	60.1	24.5	Vancouver, B. C.	Rotterdam, Holland	Wheat	9,687	8,062	5,289
Key West	23	20:00	25	10:50	25	19:20	25	19:20	Norwegian	Knut Knutsen	381.4	53.2	24.0	Antofagasta, Chile.	Land's End, Eng.	General	6,598	5,885	4,157
Elm	24	1:10	25	12:02	25	20:40	25	20:40	Greek	An. Th. Callinios	420.7	54.2	25.6	Liquine, Chile.	Azores ²²	Nitrates	8,820	11,216	7,881
Matakana	24	5:00	25	12:57	25	22:35	25	2:55	British	Shaw, Savill & Albion	477.5	54.2	25.6	Los Angeles, Calif.	London, England	Frozen, general	8,324	6,387	4,183
Katagat ²⁸	24	6:00	25	13:36	25	22:45	25	22:45	German	Atlantic Tank Rbderer	428.4	55.0	25.7	P. Chalmers, N. Z.	London, England	Frozen, general	2,447		
Vega	25	10:52	25	14:45	26	00:27	26	22:20	American	U. S. Navy	390.0	54.2	17.9	Mare Island, Calif.	Boston, Mass.	Benzine	10,517	8,888	6,612
Noorddijk	24	14:00	25	23:45	26	8:40	26	8:40	Dutch	Holland-American Line.	470.0	58.5	29.8	Victoria, B. C.	Antwerp, Belgium	General	6,970	5,181	3,713
Marja Raec	24	18:30	26	00:55	26	10:10	26	11:58	Yugoslav	Baburizza & Co.	378.1	52.2	22.7	Tocopilla, Chile	Azores ²²	Nitrates	7,800	5,583	4,073
Nyanza	24	23:40	26	1:45	26	10:20	26	11:00	British	Wessex, Duval & Co.	402.7	52.2	24.6	Antofagasta, Chile	Savannah, Ga.	Nitrates	9,600	8,310	6,005
Hanley	25	3:00	26	2:51	26	11:45	26	11:45	American	Hanley S. S. Co.	440.0	56.0	29.0	Everett, Wash.	Baltimore, Md.	Lumber	7,593	6,830	4,932
Georgie	25	3:00	26	4:05	26	12:50	27	16:07	French	French Line	410.1	52.7	25.0	Vancouver, B. C.	Le Havre, France.	General	21,000	15,551	4,297
Steele	24	10:46	26	5:21	26	20:30	26	20:30	American	Ore S. S. Corp.	550.0	72.2	34.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	5,595	7,380	5,359
Alaskan	25	6:00	26	6:10	26	20:40	26	20:40	American	Amor-Hawian Line	415.0	54.0	24.1	Tacoma, Wash.	Boston, Mass.	General	5,595	7,380	5,359
Elmport	25	6:00	26	7:32	26	16:00	26	16:00	British	J. & T. DeHollm, Ltd.	410.0	53.5	26.0	Liquine, Chile.	Dunkirk, France	Nitrates	7,900	6,565	4,728
Sabotawan	25	6:51	26	8:41	26	17:15	26	17:15	American	Redwood Line	386.8	52.2	23.8	San Francisco, Cal.	Mobile, Ala.	(*)	5,975	5,708	4,128
Port Wellington	25	9:30	26	9:45	26	18:40	27	8:35	British	Com lth & Dom. Line	469.1	60.0	26.0	Napier, N. Z.	London, England	General	7,527	10,381	7,581
Oreoma	26	8:45	27	10:43	26	20:00	27	5:15	British	Pacific Steam Nav. Co.	511.6	62.2	27.4	Talcahuano, Chile	Liverpool, England	General	6,493	12,417	8,305
Silkeborg	26	6:30	26	11:49	26	23:20	27	1:10	Danish	C. K. Hansen	265.0	42.2	18.0	Chetumal, B. C.	Guadeloupe, F.W.I.	General	2,534	2,040	1,355
Ionestar	25	10:00	26	12:41	26	21:45	26	21:45	British	Blue Star Line.	390.0	56.0	25.0	N. Westminster	Newcastle, England	Frozen, general	4,338	5,989	4,442
Sun ²⁸	25	15:05	26	14:01	26	21:15	27	00:15	American	Sun Oil Co.	480.6	63.0	29.6	Los Angeles, Calif.	Chester, Pa.	Gasoline	13,622	9,620	6,424
Manizales	26	10:30	26	14:00	26	23:10			German	Roland Line	216.5	33.9	17.0	Buenaventura, Col.	Cristobal, C. Z.	General	752	1,132	741

* Tanker.

28 Supply ship.

29 January 19 for dry-docking only.

30 Cruiser.

31 Motor ship.

32 Lumber, pulp, and general.

33 Lumber, sugar, and canned goods.

34 Wool, frozen, and general.

35 Wheat, lumber, and general.

36 For orders.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 21	Inapaquina ³⁵	United Fruit Co	Colon, R. P.	January 20	Cristobal	Panama R. R. S. S. Line	New York via Haiti
January 21	Anachucuna ³⁵	United Fruit Co	Colon, R. P.	January 21	Heredia	United Fruit Co	New Orleans via wayports.
January 22	Stuyvesant	Royal Netherlands S. S. Co	Hamburg via wayports.	January 21	Anachucuna ³⁵	United Fruit Co	Colon, R. P.
January 23	Granada	Standard Fruit & S. S. Co	New Orleans, La.	January 21	Inapaquina ³⁵	United Fruit Co	Colon, R. P.
January 23	Santa Marta	United Fruit Co	New York via Kingston.	January 23	Wanks	Standard Fruit & S. S. Co	San Blas, R. P.
January 23	Suriname	Hamburg-American Line	New Orleans, La.	January 23	Mandeville	United Fruit Co	Perme, R. P.
January 23	Ipseldijk	Hamburg-American Line	Hamburg, Germany.	January 24	Suriname	United Fruit Co	Pto. Colombia via Bocas.
January 24	Inapaquina ³⁵	United Fruit Co	Colon, R. P.	January 24	Santa Marta	United Fruit Co	Colombian ports.
January 24	Tolosa	United Fruit Co	New York via wayports.	January 24	Inapaquina ³⁵	United Fruit Co	Colon, R. P.
January 24	Margalea	Hamburg-American Line	Hamburg, Germany.	January 25	Stuyvesant	Royal Netherlands S. S. Co	Curacao and Pto. Colombia.
January 24	Flandre	French Line	Havre via wayports.	January 25	Antillian	Leyland Line	Curacao and Aruba.
January 25	Wanks	Standard Fruit & S. S. Co	San Blas, R. P.	January 25	Granada	Standard Fruit & S. S. Co	New Orleans and Puerto Cabezas.
January 25	Coppename	United Fruit Co	Bocas del Toro, R. P.	January 25	Coppename	United Fruit Co	New Orleans, La.
January 26	Mandeville	United Fruit Co	Colon, R. P.	January 25	Tolosa	United Fruit Co	New York via wayports.
January 26	Duchess of Bedford	Canadian-Pacific S. S. Co	Perme, R. P.	January 25	Ipseldijk	Hamburg-American Line	Port Limon, Costa Rica.
January 26	Kungsholm	Swedish-American Line	New York, N. Y.	January 25	Anachucuna ³⁵	United Fruit Co	Colon, R. P.
January 26	Linda S. ³⁶	Surgeon Brothers	Colon, R. P.	January 26	Flandre	French Line	Havre via wayports.
January 26	Cartago	United Fruit Co	New Orleans via Habana.	January 26	Linda S. ³⁶	Surgeon Brothers	Bluefields, Nicaragua.
				January 26	Mandeville	United Fruit Co	Mobile, Ala.
				January 26	Magdalena	Hamburg-American Line	Cartagena, Colombia.

PORT OF BALBOA.

³⁵ Motor boat. ³⁶ Motor schooner.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 21	San Luis ³⁷	Chiriqui Land Co	Pto. Armuelles, R. P.	January 22	San Luis ³⁷	Chiriqui Land Co	Pto. Armuelles, R. P.
January 23	Lippe	North German Lloyd	High seas.	January 23	Lippe	North German Lloyd	Puntarenas, C. R.
January 24	Lagarto ³⁸	Pacific Steam Navigation Co.	Los Angeles, Calif.	January 24	Des Hermanos ³⁷	A. Valdez	Panama Bay, R. P.
January 24	Robert E. Hopkins	Associated Oil Co	Bayano River, R. P.	January 24	El B. de Ovarrio ³⁷	Pacific Fruit Co	Panama Bay, R. P.
January 25	Des Hermanos ³⁷	A. Valdez	Bayano River, R. P.	January 25	El Colon ³⁷	H. Elliot	Panama Bay, R. P.
January 25	A. B. de Ovarrio ³⁷	Pacific Fruit Co	Darien, R. P.	January 25	Big Bill ³⁸	H. Elliot	Panama Bay, R. P.
January 25	Big Bill ³⁸	H. Elliot	Darien, R. P.	January 26	Robert E. Hopkins	Associated Oil Co	Los Angeles, Calif.
January 25	El Colon ³⁷	H. Elliot	Darien, R. P.				

* Other than ships passing through the Canal.

³⁸ Motor ship.³⁷ Motor schooner.

Cargo Through Canal During December, 1928.

On pages 374 and 375 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in December, 1928. This cargo, segregated according to direction, as compared with December, 1927, and the differences, is shown in the following tabulation:

	December, 1928.	December, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	867,504	676,601	+190,903
Pacific to Atlantic.....	1,847,483	1,897,227	-49,744
Totals.....	2,714,987	2,573,828	+141,159

As will be noted above, tonnage from the Atlantic to the Pacific increased 190,903 tons over that in December, 1927, while that from the Pacific to the Atlantic showed a decrease of 49,744 tons, or a net increase in combined traffic over December, 1927, of 141,159 tons. Total cargo passing through the Canal in the past month is the second heaviest month since the opening of the Canal, falling short by 2,659 tons of the record month (October, 1927). This represents a general increase in the movement of practically all the more important items of cargo, with the exception of mineral oils, which decreased heavily under December, 1927.

ATLANTIC-TO-PACIFIC CARGO MOVEMENT.

Origin.—Sixty-five per cent of the cargo moving from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 22.5 per cent in Europe. Cargo originating in the United States was 122,135 tons, or 27.6 per cent, greater than the amount coming from that area in December, 1927, although the percentage of the total cargo was approximately the same as in December, 1927. Cargo from Europe increased 20,884 tons, or 12.1 per cent, over that originating in Europe in December, 1927, although the percentage of the whole was somewhat lower than in December of last year.

Destination.—Over 40 per cent of the Pacific-bound cargo was destined to the United States; 24.5 per cent to Asia; 14.8 per cent to Australasia; and 12.6 per cent to South America. Tonnage to all of these regions showed actual increases in the amounts of 87,433 tons, or 33.6 per cent; 62,129 tons, or 41.1 per cent; 14,031 tons, or 12.4 per cent; and 14,180 tons, or 14.8 per cent, respectively, over December of last year. The percentage of the total to South America and Australasia, however, was lower in December, 1928, than in December, 1927.

PACIFIC-TO-ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 42.7 per cent originated on the west coast of the United States; 34.7 per cent in South America; 16.7 per cent in Canada; 3.1 per cent in Asia; and 2.5 per cent in Australasia. Cargo from the United States showed an actual decrease of 212,046, or 21.2 per cent, under December, 1927, and the percentage of the total cargo dropped from 52.9 per cent in December, 1927, to 42.7 per cent in December, 1928. Cargo tonnage from South America increased 144,735 tons, or 29.1 per cent, over December, 1927.

The percentage of the total cargo shipped from South America also showed a large increase over December, 1927. Cargo from Canada, Asia, and Australasia, showed increases of 3,304 tons, 12,745 tons, and 1,226 tons, respectively, over December, 1927. A notable feature of the cargo coming from the Pacific in December, 1928, as compared with December, 1927, was the heavy increase of tonnage from South America, and the large decrease in the tonnage from the west coast of the United States. Heavy shipments of nitrates, ores, and mineral oils were largely responsible for the increase of tonnage from South America. Nitrates totaled more than 300,000 tons, the greatest amount of this commodity to have passed through the Canal in one month. Decreased tonnage from the United States was caused by a general decline in shipments of grains and mineral oils.

Destination.—Segregated according to destination, 46.8 per cent of the cargo in this direction went to the United States, and 48.4 per cent to Europe. Tonnage to the United States showed an increase of 13,503 tons, over December, 1927, as well as a small relative increase, while that to Europe decreased 13,364 tons.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify over 91 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 9 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic to Pacific bound commodities which aggregated more than 10,000 tons for December, 1928, or December, 1927, are listed in the following tabulation, showing differences:

Commodity.	December, 1928.	December, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Automobiles	24,086	11,825	+12,261
Cement	39,861	19,558	+20,303
Coal and coke	5,150	15,097	-9,947
Cotton	58,179	30,982	+27,197
Manufactured goods:			
Iron and steel	210,047	122,504	+87,543
Machinery	15,778	19,947	-4,169
Railroad materials	26,239	20,214	+6,025
Textiles	14,156	9,236	+4,920
Miscellaneous	14,994	47,387	-32,393
Metals, various	24,347	5,538	+18,809
Oils, mineral	48,900	66,738	-17,838
Paper	20,107	16,885	+3,222
Phosphates	37,513	9,397	+28,116
Sugar	36,708	2,433	+34,275
Sulphur	29,655	39,364	-9,709
Tobacco	13,382	4,160	+9,222

The above 16 commodity groups comprise over 71 per cent of the cargo moving from the Atlantic to the Pacific during December, 1928. It will be noted that 11 of these items show increases while 5 show decreases. The heaviest increases were in iron and steel, sugar, phosphates, and cotton.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 99 per cent of all cargo moving from the Pacific to the Atlantic during the month of December, 1928. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month a year ago are listed below, showing differences:

Commodity.	December, 1928.	December, 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	8,008	6,134	+1,874
Beans.....	16,800	11,253	+5,547
Canned goods (fish, fruit, vegetables, etc.).....	87,760	78,106	+9,654
Coffee.....	9,707	8,540	+1,167
Cold storage (food products) *.....	24,855	14,598	+10,257
Copra.....	9,513	11,159	-1,646
Cotton.....	14,357	8,609	+5,748
Fruit, dried.....	35,655	29,127	+6,528
Fruit, fresh.....	22,483	9,662	+12,821
Lumber.....	244,862	233,962	+10,900
Metals, various.....	65,923	62,503	+3,420
Nitrates.....	315,699	237,270	+78,429
Oils, mineral.....	345,322	511,721	-166,399
Ores, various.....	170,098	127,662	+42,436
Rice.....	12,598	1,491	+11,107
Sugar.....	50,253	25,956	+24,297
Wheat.....	300,560	393,426	-92,866

* Does not include fresh fruit.

The above 17 commodity groups comprise almost 94 per cent of the cargo moving from the Pacific to the Atlantic during December, 1928. Mineral oils and wheat decreased heavily while all the rest of the commodities moving in this direction, with the exception of copra, showed increases. Nitrates and ores registered the heaviest increases.

(Continued on page 374.)

First Pulverized Coal Burner to Transit Canal.

The British steamer *Hororata*, a vessel of 11,000 gross tons, owned and operated by the New Zealand Shipping Company, transited the Canal on January 17, 1929, en route from London to New Zealand, via Norfolk, Va. The *Hororata* has recently had her boiler furnaces partly converted to burn pulverized coal, the three single-ended boilers in her forward stokehold having been fitted each with four burners for that purpose. She is the first pulverized coal burner to transit the Panama Canal.

The burner used is of the triple-flow type. The pulverized coal is projected into the furnace between two bodies of primary air, while secondary air is supplied by a heater, a patented device enabling the furnace front to be arranged with an inner chamber in which the secondary air is heated to a high temperature and mixed with primary air in such a way as to give rapid and complete combustion. In fitting this burner to an existing boiler little alteration of the original construction is required. Reversion to hand-firing can be effected in an hour or two if required.

After being crushed, the coal is taken by a conveyor to a bin which holds enough for a day's consumption and supplies three pulverizers. The blowing plant consists of three fans, and in connection with each of these there are four separate distributors to the four burners of each boiler. The crushers and the conveyors are driven by electric motors and the pulverizers and fans by small steam turbines, but these pulverizing arrangements are not definitive, and changes are in view to reduce both the cost and space occupied.

The *Hororata* has been engaged in the London-New Zealand trade, via the Panama Canal, since 1923.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending January 26, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal	Panama R. R. S. S. Line		January 20		1,906
Legazpi	Spanish Line		January 20		344
San Jose	United Fruit Co.	January 20	January 20	11½	236
Baarn	Royal Netherlands S. S. Co.	January 20	January 21	261	122½
Buenos Aires	Spanish Line	January 20	January 21	195	(¹)
San Francisco	Hamburg-American Line	January 20	January 22	6	366
Durazzo	Hamburg-American Line	January 20	January 24	767	1,680
Venezuela	Panama Mail S. S. Co.		January 21		671
Heredia	United Fruit Co.		January 21		86
Lagarto	Pacific Steam Navigation Co.	January 21	January 22	(¹)	39
Saale	Hamburg-American Line	January 21	January 22	(¹)	222
Mayari	United Fruit Co.	January 21	January 22	(¹)	967
Bennekom	Royal Netherlands S. S. Co.	January 21	January 22	461	66
Santa Cecilia	Grace Line	January 21	January 22	63	(¹)
Acajutla	Pacific Steam Navigation Co.		January 22		1,104½
Ucayali	Peruvian Line		January 22		252
Levant Arrow	Standard Oil Co. of New York	January 22	January 23	352	(¹)
Edward L. Doheny	Huasteca Petroleum Co.	January 22	January 25	9,506	(¹)
Walter Luckenbach	Luckenbach Line	January 22	January 23	12	(¹)
Stuyvesant	Royal Netherlands S. S. Co.	January 22	January 25	41	794
Teno	Chilean Line	January 23	January 23	(¹)	141
Wanks	Standard Fruit & S. S. Corp.		January 23		1
Isis	Hamburg-American Line	January 23	January 24	402	42
Santa Marta	United Fruit Co.	January 23	January 24	1,051	209
El Salvador	Panama Mail S. S. Co.	January 23	January 24	1,507	415
Suriname	United Fruit Co.	January 23	January 24	1,112	196
Limón	United Fruit Co.	January 23	January 25	1,450	51
Drecht dijk	Holland-American Line	January 23	January 24	106	315
Counsellor	Harrison Line	January 23	January 24	678	(¹)
Ijsseldijk	Hamburg-American Line	January 23	January 25	319	486
Granada	Standard Fruit & S. S. Corp.	January 23	January 25	401	520
Caldas	National Navigation Co.	January 23	January 26	283	266
Hague Maru	Osaka Shosen Kaisha	January 24	January 24	126	(¹)
Santa Barbara	Grace Line	January 24	January 24	(¹)	5
El Ciervo	Anglo-Saxon Petroleum Co.	January 24	January 25	551	(¹)
Radnorshire	Royal Mail S. P. Co.	January 24	January 25	(¹)	572
Tolosa	United Fruit Co.	January 24	January 25	1,436	190
Gracia	Donaldson Line	January 24	January 26	(¹)	315
Magdalena	Hamburg-American Line	January 24	January 26	365	1,723
Flandre	French Line	January 24	January 26	358	333
Coppename	United Fruit Co.	January 25	January 25	51	109
Astillian	Leyland Line		January 25		2,247
Taormina	Italian Line	January 25	January 26	385	(¹)
Impero	Italian-Chilean Commercial Line	January 25	January 26	68	(¹)
Wanks	Standard Fruit & S. S. Corp.	January 25	January 26	70	
Cartago	United Fruit Co.	January 26	January 26	583	
Mandeville	United Fruit Co.	January 26	January 26	(¹)	108
Linda S.	R. Feuillebois	January 26	January 26	(¹)	40
Manizales	North German Lloyd	January 26		775	
Georgie	French Line	January 26		309	
Port Wellington	Commonwealth & Dominion Line	January 26		75	
Uribe	Estrada G. Hermanos		January 26		631

* No cargo discharged.

* One case.

* No cargo laded.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, December, 1928.—Continued from page 372.
(Figures represent tons of 2,240 pounds.)

FROM—	SOUTH AMERICA.					NORTH AMERICA.					ASIA.					AUSTRALASIA.				Grand totals.	Per cent of total cargo.			
	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	West coast of United States.	West coast of Canada.	West coast of Central America.	West coast of North America. ²	Balboa, C. Z. ³	Hawaii.	Total, North America.	Japan.	China.	Philippines.	Far East. ⁴	Total, Asia.	Australia.			New Zealand.	Total, Australasia. ⁵	
NORTH AMERICA:																								
UNITED STATES—																								
N. Atlantic ports.	12,555	3,453	727	5,305	7,699	29,769	199,697	894	1,789		81	4,296	206,727	19,634	24,032	16,080	22,091	81,837	33,120	10,092		43,212	361,545	41.6
S. Atlantic ports.				700		700	3,123	610					3,733			40		5,700	5,740				10,173	1.2
Gulf ports.	2,914	224	71	927		4,136	52,745	6,491	1,376		2,470		63,082	92,513	982	6,469	11,357	111,321	6,629	6,914		13,543	192,082	22.1
Totals, U. S.	15,469	3,677	798	6,932	7,699	34,605	255,565	7,965	3,155		2,551	4,296	273,542	112,147	25,054	22,549	39,148	198,898	39,749	17,006		56,755	563,800	64.9
Cristobal, C. Z. ³	1,897	2,846	1,029	988	1,646	8,409	2,921	13,241	7,032				9,953								56	56	18,418	2.1
E. coast of Canada.							4,497	90					17,738						4,901		6,371	1,900	30,910	3.6
West Indies.	5					5	21,975						22,065		14,217			14,217					36,287	4.2
E. coast of Mexico and Cen. America.							2,499	24	975				3,498						5,225				8,723	1.0
Totals, N. Amer.	17,401	6,526	1,827	7,920	9,345	43,019	287,457	21,320	11,172		2,551	4,296	326,796	112,147	39,271	22,549	39,148	213,115	49,875	23,377		75,208	658,138	75.8
EUROPE:																								
British Isles.	6,577	127	893	2,561	3,429	13,488	4,801	3,584	11,485				19,870									42,897	76,255	8.8
Belgium.	6,042	1,142	1,170	4,346	1,765	14,465	18,439	3,985					22,424										36,889	4.4
Denmark.							133						5,328										133	
France.	695		10	200	456	1,361	4,747	581					10,565									1,764	8,453	0.9
Germany.	1,688	417	258	1,929	328	4,611	9,551	358			656		6,566										15,176	1.7
Holland.	311			5	30	550	5,971	395					1,881										7,116	0.8
Italy.	2,517		80	563	63	3,223	5,225	1,347	9				7,003										5,104	0.6
Norway and Sweden.	2,759	1,532		187	3,853	8,331	3,754	47	1,951		1,251		19										15,334	1.8
Spain and Portugal.	1,197		4	120	197	518	13		6				9,578										537	0.1
Europe. ⁶	1,499	797	269	3,282	14,089	19,936	5,450	393	3,693		42												29,514	3.4
Totals, Europe.	22,285	4,015	2,509	13,383	24,201	66,483	53,384	10,890	17,144		1,949		83,367									41,620	194,511	22.5
E. coast of S. America.													6,856										7,155	0.8
Africa.	4	136			159	299	6,720	136															7,700	0.9
Grand totals	39,690	10,677	4,426	21,303	33,705	109,801	347,561	32,346	28,316		4,500	4,296	417,019	112,147	39,271	22,549	39,148	213,115	49,875	72,697		127,569	867,504	100.0
Percent of total cargo:																								
December, 1928.	4.6	1.2	0.5	2.4	3.9	12.6	40.1	3.7	3.3		0.5	0.5	48.1	12.9	4.5	2.6	4.5	24.5	5.8	8.4		14.8	100.0	
December, 1927.	5.6	1.4	0.5	2.5	4.1	14.1	38.5	3.8	3.1		0.5	0.5	46.8	14.9	3.1	2.1	2.2	22.3	9.0	7.4		16.8	100.0	
December, 1926.	3.8	2.2	0.8	2.1	3.6	12.5	39.0	3.8	1.5	0.4	0.9		45.6	13.5	3.4	1.9	3.7	22.5	8.7	9.5		19.4	100.0	

¹ Includes both local and transit.

² General cargo not routed so as to allow segregation between definite ports.

* Includes both local and transit cargo.

* General cargo not routed so as to allow segregation between definite ports.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, December, 1928.

(Figures represent tons of 2,240 pounds.)

FROM—	NORTH AMERICA.										EUROPE.										Grand totals	Per cent of total cargo.
	UNITED STATES.						Central America.				Total, North America.	Europe.										
	North Atlan- tic ports.		South Atlan- tic ports.		Gulf ports.		Total, United States.		East coast of Canada.			West Indies.		East coast of Central America.		Cristobal, C. Z.						
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	West Indies.	East coast of Central America.	Cristobal, C. Z.	British Isles.	Belgium.		Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ¹	Total, Europe.			East coast of South America.	Africa.
SOUTH AMERICA:																						
Chile.....	188,444	31,163	19,227	238,834	811		208,239,853	21,885	6,174	4	8,304	10,434	6,516	3,628	115	7,971	210,594	275,625				
Colombia.....							3,913	3,913										10				
Ecuador.....	657		7,769	8,426			1,684	10,110	25		141			315	109		220	835				
Peru.....	35,253		35,253	19,179			5,074	59,506	31,323		1,721	664		307	70		1,096	47,019				
W. coast of S. America ¹	61			61				61	3,630								349	4,759				
Totals, S. America	224,415	31,163	26,996	282,574	19,179	811	10,879	313,443	56,848	7,930	668	9,225	22,287	6,823	4,013	115	8,080	212,250	328,248			
NORTH AMERICA:																						
West coast of Canada.....	25,407		135	25,542	137	1,609	288	28,036	115,888	22,999	2,087	9,791	13,319	35,953	18,955	3,192	35,793	276,122	1,146	3,404		
W. coast Cen. America.....	50			50			140	3,517	3,707				580	70			602	1,252				
W. coast United States.....	442,214	17,306	49,009	508,529		10,950	9,539	12,632	541,650	130,783	5,745	507	7,908	40,833	14,950	6,410	1,085	26,843	243,633	1,833	2,740	
Hawaii.....	77			77				77														
Totals, N. America	467,748	17,306	49,144	534,198	137	12,559	10,139	16,437	573,470	246,671	28,744	2,594	17,699	54,732	50,973	25,365	4,877	26,114	63,238	521,007	2,979	6,144
ASIA:																						
China.....	6,941		104	7,045			742	7,787														
Japan.....	2,480			2,480			6	2,486														
Philippines.....	15,377	11,762		27,139				27,139														
Far East ¹	3,076			3,076				10,591	3,000													
Totals, Asia	27,874	11,762	104	39,740			748	48,003	3,000													
AUSTRALASIA:																						
Australia.....	7,698			7,698	429		8,127	30,147														
New Zealand.....					142		5	147														
Australasia ¹	940			940				940	5,790													
Totals, Australasia	8,638			8,638	571		5	9,214	35,937													
Grand totals	728,675	50,231	76,244	855,150	19,887	20,885	10,139	28,069	944,120	342,456	36,674	3,262	26,924	77,019	57,796	29,378	4,992	34,194	281,535	894,230	2,979	6,144
Per cent of total cargo:																						
December, 1928.....	39.4	3.3	4.1	46.8	1.1	1.1	0.5	1.6	51.1	18.5	2.0	0.2	1.5	4.2	3.1	1.6	0.3	1.8	15.2	48.4	0.2	0.3
December, 1927.....	38.6	2.8	3.4	44.8	1.3	1.8	0.1	3.0	51.0	17.2	0.8	0.4	2.1	2.6	3.7	3.3	0.8	1.0	16.0	47.9	1.1	100.0
December, 1926.....	57.1	1.4	1.4	59.9	3.9	0.6	0.1	1.8	66.3	13.1	1.6	0.2	1.3	1.2	0.6	0.9		0.2	14.5	33.6	0.1	100.0

¹ General cargo not routed so as to allow segregation between definite ports.² Includes both local and transit cargo.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors. An illustrated pamphlet explaining in detail the arrangement may be had upon application to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

On general merchandise the rates are as follows:

(a) For handling cargo from ship's side to storage place, the customary inward local charge of \$1 per ton.

(b) For delivery or reforwarding, customary outward local charge of \$1 per ton. (Total of 20 cents per ton more than regular transfer charge.)

(c) For storage, 3 cents per ton per day, except that no charge will be made for the first 35 days.

The Panama Railroad Company stores this cargo in four fireproof warehouses, 160 feet by 850 feet, at Cristobal, and in one of the same dimensions at Balboa.

Cargo stored for orders can be reforwarded from the Isthmus—each carrier to collect its proportion of the through rate instead of the local. This means that should a shipment move from New York to the Canal Zone, it will of course pay regular local rate to Balboa or Colon, as the case may be—but should owner wish to reforward to, say, "Guayaquil," he can do so by paying the oncarrier's proportion of the through rate. Upon evidence that the shipment or any part of it moved beyond the Canal Zone, the initial carrier will refund the difference between the through and local rate.

Cargo intended for warehousing at Cristobal or Balboa should be so indicated on the bill of lading, thus "Cristobal for orders" or "Balboa for orders." When so consigned it is not necessary for shippers to secure consular papers at original point of shipment, nor to have bills of lading consulated. Cargo consigned to Canal Zone for orders may be delivered in the Republic of Panama in which case it is necessary to prepare an invoice on which duties can be paid. When evidence of payment of duty is presented to the Canal Zone customs officers they will issue the necessary release and delivery can be taken in the usual way. For those on the Canal Zone who are allowed to import goods duty free the Panama Canal customs release is all that is necessary. For reshipment from storage to a foreign country the shipper takes out bill of lading, consular invoice and sobordo if necessary and cargo is forwarded as regular outward local.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," are shown in the pamphlet referred to above.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 13 years of operation.

Publication of Notices and Circulars of Interest to Shipping

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., February 6, 1928. No. 27.

Traffic Through the Panama Canal in January, 1929—New High Records.

During the month of January, 1929, 603 commercial vessels and 7 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,502,815.12, and on the launches \$81 or a total tolls collection of \$2,502,896.12.

The daily average number of commercial transits for the month was 19.45, and the average tolls collection, \$80,735.97. The average amount of tolls paid by each of the commercial transits was \$4,150.61, as compared with \$4,219.39 for the month of December, 1928.

The total number of commercial transits in January establishes a new high record for a month, exceeding by 14 the previous record of 589 commercial transits made in December, 1927. The tolls collected from the commercial transits, amounting to \$2,502,815.12, exceed by almost \$60,000 the previous record of \$2,443,029.39, collected from commercial traffic during the month of December, 1928.

In addition to the commercial traffic transiting the Canal during the past month there were 121 transits of vessels of the United States Government, 2 transits of a Panaman Government vessel, and 3 transits of vessels solely for repairs, on which no tolls were collected, making a total of 736 vessels of all kinds transiting the Canal during the month, or a daily average for all traffic of 23.74 vessels. The majority of the United States Government vessels were units of the Scouting Fleet transiting from Atlantic to Pacific to participate in the fleet maneuvers in or beyond the Gulf of Panama.

In the following tabulation, the number of commercial transits and the amount of tolls collected are shown for the first 7 months of the current fiscal year, with the daily averages of transits and tolls, together with the totals for the first 7 months of the fiscal years 1928 and 1927:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July	509	\$2,109,083.19	16.41	\$68,034.94
August	526	2,199,069.31	16.97	70,937.72
September	487	2,111,230.56	16.23	70,374.35
October	557	2,274,945.30	17.97	73,385.33
November	527	2,225,937.48	17.57	74,197.91
December	579	2,443,029.39	18.67	78,807.39
January	603	2,502,815.12	19.45	80,735.97
Totals, first 7 months of fiscal year 1929	3,788	15,866,110.35	17.62	73,795.86
Totals, first 7 months of fiscal year 1928	3,847	16,144,585.09	17.89	75,091.32
Totals, first 7 months of fiscal year 1927	3,140	13,914,400.47	14.60	64,718.14

In comparison with the first seven months of the fiscal year 1928, the corresponding period this year has had 59 fewer commercial transits and \$278,474.74 less tolls, a decrease of between $1\frac{1}{2}$ and 2 per cent.

MOVEMENTS OF CCEAN VESSELS.
Week ending at midnight, February 2, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Sunolt ^{1 2}	26	7 55	27	6 20	27	20 57	27	22 16	American...	Sun Oil Co.	480.0	66.0	22.0	Chester, Pa.	Los Angeles, Calif.	Ballast.	1,484	9,610	6,396
West Notus	26	8 15	27	6 30	27	19 56	27	21 05	American...	McCormick S. S. Co.	410.5	54.3	16.6	Buenos Aires, Arg.	Vancouver, B. C.	General.	6,583	5,014	3,475
S. C. T. Doud	26	9 10	27	7 05	27	22 05	27	23 08	American...	Tide Water Oil Co.	435.0	57.2	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,481	4,975	2,915
El Aleo ^{1 2}	26	9 47	27	7 15	27	23 12	28	3 54	British...	Imperial Oil Co., Ltd.	440.0	57.6	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,555	5,049	3,085
Buffalo Bridge.	26	10 53	27	8 15	27	22 23	28	9 15	American...	Charles Nelson & Co.	334.0	46.0	18.0	Baltimore, Md.	San Francisco, Cal.	General.	2,700	3,985	2,630
Madras City	26	16 45	27	8 30	28	00 35	28	2 05	British...	Reardon Smith Line.	333.0	53.6	13.4	Barry, England.	Vancouver, B. C.	Ballast.	5,913	4,377	2,817
Cananea.	26	12 20	27	8 40	28	1 39	28	2 53	British...	Furness Houliher Line.	450.0	57.5	15.0	Southampton, Eng.	Los Angeles, Calif.	Ballast.	8,956	6,562	3,944
Mexican.	26	14 20	27	10 05	28	2 41	28	3 54	American...	Amer-Hawaiian Line.	472.3	57.2	19.6	Boston, Mass.	Portland, Oreg.	General.	3,814	9,258	6,944
Anglo-Canadian ²	26	16 25	27	10 20	28	3 41	28	15 40	British...	Nitrate Prod. S. S. Co.	426.0	58.0	22.0	Galveston, Texas.	Melbourne, Aust'a.	Sulphur.	7,000	7,680	5,680
Kersten Miles.	27	00 45	27	11 45	28	5 43	28	23 15	German...	G. J. H. Siemens & Co.	407.7	54.4	23.6	Houston, Texas.	Kobe, Japan	General.	6,821	6,620	4,889
Irsvich	27	8 35	27	13 35	28	6 16	28	12 10	American...	Argonaut S. S. Co.	400.7	54.2	24.6	Baltimore, Md.	Tacoma, Wash.	Steel, general.	6,920	6,616	4,614
Limon.	27	9 25	27	15 03	28	00 42	28	2 05	American...	United Fruit Co.	331.0	44.0	18.4	Port Limon, C. R.	San Francisco, Cal.	Bananas, general.	545	3,675	2,229
Hellon.	27	9 55	27	19 40	28	6 47	28	8 12	American...	Norton, Lilly & Co.	440.0	56.0	23.0	New York, N. Y.	Everett, Wash.	Steel, general.	6,135	8,312	6,097
Manizates	26	23 10	28	6 10	28	20 15	28	21 06	German...	North German Lloyd	216.5	33.0	13.8	Cristobal, C. Z.	Guayaquil, Ecuador	General.	392	1,132	741
Hilda ³	25	19 35	28	6 20	28	19 00	29	14 10	American...	Charles Bolt.	172.0	27.0	14.0	Guantanamo, Cuba	Los Angeles, Calif.	Ballast.	6,866	10,428	7,456
Westmeland.	27	20 25	28	7 00	28	19 15	28	20 25	British...	Federal Steam Nav. Co.	473.0	60.0	28.5	London, England.	Auckland, N. Z.	General.	5,654	6,212	4,710
Hofuku Maru.	28	2 10	28	8 35	28	20 23	28	21 51	Japanese...	Kokusa Kisen Kaisha.	335.0	51.0	23.0	Norfolk, Va.	Yokohama, Japan	Steel, tobacco.	3,486	5,455	3,902
Orinoco	28	4 45	28	9 45	28	21 20	28	22 48	American...	Quaker Line.	375.0	52.3	18.0	Newport News, Va.	Los Angeles, Calif.	General.	3,447	6,934	5,102
Editor	28	5 05	28	13 14	28	22 25	28	23 43	American...	Roosevelt S. S. Co., S. B.	402.0	54.6	24.3	Philadelphia, Pa.	Adelaide, Australia	General.	2,600	8,736	5,860
Bridge ⁴	28	22 50	29	8 15	29	18 09	29	20 55	American...	U. S. Navy.	400.0	55.0		Norfolk, Va.	Bahoa, C. Z.	Naval supplies.	970	6,199	4,455
Goetendijk	28	16 33	29	9 30	29	19 25	28	20 55	Dutch...	Holland-American Line.	480.0	58.0	21.0	Antwerp, Belgium	Vancouver, B. C.	General.	3,542	6,824	4,885
Commercial	29	5 10	29	11 00	29	20 31	29	21 50	American...	Moore & McCormack	400.0	51.0	17.0	New York, N. Y.	Valparaiso, Chile	General.	2,975	12,057	8,509
Texas	29	6 10	29	12 25	29	21 25	29	22 15	French...	French Line.	409.0	53.0	22.8	Havre, France.	Vancouver, B. C.	General.	2,928	7,221	4,844
President	29	12 50	29	13 35	29	22 40	30	6 33	British...	Dollar Line.	502.0	62.2	28.0	New York, N. Y.	San Francisco, Cal.	General.	5,875	12,057	8,509
Garfield	29	18 05	29	15 11	29	23 31	30	13 05	British...	Pacific Steam Nav. Co.	406.0	54.0	17.3	Hull, England.	Valparaiso, Chile.	General.	2,928	7,221	4,844
Losada ²	29	18 05	29	16 10	30	13 34	30	19 28	Norwegian...	Fern Line.	381.0	53.0	24.0	Tampa, Fla.	Yokohama, Japan	General.	6,800	6,921	4,530
Fernmoor ²	29	23 10	30	7 45	30	19 32	30	21 15	American...	The Texas Co.	417.0	57.0	21.0	Norfolk, Va.	Los Angeles, Calif.	Ballast.	7,130	5,249	2,319
New Jersey	29	23 10	30	7 45	30	19 32	30	21 15	American...	The Texas Co.	417.0	57.0	21.0	Norfolk, Va.	Los Angeles, Calif.	Ballast.	7,130	5,249	2,319
Paul Luckenbach	30	3 15	30	8 45	30	20 39	30	22 16	American...	Luckenbach Line.	471.0	59.6	21.1	Boston, Mass.	Seattle, Wash.	General.	4,468	9,027	6,539
Knockfierna	30	9 00	30	11 05	30	21 34	30	23 15	British...	Andrew Weir & Co.	400.0	52.0	14.0	Oran, Algeria.	Taitai, Chile	Ballast.	5,828	4,095	2,025
Solana ²	30	11 30	30	12 00	30	22 32	31	16 08	American...	Tide Water Oil Co.	419.5	56.6	22.6	Bayonne, N. J.	San Francisco, Cal.	General.	7,060	5,025	3,154
Rhodopis	29	22 45	31	6 07	31	15 10	31	16 05	German...	Hamburg-American Line	435.0	53.2	24.6	Hamburg, Germany	Valparaiso, Chile.	General.	4,017	7,525	5,154
Gall.	28	23 30	31	6 22	31	16 38	31	17 45	German...	North German Lloyd	216.5	32.9	14.7	Cristobal, C. Z.	Buenaventura, Col.	General.	103	1,105	698
Purtas ²	30	20 35	31	6 35	31	16 28	31	21 20	Italian...	Industria Armamento.	385.7	51.7	18.0	Genoa, Italy	Vancouver, B. C.	Ballast.	7,105	6,024	4,482
Indianola.	30	20 45	31	7 30	31	17 41	31	19 00	British...	Andrew Weir & Co.	390.0	52.1	23.9	Antwerp, Belgium.	Auckland, N. Z.	Basic slag.	7,105	6,024	4,482

• Tanker.

• Motor ship.

• Yacht.

• Supply ship.

* Motor ship.

* Yacht.

* Tanker.

* Supply ship.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Calif.	28	12.00	28	14.14	28	23.30	31	6.22	German.	North German Lloyd.	216.5	32.9	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	840	698
Jane Christenson.	28	9.10	28	21.55	29	8.55	29	8.55	American.	Arrow Line.	409.5	54.2	24.2	Portland, Ore.	New York, N. Y.	Lumber.	7,156	4,966
Canadian Constructor.	28	11.15	28	23.01	29	9.55	29	20.00	British.	Can. Nat. Steamships.	430.0	56.2	18.0	Adelaide, Australia	Halifax, N. S.	General.	2,438	5,494
Gaveston.	29	00.06	29	09.00	29	13.00	29	13.00	American.	U. S. Navy.	292.0	44.0		Balboa, C. Z.	Cristobal, C. Z.	General.	7,300	4,612
Northmoor.	28	17.30	29	00.20	29	10.12	29	10.12	British.	Moor Line, Ltd.	375.0	53.5	25.6	Vancouver, B. C.	Hull, England.	Wheat.	7,365	4,066
Chastine.	28	17.00	29	1.05	29	11.10	29	11.10	Danish.	Isbrandtsen Moller Co.	367.0	48.8	25.0	Pulupandan, P. I.	Baltimore, Md.	Sugar.	7,035	4,505
Marsk.	28	22.00	29	1.42	29	12.20	29	14.25	British.	Sir R. Roper & Co.	420.1	54.1	24.6	Vancouver, B. C.	Rotterdam, Holland	Wheat.	3,983	4,641
Crugpool.	28	23.11	29	2.51	29	13.30	29	14.30	British.	N. Pacific Coast Serv.	440.0	56.3	24.6	Vancouver, B. C.	Rotterdam, Holland	General.	4,185	2,528
Meisomer.	28	23.11	29	6.55	29	14.35	30	12.37	American.	The Texas Co.	315.0	43.7	23.0	Los Angeles, Calif.	Wilmington, Del.	(*)		
Solitaire.	28	23.11	29	8.17	29	15.50	29	15.50	American.	U. S. Navy.	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.			
No. 236.	29	8.17	29	15.50	29	15.50	29	15.50	American.	U. S. Navy.	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.			
No. 290.	29	8.17	29	15.50	29	15.50	29	15.50	American.	U. S. Navy.	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.			
No. 241.	29	8.19	29	15.50	29	15.50	29	15.50	American.	U. S. Navy.	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.			
No. 247.	29	8.45	29	9.55	29	18.00	29	23.00	Norwegian.	Scand. So. Pacific Line	410.5	54.1	23.6	Iquique, Chile.	Land's End, Eng.	Nitrates.	7,500	4,799
Sucolanco.	29	9.10	29	10.11	29	19.25	29	23.15	American.	Transmarine Lines.	324.0	46.2	23.8	Aberdeen, Wash.	Philadelphia, Pa.	Lumber.	4,300	2,612
Robert Luck-enbach.	29	10.15	29	11.16	29	19.50	29	19.50	American.	Lockenbach Line.	445.0	58.0	27.0	Portland, Ore.	Boston, Mass.	Lumber, general.	8,018	6,375
O-8.	29	11.55	29	12.14	29	19.25	29	19.25	American.	U. S. Navy.	390.1	55.5	23.0	Balboa, C. Z.	Cristobal, C. Z.	Wheat.	7,778	4,257
Warlab.	29	11.55	29	12.41	29	20.55	29	22.05	British.	Sir R. Roper & Co.	390.1	55.5	23.0	Vancouver, B. C.	United Kingdom.			
Canadian Traveller.	29	13.00	29	13.47	29	21.35	29	23.15	British.	Can. Nat. Steamships.	399.5	52.2	17.9	Melbourne, Aus'lia	Halifax, N. S.	Lumber.	1,400	5,984
Pacific Pine.	29	13.15	29	14.09	29	23.20	29	23.20	American.	Dimon S. S. Corp.	410.5	54.3	24.6	Aberdeen, Wash.	Baltimore, Md.	General.	7,400	4,808
Turpin.	21	9.00	29	23.45	30	9.22	30	16.55	German.	Roland Line.	395.0	50.0	26.0	Corral, Chile.	Hamburg, Germany		6,833	4,423
Denver.	29	23.50	30	9.10	30	12.25	30	12.25	American.	U. S. Navy.	292.0	44.0		Balboa, C. Z.	Cristobal, C. Z.			
Taranaki.	29	6.00	30	00.40	30	9.47	30	9.47	British.	Shaw Savill & Albion.	483.0	64.0	26.6	Pt. Chalmers, N. Z.	London, England.	Frozen, general.	6,724	11,706
Volumbia.	29	14.25	30	00.50	30	11.10	30	11.50	British.	Can-Am. Ship. Co.	423.6	56.0	23.6	Vancouver, B. C.	Rotterdam, Holland	Lumber, wheat.	7,860	6,229
Santa Isabel.	29	20.45	30	1.00	30	11.17	30	16.00	American.	Ishman S. S. Lines.	251.0	43.6	22.0	Portland, Ore.	Boston, Mass.	Lumber, general.	2,534	1,740
Kentuckian.	29	16.10	30	1.32	30	12.20	30	12.20	American.	Amer-Hawaiian Line.	414.3	53.7	27.1	Portland, Ore.	Boston, Mass.	General.	6,072	4,941
San Mateo.	30	2.35	30	3.57	30	12.55	31	16.23	American.	United Fruit Co.	315.2	44.2	20.0	San Francisco, Cal.	Port Limon, C. R.	Coffee, general.	1,023	3,496
Bohemian Club.	29	13.45	30	5.44	30	14.55	30	15.15	American.	Atlantic Refining Co.	425.0	57.2	27.3	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline.	9,354	7,204
Silvestad.	30	2.50	30	6.15	30	17.05	30	16.50	Norwegian.	Fern Line.	376.5	53.8	25.8	Saigon, China	San Domingo.	Rice.	7,331	4,706
Heduan.	30	6.45	30	8.15	30	15.15	30	23.50	German.	Hamburg-American Line	441.1	52.8	26.4	Valparaiso, Chile.	Hamburg, Germany	General.	7,310	5,313
Mantaro.	30	8.30	30	9.55	30	17.05-2-2	6	10	Peruvian.	Peruvian Line.	267.3	46.0	19.6	Callao, Peru.	Cristobal, C. Z.	General.	2,178	2,950
Nitro.	29	19.30	30	10.34	30	20.00-1-30	22	25	Italian.	Soc. Auon. Com. Italian	406.8	48.8	25.7	Tocopilla, Chile.	Gibraltar.	Nitrates.	7,150	6,742
Point Bonita.	30	7.25	30	10.37	30	19.35	30	19.35	American.	Gulf-Pacific Line.	324.0	46.2	22.8	San Francisco, Cal.	New Orleans, La.	General.	3,700	3,984

* Wool, hides, and general.

* For orders.

* Gasoline and packages.

* Cruiser.

* Submarine.

* Destroyer.

* Motor ship.

* Tanker.

Pacific Trader ¹¹	30	8 00	30	11 25	30	20 44	30	9 10	British	Furness, Withy & Co. Standard Shipping Co. Royal Neth. S. S. Co. Lloyd Mediterranean. U. S. Army	420.0 429.4 347.6 385.0	53.0 59.2 48.2 52.0	26.7 27.2 18.7 23.7	Vancouver, B. C. Los Angeles, Calif. Quimbo, Chile. Mellones, Chile. Balboa, C. Z.	Glasgow, Scotland New York, N. Y. Hamburg, Germany Azores ¹² Cristobal, C. Z.	General Gasoline General Nitrates	7,914 7,905 9,556 2,262 7,538	5,869 5,616 3,083 3,663 4,149
Joseph Scop ¹¹	30	10 15	30	12 24	30	20 44	30	21 40	American	U. S. Army	429.0	53.0	26.7	Balboa, C. Z.	Cristobal, C. Z.	General	7,914	5,869
Orestes ¹¹	30	11 43	30	14 43	30	23 40	30	2 15 50	Dutch	U. S. Army	429.4	59.2	27.2	Balboa, C. Z.	Cristobal, C. Z.	Gasoline	7,905	5,616
Valdresca ¹¹	30	11 40	30	15 04	30	1 00 50	31	2 15	Italian	U. S. Army	347.6	48.2	18.7	Balboa, C. Z.	Cristobal, C. Z.	General	9,556	3,083
Gen. Wm. M. Graham ¹⁰	30	11 40	30	15 04	30	1 00 50	31	2 15	Italian	U. S. Army	385.0	52.0	23.7	Balboa, C. Z.	Cristobal, C. Z.	Nitrates	7,538	4,149
Gen. G. W. Edward P. Getty ²¹	30	6 33	30	6 33	30	15 05			American	U. S. Army	160.2	32.0		Balboa, C. Z.	Cristobal, C. Z.			
Nonces ²¹	30		30		30	16 40			American	U. S. Army	98.0	22.0		Balboa, C. Z.	Cristobal, C. Z.			
L-10 ²²	30		30		30	15 05			American	U. S. Army				Balboa, C. Z.	Cristobal, C. Z.			
J-10 ²²	30		30		30	15 05			American	U. S. Army				Balboa, C. Z.	Cristobal, C. Z.			
Sofoia ²²	30		30	9 05	30	15 40	31	6 00	American	U. S. Army	155.0	30.0		Balboa, C. Z.	Cristobal, C. Z.			
L-55 ²²	30	15 10	31	4 56	31	12 50	31	12 50	American	U. S. Army	334.0	46.2	24.0	Balboa, C. Z.	Cristobal, C. Z.			
Spurtoed ²²	30	15 10	31	5 00	31	12 10	31	12 10	British	U. S. Army	300.0	53.5	23.0	Balboa, C. Z.	Cristobal, C. Z.			
Gracfield ²²	30	17 15	31	5 39	31	14 55	4	9 45	British	U. S. Army	220.0	34.0	12.9	Balboa, C. Z.	Cristobal, C. Z.			
Jamaica ²²	30	20 50	31	6 33	31	14 35	31	14 35	American	U. S. Army	431.0	59.2	27.4	Balboa, C. Z.	Cristobal, C. Z.			
Leme ²²	30	8 45	31	7 43	31	16 55	31	16 55	Italian	U. S. Army	459.0	57.0	28.2	Balboa, C. Z.	Cristobal, C. Z.			
Hovsef ²²	30	17 45	31	7 51	31	15 45	1	4 45	Norwegian	U. S. Army	255.1	35.5	15.4	Balboa, C. Z.	Cristobal, C. Z.			
Reedpool ²²	30	23 00	31	8 47	31	17 30	31	18 30	British	U. S. Army	390.0	55.5	24.0	Balboa, C. Z.	Cristobal, C. Z.			
Nehrascan ²²	31	3 00	31	9 32	31	18 35	31	18 35	American	U. S. Army	471.1	59.1	27.0	Balboa, C. Z.	Cristobal, C. Z.			
Los Angeles ²²	31	5 45	31	10 15	31	18 55	31	23 45	German	U. S. Army	432.2	59.4	26.3	Balboa, C. Z.	Cristobal, C. Z.			
Baralt ²²	31	15 30	31	11 13	31	19 55	3	6 10	Dutch	U. S. Army	202.9	33.1	12.0	Balboa, C. Z.	Cristobal, C. Z.			
Garfield ²²	31	15 30	31	23 44	2-1	8 50	2-1	8 50	American	U. S. Army	209.4	45.0	22.3	Balboa, C. Z.	Cristobal, C. Z.			
Kont ²²	31	17 00	2-1	1 32	1	9 55	1	9 55	British	U. S. Army	477.5	62.8	23.0	Balboa, C. Z.	Cristobal, C. Z.			
Illinois ²²	31	17 10	1	2 14	1	11 05	1	11 05	British	U. S. Army	416.8	56.1	25.6	Balboa, C. Z.	Cristobal, C. Z.			
Karistian ²²	2-1	3 40	1	4 32	1	11 55	1	11 55	British	U. S. Army	390.0	53.6	24.3	Balboa, C. Z.	Cristobal, C. Z.			
Bethore ²²	1-31	13 00	1	5 05	1	15 05	1	15 05	American	U. S. Army	550.3	72.2	35.0	Balboa, C. Z.	Cristobal, C. Z.			
Henri ²²	31	20 50	1	6 25	1	15 40	1	23 35	French	U. S. Army	400.5	51.2	27.6	Balboa, C. Z.	Cristobal, C. Z.			
Desmarais ²²	31	20 50	1	6 25	1	15 40	1	23 35	French	U. S. Army	400.5	51.2	27.6	Balboa, C. Z.	Cristobal, C. Z.			
Agwistone ²²	1-1	4 20	1	8 13	1	17 15	1	17 15	American	U. S. Army	499.9	68.1	29.0	Balboa, C. Z.	Cristobal, C. Z.			
Albionstar ²²	1	7 05	1	8 34	1	17 50	2	4 55	British	U. S. Army	450.0	58.5	26.6	Balboa, C. Z.	Cristobal, C. Z.			
Rotortia ²²	1-31	23 30	1	10 25	1	18 00	1	18 00	British	U. S. Army	526.4	61.2	26.6	Balboa, C. Z.	Cristobal, C. Z.			
Dean Emery ²²	1-31	8 20	1	11 21	1	19 25	1	19 25	American	U. S. Army	429.3	59.4	26.6	Balboa, C. Z.	Cristobal, C. Z.			
Hovick Hall ²²	1	12 20	1	13 11	1	21 05	1	23 05	American	U. S. Army	400.8	51.5	26.0	Balboa, C. Z.	Cristobal, C. Z.			
Suritcho ²²	1	12 35	1	13 34	1	22 05	2	1 10	American	U. S. Army	324.0	46.2	24.0	Balboa, C. Z.	Cristobal, C. Z.			
Vidvadan ²²	1	13 00	1	13 59	1	23 55	2	2 10	Yugoslav	U. S. Army	421.9	55.3	25.0	Balboa, C. Z.	Cristobal, C. Z.			
Kanawa ²²	1	13 00	1	5 07	2	12 35	4	7 17	American	U. S. Army	455.0	50.0		Balboa, C. Z.	Cristobal, C. Z.			
Neches ²²	2	6 15	2	6 15	2	14 50	2	14 50	American	U. S. Army	475.0	56.0		Balboa, C. Z.	Cristobal, C. Z.			
Pacific ²²	2	1 35	2	7 30	2	14 50	2	14 50	American	U. S. Army	399.7	56.2	25.3	Balboa, C. Z.	Cristobal, C. Z.			
Kurdistian ²²	2	3 30	2	8 45	2	16 10	2	16 10	British	U. S. Army	420.0	54.0	25.0	Balboa, C. Z.	Cristobal, C. Z.			
Arzuta ²²	2	12 45	2	13 29	2	13 29	2	13 40	French	U. S. Army	425.0	54.8	23.4	Balboa, C. Z.	Cristobal, C. Z.			
Krute Nelson ²²	2	14 45	2	23 15	2	9 15	3	13 30	Norwegian	U. S. Army	436.0	56.0	27.3	Balboa, C. Z.	Cristobal, C. Z.			

* Tanker.

** Mine planter.

** Tug.

** Launch.

** Towing raft.

** Coffee, sugar, hides, wood, and balloon.

** Coffee, and canned goods.

** Lumber, ore, and pulp.

** Lumber, ore, and pulp.

** Lumber, ore, and pulp.

** Lumber, ore, and pulp.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 27	Nidar	General American Shipping Co.	Tampa, Fla.	January 27	Duchess of Bedford	Canadian Pacific S. S. Co.	Kingston, Jamaica.
January 27	Camden	United Fruit Co.	Curacao, D. W. I.	January 27	Kungsholm	Swedish-American Line.	New York via wayports.
January 27	Midas	Royal Netherlands S. S. Co.	Maracabo, Venezuela.	January 28	Cardago	United Fruit Co.	New Orleans via wayports.
January 28	Maravi	United Fruit Co.	New York, N. Y.	January 28	Camden	United Fruit Co.	Port Limon and Curacao.
January 28	Manaquí	United Fruit Co.	New York via wayports.	January 29	Maravi	United Fruit Co.	Puerto Colombia.
January 29	Patella	Anglo-Saxon Petroleum Co.	Curacao, D. W. I.	January 29	Nidar	General American Shipping Co.	Cienfuegos, Cuba.
January 30	Irióna	United Fruit Co.	New Orleans, La.	January 29	Manaquí	United Fruit Co.	New York via Kingston.
January 30	Ancon	Panama Railroad S. S. Line	New York via Haiti.	January 30	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.
January 30	Cavina	Elders & Fyffes, Ltd.	Avonmouth via wayports.	January 30	Patella	G. I. Bryan.	Bluefields, Nicaragua.
January 30	Metapan	United Fruit Co.	New York via Kingston.	January 31	William M. 27	Anglo-Saxon Petroleum Co.	Curacao, D. W. I.
January 30	Tegucigalpa	Standard Fruit & S. S. Co.	New Orleans, La.	January 31	Metapan	United Fruit Co.	Colombian ports.
January 31	William M. 27	G. I. Bryan	Colon, R. P.	January 31	Santa Marta	United Fruit Co.	New York via Kingston.
January 31	Santa Marta	United Fruit Co.	Cartagena, Colombia.	January 31	Irióna	United Fruit Co.	Port Limon and Bocas.
February 1	Calamarcos	United Fruit Co.	Puerto Colombia.	February 1	Tegucigalpa	Standard Fruit & S. S. Co.	New Orleans, La.
February 1	Wanks	Standard Fruit & S. S. Co.	New York via wayports.	February 1	Cavina	Elders & Fyffes, Ltd.	Avonmouth via Kingston.
February 1	Calgaric	White Star Line	San Blas, R. P.	February 1	Suriname	United Fruit Co.	New York via wayports.
February 1	California	Guinard Line	New York via wayports.	February 1	Calamarcos	United Fruit Co.	Colon, R. P.
February 1	Dellian	Leyland Line	Liverpool via wayports.	February 1	Inapaquina 28	White Star Line	New York via wayports.
February 1	Inapaquina 28	United Fruit Co.	Colon, R. P.	February 2	Calgaric	Surgeon Brothers.	Bluefields, Nicaragua.
February 2	Linda S. 29	Surgeon Brothers	Colon, R. P.	February 2	Linda S. 29	United Fruit Co.	Colon, R. P.
February 2	Anacuecuna 28	United Fruit Co.	Colon, R. P.	February 2	Anacuecuna 28	Leyland Line.	Palo Alto, Cuba.
27 Schooner.				PORT OF BALBOA.			
28 Motor boat.				29 Motor schooner.			
January 30	Cricmola 30	Chiriqui Land Co	Pto. Armuelles, R. P.	January 31	Cricmola 30	Chiriqui Land Co.	Pto. Armuelles, R. P.
January 31	El Colon 31	H. Elliot	Darien, R. P.	January 31	El Colon 31	H. Elliot	Panama Bay, R. P.
February 1	A. B. de Obarrio 31	Pacific Fruit Co.	Bayano River, R. P.	February 1	A. B. de Obarrio 31	Pacific Fruit Co.	Panama Bay, R. P.
February 1	Dos Hermanos 31	A. Valdez	Pto. Armuelles, R. P.	February 1	Dos Hermanos 31	A. Valdez	Panama Bay, R. P.
February 2	San Luis 31	Chiriqui Land Co	Pto. Armuelles, R. P.	February 1	Lagarto 30	Pacific Steam Navigation Co.	Coronel, Chile.
				February 2	San Luis 31	Chiriqui Land Co.	Panama Bay, R. P.

* Other than ships passing through the Canal.

30 Motor ship.

31 Motor schooner.

Notice to Mariners.

The Hydrographic Office of the United States Navy included among the Notices to Mariners published under date of January 26, 1929, the following (No. 240), quoted from *Nachrichten für Seefahrer* 52 (4817), Berlin, December 29, 1928:

The master of the German steamer *Schwarzwald* reports that the wreck of a lighter lies sunk west-northwestward of Punta Limones, in (approximately) 3° 50' 39" N., 77° 07' 27" W. (on H. O. Chart 1786). A black buoy marks the wreck temporarily. The notation "(1928) P. D." will be inserted against this wreck on the chart.

Tanker Traffic Through the Panama Canal in January, 1929.

During the month of January, 1929, 99 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 520,411, on which tolls of \$468,542.16 were collected. Cargo amounted to 521,554 tons. In point of net tonnage, tanker traffic for the past month showed an increase of 10.3 per cent over the same traffic for the corresponding month a year ago, while cargo tonnage increased 35.7 per cent over the cargo tonnage of January, 1928.

Tank ships comprised 16.4 per cent of the total commercial transits through the Canal during the month; made up 18.7 per cent of the total Panama Canal net tonnage; were the source of 18.7 per cent of the total tolls collected; and carried 19.3 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of January, 1929, segregated by direction of transit and nationality of vessels, are shown in the following tabulations, with comparative totals, for the two preceding months and for January, 1928:

Nationality.	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	10	50,933	\$36,671.76	.....
Danish.....	1	6,054	4,358.88	.....
Danzig.....	1	6,338	4,563.36	.....
French.....	2	9,250	6,660.00	.....
German.....	1	4,133	2,975.76	.....
Norwegian.....	1	5,822	4,191.84	.....
Peruvian.....	1	144	103.68	.....
United States.....	29	159,106	117,983.28	.....
Totals, January, 1929.....	46	241,780	177,508.56	.....
Totals, December, 1928.....	44	229,747	171,163.47	15,700
Totals, November, 1928.....	37	204,612	149,609.70	9,244
Totals, January, 1928.....	48	252,682	182,391.35	2,291
<i>Pacific to Atlantic.</i>				
Belgian.....	1	4,976	5,710.00	9,600
British.....	8	39,811	43,132.50	73,329
Danish.....	1	5,695	5,910.00	11,259
Danzig.....	1	6,338	6,545.00	11,400
Dutch.....	1	5,065	5,675.00	8,890
French.....	2	9,685	10,475.00	18,877
German.....	2	8,319	8,897.50	16,570
Norwegian.....	5	23,256	24,970.00	45,598
United States.....	32	175,486	179,718.60	326,031
Totals, January, 1929.....	53	278,631	291,033.60	521,554
Totals, December, 1928.....	37	194,903	198,667.64	345,004
Totals, November, 1928.....	44	233,612	241,705.35	424,708
Totals, January, 1928.....	39	218,983	221,233.75	404,926

* Includes 1 tanker of molasses, Panama Canal tonnage 6,287, tolls \$6,707.50, cargo 12,030 tons.

Of the total tanker traffic shown above, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for January, 1928:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
January, 1929.....	32	174,269	\$125,631.30	.....
December, 1928.....	38	201,765	151,016.43	15,700
November, 1928.....	29	660,638	115,659.36	.....
January, 1928.....	35	198,205	161,444.50	.....
<i>From Los Angeles.</i>				
January, 1929.....	40	206,611	215,099.85	391,511
December, 1928.....	26	136,116	137,683.75	243,385
November, 1928.....	33	174,578	180,329.10	317,050
January, 1928.....	26	146,507	149,595.00	273,534

Air Mail Between the United States and the Canal Zone.

Regular air mail service between the United States and the Canal Zone was begun with the departure from Miami on February 4 of the plane *NC 8000* of the Pan-American Airways, Inc., arriving at France Field the afternoon of February 6. Stops were made at Le So, Cuba; Belize, British Honduras (over night); Tela, Honduras; Managua, Nicaragua (over night); Puntarenas, Costa Rica; David, Panama; France Field. The plane delivered six sacks of United States mail weighing about 350 pounds to a truck sent from the Cristobal post office. The return flight with mail from the Canal Zone is to start from France Field on the morning of February 10 and is scheduled to follow to the United States the route used on the southward flight, with arrival at Miami scheduled for the afternoon of February 12.

For the present the service will provide flights in both directions twice monthly. The operating company has announced its intention of expanding the service as rapidly as air ports can be conditioned and new planes be added to the equipment, with the expectation that daily departures can be realized within a year. For the present the only contract which has been made for the handling of mail is with the Post Office Department of the United States but it is expected that arrangements will be made for carrying mail to and from all of the countries at which stops are made. No commercial passengers are being carried at this stage of the development, and the company has announced a policy of not accepting such passengers until the safety of the service has been demonstrated by a period of successful operation, possibly several months.

On its first flight the plane carried only employees of the operating company including as pilot, Col. C. A. Lindbergh, Air Corps, who conducted a lone flight over approximately the route of this service in January, 1928, as part of a good will tour through the countries of the Caribbean area.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference. It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

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New High Records for Month's Commercial Transits, Measurement Tonnage, Tolls and Cargo, Established in January, 1929.

Supplementing the article in THE PANAMA CANAL RECORD of February 6, 1929, stating that traffic through the Panama Canal in January, 1929, had broken all previous records with respect to commercial transits and tolls collected for a month's period, figures recently compiled show that ship tonnage and cargo tonnage for the month have also established new high records for these respective items.

The following tabulation shows the number of transits, tonnage, tolls collected, and tons of cargo carried during the past month, as compared with the corresponding totals made during previous record months, and the amount of the increases:

Commercial traffic.*	January, 1929.	Previous high record.		Increase.
Number of transits.....	603	589	December, 1927...	14
Tonnage:				
Panama Canal net.....	2,771,280	2,638,140	December, 1923...	73,140
United States net.....	2,117,812	2,055,643	December, 1923...	62,164
Registered gross.....	3,470,934	3,359,731	December, 1923...	111,203
Registered net.....	2,122,121	2,056,933	December, 1923...	65,188
Tolls collected.....	\$2,592,815 12	\$2,443,029 39	December, 1923...	\$9,785.73
Tons of cargo.....	2,858,835	2,717,646	October, 1927....	141,189

* Commercial traffic includes all craft subject to the payment of tolls except small vessels under 20 net tons, Panama Canal net measurement. It does not include vessels in the public service of the Governments of the United States, Panama, and Colombia, and ships which transit the Canal solely for the purpose of having repairs made at the Balboa shops and dry dock, as such vessels are exempt from payment of tolls.

Record Nitrate Shipments in January.

During the month of January, 1929, 358,600 tons of Chilean nitrates passed through the Panama Canal. This surpassed the previous high record of 315,670 tons shipped through during the month of December, 1928, by 42,980 tons. Of this January cargo, 229,810 tons were destined to Europe, 110,563 tons to the United States, and the balance, consisting of small shipments, to Egypt and the West Indies.

The graph and tabulation below give a comparison of nitrate shipments and of the other larger commodities passing through the Canal from the Pacific to the Atlantic during the month of January, 1929:

Commodity.	Long tons	Percent of total from Pacific to Atlantic.
Mineral oils.....	509,811	24.3
Nitrates.....	358,600	17.1
Wheat.....	330,500	15.7
Lumber.....	229,743	10.9
Ores.....	120,594	5.7
Canned goods.....	105,824	5.0
Other.....	443,913	21.3

An article showing the shipments of Chilean nitrates through the Canal for the past 8 calendar years was published in THE PANAMA CANAL RECORD of January 23, 1929.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, February 9, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Salt water draft.			From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.			Length.	Beam.	Water draft.			Nature.	Tons.	Gross.	Net.
Barnevelde	1	16.15	3	6.15	3	16.52	3	18.15	Dutch	Royal Neth. S. S. Co.	446.0	58.0	25.3	Hamburg, Germany	Corral, Chile	General	5,588	7,829	5,980
Noire Dame de Fourviere	2	14.05	3	7.05	3	17.56	3	19.00	French	French Line	417.0	58.2	16.0	Havre, France	Vancouver, B. C.	General	1,425	8,043	5,454
Barat	1-31	19.55	3	6.10	3	16.57	3	18.57	Dutch	Royal Neth. S. S. Co.	202.0	33.1	11.3	Cristobal, C. Z.	Guayaquil, Ecuador	General	190	1,183	742
Paez	2-2	22.35	3	7.50	3	17.56	3	19.00	Venezuela	Venezuela Gulf Oil Co.	300.0	50.0	11.0	Maracaibo, Venez.	Balboa, C. Z.	Ballast			
Castor	3	7.25	3	9.10	3	19.00	3	23.45	Swedish	F. Malmros	466.0	62.0	20.3	Falmouth, England	Los Angeles, Calif.	Ballast	8,900	6,295	
Willhois	3	7.35	3	9.40	3	20.10	4	1.30	American	Williams S. S. Line	434.3	57.7	22.9	Baltimore, Md.	Seattle, Wash.	General	6,829	7,983	5,850
Annan	2	19.00	3	10.45	3	21.25	4	15.00	Danish	East Asiatic Co.	410.0	55.0	22.10	Newcastle-on-Tyne	Vancouver, B. C.	General	6,269	7,067	5,286
San Mateo	3	2.25	3	11.26	3	21.40	4	1.00	American	United Fruit Co.	315.2	44.2	20.3	Port Limon, C. R.	San Francisco, Cal.	Bananas, coffee	670	3,496	2,141
Perseus	3	7.30	3	11.50	3	22.30	4	23.42	Greek	Kilikundis & Marg'nis	390.0	52.7	15.0	Rotterdam, Holland	Arica, Chile	Ballast	6,283	4,619	
Annie Johnson	3	8.45	3	13.35	3	23.30	4	4.04	Swedish	Johnson Line	392.2	52.0	18.2	Stockholm, Sweden	Vancouver, B. C.	General	2,676	6,650	4,919
Sommerstad	3	19.30	3	20.12	4	20.04	5	18.05	Norwegian	Caucasian Oil Co.	381.0	55.2	18.0	Falmouth, England	Los Angeles, Calif.	Ballast		5,994	3,876
Kamwhia	2	12.05	4	7.11	4	21.15			American	U. S. Navy	458.0	56.0	19.0	Cristobal, C. Z.	Balboa, C. Z.	Fuel oil			
Pacific																			
Redwood	3	19.20	4	9.40	4	23.27	5	00.50	American	Dimon S. S. Corp.	409.0	54.0	19.10	Norfolk, Va.	Los Angeles, Calif.	General	5,691	6,537	4,841
Jamaica	1-31	14.55	4	9.45	4	21.37	4	23.24	British	Pacific Steam Nav. Co.	220.0	34.0	13.2	Cristobal, C. Z.	Champerico, Guat.	General	1,187	622	
Guatemala	2-2	19.03	3	10.42	4	22.45	5	2.07	American	Panama Mail S. S. Co.	360.2	51.6	22.10	New York, N. Y.	San Francisco, Cal.	General	2,789	5,776	4,081
Feltore	3	20.10	4	12.40	5	00.33	5	2.07	American	Ore S. S. Corp.	449.1	57.2	18.3	Baltimore, Md.	Cruz Grande, Chile	Ballast	7,808	5,139	
Sidney M.																			
Hauptman	4	00.50	4	14.00	5	1.45	5	3.00	American	Muson, McCor'k Line	401.0	53.2	24.0	Baltimore, Md.	Tacoma, Wash.	Steel, general	5,225	7,082	5,167
Sapelo	4	6.20	4	15.05	5	2.51	5	5.06	Danish	U. S. Navy	463.0	60.0	27.0	Port Arthur, Texas	Balboa, C. Z.	Fuel oil	10,917		
Nordya	4	9.25	4	16.10	5	4.14	5	5.06	Danish	Wessel Dval & Co.	362.0	51.5	21.0	Baltimore, Md.	San Antonio, Chile	Coke	4,018	4,932	3,468
A. L. Kent	4	15.07	4	17.50	5	5.45	5	12.10	American	U. S. Steel Products Co.	394.1	55.1	27.0	Baltimore, Md.	Seattle, Wash.	Steel, general	8,352	7,017	5,132
Silverbeech	4	17.28	4	18.55	5	6.22	5	7.08	British	Kerr Line	423.0	58.3	23.6	New York, N. Y.	Singapore, S. S. Set.	General	5,491	8,226	6,030
Swan	4	12.45	4	22.35	5	22.35	5	23.30	American	U. S. Navy	189.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	Case oil, general	7,894	8,315	6,100
Archer	4	22.05	5	7.20	5	18.35	5	19.50	American	Roosevelt S. S. Co., S. B.	440.0	55.0	27.0	Baltimore, Md.	Taku Bar, China	Ballast	4,781	4,643	
Uraniborg	5	5.55	5	8.10	5	20.55	5	21.51	Danish	C. K. Hansen	346.0	50.0	12.0	Aruba, D. W. I.	Los Angeles, Calif.	General	9,896	11,443	8,417
Ruabine	5	10.15	5	10.30	6	3.09	6	3.09	British	N. Z. Shipping Co.	480.6	69.3	29.6	London, England	Auckland, N. Z.	General	332	4,838	2,959
Mantaro	4	14.38	5	11.25	5	21.02	5	22.20	Peruvian	Peruvian Line	360.0	46.0	19.3	Covenas, Colombia	Callao, Peru	General, cattle	2,705	2,835	1,805
Minolea	5	3.35	5	11.30	5	22.15	5	23.20	American	N. O. & S. A. S. S. Line	298.6	40.0	19.10	New Orleans, La.	Talcahuano, Chile	Lumber, steel			
Harry Luckenbach	5	11.20	5	12.30	5	23.00	5	23.54	American	Luckenbach Line	448.9	60.2	25.1	Houston, Texas	Seattle, Wash.	General	6,403	9,202	6,853
Marore	5	13.10	6	6.15	6	17.05	6	18.29	American	Ore S. S. Corp.	550.3	72.2	22.0	New York, N. Y.	Cruz Grande, Chile	Ballast	15,551	4,297	
Cape Verde	5	13.10	6	6.15	6	18.12	6	20.10	British	Dom. Iron & Steel Co.	505.3	53.0	24.9	Sydney, C. B.	Vancouver, B. C.	General	7,109	5,756	4,118
Kansan	5	23.47	6	7.39	6	19.10	6	20.30	American	Amer.-Hawaiian Line	404.6	53.9	27.0	Boston, Mass.	Seattle, Wash.	General	3,913	6,779	4,927
Dorothy Luckenbach	5	23.58	6	8.00	6	20.15	6	22.40	American	Luckenbach Line	448.9	63.2	24.0	Boston, Mass.	Seattle, Wash.	General	7,000	9,204	6,861
Totoku Maru	6	1.40	6	8.50	6	21.35	6	23.44	Japanese	Kokusei Kaisha	385.0	51.0	26.6	Philadelphia, Pa.	Yawata, Japan	General	6,734	9,191	4,400

* Tin, scrap, rosin, and cotton.

* Coal, cobbings, and general.

* Mine sweeper.

* Motor ship.

* Tanker.

[illegible]

⁹ Sulphur, case oil, and general.

⁸ Iron, paper, and general.

Yacht.

U. S. Army transport.

二

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Sucareco.	2	17 52	3	00 48	3	11 10	3	11 10	American	Transmarine Lines	324.0	46.2	24.0	Aberdeen, Wash.	Newark, N. J.	Lumber	4,250	3,984	2,628
Broad Arrow	2	18 00	3	5 02	3	13 20	3	13 20	American	Standard Oil Co. of N. Y.	457.6	62.7	26.6	Los Angeles, Calif.	Boston, Mass.	Gasoline	11,408	9,700	6,842
Amerikaland	2	14 00	3	5 50	3	14 55	3	14 55	Swedish	Ore S. S. Corp.	501.0	72.2	33.6	Cruz Grande, Chile	New York, N. Y.	Iron ore	21,500	15,560	4,496
Paul Shoup	3	2 05	3	7 18	3	16 08	3	16 08	American	Associated Oil Co.	424.4	53.2	26.0	San Francisco, Cal.	New York, N. Y.	Gasoline	8,233	7,333	5,182
Agwistar	3	4 23	3	8 04	3	17 20	3	17 20	American	Grace Line	370.0	52.1	24.6	Valparaiso, Chile	Houston, Texas	Nitrates	6,900	5,523	4,068
Axel Johnson	3	8 15	3	11 25	3	18 20	3	22 15	Swedish	Johnson Line	409.0	52.6	25.0	Vancouver, B. C.	Stockholm, Sweden	(*)	4,993	6,642	4,860
Negada.	3	11 00	3	12 00	3	20 10	7	1 45	German	Hamburg-American Line	410.0	50.7	33.6	Magallanes, Chile.	Hamburg, Germany	General	4,732	6,402	4,463
Nicolaas	3	12 50	3	13 28	3	22 15	3	23 55	Greek	Cristofores Zafrafrakis.	350.0	46.0	23.0	Liquique, Chile.	Azorras	Nitrates	5,600	3,984	2,958
Zafrafrakis	3	17 10	3	23 20	4	9 05	5	17 05	American	U. S. Army	448.0	58.0	25.0	San Francisco, Cal.	Brooklyn, N. Y.	Army general	1,150		
Somme	3	16 20	3	23 52	4	9 45	4	15 30	American	North German Lloyd	475.3	69.7	36.6	San Antonio, Chile.	Hamburg, Germany	General	10,195	8,754	5,995
Lippe.	3	17 40	4	1 05	4	9 50	6	16 10	Italian	Nav. Gen. Italiana	397.4	52.6	24.6	Valparaiso, Chile	Genoa, Italy	(*)	5,950	5,870	4,188
Orion.	3	22 30	4	2 20	4	10 55	4	12 50	Danish	Orion S. S. Co.	303.0	43.0	12.0	Punta Arenas, C. R.	Manzanillo, Cuba.	Ballast	7,335	2,800	1,723
Jagled	3	21 05	4	2 25	4	12 23	4	14 00	Yugoslav	Yugoslavenski Lloyd	384.0	53.3	23.6	Antofagasta, Chile.	Azorras	Nitrates	3,900	3,987	2,612
Sugilenco.	3	23 30	4	3 54	4	12 55	4	14 00	American	Transmarine Lines	324.0	46.2	23.0	Everett, Wash.	Newark, N. J.	Lumber	8,007	5,551	4,076
Dunrobin.	3	22 00	4	3 59	4	14 30	4	18 55	British	Anglo-Chilean Nitro Co	404.9	53.0	24.0	Toe pillia, Chile	Norfolk, Va.	Nitrates	7,752	5,651	4,076
Hindpool.	3	22 30	4	5 12	4	15 40	4	17 25	British	Sir R. Roper & Co.	405.0	53.5	23.9	Prince Rupert, B. C.	United Kingdom	Wheat	7,752	5,878	4,281
Tiger.	4	1 00	4	6 07	4	15 40	4	17 25	American	Standard Transp. Co.	410.0	56.0	27.8	Los Angeles, Calif	New York, N. Y.	Gas oil	8,506	8,201	6,207
Bridge.	4	6 30	4	7 38	4	17 25	5	9 20	American	U. S. Navy	400.0	52.0		Balboa, C. Z.	Cristobal, C. Z.	(*)			
Almagro	4	6 30	4	7 46	4	17 35	5	9 20	British	Pacific Steam Nav. Co.	393.0	43.0	19.6	Coronel, Chile.	New York, N. Y.	(*)	2,982	2,826	1,760
Edgar F. Luck	4	6 30	4	8 34	4	18 45	4	18 45	American	Luckenbach Line.	425.0	57.3	28.0	Portland, Oreg.	New Orleans, La.	Lumber, general	7,127	8,568	6,638
bach.	4	8 15	4	11 27	4	20 10	5	00 05	British	Pacific Steam Nav. Co.	450.3	57.8	24.0	Talcahuano, Chile	New York, N. Y.	Copper, general	2,610	9,158	6,176
Essequibo.	4	4 30	4	11 50	4	22 20	4	22 20	American	Amer.-Pioneer Line	440.0	56.0	28.0	Manila, P. I.	New Orleans, La.	(*)	9,852	8,294	6,078
Eclipse.	4	4 30	4	11 50	4	22 20	4	22 20	American	Amer.-Pioneer Line	440.0	56.0	28.0	Manila, P. I.	New Orleans, La.	(*)	9,852	8,294	6,078
City of San Francisco	3	18 55	4	12 01	4	21 20	5	3 15	Panamanian	Panama Mail S. S. Co.	296.0	46.5	18.3	San Francisco, Cal.	Cristobal, C. Z.	Gasoline	1,259	3,848	2,606
San Manuel.	4	6 35	4	13 12	4	23 00	5	3 15	British	Anglo-Mex. Pet. Co.	407.2	52.3	25.0	Los Angeles, Calif.	Lizard's Head, Eng	General	7,325	6,183	4,343
Mississippi.	4	7 05	4	14 11	5	00 38	5	15 20	French	French Line	410.0	52.4	26.0	Talcahuano, Chile	Le Havre, France.	General	7,657	7,156	4,985
Orlando.	4	9 40	4	15 06	5	8 45	5	11 00	American	Queker Line	410.5	54.2	25.6	Portland, Oreg.	Philadelphia, Pa.	Lumber	7,200	6,755	4,873
Vaugeois.	4	13 15	4	15 19	5	8 30	5	8 30	German	Roland Line	231.2	37.8	12.3	Punta Arenas, C. R.	Cristobal, C. Z.	Ballast	855	1,406	
California.	4	12 00	5	6 38	5	14 35	5	15 40	American	Panama-Pacific Line	574.4	80.3	30.0	San Francisco, Cal.	New York, N. Y.	General	8,012	24,506	17,565
Salina.	5	7 34	5	13 50	7	7 35	7	7 35	American	U. S. Navy.	463.0	69.0		Balboa, C. Z.	Cristobal, C. Z.	(*)			
Swan.	5	6 58	5	17 40	7	17 40	7	17 40	American	U. S. Navy.	188.0			Balboa, C. Z.	Cristobal, C. Z.	(*)			
Quarrington	4	19 45	5	8 25	5	17 40	7	17 40	British	Court Line.	420.0	56.6	26.0	Vancouver, B. C.	Europe.	Grain	9,810	6,907	4,95
Court.	5	2 30	5	9 42	5	18 55	5	18 55	American	Ore S. S. Corp.	449.1	57.2	29.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	11,614	7,808	5,139
Sanford.	5	6 00	5	10 35	5	19 00	5	19 00	American	Amer.-Hawaiian Line.	407.7	53.7	26.0	Los Angeles, Calif.	New York, N. Y.	General	6,337	7,098	5,065
Panaman.	5	9 45	5	11 48	5	21 07	6	00 45	American	Dimon S. S. Corp.	399.4	54.7	25.0	Tacama, Wash.	Philadelphia, Pa.	Lumber	6,642	6,138	4,354
Pacific Cedar	5	9 45	5	12 17	5	21 07	6	00 45	American	Dimon S. S. Corp.	399.4	54.7	25.0	Tacama, Wash.	Philadelphia, Pa.	Lumber	6,642	6,138	4,354
Saramacca.	5	10 30	5	12 17	5	21 15	5	21 15	American	United Fruit Co.	336.7	43.0	19.0	San Francisco, Cal.	Port Limon, C. R.	General	1,262	3,668	2,308

† Tanker. * Motor ship. ** U. S. Army transport. †† Wheat, fruit, and general. ‡ Sugar, copper, and metals. ‡‡ Coffee, hides, and general. ‡‡‡ Nitrates, copper, and general. ‡‡‡‡ Towing barge No. 2.

* Tanker.

10 Motor ship.

11 U. S. Army transport.

12 Wheat, fruit, and general.

13 For orders.

14 Nitrates, copper, and general.

15 Ore, copper, and metals

16 Sugar, copper, and general.

17 Coffee, hides, and general.

18 Towing barge No. 2.

	5	11.15	5	12.52	5	22.05	5	22.40	British	Common Brothers	400.0	52.4	24.8	Vanouver, B. C.	Rotterdam, Holland	Wheat	7,312	5,826	4,154
Hindustan	5	12.00	5	13.51	5	23.25	5	23.25	Norwegian	Jaob R. Olsen	420.0	53.9	28.6	Antofagasta, Chile	Charleston, S. C.	Nitrates	10,249	6,592	4,723
Rendsalshorn	5	13.50	6	12.40	6	13.40	6	13.40	British	Sir R. Ropner & Co.	390.0	55.5	24.2	Vanouver, B. C.	Antwerp, Belgium	Wheat	7,624	5,889	4,274
Bridgford	5	14.40	6	4.12	6	13.45	6	13.45	American	Union Sulphur Co.	409.8	54.2	24.3	Portland, Oreg.	Providence, R. I.	Lumber	6,200	6,851	4,784
J. R. Gordon	5	17.50	6	5.00	6	13.30	6	13.30	American	Luckenbach Line	496.0	68.2	31.0	Portland, Oreg.	Boston, Mass.	Lumber, general	12,452	11,487	8,762
bach	5	21.40	6	6.20	6	14.45	6	14.45	British	Imperial Oil Co., Ltd.	510.9	68.2	31.0	Talara, Peru	New York, N. Y.	Crude oil	15,597	11,555	7,639
Monroville	5	21.40	6	6.20	6	14.45	6	14.45	British	Anglo-Mexican Pet. Co.	407.0	52.2	25.6	Los Angeles, Calif	United Kingdom	Gasoline	7,395	6,156	4,212
San Quirino	5	21.10	6	8.31	6	17.20	6	17.20	British	F. & W. Rison	400.0	51.0	24.5	Corral, Chile	Liverpool, England	General	6,352	5,208	3,578
Hazel Brauch	5	21.10	6	8.31	6	17.20	6	17.20	British	Sir R. Ropner & Co.	403.0	53.5	24.6	Vanouver, B. C.	Hamburg, Germany	Grain	7,900	5,876	4,327
Ullapool	5	21.15	6	9.21	6	18.40	6	18.40	American	Calmar S. S. Corp.	385.0	51.2	25.4	N. Westminster	Boston, Mass.	Lumber	7,946	6,224	4,465
Vaziristan	5	21.15	6	10.20	6	18.50	6	18.50	American	Sir R. Ropner & Co.	390.0	53.5	24.9	Vanouver, B. C.	London, England	Wheat	7,883	5,612	4,119
Penmar	5	21.15	6	11.15	6	20.15	6	20.15	British	Common Brothers	370.0	53.1	25.6	P. Townsend, Wash	Lumber, general	Wheat	5,853	5,577	4,225
Munster	5	21.20	6	12.14	6	22.51	6	22.51	British	Munster Line	370.0	53.1	25.6	P. Townsend, Wash	New York, N. Y.	Wheat	7,808	6,051	4,514
Munster	5	21.20	6	12.14	6	22.51	6	22.51	British	Sir W. R. Smith & Sons	399.0	53.5	25.0	Vanouver, B. C.	Hamburg, Germany	Wheat	5,700	3,592	9,383
Norwich City	5	21.35	6	13.21	6	22.51	6	22.51	British	Shaw, Savill & Albion	500.0	63.2	27.6	Wellington, N. Z.	London, England	Frozen, general	7,420	6,207	4,670
Tamara	5	21.35	6	13.21	6	22.51	6	22.51	British	Venezuela Gulf Oil Co.	300.0	51.0	26.1	Vanouver, B. C.	Maracaibo, Venez	Wheat	3,427	3,984	2,628
Paz	5	21.35	6	13.21	6	22.51	6	22.51	British	Kokusa Kisen Kaisha	385.0	51.0	26.1	Vanouver, B. C.	Lisbon, Portugal	Wheat	7,325	5,631	3,343
Naples Mar	5	21.35	6	13.21	6	22.51	6	22.51	British	Charles Nelson & Co.	324.0	46.2	24.0	Balboa, C. Z.	Baltimore, Md	Nitrates	6,046	5,530	3,917
Chetopa	5	21.35	6	13.21	6	22.51	6	22.51	British	Axel Brostrom & Son	388.0	52.0	25.0	Liqueur, Chile	Azores	General	9,609	9,436	8,867
Atland	5	21.35	6	13.21	6	22.51	6	22.51	British	Donaldson Brothers	385.0	52.0	25.0	Vanouver, B. C.	Glasgow, Scotland	General	7,230	11,136	8,109
Kastalia	5	21.35	6	13.21	6	22.51	6	22.51	British	Federal Steam Nav. Co.	479.7	62.2	24.6	Pt. Chalmers, N. Z.	Dunkirk, France	Frozen, general	7,230	11,136	8,109
Pacora	5	21.35	6	13.21	6	22.51	6	22.51	British	Com'th & Dom. Line	481.2	62.2	24.6	Pt. Chalmers, N. Z.	Dunkirk, France	Frozen, general	7,230	11,136	8,109
Port Hardy	5	21.35	6	13.21	6	22.51	6	22.51	British	U. S. Navy	455.0	51.0	28.0	Balboa, C. Z.	Cristobal, C. Z.	Wheat	7,050	5,953	3,723
Adra	5	21.35	6	13.21	6	22.51	6	22.51	British	C. T. Bowring	385.0	53.0	28.0	Balboa, C. Z.	Cristobal, C. Z.	Wheat	7,050	5,953	3,723
Heinrich App.	5	21.35	6	13.21	6	22.51	6	22.51	British	Cia. Marti. Colombiana	327.0	38.0	23.0	Buenaventura, Col	New York, N. Y.	Coffee, hides	1,023	1,718	1,167
West Honaker	5	21.35	6	13.21	6	22.51	6	22.51	British	Rosevelt S. S. Co., S. B.	410.0	54.4	22.8	Geelong, Australia	Boston, Mass	Coffee, hides	6,638	6,736	4,881
Tongking	5	21.35	6	13.21	6	22.51	6	22.51	British	East Asiatic Co.	410.0	55.2	28.6	Seattle, Wash	Copenhagen, Den.	Coffee, general	9,438	7,013	5,317
Colombia	5	21.35	6	13.21	6	22.51	6	22.51	British	Panama Mail S. S. Co.	380.0	48.7	23.8	San Francisco, Cal	New York, N. Y.	Coffee, general	2,429	6,015	4,281
Astral	5	21.35	6	13.21	6	22.51	6	22.51	British	Standard Transp. Co.	439.5	58.0	28.6	Los Angeles, Calif	Providence, R. I.	General	10,141	8,913	6,210
Robin Hood	5	21.35	6	13.21	6	22.51	6	22.51	British	Seas Shipping Co.	424.8	54.0	24.9	Vanouver, B. C.	Avonmouth, Eng.	Chilled apples	8,319	7,473	5,523
Romanar	5	21.35	6	13.21	6	22.51	6	22.51	British	Blue Star Line	420.0	54.0	24.9	San Francisco, Cal	Newcastle, England	General	5,177	7,433	5,870
Lebore	5	21.35	6	13.21	6	22.51	6	22.51	British	Ore S. S. Corp.	549.6	72.2	31.6	Cruz Grande, Chile	Baltimore, Md	Iron ore	20,000	11,325	5,615
Maine	5	21.35	6	13.21	6	22.51	6	22.51	British	Seas Shipping Co.	402.0	54.2	28.0	Everett, Wash	Portsmouth, Eng	Lumber	7,670	6,936	5,924
Tiberton	5	21.35	6	13.21	6	22.51	6	22.51	British	North German Lloyd	216.6	32.9	14.9	Buenaventura, Col	Cristobal, C. Z.	General	7,728	1,104	698
Sarelto	5	21.35	6	13.21	6	22.51	6	22.51	British	R. Chapman & Son	461.6	60.0	27.0	Vanouver, B. C.	Avonmouth, Eng.	Wheat	7,249	5,699	4,126
Seckonk	5	21.35	6	13.21	6	22.51	6	22.51	British	U. S. Navy	390.0	51.2	27.8	Balboa, C. Z.	Cristobal, C. Z.	General	7,157	6,162	4,417
Ohioan	5	21.35	6	13.21	6	22.51	6	22.51	British	Williams Line	390.0	51.2	27.8	Portland, Oreg	New York, N. Y.	General	5,859	7,103	4,991
Badwesthafen	5	21.35	6	13.21	6	22.51	6	22.51	British	Amer-Hawaiian Line	407.7	53.7	25.0	Tacoma, Wash	Boston, Mass	Wheat	6,575	5,296	3,933
Caldas	5	21.35	6	13.21	6	22.51	6	22.51	British	Common Brothers	382.0	51.2	26.6	Vanouver, B. C.	Fayal	General	7,713	6,600	4,622
Glenbeath	5	21.35	6	13.21	6	22.51	6	22.51	British	Roland Line	391.0	54.0	26.1	Valparaiso, Chile	Hamburg, Germany	General	7,071	211	124
Atlantic Sun	5	21.35	6	13.21	6	22.51	6	22.51	British	National Navigation Co.	116.0	21.1	8.0	Buenaventura, Col	Cristobal, C. Z.	General	6,256	5,224	3,934
Turicum	5	21.35	6	13.21	6	22.51	6	22.51	British	Canadian Transp. Co.	376.5	52.2	23.0	Olympia, Wash	London, England	Lumber, general	9,249	7,568	5,283
Orfa	5	21.35	6	13.21	6	22.51	6	22.51	British	Sun Oil Co.	429.3	59.2	26.0	Los Angeles, Calif	Miami, Florida	Gasoline	9,582	8,279	5,442
Santa Cruz	5	21.35	6	13.21	6	22.51	6	22.51	British	Camillo Witten & Co.	451.8	59.2	25.6	San Francisco, Cal	Land's End	Nitrates, general	8,182	9,956	6,561
Aghios Marcus	5	21.35	6	13.21	6	22.51	6	22.51	British	Pacific Steam Nav. Co	485.4	58.3	30.6	Talcahuano, Chile	Liverpool, England	Nitrates, general	4,918	5,534	3,868
Pont Gorda	5	21.35	6	13.21	6	22.51	6	22.51	British	Grace Line	384.0	50.2	26.6	Chancal, Chile	New York, N. Y.	Nitrates, general	7,500	6,319	4,555
Rokos Ver-	5	21.35	6	13.21	6	22.51	6	22.51	British	D. Paninos	399.8	53.9	25.0	Antofagasta, Chile	Europe	Nitrates	3,293	3,984	2,643
gottis	5	21.35	6	13.21	6	22.51	6	22.51	British	Swayne & Hoyt	324.0	46.2	21.4	Portland, Oreg.	New Orleans, La.	Nitrates	8,000	5,819	4,230

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

... Tanker. ... Came south for dry-docking. ... U. S. Navy hospital ship. ... Zinc ore, tallow, and wool. ... Iron ore, wool, and copra. ... Wheat, barley, and general. ... Kerosene distillate.

... Lumber, wheat, and general.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
February 3	Parismina	United Fruit Co.	New Orleans via Habana.	February 3	Hvoslef	United Fruit Co.	Mobile, Ala.
February 4	Hvoslef	United Fruit Co.	Perme, R. P.	February 3	California	Cunard Line	New York via wayports.
February 5	Asuris	Royal Mail S. P. Co.	Southampton via wayp'ts.	February 3	Ancon	Panama R. R. S. S. Line	New York via Haiti.
February 6	Granada	Standard Fruit & S. S. Corp.	New Orleans via wayports.	February 4	Parismina	United Fruit Co.	New Orleans via wayports.
February 6	Laconia	Cunard Line	Liverpool via wayports.	February 5	Asurias	Royal Mail S. P. Co.	Southampton via Kingston.
February 6	Sixada	United Fruit Co.	New York via Kingston.	February 6	Wauks	Standard Fruit & S. S. Corp.	San Blas, R. P.
February 6	Coppaname	United Fruit Co.	New Orleans, La.	February 6	Inapaquina ²⁷	United Fruit Co.	Colon, R. P.
February 6	Relance	Hamburg-American Line	Colon, R. P.	February 6	Anacuetena ²⁷	United Fruit Co.	Colon, R. P.
February 6	Inapaquina ²⁷	French Line	Havre via wayports.	February 7	San Pablo	United Fruit Co.	Puerto Colombia
February 6	Macoris	United Fruit Co.	New York.	February 7	Laconia	Cunard Line	Southampton via Kingston.
February 6	San Pablo	Pan-American Airways	Miami via wayports.	February 7	Coppaname	United Fruit Co.	Pto. Colombia via Bocas.
February 6	N. C. 8000 ²⁶	United Fruit Co.	Colon, R. P.	February 7	Sixada	United Fruit Co.	Colombian ports.
February 6	Anachucuna ²⁷	United Fruit Co.	Cartagena, Colombia.	February 7	Metapan	United Fruit Co.	New York via Kingston.
February 7	Venezuela	Royal Netherlands S. S. Co.	Amsterdam via wayports.	February 7	Macoris	French Line	Havre via wayports.
February 7	Pastores	United Fruit Co.	New York via wayports.	February 7	Relance	Hamburg-American Line	New York via wayports.
February 7	Camden	United Fruit Co.	Curacao, D. W. I.	February 8	Inapaquina ²⁷	United Fruit Co.	Colon, R. P.
February 8	Wauks	Standard Fruit & S. S. Corp.	Bocas del Toro, R. P.	February 8	Camden	United Fruit Co.	Santa Marta via Bocas.
February 8	Lapland	Red Star Line	San Blas, R. P.	February 8	Iriona	Standard Fruit & S. S. Corp.	New Orleans via wayports.
February 9	Inapaquina ²⁷	United Fruit Co.	Colon, R. P.	February 8	Pastores	United Fruit Co.	New Orleans, La.
February 9	Anachucuna ²⁷	United Fruit Co.	New York via wayports.	February 8	Lapland	United Fruit Co.	New York via wayports.
February 9	Lizzie D. Peabody ²⁸	United Fruit Co.	Colon, R. P.	February 8	Oranian	Leyland Line	Puerto Colombia.
February 9	Heredia	M. P. Martinez	Colon, R. P.	February 9	Inapaquina ²⁷	United Fruit Co.	Colon, R. P.
February 9		United Fruit Co.	New Orleans via Habana.	February 9	Midias	Royal Netherlands S. S. Co.	Curacao, D. W. I.
				February 9	Venezuela	Royal Netherlands S. S. Co.	Pto. Colombia.

PORT OF BALBOA.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
February 3	Parismina	United Fruit Co.	New Orleans via Habana.	February 3	Hvoslef	United Fruit Co.	Mobile, Ala.
February 4	Hvoslef	United Fruit Co.	Perme, R. P.	February 3	California	Cunard Line	New York via wayports.
February 5	Asuris	Royal Mail S. P. Co.	Southampton via wayp'ts.	February 3	Ancon	Panama R. R. S. S. Line	New York via Haiti.
February 6	Granada	Standard Fruit & S. S. Corp.	New Orleans via wayports.	February 4	Parismina	United Fruit Co.	New Orleans via wayports.
February 6	Laconia	Cunard Line	Liverpool via wayports.	February 5	Asurias	Royal Mail S. P. Co.	Southampton via Kingston.
February 6	Sixada	United Fruit Co.	New York via Kingston.	February 6	Wauks	Standard Fruit & S. S. Corp.	San Blas, R. P.
February 6	Coppaname	United Fruit Co.	New Orleans, La.	February 6	Inapaquina ²⁷	United Fruit Co.	Colon, R. P.
February 6	Relance	Hamburg-American Line	Colon, R. P.	February 6	Anacuetena ²⁷	United Fruit Co.	Colon, R. P.
February 6	Inapaquina ²⁷	French Line	Havre via wayports.	February 7	San Pablo	United Fruit Co.	Puerto Colombia
February 6	Macoris	United Fruit Co.	New York.	February 7	Laconia	Cunard Line	Southampton via Kingston.
February 6	San Pablo	Pan-American Airways	Miami via wayports.	February 7	Coppaname	United Fruit Co.	Pto. Colombia via Bocas.
February 6	N. C. 8000 ²⁶	United Fruit Co.	Colon, R. P.	February 7	Sixada	United Fruit Co.	Colombian ports.
February 6	Anachucuna ²⁷	United Fruit Co.	Cartagena, Colombia.	February 7	Metapan	United Fruit Co.	New York via Kingston.
February 7	Venezuela	Royal Netherlands S. S. Co.	Amsterdam via wayports.	February 7	Macoris	French Line	Havre via wayports.
February 7	Pastores	United Fruit Co.	New York via wayports.	February 7	Relance	Hamburg-American Line	New York via wayports.
February 7	Camden	United Fruit Co.	Curacao, D. W. I.	February 8	Inapaquina ²⁷	United Fruit Co.	Colon, R. P.
February 8	Wauks	Standard Fruit & S. S. Corp.	Bocas del Toro, R. P.	February 8	Camden	United Fruit Co.	Santa Marta via Bocas.
February 8	Lapland	Red Star Line	San Blas, R. P.	February 8	Iriona	Standard Fruit & S. S. Corp.	New Orleans via wayports.
February 9	Inapaquina ²⁷	United Fruit Co.	Colon, R. P.	February 8	Pastores	United Fruit Co.	New Orleans, La.
February 9	Anachucuna ²⁷	United Fruit Co.	New York via wayports.	February 8	Lapland	United Fruit Co.	New York via wayports.
February 9	Lizzie D. Peabody ²⁸	United Fruit Co.	Colon, R. P.	February 8	Oranian	Leyland Line	Puerto Colombia.
February 9	Heredia	M. P. Martinez	Colon, R. P.	February 9	Inapaquina ²⁷	United Fruit Co.	Colon, R. P.
February 9		United Fruit Co.	New Orleans via Habana.	February 9	Midias	Royal Netherlands S. S. Co.	Curacao, D. W. I.
				February 9	Venezuela	Royal Netherlands S. S. Co.	Pto. Colombia.

* Other than ships passing through the Canal.

²⁶ Motor schooner.²⁷ Motor ship.²⁸ Motor schooner.²⁹ Motor ship.

Commercial Traffic Through the Panama Canal in January, 1929, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of January, 1929, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for January, 1928 and 1927. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	82	431,095	335,600	535,604	335,841	\$375,862.13	243,406
Europe to west coast Canada:							
British.....	22	105,873	79,387	128,901	80,019	81,684.23	9,328
Danish.....	1	5,263	3,368	5,497	3,425	3,789.36	.....
Dutch.....	4	24,931	19,510	31,773	19,289	23,664.74	7,046
French.....	2	9,051	7,537	12,140	7,536	9,421.25	6,247
German.....	1	6,344	3,826	6,753	4,036	4,782.50	5,341
Italian.....	2	10,054	8,395	12,550	7,696	9,254.36	3,293
Norwegian.....	1	4,230	2,717	4,341	2,723	3,396.25	6,828
Swedish.....	4	18,477	14,643	23,046	17,413	14,779.96	.....
United States.....	1	5,099	4,273	6,965	4,282	5,341.25	8,663
Totals.....	38	189,322	143,656	231,966	146,419	156,113.90	46,746
East coast of United States to west coast of South America:							
British.....	8	42,352	34,707	59,701	36,561	32,740.38	5,234
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	2,847
German.....	1	1,167	998	1,428	813	1,247.50	864
Norwegian.....	2	7,895	6,296	10,247	6,299	5,632.96	.....
Panaman.....	1	4,897	4,014	6,386	4,067	5,017.50	1,773
Swedish.....	3	10,430	8,793	32,276	9,816	8,053.99	521
United States.....	14	66,033	54,377	92,924	54,042	52,908.21	16,830
Totals.....	30	137,477	112,651	210,272	115,574	109,983.04	28,069
Europe to west coast of South America:							
Belgian.....	1	4,792	4,142	6,512	4,038	3,450.24	.....
British.....	6	28,062	23,372	37,142	23,186	27,878.89	18,120
Danzig.....	1	6,338	5,236	8,956	5,041	4,563.36	.....
Dutch.....	3	13,207	9,706	16,025	9,287	12,132.50	8,796
French.....	1	4,441	3,264	5,384	3,231	4,080.00	3,037
German.....	3	15,117	11,537	18,489	11,328	14,421.25	14,362
Greek.....	3	10,621	8,390	12,811	7,683	7,701.36	.....
Italian.....	3	15,614	13,480	20,890	13,148	14,584.50	2,558
Norwegian.....	1	3,965	2,637	4,436	2,664	3,296.25	6,999
Peruvian.....	1	144	132	259	128	103.68	.....
Spanish.....	1	3,844	3,017	5,205	3,226	3,771.25	180
Swedish.....	2	7,890	6,846	11,551	7,523	5,680.80	.....
Totals.....	26	114,035	91,759	147,660	90,483	101,664.08	54,052
Europe to west coast United States:							
British.....	9	38,115	30,272	50,665	30,727	28,216.91	7,123
Danish.....	3	16,024	11,135	18,256	11,220	11,537.28	.....
French.....	2	9,479	7,812	12,592	7,788	8,271.91	9,019
German.....	4	18,971	14,416	23,637	14,318	16,567.01	12,490
Norwegian.....	3	15,679	12,096	19,486	12,031	13,215.59	6,460
Swedish.....	1	5,533	3,430	5,554	4,225	4,227.50	5,665
Totals.....	22	103,801	79,161	130,190	80,309	82,096.20	40,757
East coast of United States to Far East:							
British.....	5	26,082	15,289	24,723	15,217	19,111.25	26,926
Danish.....	1	4,418	3,585	5,702	3,583	4,481.25	6,000
German.....	2	7,048	4,866	8,214	4,816	6,082.50	8,321
Japanese.....	4	20,153	17,290	25,296	16,847	21,458.25	25,043
Norwegian.....	3	14,613	8,476	14,413	8,532	10,595.00	21,902
United States.....	5	28,503	19,128	31,078	19,053	23,910.00	44,658
Totals.....	20	100,817	68,634	109,426	68,048	85,638.25	132,850

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Cristobal, C. Z., to west coast of South America:							
Colombian.....	3	911	843	1,517	845	\$1,053.75	1,047
Dutch.....	1	742	294	780	323	367.50	61
German.....	5	3,889	2,980	5,268	3,034	3,725.00	1,286
Peruvian.....	1	2,405	989	3,305	1,514	1,236.25	261
United States.....	1	5,139	4,476	7,117	4,498	3,700.08	.....
Totals.....	11	13,086	9,582	17,987	10,214	10,082.58	2,655
East coast of United States to Australasia:							
British.....	6	31,202	20,053	32,543	20,182	25,066.25	31,759
United States.....	2	9,982	7,347	11,754	7,347	9,183.75	9,933
Totals.....	8	41,184	27,400	44,297	27,529	34,250.00	41,692
Cristobal, C. Z., to west coast of Central America:							
British.....	4	3,811	3,389	5,914	3,354	4,215.15	3,769
German.....	1	1,041	517	1,153	556	646.25	1,680
Norwegian.....	2	1,498	1,309	2,485	1,374	1,636.25	2,537
Totals.....	7	6,350	5,215	9,552	5,284	6,497.65	7,986
Europe to Australasia:							
British.....	7	51,602	36,823	61,567	38,270	46,028.75	49,078
Foreign vessels in ballast— U. S. intercoastal:							
British.....	4	23,435	19,577	34,199	20,412	16,873.20	.....
French.....	1	5,072	4,392	6,795	4,094	3,651.84	.....
Totals.....	5	28,507	23,969	40,994	24,506	20,525.04	.....
East coast of United States to Philippine Islands:							
British.....	1	6,152	3,491	6,734	3,656	4,363.75	7,029
Danish.....	1	2,562	2,085	2,480	1,471	2,606.25	3,750
United States.....	2	11,782	10,008	12,807	9,079	12,510.00	14,175
Totals.....	4	20,496	15,584	22,021	14,206	19,480.00	24,954
Central American intercoastal:							
Danish.....	2	3,439	2,921	4,650	2,823	3,651.25	3,991
Norwegian.....	1	987	964	1,581	977	1,184.40	1,087
Panaman.....	1	1,742	1,560	2,802	1,519	1,950.00	2,069
Totals.....	4	6,168	5,445	9,033	5,319	6,785.65	7,147
East coast of Central America to west coast United States:							
United States.....	4	9,210	8,478	13,558	8,403	10,544.45	2,773
East coast of United States to west coast of Canada:							
British.....	1	7,401	5,533	9,002	5,566	5,328.72	.....
United States.....	2	10,105	7,311	11,718	7,299	9,138.75	14,391
Totals.....	3	17,506	12,844	20,720	12,865	14,467.47	14,391
East coast of United States to Hawaiian Islands:							
United States.....	3	9,320	7,898	12,867	7,910	9,872.50	13,743
East coast of Canada to Aus- tralasia:							
British.....	3	12,506	9,895	16,395	10,023	12,368.75	9,768
South American intercoastal:							
British.....	1	806	424	944	482	530.00	115
Colombian.....	1	307	302	405	308	368.40	411
Peruvian.....	1	2,959	1,515	4,617	2,427	1,893.75	244
Totals.....	3	4,072	2,241	5,966	3,217	2,792.15	770
Africa to west coast Canada:							
British.....	3	13,198	10,168	16,235	10,096	9,502.56	.....
Around the world:							
United States.....	2	16,966	12,433	21,118	12,400	15,541.25	9,436
West India to west coast of United States:							
British.....	1	2,207	1,239	2,338	1,249	1,548.75	4,270
United States.....	1	344	378	571	388	283.50	.....
Totals.....	2	2,551	1,617	2,909	1,637	1,832.25	4,270

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West Indies to west coast of South America:							
Greek.....	2	8,639	5,905	9,575	5,653	\$6,220.08	.....
East coast of South America to west coast Canada:							
Norwegian.....	1	4,375	2,431	4,000	2,485	3,038.75	2,259
United States.....	1	5,014	3,508	5,550	3,533	4,385.00	1,484
Totals.....	2	9,389	5,939	9,550	6,018	7,423.75	3,743
Cristobal, C. Z., to west coast United States:							
Panaman.....	1	2,603	1,383	2,461	1,384	1,728.75	2,852
United States.....	1	5,199	4,315	7,059	4,349	3,743.28	.....
Totals.....	2	7,802	5,698	9,520	5,733	5,472.03	2,852
Europe to west coast Central America:							
German.....	2	3,997	2,581	4,558	2,616	3,226.25	6,722
Canadian intercoastal:							
British.....	1	4,071	3,116	4,896	3,136	3,895.00	7,056
East coast of Canada to west coast United States:							
British.....	1	4,649	3,926	7,115	3,943	3,347.28	.....
East coast of Canada to west coast Cen. America:							
German.....	1	1,469	1,155	1,930	1,128	1,057.68	.....
East coast of Central America to Balboa, C. Z.:							
British.....	1					2,400.00	.....
East coast of Central America to west coast South America:							
Norwegian.....	1	887	773	1,143	681	966.25	1,428
East coast of South America to Far East:							
Japanese.....	1	7,354	5,958	9,455	5,902	7,447.50	3,476
Africa to west coast United States:							
British.....	1	4,061	3,197	5,275	3,195	2,923.92	.....
Africa to west coast of South America:							
British.....	1	4,095	3,219	5,285	3,208	2,948.40	.....
Grand totals, Jan., 1929..	303	1,385,682	1,062,520	1,748,639	1,069,746	1,179,256.79	759,820
Grand totals, Jan., 1923..	285	1,287,487	998,787	1,616,531	998,084	1,109,055.44	641,708
Grand totals, Jan., 1927..	238	1,144,034	893,367	1,445,479	889,045	1,019,164.68	739,900

* Naval vessel of 4,800 displacement tons.

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	84	437,801	338,713	544,331	338,148	\$423,218.00	651,649
West coast Canada to Europe:							
British.....	39	188,475	138,026	221,100	136,318	172,532.50	296,632
Dutch.....	3	17,397	12,765	21,220	12,460	15,956.25	29,854
French.....	1	4,932	4,219	6,669	4,224	5,273.75	7,614
German.....	3	19,854	12,500	21,174	12,678	15,336.25	23,207
Italian.....	1	6,497	4,905	8,124	5,128	6,131.25	9,500
Norwegian.....	2	8,713	6,240	8,927	5,543	7,800.00	14,123
Spanish.....	1	4,512	3,415	5,649	3,373	4,268.75	7,345
Swedish.....	1	4,029	3,279	5,655	4,150	4,098.75	6,300
United States.....	2	9,721	7,501	12,282	7,501	9,376.25	15,521
Totals.....	53	264,130	192,850	310,800	191,375	240,773.75	410,101
West coast of South America to Europe:							
Belgian.....	1	6,211	4,522	7,130	4,013	5,652.50	9,800
British.....	5	30,259	23,564	38,450	23,854	29,455.00	37,072
Danzig.....	1	6,333	5,236	8,956	5,041	6,545.00	11,400
Dutch.....	2	9,184	4,763	8,213	4,834	5,953.75	10,386
French.....	2	8,288	6,574	10,785	6,594	8,217.50	14,351
German.....	5	23,991	16,946	27,800	16,996	21,182.50	37,353
Greek.....	7	27,137	20,994	31,585	19,806	26,214.35	49,900
Italian.....	6	29,888	23,131	36,558	22,587	28,712.30	40,908
Norwegian.....	2	8,956	6,477	10,492	6,364	8,096.25	14,098
Spanish.....	2	7,112	5,875	10,103	5,954	7,343.75	8,433
Yugoslav.....	7	28,509	22,160	34,966	22,357	27,700.00	54,339
Totals.....	40	185,873	140,242	225,038	138,430	175,072.90	288,040

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to east coast United States:							
British.....	11	49,020	36,125	60,184	36,959	\$45,156.25	80,142
Chilean.....	2	7,735	6,033	10,874	6,233	7,541.25	9,066
German.....	1	909	689	1,314	681	861.25	324
Norwegian.....	3	13,025	10,544	16,947	10,547	13,180.00	25,937
Peruvian.....	1	1,529	1,483	2,155	1,169	1,834.80	2,384
Swedish.....	2	5,934	5,050	16,939	5,431	6,312.50	22,026
United States.....	13	61,043	49,736	84,148	49,261	62,050.30	129,629
Totals.....	33	139,195	109,660	192,561	110,281	136,936.35	269,508
West coast of United States to Europe:							
Belgian.....	1	4,976	4,568	7,138	3,988	5,710.00	9,600
British.....	11	53,475	42,842	69,509	42,853	53,552.50	81,345
Danish.....	1	5,695	4,728	7,691	4,713	5,910.00	11,259
French.....	2	9,685	8,380	13,488	7,477	10,475.00	18,877
German.....	2	8,319	7,118	12,075	6,790	8,897.50	16,570
Japanese.....	1	4,665	4,268	5,831	4,227	5,335.00	7,709
Norwegian.....	5	23,256	19,976	33,636	19,849	24,970.00	45,598
Swedish.....	1	5,661	3,406	5,642	4,320	4,257.50	7,591
United States.....	1	5,841	3,582	5,871	3,530	4,477.50	8,909
Totals.....	25	121,573	98,868	160,881	97,747	123,585.00	207,458
West coast of South America to Cristobal, C. Z.:							
British.....	2	2,554	1,913	3,422	1,930	2,391.25	594
Colombian.....	3	411	390	647	384	479.30	759
Dutch.....	2	1,484	588	1,560	646	735.00	1,572
German.....	5	4,232	2,879	5,398	2,974	3,598.75	3,727
Norwegian.....	2	1,110	908	1,587	873	1,135.00	1,565
Peruvian.....	2	5,364	2,504	7,922	3,941	3,130.00	4,349
Totals.....	16	15,155	9,182	20,536	10,748	11,469.30	12,566
Australasia to Europe:							
British.....	9	71,674	48,212	78,110	48,490	60,265.00	61,593
West coast of Central America to Cristobal, C. Z.:							
British.....	3	2,063	1,900	3,436	1,936	2,375.00	2,580
Norwegian.....	2	1,784	1,648	3,260	1,784	1,672.24	715
Panamanian.....	1	1,742	1,560	2,802	1,519	1,254.24	.....
Totals.....	6	5,589	5,108	9,498	5,209	5,301.48	3,295
Australasia to east coast of Canada:							
British.....	5	22,501	17,537	28,850	17,685	21,921.25	12,401
Philippine Islands to east coast United States:							
Danish.....	1	4,066	3,142	5,177	3,199	3,927.50	7,365
Japanese.....	3	15,665	13,539	20,348	13,110	16,744.00	25,522
United States.....	1	5,906	5,469	6,959	5,438	6,836.25	8,023
Totals.....	5	25,637	22,150	32,484	21,747	27,507.75	40,910
West coast of United States to east coast Central America:							
United States.....	4	8,984	8,359	13,482	8,211	10,395.70	4,265
West coast of Canada to east coast United States:							
British.....	2	8,705	5,996	9,680	5,984	7,495.00	13,480
United States.....	2	7,081	5,595	9,073	5,585	6,993.75	9,990
Totals.....	4	15,786	11,591	18,753	11,569	14,488.75	23,470
Far East to Europe:							
British.....	1	5,062	3,186	5,150	3,150	3,982.50	8,000
Norwegian.....	2	9,344	4,986	8,658	5,017	6,232.50	14,040
Totals.....	3	14,406	8,172	13,808	8,167	10,215.00	22,040
Far East to east coast United States:							
British.....	1	6,287	5,366	8,782	5,144	6,707.50	12,030
Japanese.....	1	4,772	3,533	5,642	3,452	4,416.25	6,557
® Totals.....	2	11,059	8,899	14,424	8,596	11,123.75	18,587

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast United States to Cristobal, C. Z.:							
French.....	* 1					\$6,597.50	
United States.....	1	5,199	4,315	7,059	4,349	5,393.75	11,000
Totals.....	2	5,199	4,315	7,059	4,349	11,991.25	11,000
West coast of Canada to West Indies:							
Danish.....	1	1,355	1,102	1,806	1,099	1,377.50	2,584
West coast of Central America to Europe:							
Spanish.....	1	3,357	2,672	4,324	2,673	3,340.00	5,000
West coast South America to Egypt:							
Yugoslav.....	1	4,536	3,547	5,635	3,537	4,433.75	8,471
West coast of South America to east coast Canada:							
British.....	1	5,042	4,355	7,259	4,414	5,443.75	9,553
West coast of United States to West Indies:							
Dutch.....	1	5,065	4,540	7,412	4,235	5,675.00	8,890
Canadian intercoastal:							
British.....	1	4,182	3,318	5,757	3,554	4,147.50	5,964
West coast of South America to West Indies:							
Dutch.....	1	6,653	4,250	6,899	4,417	5,312.50	9,790
Australasia to east coast of United States:							
British.....	1	6,140	5,156	8,287	5,155	6,445.00	4,549
Far East to West Indies:							
Norwegian.....	1	4,706	2,494	4,301	2,519	3,117.50	7,331
Grand totals, Jan., 1929..	300	1,385,508	1,055,292	1,722,295	1,052,355	1,323,558.33	2,099,015
Grand totals, Jan., 1928 ..	255	1,135,283	886,265	1,447,737	886,454	1,103,697.06	1,730,353
Grand totals, Jan., 1927..	205	977,597	778,421	1,262,429	777,602	965,596.03	1,501,865

* Naval vessel of 13,195 displacement tons.

Traffic by Nationality for January, 1929.

The following tabulation shows the commercial traffic through the Canal during the month of January, 1929, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with corresponding totals for January, 1928 and 1927:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,792	4,142	6,512	4,038	\$3,450.24	
British.....	* 86	409,680	307,077	509,574	312,482	330,972.14	179,575
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	2,847
Colombian.....	4	1,218	1,145	1,922	1,153	1,422.15	1,458
Danish.....	8	31,706	23,094	36,585	22,522	26,065.39	13,741
Danzig.....	1	6,338	5,236	8,956	5,041	4,563.36	
Dutch.....	8	38,880	29,510	48,578	28,899	36,164.74	15,903
French.....	6	28,043	23,005	36,911	22,649	25,425.00	18,303
German.....	20	59,043	42,876	71,430	42,645	51,755.94	51,066
Greek.....	5	19,260	14,295	22,386	13,336	13,921.44	
Italian.....	5	25,668	21,875	33,440	20,844	23,838.86	5,851
Japanese.....	5	27,507	23,248	34,751	22,749	28,905.75	28,519
Norwegian.....	15	54,127	37,699	62,132	37,766	43,011.70	49,500
Panamanian.....	3	9,242	6,957	11,649	6,970	8,696.25	6,694
Peruvian.....	3	5,508	2,636	8,181	4,069	3,233.68	505
Spanish.....	1	3,844	3,017	5,205	3,226	3,771.25	180
Swedish.....	10	42,330	33,712	72,427	38,977	32,802.25	6,186
United States.....	121	613,791	479,530	770,690	478,424	536,924.15	379,492
Totals, January, 1929....	303	1,385,682	1,062,520	1,748,639	1,069,766	1,179,256.79	759,820
Totals, January, 1928....	285	1,287,487	998,787	1,616,531	998,084	1,109,055.44	641,708
Totals, January, 1927....	238	1,144,034	893,367	1,445,479	889,045	1,019,164.68	739,900

* Includes naval vessel of 4,800 displacement tons, paying tolls at 50 cents per displacement ton.

THE PANAMA CANAL RECORD

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	11,187	9,090	14,268	8,001	\$11,332.50	19,400
British.....	92	455,439	337,496	547,976	337,396	421,870.00	625,935
Chilean.....	2	7,735	6,033	10,874	6,233	7,541.25	9,066
Colombian.....	3	411	890	647	384	479.30	759
Danish.....	3	11,116	8,972	14,674	9,011	11,215.00	21,208
Danzig.....	1	6,338	5,236	8,956	5,041	6,545.00	11,400
Dutch.....	9	39,783	26,906	45,304	26,592	33,632.50	60,492
French.....	6	22,905	19,173	30,942	18,295	30,563.75	40,842
German.....	16	57,305	40,132	67,761	40,119	49,876.25	81,181
Greek.....	7	27,137	20,994	31,585	19,806	26,214.35	49,900
Italian.....	7	36,385	28,036	44,682	27,715	34,843.55	50,408
Japanese.....	5	25,102	21,340	31,821	20,789	26,495.25	39,788
Norwegian.....	19	70,894	53,273	87,808	52,526	66,203.49	123,412
Panamanian.....	1	1,742	1,560	2,802	1,519	1,254.24	.....
Peruvian.....	3	6,893	3,987	10,077	5,110	4,964.80	6,733
Spanish.....	4	14,981	11,962	20,076	12,000	14,952.50	20,778
Swedish.....	4	15,624	11,735	28,236	13,901	14,668.75	35,917
United States.....	108	541,576	423,270	683,235	422,023	523,742.10	838,986
Yugoslav.....	8	33,045	25,707	40,601	25,894	32,133.75	62,810
Totals, January, 1929....	300	1,385,598	1,055,292	1,722,295	1,052,355	1,323,558.33	2,099,015
Totals, January, 1928....	255	1,135,283	886,265	1,447,737	886,454	1,103,697.06	1,730,353
Totals, January, 1927....	205	977,597	778,421	1,262,429	777,692	965,596.03	1,501,865

* Includes naval vessel of 13,195 displacement tons, paying tolls at 50 cents per displacement ton.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	3	15,979	13,232	20,780	12,039	\$14,812.74	19,400
British.....	*178	865,119	644,573	1,057,550	649,878	752,842.14	805,510
Chilean.....	3	12,440	9,499	18,184	10,209	11,873.75	11,913
Colombian.....	7	1,629	1,535	2,569	1,537	1,901.45	2,217
Danish.....	11	42,822	32,066	51,259	31,533	37,289.39	34,949
Danzig.....	2	12,676	10,472	17,912	10,082	11,108.36	11,100
Dutch.....	17	78,663	56,416	93,882	55,491	69,797.24	76,395
French.....	*12	50,948	42,178	67,853	40,944	55,988.75	59,145
German.....	36	116,348	83,008	139,191	82,764	101,632.19	132,247
Greek.....	12	46,397	35,289	53,971	33,142	40,135.79	49,900
Italian.....	12	62,053	49,911	78,122	48,559	58,682.41	56,259
Japanese.....	10	52,609	44,588	66,572	43,538	55,401.00	68,307
Norwegian.....	34	125,021	90,972	149,940	90,292	109,215.19	172,912
Panamanian.....	4	10,984	8,517	14,451	8,489	9,950.49	6,694
Peruvian.....	6	12,401	6,623	18,258	9,179	8,198.48	7,238
Spanish.....	5	18,825	14,979	25,281	15,226	18,723.75	20,958
Swedish.....	14	57,954	45,447	100,663	52,878	47,471.00	42,103
United States.....	229	1,157,367	902,870	1,453,885	900,447	1,065,666.25	1,218,478
Yugoslav.....	8	33,045	25,707	40,691	25,894	32,133.75	62,810
Totals, January, 1929....	603	2,771,280	2,117,812	3,470,934	2,122,121	2,502,815.12	2,858,835
Totals, January, 1928....	540	2,422,770	1,885,052	3,064,268	1,884,538	2,212,752.50	2,372,061
Totals, January, 1927....	443	2,121,631	1,671,788	2,707,938	1,666,647	1,984,761.71	2,241,765

* Includes naval vessel of 4,870 displacement tons, paying tolls at 50 cents per displacement ton.

* Includes naval vessel of 13,195 displacement tons, paying tolls at 50 cents per displacement ton.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

United States Intercoastal Traffic by Commodities for January, 1929.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for January, 1929, and the totals for January, 1928 and 1927. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the destination of "General Cargo." These statistics are accordingly not precise but they are indicative of the kind and quantity of the cargo in transit through the Canal. The figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Aeroplanes	58		58
Agricultural implements	1,648	13	1,661
Alfalfa		154	154
Alfalfa meal		1,021	1,021
Ammonia	107		107
Ammunition	29		29
Asbestos	90		90
Asphalt	225	236	461
Automobiles	677	25	702
Automobile accessories	155	18	173
Bamboo		23	23
Beans	37	8,934	8,971
Borax	230	700	930
Bricks	412		412
Burlap	11	122	133
Calcium carbide	32		32
Camphor		118	118
Canned goods:			
Fish	1,817	15,633	17,450
Fruit	542	33,735	34,277
Meat		50	50
Milk	71	174	245
Soup	1,748		1,748
Vegetables	1,145	10,603	11,748
Miscellaneous	1,506	11,905	13,411
Carbon black	136		136
Celite filterco		990	990
Cement	906		906
Charcoal	188	149	337
Chemicals	2,211	603	2,814
China and fire clay	31		31
Coal	4,338		4,338
Cocoa	110		110
Coconuts		160	160
Coffee	124	167	291
Cold storage:			
Cheese	40	1,405	1,445
Lard	33		33
Other	288		288
Confectionery	369		369
Cork	24		24
Corn		255	255
Cotton	226	6,899	7,125
Drugs	1,112	89	1,201
Dyes	121		121
Earthenware	284	14	298
Eggs, dried		73	73
Explosives		20	20
Fertilizer	40		40
Flour	97	7,675	7,772
Fruit:			
Dried		16,505	16,505
Fuller's earth	44		44
Furniture	552		552
General	41,798	15,263	57,061
Glass and glassware	1,417	65	1,482
Glue		26	26
Hair	11	36	47
Hardwoods	1,219		1,219
Hay		704	704
Hemp	53	837	910
Honey		40	40
Hops		5	5
Jute	74	22	96
Livestock	1,144		1,144
Liquors	54		54
Lumber	3,333	167,544	170,877
Malt	111		111

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Manufactured goods:			
Iron and steel.....	121,481	481	121,962
Machinery.....	8,354	837	9,191
Railroad material.....	7,260	10	7,270
Tinplate.....	11,087		11,087
Textiles.....	2,335	323	2,658
Miscellaneous.....	7,156	1,786	8,942
Marble.....	71		71
Matches.....	140		140
Metals:			
Copper.....	32	7,375	7,407
Iron.....	50		50
Lead.....	117	461	578
Scrap.....	137	270	407
Tin.....		224	224
Zinc.....	50	570	620
Milk, powdered.....	32	463	495
Molasses.....	146		146
Musical instruments.....	29		29
Nitrates.....	10		10
Nuts.....		250	250
Oats.....	52		52
Oils:			
Cottonseed.....	48		48
Gas oil, fuel oil.....		20,357	20,357
Gasoline, benzine, and naphtha.....		271,853	271,853
Kerosene.....		12,224	12,224
Linseed.....	29		29
Lubricating and greases.....	4,651	166	4,817
Vegetable.....	192	39	231
Other.....	34		34
Ores:			
Antimony.....		192	192
Copper.....		1,152	1,152
Magnetite.....		946	946
Manganese.....	63		63
Other.....	190		190
Paint.....	535	72	607
Paper.....	3,746	5,537	9,283
Paper pulp.....		3,894	3,894
Peanuts.....	18	172	190
Peas.....		552	552
Phosphates.....	1,427		1,427
Porcelain.....	131	197	328
Rags.....	61	293	354
Rice.....	845	22	867
Rope.....	744	34	778
Rosin.....	420		420
Rubber:			
Manufactured.....	918	114	1,032
Scrap.....	15	225	240
Salt.....	45	38	83
Sand.....	28		28
Seeds:			
Grass.....		88	88
Other.....	90	53	143
Shells.....	1,401	55	1,456
Silk.....		861	861
Skins and hides.....		1,066	1,066
Soap.....	1,471		1,471
Soda.....	294		294
Soda ash.....	498		498
Soda, bicarbonate.....	167		167
Soda, caustic.....	749		749
Starch.....	47		47
Sugar.....	22	4,000	4,022
Sulphur.....	6,886		6,886
Syrup.....	173		173
Talc.....		87	87
Tallow.....		183	183
Tar.....	39		39
Tea.....		80	80
Tobacco.....	1,374	21	1,395
Toys.....	12	96	107
Turpentine.....	70		70
Waste.....	80	266	346
Wax.....	118	88	206
Wheat.....		1,375	1,375
Wine.....		75	75
Wool.....		1,465	1,465
Totals, January, 1929.....	257,198	644,018	901,216
Totals, January, 1928.....	193,346	540,540	733,886
Totals, January, 1927.....	234,688	627,821	862,509

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending February 2, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Georgie	French Line		January 27		142
Orcoma	Pacific Steam Navigation Co		January 27		2
Limon	United Fruit Co.	January 27	January 27	13½	(²)
Asuka Maru	Nippon Yusen Kaisha	January 27	January 27	130	(²)
Midas	Royal Netherlands S. S. Co.	January 27		6	
Camden	United Fruit Co.	January 27	January 28	3,785	(²)
Cartago	United Fruit Co.		January 28		1
Manizales	North German Lloyd		January 28		250
Nidar	General American S. S. Co.	January 27	January 29	1,899	(²)
Losada	Pacific Steam Navigation Co	January 28	January 29	276	215
Orazio	Italian Line	January 28	January 29	10	963
Grootendijk	Holland-American Line	January 28	January 29	355	11
Maravi	United Fruit Co.	January 28	January 28	1,409	82
Manaquí	United Fruit Co.	January 28	January 29	185	807
Santa Maria	Grace Line	January 28	January 28	22	278
Cali	North German Lloyd	January 28	January 31	847	103
Canadian Constructor	Canadian National Steamships	January 29	January 29	42	(²)
Texas	French Line	January 29	January 29	118	87
Patella	Anglo-Saxon Petroleum Co.	January 29	January 31	9,391	(²)
Rhodopis	Hamburg-American Line	January 29	January 31	290	71
Wanks	Standard Fruit & S. S. Corp		January 30		63
Ancon	Panama Railroad S. S. Line.	January 30		4,340	
Paul Luckenbach	Luckenbach Line	January 30	January 30	1½	(²)
William M.	R. Feuillebois	January 30	January 30	(²)	28
San Mateo	United Fruit Co.	January 30	January 31	906	86
Metapan	United Fruit Co.	January 30	January 31	696	545
Iriana	United Fruit Co.	January 30	January 31	939	43
Heluan	Hamburg-American Line	January 30	January 30	133	90
Turpin	North German Lloyd	January 30	January 30	(²)	156
Tegucigalpa	United Fruit Co.	January 30	February 1	468	623
Cavina	United Fruit Co.	January 30	February 1	1	736
Mantaro	Peruvian Line	January 30	February 1	2,178	(²)
Santa Marta	United Fruit Co.	January 31	January 31	15	291
Calamares	United Fruit Co.	January 31	February 1	1,385	416
Orestes	Royal Netherlands S. S. Co.	January 31		30	
Hvostef	United Fruit Co.	January 31	February 1	715	(²)
Baralt	Royal Netherlands S. S. Co.	January 31		700	
Jamaica	Pacific Steam Navigation Co.	January 31		765	
Arana	Pacific Steam Navigation Co.	January 31	February 2	30	195½
Suriname	United Fruit Co.	February 1	February 1	85	213
Wanks	Standard Fruit & S. S. Corp	February 1		60	
Barneveld	Royal Netherlands S. S. Co.	February 1		325	
Wiegand	Roland Line	February 1	February 2	251	128½
Delilian	Leyland Line	February 1	February 2	534	(²)
Ebro	Pacific Steam Navigation Co.	February 1	February 2	278	12½
Guatemala	Panama Mail S. S. Co.	February 2		441	
Linda S.	R. Feuillebois	February 2	February 2	(²)	45
Annam	Danish East Asiatic S. S. Line	February 2		188	
Notre Dame de					
Fourviere	French Line	February 2		91	
Arizona	French Line	February 2		97	

* No cargo discharged. * No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending February 9, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Lagarto	Pacific Steam Navigation Co.	January 24	February 1	594	49
Asuka Maru	Nippon Yusen Kaisha	January 26	January 27	23	
Caldas	National Navigation Co.	January 26	January 27		34
Fort Armstrong	Charles Nelson & Co.	January 27	January 28	320	
Santa Maria	Grace Line	January 27	January 28	6	
Losada	Pacific Steam Navigation Co.	January 29	January 30	119	118
Bridge	U. S. Navy	January 29		193	
Canada	Johnson Line	February 1	February 1	33	
Arana	Pacific Steam Navigation Co.	February 2	February 2		327
City of San Francisco	Panama Mail S. S. Co.	February 3	February 4	38	
S. A. Perkins	James Griffiths & Sons	February 3		6,392	
Borga	F. Olsen & Co.	February 2	February 6	898	
Annam	East Asiatic Co.	February 3	February 4	263	
Guatemala	Grace Line	February 4	February 5	17	1
Glenbeath	Waverly S. S. Co.	February 7	February 7	369	
Ludwigshafen	Roland Line	February 7	February 9	104	
Colombia	Panama Mail S. S. Co.	February 7	February 8	144	30
Ginyo Maru	Nippon Yusen Kaisha	February 8	February 8	62	
President Johnson	Dollar Line	February 9	February 9		31

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal- Colon.	Balboa.
For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.....	\$8.00	\$11.00
For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.....	11.00	14.00

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., February 20, 1929. No. 29.

Canal Traffic During the First Fifteen Days of February.

During the first 15 days of February, 285 commercial vessels and 7 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,222,245.97, and on the launches, \$37.95, or a total tolls collection of \$1,222,283.92.

The daily average of transits of commercial vessels was 19 and the average tolls collection, \$81,483.06. The average amount of tolls paid by each of the commercial transits was \$4,288.58, as compared with \$4,124.70 for the first 15 days of January.

The total number of commercial transits for the first 15 days of February were 4 fewer than those passing through during the first 15 days of January, while the tolls collected in the first 15 days of the current month were slightly higher than the tolls paid in the first half of January.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 7½ months of the current fiscal year, with the daily averages of transits and tolls:

	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	509	\$2,109,083.19	16.41	\$68,034.94
August.....	526	2,199,069.31	16.97	70,937.72
September.....	487	2,111,230.56	16.23	70,374.35
October.....	557	2,274,945.30	17.97	73,385.33
November.....	527	2,225,937.48	17.57	74,197.91
December.....	579	2,443,029.39	18.67	78,807.39
January.....	603	2,562,815.12	19.45	80,735.97
February (first 15 days).....	285	1,222,245.97	19.00	81,483.06
Totals.....	4,073	17,088,356.32	17.71	74,297.20

"President Johnson" on First Voyage in Dollar Line Service Around the World.

The *President Johnson*, around-the-world steamer of the Dollar Steamship Line, transited the Canal from the Atlantic to the Pacific on February 9, 1929, on her first voyage in this run. The *President Johnson* was formerly the *Manchuria* of the Panama-Pacific Line and was sold to the Dollar Line when the Panama-Pacific Line placed the new turbo-electric liner *Virginia* in its intercoastal service.

Announcement of the proposed expansion of the Dollar Line around-the-world service appeared in THE PANAMA CANAL RECORD of December 12, 1928.

Notice to Mariners.

New Light on Margarita Island, Venezuela.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 14, 1929.

No. 512.

The master of the steamship *Columbus* reports a new light on the northeast corner of Margarita Island, Venezuela. Characteristics, two flashes every 15 seconds, visible 30 miles. (This light is presumably on Cabo de la Isla, approximate position 11° 10' north, 64° 53' west, according to H. O. Chart No. 2035.

H. BURGESS, Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, February 16, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Day.	Hour.			Nature.	Tons.	Gross.	Net.
Chilore.....	9	14.45	10	6.15	10	13.51	10	14.50	American.	Ore S. S. Corp.	549.0	72.0	34.7	Baltimore, Md.	Cruz Grande, Chile	Ballast.	3,959	14,538	9,348
Leikanger.....	9	15.18	10	6.15	10	16.44	10	17.50	Norwegian.	Westfal. Larsen & Co.	375.0	52.0	21.0	Buenos Aires, Arg.	Vancouver, B. C.	General.	5,953	3,953	4,354
Cashdown.....	9	20.45	10	6.30	10	16.48	13	10.59	American.	Charles Nelson & Co.	321.7	50.0	19.6	Baltimore, Md.	Seattle, Wash.	General.	2,698	3,872	2,568
Rufo.....	9	00.55	10	7.25	10	17.41	10	18.49	Italian.	Nav. Libera-Trishina	447.9	55.3	16.2	Triste, Italy	Vancouver, B. C.	General.	1,845	7,789	6,025
British Glory.....	9	16.00	10	7.25	10	18.50	10	20.02	British.	British Tankers Co.	435.0	57.3	23.6	No. Shields, Eng.	San Luis, Calif.	Ballast.	5,254	14,827	10,630
Oresea.....	9	19.30	10	8.25	10	15.40	10	16.40	British.	Pacific Steam Nav. Co.	530.0	66.0	25.6	Liverpool, England	Talcahuano, Chile.	General.	5,254	14,827	10,630
Cities Service	9	16.45	10	8.30	10	20.07	10	21.32	American.	Cities Service Corp.	464.7	60.2	20.6	New York, N. Y.	Los Angeles, Calif.	General.	8,561	5,997	
Empire.....	9	9.00	10	10.00	10	21.10	11	00.15	Dutch.	Holland-American Line.	485.0	62.0	23.6	Rotterdam, Holland	Vancouver, B. C.	General, bananas	4,879	10,786	7,551
Dinteldijk.....	9	18.35	10	11.05	10	22.21	10	23.15	American.	Atlantic Refining Co.	431.0	59.2	19.0	Philadelphia, Pa.	La Libertad, E'dor	Ballast.	8,093	5,347	
Hampson.....	9	4.35	10	11.05	10	18.55	10	20.45	Swedish.	Colombian Mari. Co.	256.0	39.6	13.3	New York, N. Y.	Buenaventura, Col.	General.	567	1,714	1,078
Justice.....	9	18.55	10	12.35	10	23.29	11	00.45	British.	British Tankers Co.	440.7	57.1	19.0	Falmouth, England	Los Angeles, Calif.	Ballast.	615	1,105	698
Call.....	8	21.00	10	13.50	10	22.35	10	23.59	German.	North German Lloyd	216.5	32.9	14.3	Cristobal, C. Z.	Buenaventura, Col.	General.	789	3,668	2,308
Saramacca.....	10	00.15	10	13.50	11	00.35	11	9.41	American.	United Fruit Co.	336.7	42.0	19.3	Port Limon, C. R.	San Francisco, Cal.	Bananas, cocoa.	3,879	6,754	4,800
Oregonian.....	9	20.10	10	15.20	11	00.42	13	11.10	American.	Amer-Hawaiian Line.	404.6	53.9	19.8	Boston, Mass.	Portland, Oreg.	General.	5,100	5,891	4,186
Canadian.....	9	22.30	10	16.00	11	1.49	11	3.00	British.	Can. Nat. Steamships	400.0	52.0	21.2	Halifax, N. S.	Vancouver, B. C.	General.	9,744	7,140	
Dixie Arrow.....	10	4.30	10	17.30	11	2.50	11	4.30	American.	Standard Oil Co.	468.3	62.7	21.0	Boston, Mass.	Los Angeles, Calif.	Ballast.	8,237	6,755	4,750
Charles H.....	10	14.15	10	18.45	11	4.12	11	8.00	American.	Isthmian S. S. Lines	404.6	53.9	28.9	Baltimore, Md.	Vancouver, B. C.	Steel, general	5,104	6,246	4,499
Cramp.....	10	14.35	10	19.05	11	4.49	11	10.51	British.	Chile Exploration Co.	400.0	53.5	23.0	Grangemouth, Eng.	San Antonio, Chile.	Coke	14	14	
Salt River.....	10	14.35	10	19.05	11	4.49	11	10.51	British.	Chile Exploration Co.	400.0	53.5	23.0	Grangemouth, Eng.	San Antonio, Chile.	Coke	14	14	
No. 1.....	10	14.35	10	19.05	11	4.49	11	10.51	British.	Chile Exploration Co.	400.0	53.5	23.0	Grangemouth, Eng.	San Antonio, Chile.	Coke	14	14	
Salt River.....	10	14.35	10	19.05	11	4.49	11	10.51	British.	Chile Exploration Co.	400.0	53.5	23.0	Grangemouth, Eng.	San Antonio, Chile.	Coke	14	14	
No. 8.....	10	20.05	11	6.35	11	15.20	11	16.30	American.	United Fruit Co.	324.0	46.2	22.9	Cristobal, C. Z.	Gatun, C. Z.	Ballast.	4,315	3,934	2,612
Point Montara.....	11	6.35	11	7.35	11	15.26	11	19.40	British.	Gulf-Pacific Line.	400.0	52.0	24.0	New Orleans, La.	Vancouver, B. C.	General.	7,133	5,701	4,123
Willaston.....	11	6.35	11	7.35	11	15.26	11	19.40	British.	John Edgar & Co.	400.0	52.0	24.0	New York, N. Y.	Noumea, N. Cakid.	General.	6,967	4,953	
Sinnington.....	11	7.25	11	8.15	11	16.54	12	7.00	British.	Haldin & Co.	420.0	56.5	14.0	Newcastle, Eng.	Vancouver, B. C.	Ballast.	7,502	4,982	
Birkenhead.....	11	7.48	11	8.40	11	17.55	11	19.03	American.	Acwood Pet. Sales Co.	425.0	57.2	21.0	Mobile, Ala.	Los Angeles, Calif.	Ballast.	6,967	4,953	
Dardford.....	11	4.00	11	9.55	11	13.02	11	20.15	American.	Gladsstone Transp. Co.	391.9	51.2	18.0	New Orleans, La.	Los Angeles, Calif.	Ballast.	4,315	3,934	2,612
8-1.....	11	10.00	11	10.00	11	19.06	11	21.23	American.	U. S. Navy	219.3	21.8	8.8	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	11,575	7,649	
8-14.....	11	10.00	11	10.00	11	19.06	11	21.23	American.	U. S. Navy	219.3	21.8	8.8	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	11,575	7,649	
Violante.....	11	7.55	11	11.05	11	20.18	11	21.23	British.	Imperial Oil Co., Ltd.	450.0	68.2	21.0	New York, N. Y.	Talara, Peru.	Ballast.	4,145	9,201	6,961
Rumataka.....	11	7.30	11	14.30	11	22.04	12	4.34	British.	N. Z. Shipping Co.	517.0	58.0	26.8	London, England	Timaru, N. Z.	General.	176	1,714	933
Sayrua.....	10	9.45	11	15.15	11	22.10	11	23.15	German.	North German Lloyd	250.5	37.1	14.1	Hamburg, Germany	Champerico, Guat.	General.	176	1,714	933

* Motor ship.

* Tanker.

* Submarine.

	11	15.00	11	15.15	11	23.23	12	00.22	American	N. Y. & S. A. Line	409.8	54.2	23.0	New York, N. Y.	San Antonio, Chile	General	5,212	4,793
Centaurus	11	15.55	11	17.45	12	00.57	12	8.10	American	Norton, Lilly & Co.	424.0	56.0	25.0	Houston, Texas	Shanghai, China	Steel, general	8,036	7,011
Chaflanoga	11	18.30	11	18.55	12	3.04	12	17.15	British	Blue Star Line	435.0	54.0	18.6	Glasgow-England	Seattle, Wash.	Ballast	8,036	7,011
Saxonsar	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Eagle No. 35 s.	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Eagle No. 58 s.	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Fishpool	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Herman Frueh	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Eurypylus	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Heracles	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Deidrah	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Victoria	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Laguna	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Storven	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Abdi Mendi	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Chelatos	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Tut	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
La Plata Maru	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Zelandie	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
R. J. Hanna	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Esperanza	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Oloshovg	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Levant Arrow	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Californian	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Teno	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Maple Branch	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Fianona	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
W. S. Rheem	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Katrina Leck-	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
enlach	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Tilthorn	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Empire Arrow	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Nedus	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Caldes	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Tahoe	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Helen Olmsted	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Svealand	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Mataroa	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Mary Ellen	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
O'Neil	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Victoria Maru	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
W. L. Steed	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Moveria	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
El Grillo	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Harpy On	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Ark	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
L-55	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Singstad	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Dusan Sini	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
Wabeta III	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			
City of Hankow	12	00.50	12	6.00	12	12.58	12	17.15	American	U. S. Navy	200.9	25.0	12.0	Cristobal, C. Z.	Balboa, C. Z.			

Towing launch Ark.

Steel sheets, scrap iron, rails, tinplate, and cotton.

Yacht.

Coast guard cutter.

Whaler.

Launch.

Patrol boat.

Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Heathfield.....	15	1 10	15	7 40	15	18 15	15	19 25	British	Saon Spencer & Young	400 0	52 0	15 0	S. Shields, Eng.	Vancouver, B. C.	Ballast.....	5,804	4,045
Sun 1.....	15	3 00	15	8 40	15	19 25	16	00 30	American	Sun Oil Co.	480 6	66 0	21 0	Chester, Pa.	Los Angeles, Calif.	Ballast.....	9,020	6,424
Woodfield.....	15	5 20	15	9 05	15	20 12	16	01 35	British	Anglo-Chilean Nitro Co.	400 0	53 0	14 6	Persacola, Fla.	Tocopilla, Chile	Ballast.....	5,798	4,118
Norona II.....	12	23 55	15	9 45	15	17 15	15	18 20	Norwegian	L. Thorsen S. Co.	111 0	20 0	10 4	Sandeferd, N'way	Magdalena Bay	Ballast.....	178	49
Trouton P.....	15	7 50	15	11 15	15	21 11	15	22 23	British	E. Deckers & Co.	390 0	55 0	22 0	Antwerp, Belgium	Los Angeles, Calif.	Cement clinkers.	6,206	5,899
Gen. Wm. M.....									American	U. S. Army	156 0	32 0		Cristobal, C. Z.	Balboa, C. Z.			
Graham 24.....			15	8 00	15	17 11			American	U. S. Army	101 0	23 5		Cristobal, C. Z.	Balboa, C. Z.			
Edw. P. Nones 15			15	8 00	15	17 11			American	U. S. Army	89 0	22 0		Cristobal, C. Z.	Balboa, C. Z.			
Gen. G. W.....			15	8 00	15	17 11			American	Royal Neth. S. S. Co.	474 0	65 0	21 3	Hamburg, Germany	Corral, Chile	General.....	3,843	11,638
Getty 15.....	14	9 20	16	6 15	16	16 35	17	7 20	Dutch									7,712
Ramon de.....									British	Larrinaga & Co.	449 9	58 0	18 0	Barry, England	Vancouver, B. C.	Ballast.....	7,712	5,600
El Panuaco 16	15	21 55	16	6 25	16	18 02	16	19 30	British	Panama Government	125 0	23 0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.....	288	101
Cabimas 17.....	16	00 55	16	7 30	16	18 02	16	17 41	Panamanian	Venezuela Gulf Oil Co.	279 8	47 2	10 6	Maracaibo, Vinez'a	Balboa, C. Z.	Ballast.....	2,220	1,328
Manizales.....	14	19 55	16	10 30	16	19 00	16	20 15	German	North German Lloyd.	216 5	33 9	14 0	Cristobal, C. Z.	Guayaquil, Ecuador	General.....	160	1,132
Pacific Grove 12	13	16 33	16	12 40	16	20 16	17	00 25	British	Furness, Withy & Co.	450 0	60 6	21 6	Manchester, Eng.	Vancouver, B. C.	General, bananas	1,404	10,086
Golden Sea.....	16	12 30	16	12 45	16	21 25	17	4 13	British	Boyd, Weir & Sewel	387 6	52 0	23 9	New York, N. Y.	Taku Bar, China	Flour.....	7,032	5,434
George Wash- ington.....	16	11 15	16	15 48	16	23 15	18	13 45	Norwegian	Fred Olsson & Co.	425 1	55 3	23 11	Oslo, Norway	Vancouver, B. C.	General.....	6,626	7,505
Sateruco.....	16	11 25	16	19 36	17	3 50	17	6 00	American	Grace Line.....	324 0	46 2	18 7	New York, N. Y.	Antofagasta, Chile	General.....	1,750	3,984
City of San Francisco 12	4	21 20	16	19 30	17	3 53	17	11 12	Panamanian	Panama Mail S. S. Co.	295 0	40 0	21 5	Cristobal, C. Z.	San Francisco, Cal.	General.....	2,579	3,818
Quail 15.....			16	11 30	16	20 08			American	U. S. Navy.....	180 0	35 6		Cristobal, C. Z.	Balboa, C. Z.	General (19)	2,579	3,818

19 Towing raft.

20 Mine sweeper.

21 South for dry-docking.

22 Transport.

23 Tug.

24 Mine planter.

25 Whaler.

26 Motor ship.

27 Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Canadian Miller	9	14 45	10	4 12	10	12 40	10	15 30	British	Can. Nat. Steamships.	400 3	52 3	23 6	Port Alberni, B. C.	Halifax, N. S.	Lumber, general.	6,005	5,982
H. C. Folger 1	9	15 30	10	5 36	10	13 35	10	13 35	American	Atlantic Refining Co.	425 0	56 0	27 2	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline.....	9,123	7,461
Firmore.....	9	21 45	10	6 53	10	14 58	10	14 58	American	Ore S. Corp.	449 0	57 3	24 0	Cruz Grande, Chile	Baltimore, Md.	Iron ore.....	11,614	5,185
Witell.....	9	22 12	10	7 23	10	17 05	10	18 40	German	North German Lloyd.	449 6	58 2	28 4	Seattle, Wash.	Antwerp, Belgium	General.....	7,290	7,816
Ville de Verdun	10	6 45	10	8 51	10	18 10	10	22 45	French	Messageries Maritimes	409 3	53 5	25 6	Noumea, N. Calid	Dunkirk, France	General.....	3,725	7,603
East Lynn 20.....	9	23 50	10	9 53	10	18 50	10	18 50	British	Sir W. R. Smith & Sons	401 1	54 3	25 5	Vancouver, B. C.	Manchester, Eng.	General.....	7,878	6,784
Santa Cecilia.....	10	14 30	11	4 55	11	12 20	11	12 20	American	Argonaut S. S. Co.	404 6	53 9	27 6	Seattle, Wash.	Baltimore, Md.	Lumber, general.	6,733	6,784
Laponia 20.....	10	2 15	11	7 38	11	15 20	11	16 18	Swedish	Trat. Granges, Oxales d	383 6	53 4	27 9	Iquique, Chile	Azores 21	Lumber, general.	7,700	5,870
Santa Elisa.....	11	10 25	11	11 18	11	19 00	11	21 55	American	Grace Line.....	360 3	51 7	25 6	Antofagasta, Chile	New York, N. Y.	Nitrates.....	3,946	5,957
Scotsraig.....	11	10 25	11	11 34	11	20 50	11	22 55	British	Pank Lane, Ltd.	350 3	51 2	24 9	Pecopilla, Chile	Mobile, Ala.	Nitrates.....	6,540	4,892

28 For orders.

29 Motor ship.

30 Tanker.

PORT OF CRISTOBAL

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
February 10...	Juan Sebastian Elcano	Spanish Line.	Barcelona via waypoints.	February 10...	Anachucuna ³¹	United Fruit Co.	Colon, R. P.
February 10...	Macao	United Fruit Co.	New York via waypoints.	February 10...	N. C. 8000 ³²	Pan-American Airways	Miami via waypoints.
February 12...	Columbus	North German Lloyd	New York via waypoints.	February 10...	N. C. 8004 ³²	Pan-American Airways	Miami via waypoints.
February 13...	Ariguan	Elders & Fyffes, Ltd.	Avonmouth via waypoints	February 11...	Heredia	United Fruit Co.	New Orleans via waypoints.
February 13...	Cristobal	Panama R. S. S. Line.	New York via Haiti	February 11...	Macao	United Fruit Co.	New Orleans via waypoints.
February 13...	Zacapa	United Fruit Co.	New York via Kingston.	February 11...	Wanki	Standard Fruit & S. Corp.	San Blas, R. P.
February 13...	Surinam	United Fruit Co.	New Orleans, La.	February 13...	Juan Sebastian Elcano	Spanish Line	Barcelona via waypoints.
February 13...	Loening ³²	United Fruit Co.	New Orleans, La.	February 13...	Columbus	North German Lloyd	New York via waypoints.
February 14...	Mandeville	Pan-American Airways	Managua, Nicaragua.	February 14...	Ariguan	Elders & Fyffes, Ltd.	Avonmouth via waypoints.
February 14...	Dagblid.	Anglo-Saxon Petroleum Co.	Curacao, D. W. I.	February 14...	Zacapa	United Fruit Co.	Colombian ports.
February 14...	Atlantian	Leyland Line	Liverpool, England.	February 14...	Mandeville.	United Fruit Co.	Peru, R. P.
February 14...	Ulua	United Fruit Co.	New York via waypoints.	February 14...	Linda S. ³³	A. L. Surgeon	Bluefields, Nicaragua.
February 14...	Inapaquina ³²	United Fruit Co.	Colon, R. P.	February 14...	Suriname	United Fruit Co.	Santa Marta via Bocas.
February 14...	Atlantida	United Fruit Co.	Colon, R. P.	February 14...	Inapaquina ³²	United Fruit Co.	Colon, R. P.
February 14...	Anachucuna ³¹	United Fruit Co.	Colon, R. P.	February 14...	Anachucuna ³¹	United Fruit Co.	Colon, R. P.
February 15...	Atlantida	Standard Fruit & S. S. Co.	New Orleans, La.	February 15...	Atlantian	Leyland Line	Sardinia Cay.
February 15...	Coppepame	United Fruit Co.	Puerto Colombia.	February 15...	Coppepame	United Fruit Co.	New Orleans, La.
February 15...	Gruncwald.	Hamburg-American Line.	Hamburg, Germany.	February 15...	Ulua	United Fruit Co.	New York via waypoints.
February 16...	Kungstholm	Swedish-American Line.	New York via waypoints.	February 15...	Dagblid	Anglo-Saxon Petroleum Co.	Curacao, D. W. I.
February 16...	Dellhan	Leyland Line	Palo Alto, Cuba.	February 16...	Anachucuna ³¹	United Fruit Co.	Colon, R. P.
February 16...	Mandeville.	United Fruit Co.	Perme, R. P.	February 16...	Atlantida	Standard Fruit & S. S. Corp.	New Orleans via waypoints.
February 16...	Wanki	Standard Fruit & S. S. Co.	San Blas, R. P.	February 16...	Gruncwald	Hamburg-American Line	Port Jimon, Costa Rica.
February 16...	Anachucuna ³¹	United Fruit Co.	Colon, R. P.	February 16...	William M. ³⁴	G. I. Bryan	Bluefields, Nicaragua.
February 16...	William M. ³⁴	United Fruit Co.	Colon, R. P.	February 16...	San Pablo.	United Fruit Co.	Puerto Colombia
February 16...	San Pablo.	United Fruit Co.	New York via waypoints.				
³¹ Motor boat. ³² Air-mail carrier. ³³ Motor schooner. ³⁴ Schooner.				PORT OF BALBOA.			
February 12...	Rakuyo Maru	Nippon Yusen Kaisha	Valparaiso, Chile.	February 11...	Utacarbon	Union Oil Co. of California	Los Angeles, Calif.
February 13...	A. B. De Obarrio ³⁵	Pacific Fruit Co.	Bayano River, R. P.	February 13...	A. B. de Obarrio ³⁵	Pacific Fruit Co.	Panama Bay, R. P.
February 13...	Des Hermanos ³⁵	A. Valdez	Bayano River, R. P.	February 11...	Des Hermanos ³⁵	A. Valdez	Panama Bay, R. P.
February 13...	Ideal ³⁵	Hans Elliot	Darien, R. P.	February 11...	Ideal ³⁵	Hans Elliot	Panama Bay, R. P.
February 16...	Nora	Grues Line.	Les Angeles, Calif.				

³⁵ Motor schooner.

* Other than ships passing through the Canal.

Cargo Through Canal During January, 1929.

On pages 410 and 411 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in January, 1929. This cargo, segregated according to direction, as compared with January, 1928, and the differences, is shown in the following tabulation:

	January, 1929.	January, 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	759,820	641,708	+118,112
Pacific to Atlantic.....	2,099,015	1,730,353	+368,662
Totals.....	2,858,835	2,372,061	+486,774

As will be noted above, tonnage from the Atlantic to the Pacific increased 118,112 tons over that in January, 1928, and that from the Pacific to the Atlantic increased 368,662 tons, a gain in traffic in both directions of 486,774 tons. Total cargo passing through the Canal in the month of January, 1929, was the heaviest since the opening of the Canal. It exceeded that in the previous record month (October, 1927), by 141,189 tons. This represents a general increase in practically all of the larger items of cargo.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-eight per cent of the cargo moving from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 24.2 per cent in Europe. Cargo originating in the United States was 109,205 tons, or 26.7 per cent greater than the amount coming from that area in January, 1928. The percentages of the whole was also slightly higher in January, 1929, than in January, 1928. Cargo passing through the Canal from Europe showed the small increase of 4,883 tons, although the percentage of the whole was somewhat lower than in January of last year.

Destination.—Almost 44 per cent of the Pacific-bound cargo was destined to the United States; 21.8 per cent to Asia; 13.2 per cent to Australasia; and 11.9 per cent to South America. Cargo to the United States and Asia increased 83,052 tons, or 33.1 per cent, and 19,045 tons, or 12.9 per cent respectively, over that in January last year. Shipments to the United States also showed a small relative increase, while the proportion of the total tonnage destined to Asia was slightly lower than that shipped in January, 1928. Shipments to Australasia and South America decreased slightly in point of actual cargo under January, 1928, although the proportion of the total tonnage shipped to both these areas in January, 1928, was somewhat greater than in the past month.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 46.3 per cent originated on the west coast of the United States; 28.5 per cent in South America; 16.4 per cent in Canada; 4.2 per cent in Asia; and 3.8 per cent in Australasia. Cargo from all these areas, with the exception of Canada, showed substantial increases in actual tonnage over January, 1928, as well as, in the case of that from the United States and Asia, a greater proportion of the total cargo routed from the Pacific to the Atlantic. The actual increases to the United States, South America, Asia, and Australasia amounted to 218,276 tons, or 28.9

per cent; 98,418 tons, or 19.7 per cent; 45,315 tons, or 104.0 per cent, and 17,083 tons, or 27.8 per cent, respectively, over January, 1928. The percentages of the totals from South America and Australasia were about the same as in January of last year. Cargo from Canada showed an actual decrease of 7,678 tons, as well as a small relative decrease under January, 1928. Heavy shipments of nitrates and mineral oils were largely responsible for the increase in cargo from the Pacific coast areas.

Destination.—Segregated according to destination, 48.2 per cent of the cargo in this direction went to the United States and 47.3 per cent to Europe. Tonnage to the United States showed an actual increase of 168,570 tons, or 20 per cent over January, 1928, as well as a relative increase, and that to Europe an increase of 207,546 tons, or 26.4 per cent. The percentage of the total to Europe was 47.3 per cent as compared with 45.4 per cent in January, 1928.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify over 85 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 15 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic to Pacific bound commodities which aggregated more than 10,000 tons for January, 1929, or January, 1928, are listed in the following tabulation, showing differences:

Commodity.	January, 1929.	January, 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Automobiles.....	14,414	7,548	+6,866
Cement.....	32,425	32,053	+372
Coal and coke.....	11,797	18,880	-7,083
Cotton.....	32,431	23,920	+8,511
Manufactured goods:			
Iron and steel.....	196,308	163,331	+32,977
Machinery.....	16,064	11,499	+4,565
Railroad material.....	14,575	18,275	-3,700
Tinplate.....	31,929	8,936	+22,993
Miscellaneous.....	21,665	14,903	+6,762
Metals, various.....	17,007	15,649	+1,358
Mineral oils.....	44,819	37,648	+7,171
Paper.....	15,891	14,404	+1,487
Phosphates.....	11,166	31,731	-20,565
Slag.....	17,245	3,943	+13,302
Sulphur.....	18,786	11,886	+6,900

The above 15 commodity groups comprise over 65 per cent of the cargo moving from the Atlantic to the Pacific during January, 1929. It will be noted that 12 of the items show increases, while 3 show decreases. The heaviest increases were in shipments of iron and steel, tinplate and slag, while phosphates registered a heavy loss under January, 1928.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 98 per cent of all cargo moving from the Pacific to the Atlantic during the month of January, 1929. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month a year ago are listed below, showing differences:

Commodity.	January, 1929.	January, 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Beans.....	34,076	11,085	+22,991
Canned goods (fish, fruit, vegetables, etc.).....	105,824	71,398	+34,426
Coffee.....	14,567	18,256	-3,689
Cold storage (food products) *.....	38,459	27,763	+10,696
Cotton.....	12,864	10,208	+2,656
Flour.....	11,492	7,493	+3,999
Fruit, dried.....	31,353	28,197	+3,156
Fruit, fresh.....	24,241	8,496	+15,745
Lumber.....	229,743	222,657	+7,086
Metals, various.....	56,890	48,614	+8,276
Nitrates.....	358,600	245,572	+113,028
Oils, mineral.....	509,841	405,250	+104,591
Ores (principally iron).....	120,594	133,564	-12,970
Sugar.....	46,000	53,131	-7,131
Wheat.....	330,509	331,298	-789
Wool.....	22,289	18,397	+3,892

* Does not include fresh fruit.

The above 16 commodity groups comprise over 92 per cent of the total cargo moving from the Pacific to the Atlantic during January, 1929. All items, with the exception of coffee, ores, sugar, and wheat, showed increases, the heaviest of which were in nitrates and mineral oils.

(Continued on next page.)

Arrival of First of Three New Steamers for Spanish Line's Atlantic Service.

The steamship *Juan Sebastian Elcano* of the Compañía Trasatlantica Española (Spanish Line), which arrived at Cristobal on February 10, 1929, from Barcelona, via wayports, on her maiden voyage and sailed on February 13, is the first of three vessels of nearly 10,000 tons, gross, being constructed by the company for its service to northern South America and the Caribbean area. Each ship is to have approximately the following dimensions: Length, 460 feet; beam, 56 feet; depth, 24 feet. Each will have accommodations for first, second, and third-class passengers aggregating 1,200.

The two other steamers now building are the *Marques de Comillas* and the *Magallanes*, which are due to arrive at Cristobal on their first voyages on April 3 and April 29, 1929, respectively. The three new steamers, operating in conjunction with the *Manuel Arnus* and the *Buenos Aires*, will maintain a schedule with sailings at intervals of from three to four weeks over the following itinerary: Barcelona, Valencia, Malaga, Cadiz, Canary Islands, San Juan (Porto Rico), La Guaira, Puerto Cabello, Curacao, Puerto Colombia, Cristobal; homeward bound, Puerto Colombia, Curacao, Puerto Cabello, La Guaira, Santo Domingo (optional), San Juan (Porto Rico), Canary Islands, Cadiz, and Barcelona.

The Compañía Trasatlantica Española has heretofore been sending its steamers in this service through the Panama Canal to the west coast of South America, making calls at Guayaquil, Callao, Mollendo, Arica, Iquique, Antofagasta, and Valparaiso. With the first voyage of the *Juan Sebastian Elcano* the sending of vessels through the Canal to the west coast is discontinued and the company will for the present confine the service to the Atlantic.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, January, 1929.—Continued from page 409.

(Figures represent tons of 2,240 pounds.)

From—	SOUTH AMERICA.					NORTH AMERICA.					ASIA.					AUSTRALASIA.			Grand totals.	Per cent of total cargo.				
	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	West coast of United States.	West coast of Canada.	West coast of Central America.	West coast of North America. ²	Balboa, C. Z. ²	Hawaii.	Total, North America.	Japan.	China.	Philippines.	Far East. ¹	Total, Asia.			Australia.	New Zealand.	Total, Australasia. ¹	
NORTH AMERICA:																								
UNITED STATES—																								
North Atlantic ports	8,777	2,490	166	9,997	3,750	25,180	191,717	499	2,932	56	14,650	209,834	14,187	15,966	6,373	19,570	86,096	26,647	10,011	36,655	357,788	47.0		
South Atlantic ports	286	113	109	601	570	1,679	62,571	.....	.....	.....	.....	1,092	63,663	12,310	21,632	130	10,683	74,775	7,000	4,900	11,900	152,017	20.0	
Gulf ports	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
TOTALS, U. S.	9,063	2,603	275	10,598	4,320	26,859	257,198	499	2,932	56	15,742	276,427	91,146	37,618	6,503	30,253	165,520	33,647	14,911	48,558	517,364	68.0		
CRISTOBAL, C. Z.²	527	2,975	1,350	301	1,830	6,983	3,767	6,112	239	.....	.....	.....	15,042	.....	.....	.....	.....	.....	.....	.....	22,025	2.9		
East coast of Canada	.....	.....	.....	.....	40	40	4,270	7,056	.....	.....	.....	.....	7,593	.....	.....	.....	.....	6,268	3,500	9,768	17,361	2.3		
West Indies	.....	.....	.....	.....	.....	.....	4,270	.....	.....	.....	.....	.....	4,270	.....	.....	.....	.....	.....	.....	.....	4,310	0.6		
East Coast Cen. Amer.	.....	.....	.....	.....	1,428	1,428	2,095	5,122	.....	.....	.....	.....	7,217	.....	.....	.....	.....	.....	.....	.....	8,645	1.2		
TOTALS, N. AMERICA . .	9,590	5,578	1,625	10,899	7,618	35,310	267,897	7,561	19,323	56	15,742	310,549	91,146	37,618	6,503	30,253	165,520	39,915	18,411	58,326	569,705	75.0		
EUROPE:																								
British Isles	4,344	183	663	1,014	6,601	12,895	16,565	3,613	1,883	17	.....	.....	20,195	.....	.....	.....	.....	.....	.....	30,087	40	30,127	8.3	
Belgium	4,562	2,027	108	957	1,262	8,916	23,183	4,078	1,883	90	.....	.....	29,236	.....	.....	.....	.....	.....	.....	12,085	.....	12,085	6.6	
France	.....	71	30	.....	1,369	1,551	3,678	2,023	737	.....	.....	.....	6,438	.....	.....	.....	.....	.....	.....	7,989	1.0	7,989	1.0	
Germany	1,414	55	.....	375	1,150	2,994	8,515	4,039	263	.....	.....	.....	12,817	.....	.....	.....	.....	.....	.....	18,811	.....	18,811	2.1	
Holland	60	196	.....	334	1,676	2,266	8,025	1,545	.....	.....	.....	.....	4,570	.....	.....	.....	.....	.....	.....	6,836	.....	6,836	0.9	
Italy	430	.....	.....	51	1,852	2,333	778	1,176	1,395	.....	.....	.....	3,349	.....	.....	.....	.....	.....	.....	5,982	.....	5,982	0.7	
Norway and Sweden	2,459	3,072	.....	1,088	380	6,999	3,495	133	2,875	911	.....	13	7,427	.....	.....	.....	.....	.....	.....	14,426	.....	14,426	1.9	
Spain and Portugal	245	31	.....	46	124	446	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	446	.....	446	0.1	
Europe ¹	110	.....	.....	110	15,933	16,153	2,014	1,185	80	.....	.....	.....	3,273	.....	.....	.....	.....	.....	.....	.....	.....	19,432	2.6	
TOTALS, EUROPE.....	13,624	5,635	801	4,065	30,338	54,463	61,255	13,753	11,009	1,281		13	87,311							42,172	40	42,212	183,986	24.2
E. coast of South America	.....	506	.....	.....	.....	506	4,711	630	.....	.....	.....	.....	5,341	282	.....	.....	.....	.....	.....	.....	.....	6,129	0.8	
Grand totals	23,214	11,719	2,426	14,964	37,956	99,279	333,833	21,944	30,332	1,337	15,755	403,201	91,428	37,618	6,503	30,253	165,802	39,915	60,583	40,100	538,759	820	100.0	
Per cent of total cargo:																								
January, 1929.....	3.1	1.5	0.3	2.0	5.0	11.9	43.9	2.9	4.0	0.2	2.1	53.1	12.0	4.9	0.9	4.0	21.8	5.2	8.0	.....	13.2	100.0	.....	
January, 1928.....	2.4	1.6	0.3	1.9	7.9	14.1	39.0	1.8	3.4	0.6	0.2	1.3	46.3	13.0	5.9	1.8	22.9	7.1	8.1	1.5	16.7	100.0	.....	
January, 1927.....	3.5	0.5	0.3	0.6	6.7	11.6	37.1	3.3	2.2	2.1	1.0	0.5	46.2	11.5	4.0	0.4	7.5	23.4	11.1	7.3	1.4	19.8	100.0	

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transiting.

* Includes both local and transit cargo.

* General cargo not routed so as to allow segregation between definite ports.

(Figures represent tons of 2,240 pounds.)

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FROM—	NORTH AMERICA.							EUROPE.											Grand totals.	Per cent of total cargo.			
	UNITED STATES.				Total, North America.			Europe. ¹															
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States.	East coast of Canada.	West Indies.	East coast of Central America.	Cristobal, C. Z. ²	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ²	Total, Europe.			East coast of South America.	Egypt.	Africa.

¹ General cargo not routed so as to allow segregation between definite ports.² Indicates both local and transit cargo.

Revision of Range Lights Nos. 1 and 2, Pacific Entrance.

Range towers Nos. 1 and 2, for ships entering Balboa from the Pacific, have recently moved slightly out of alignment probably due to blasting which has been done in connection with deepening the Pacific sea level section. In order to remedy the situation the present range tower No. 1 will be removed and the present range tower No. 2 (reduced in height by 20 feet) will remain as the new No. 1 range, while a new No. 2 range tower 100 feet high will be erected on a hill west of Miraflores Lake and on the bank of the Cocoli River.

The time of beginning this work depends on the completion of other work on aids to navigation now under way. Notice to mariners will be issued when changes to existing range towers are made.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending February 9, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon.....	Panama R. R. S. S. Line.....	.....	February 3.....	.....	3,260
Orcestes.....	Royal Netherlands S. S. Co.....	.....	February 3.....	.....	444
Baralt.....	Royal Netherlands S. S. Co.....	.....	February 3.....	.....	189
Barneveld.....	Royal Netherlands S. S. Co.....	.....	February 3.....	.....	211
Arizona.....	French Line.....	.....	February 3.....	.....	168
Port Antonio.....	United Fruit Co.....	.....	February 3.....	.....	1,123
Hvoslef.....	United Fruit Co.....	.....	February 3.....	.....	395½
San Mateo.....	United Fruit Co.....	February 3.....	February 3.....	12½	51
Knute Nelson.....	Fred Olsen S. S. Line.....	February 3.....	February 3.....	(¹)	135
Annie Johnson.....	Johnson Line.....	February 3.....	February 3.....	140	(²)
Axel Johnson.....	Johnson Line.....	February 3.....	February 3.....	(¹)	83
Parismina.....	United Fruit Co.....	February.....	February 4.....	510	69½
Negada.....	Hamburg-American Line.....	February 3.....	February 6.....	(¹)	1118
Guatemala.....	Panama Mail S. S. Co.....	.....	February 4.....	.....	1,336
Jamaica.....	Pacific Steam Navigation Co.....	.....	February 4.....	.....	750½
Lippe.....	North German Lloyd.....	February 4.....	February 4.....	69½	36
Almagro.....	Pacific Steam Navigation Co.....	February 4.....	February 5.....	214	(²)
Essequibo.....	Pacific Steam Navigation Co.....	February 4.....	February 5.....	43	52
Mississippi.....	French Line.....	February 4.....	February 5.....	520	(²)
Mantaro.....	Peruvian Line.....	February 4.....	February 5.....	(¹)	249
Tirso.....	Italian Line.....	February 4.....	February 5.....	(¹)	266
Mineola.....	N. O. & S. A. S. S. Line.....	February 5.....	February 5.....	16½	100
Saramacca.....	United Fruit Co.....	February 5.....	February 7.....	2,018	14
Wanks.....	Standard Fruit & S. S. Corp.....	.....	February 6.....	.....	¾
San Pablo.....	United Fruit Co.....	February 6.....	February 6.....	60	(²)
Sixaola.....	United Fruit Co.....	February 6.....	February 7.....	651	364
Coprename.....	United Fruit Co.....	February 6.....	February 7.....	923	30
Santa Teresa.....	Grace Line.....	February 6.....	February 7.....	(¹)	6
Pacific Shipper.....	Furness, Withy & Co.....	February 6.....	February 7.....	(¹)	315
Schwaben.....	North German Lloyd.....	February 6.....	February 7.....	(¹)	250
Macoris.....	French Line.....	February 6.....	February 7.....	111	731
Granada.....	Standard Fruit & S. S. Corp.....	February 6.....	February 8.....	676	477
Seattle.....	Hamburg-American Line.....	February 7.....	February 8.....	4½	315
Heinrich Arp.....	Colombian Maritime Co.....	February 7.....	February 8.....	458	(²)
Camden.....	United Fruit Co.....	February 7.....	February 8.....	5,472	(²)
Pastores.....	United Fruit Co.....	February 7.....	February 8.....	1,774	760
Metapan.....	United Fruit Co.....	February 7.....	February 7.....	(¹)	364
Guayaquil.....	Panama R. R. S. S. Line.....	February 7.....	February 9.....	815	13
Venezuela.....	Royal Netherlands S. S. Co.....	February 7.....	February 9.....	36	899
Visurgis.....	North German Lloyd.....	.....	February 8.....	.....	1,407
Oranian.....	Leyland Line.....	.....	February 8.....	.....	143
Iriona.....	United Fruit Co.....	February 8.....	February 8.....	177½	55
Cauca.....	National Navigation Co.....	.....	February 8.....	.....	313
Phoenicia.....	Hamburg-American Line.....	February 8.....	February 9.....	100½	17
Cali.....	North German Lloyd.....	February 8.....	.....	734	.....
Colombia.....	Panama Mail S. S. Co.....	February 8.....	.....	1,562	.....
Wanks.....	Standard Fruit & S. S. Corp.....	February 8.....	.....	82	.....
Heredia.....	United Fruit Co.....	February 8.....	.....	794	.....
Santa Cruz.....	Grace Line.....	February 9.....	.....	33	.....
Caldas.....	National Navigation Co.....	February 9.....	.....	70½	.....
Dinteldijk.....	Holland-American Line.....	February 9.....	.....	41	.....
Ludwigshafen.....	Roland Line.....	February 9.....	February 9.....	267	½
Rialto.....	Nav. Libera-Triestina.....	February 9.....	.....	282	.....
Orita.....	Pacific Steam Navigation Co.....	February 9.....	February 9.....	8	6
Oropesa.....	Pacific Steam Navigation Co.....	February 9.....	.....	153	.....
Midas.....	Royal Netherlands S. S. Co.....	.....	February 9.....	.....	42
City of San Francisco.....	Panama Mail S. S. Co.....	February 4.....		1,259	

* No cargo discharged.

* No cargo laded.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., February 27, 1929. No. 30.

Air Mail Between the United States and the Canal Zone.

The regular air mail service between the United States and the Canal Zone, inaugurated by Colonel Lindbergh's first flight from Miami on February 4, was continued in operation with the arrival at France Field on the morning of February 19 of the second consignment of air mail from the United States, carried by the amphibian plane 8044, operated by the Pan-American Airways, Inc.

The plane made the trip from Miami, Fla., to France Field in 52 hours, carrying one sack of mail weighing 40 pounds.

The first dispatch of air mail from the Canal Zone to the United States left France Field at 6 a. m. on February 10, two planes being necessary to carry the heavy mail, which amounted to 803½ pounds, 689 pounds of which were from the Canal Zone, and 114½ pounds from the Republic of Panama. This dispatch consisted of about 50,000 pieces of mail.

The second dispatch from the Canal Zone left France Field for Miami on February 23.

On air mail from the Canal Zone via Cristobal-Miami, the Canal Zone has adopted the same rates as prevail in the United States for the same service, *i. e.*, 25 cents for each half-ounce or fraction thereof, in addition to regular postage. The air-mail service charge must be represented by special Canal Zone 25-cent air-mail stamps and at least one rate of 25 cents must be prepaid by special air-mail stamp.

Standard Fruit and Steamship Company Placing New Steamers in Cristobal-New Orleans Run.

Announcement has recently been made by the Standard Fruit and Steamship Company that its two new steamers, the *Atlantida* and *Amapala*, are to be placed in the Cristobal-New Orleans run beginning with the sailing of the *Atlantida* from Cristobal and the *Amapala* from New Orleans on March 2, 1929. These two vessels, which are capable of making 18 knots, have accommodations for 70 first-class passengers. They will replace the *Gatun* and *Granada* which have been on this run and are being taken off for other service.

Under the new schedule the vessels will leave New Orleans every Saturday, via Habana, and arrive at Cristobal on Friday morning. Northbound, the vessels will sail from Cristobal every Saturday at noon for New Orleans, via Puerto Cabezas, Nicaragua, and arrive at New Orleans on Wednesday.

The *Amapala* and the *Atlantida* are 350 feet long, 50.2 feet beam, and of 4,200 gross tons.

CANAL WORK IN JANUARY, 1929.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of January, 1929.

BALBOA HEIGHTS, C. Z., February 18, 1929.

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

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of January, 1929:

NUMBER OF TRANSITS.

During the month 603 commercial vessels passed through the Canal. In addition to these, 7 nonseagoing launches measuring under 20 tons, and 119 vessels belonging to or chartered by the United States Government transited the Canal. There were also 2 transits of a Panaman Government vessel and 4 transits of vessels solely for repairs, on which no tolls were collected, making a total of 735 transits for the month, or a daily average of 23.71. The majority of the United States Government vessels were units of the Scouting Fleet transiting from the Atlantic to the Pacific to participate in the fleet maneuvers in and beyond the Gulf of Panama.

Tolls on the 603 commercial vessels amounted to \$2,502,815.12, and on the launches to \$81, a total of \$2,502,896.12, or a daily average on all traffic of \$80,738.58.

Total commercial traffic in January was the heaviest month's traffic since the opening of the Canal. The previous high marks for commercial traffic were as follows: Number of transits, 589, in December, 1927; Panama Canal net tonnage, 2,698,140; United States net tonnage, 2,055,648; registered gross tonnage, 3,359,731; registered net tonnage, 2,056,933; tolls collected, \$2,443,029.39, all in December, 1928; and tons of cargo, 2,717,646, in October, 1927. January's tonnage figures will be found in this report under "Commercial traffic."

The regular periodic overhaul of Miraflores and Pedro Miguel locks was started on January 2 and will be completed about May 7. During this period the Canal is to be in operation 24 hours daily for the purpose of transiting such vessels as can not be accommodated during daylight hours.

The total numbers of craft of all kinds transiting the Canal during the month of January, 1929, as compared with the same month in 1927 and 1926, are shown in the following tabulation:

	January, 1929.	January, 1928.	January, 1927.
Commercial vessels.....	603	540	443
Noncommercial vessels (Army and Navy).....	119	38	46
Launches (under 20 tons).....	7	12	11
Panaman Government vessels.....	2		
Vessels for repairs.....	4	2	9
Totals.....	735	592	509

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	10	12	22
Pedro Miguel.....	25	38	63
Miraflores.....	24	36	60
Totals.....	59	86	145

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the fiscal year 1929, to the end of January, 1929, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1927-8	1928-9	1927-8.	1928-9.	1927-8.	1928-9.	1927-8.	1928-9.
July.....	509	509	2,406,955	2,318,395	2,450,468	2,291,955	\$2,215,515.99	\$2,109,083.19
August....	543	526	2,513,614	2,437,246	2,429,947	2,425,336	2,274,040.55	2,199,069.31
September.	540	487	2,532,942	2,295,053	2,397,753	2,313,011	2,294,432.34	2,111,230.56
October....	567	557	2,585,752	2,515,380	2,717,646	2,582,477	2,380,115.97	2,274,945.30
November..	559	527	2,591,717	2,468,297	2,488,882	2,501,630	2,369,267.99	2,225,937.48
December..	589	579	2,616,728	2,698,140	2,573,828	2,714,987	2,398,459.75	2,443,029.39
January....	540	603	2,422,770	2,771,280	2,372,061	2,858,835	2,212,752.50	2,502,815.12
Totals...	3,847	3,788	17,670,478	17,503,791	17,430,585	17,688,231	16,144,585.09	15,866,110.35

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States Government, including merchant vessels chartered by the Government, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for January, 1929, as compared with the corresponding month in 1928 and 1927, and the monthly averages for the calendar year 1928:

	January, 1929.	January, 1928.	January, 1927.	Average per month for calendar year 1928.
Number of vessels.....	603	540	443	528
Panama Canal net tonnage.....	2,771,280	2,422,770	2,121,631	2,411,953
United States net tonnage.....	2,117,812	1,885,052	1,671,788	1,851,471
Registered gross tonnage.....	3,470,934	3,061,268	2,707,908	3,029,975
Registered net tonnage.....	2,122,121	1,834,538	1,635,647	1,835,554
Tolls.....	\$2,502,815.12	\$2,212,752.50	\$1,984,750.71	\$2,197,936.85
Tons of cargo carried.....	2,858,835	2,372,061	2,241,765	2,450,132

The average daily number of transits, tonnage, tolls, and cargo are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1928.
	January, 1929.	January, 1928.	January, 1927.	
Number of transits.....	19.45	17.42	14.29	17.31
Panama Canal net tonnage.....	89,396	78,154	68,439	79,080
Tolls.....	\$80,735.97	\$71,379.11	\$64,024.54	\$72,065.47
Tons of cargo carried.....	92,220	76,518	72,315	80,332

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of January, 1929, as compared with January, 1928 and 1927, are shown in the following tabulation:

	Average per vessel.		
	January, 1929.	January, 1928.	January, 1927.
Panama Canal net tonnage.....	4,596	4,487	4,789
United States net tonnage.....	3,512	3,491	3,773
Registered gross tonnage.....	5,756	5,675	6,112
Registered net tonnage.....	3,519	3,490	3,762
Tolls.....	\$4,150.61	\$4,097.69	\$4,480.27
Tons of cargo (including vessels in ballast).....	4,741	4,393	5,060
Tons of cargo (laden vessels only).....	5,834	5,491	6,158

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and 72 cents per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per ton nor be less than 75 cents per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined both in accordance with the Panama Canal and the United States rules of measurement.

Due to this limiting proviso the tolls actually collected on laden vessels averaged \$0.941 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.723 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of January, 1929, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$14,812.74	\$14,062.20		\$750.54
British.....	* 752,842.14	* 787,649.00	\$34,806.86	
Chilean.....	11,873.75	12,440.00	566.25	
Colombian.....	1,901.45	1,629.00		272.45
Danish.....	37,280.39	34,307.20		2,973.19
Danzig.....	11,108.36	10,140.80		967.56
Dutch.....	69,797.24	76,506.20	6,708.96	
French.....	* 55,988.75	* 53,845.50		2,143.25
German.....	101,632.19	114,107.20	12,475.01	
Greek.....	40,135.79	38,693.00		1,442.79
Italian.....	58,682.41	58,636.20		46.21
Japanese.....	55,401.00	52,609.00		2,792.00
Norwegian.....	109,215.19	119,178.20	9,963.01	
Panamanian.....	9,950.49	10,287.20	336.71	
Peruvian.....	8,198.48	12,343.40	4,144.92	
Spanish.....	18,723.75	18,825.00	101.25	
Swedish.....	47,471.00	43,840.40		3,630.60
United States.....	1,065,666.25	1,077,973.40	12,307.15	
Yugoslav.....	32,133.75	33,045.00	911.25	
Totals.....	2,502,815.12	2,570,117.90	82,321.37	15,018.59
Net increase for all traffic.....			67,302.78	

* Includes \$2,400 collected for naval vessel at 50 cents per displacement ton.

* Includes \$6,597.50 collected for naval vessel at 50 cents per displacement ton.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$12,336.07
United States foreign trade.....	789.71
United States-Canal Zone trade.....	* \$18.63
Net increase.....	12,307.15

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in January, 1929, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Belgian.....		1.73	1.73
British.....	.87	1.38	1.21
Chilean.....	.60	1.17	.96
Colombian.....	1.20	1.85	1.36
Danish.....	1.32	1.90	1.62
Danzig.....		1.80	1.80
Dutch.....	.47	1.52	1.04
French.....	.97	1.78	1.42
German.....	.96	1.42	1.19
Greek.....		1.84	1.84
Italian.....	.34	1.38	1.05
Japanese.....	1.03	1.59	1.30
Norwegian.....	1.22	1.76	1.57
Panamanian.....	.73		.73
Peruvian.....	.09	.98	.59
Spanish.....	.05	1.39	1.12
Swedish.....	.88	2.30	1.85
United States.....	.90	1.55	1.27
Yugoslav.....		1.90	1.90
Average, January, 1929.....	.88	1.52	1.27
Average, January, 1928.....	.78	1.53	1.23
Average, January, 1927.....	.94	1.56	1.29

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of January, 1929, is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden	3	13,303	\$12,847.50	53	278,631	\$291,033.60
Ballast	43	228,477	164,661.06			
General cargo ships:						
Laden	191	850,420	786,738.85	243	1,103,527	1,023,500.75
Ballast	64	293,138	212,325.83	3	3,440	2,426.43
Noncargo-carrying ships:						
Naval	1		2,400.00	1		6,597.50
Yachts	1	344	283.50			
Totals	303	1,385,682	1,179,256.79	300	1,385,598	1,323,558.33
Method of propulsion:						
Steam	253	1,141,777	982,841.27	242	1,100,820	1,060,897.93
Motor	50	243,905	196,415.52	58	284,778	262,660.40
Totals	303	1,385,682	1,179,256.79	300	1,385,598	1,323,558.33

Of the 495 steam-driven vessels, 284 were oil burning, 198 coal burning, and 13 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of January, 1929. If tolls had been assessed against these vessels at commercial rates, the amount would have been approximately as follows:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Aircraft tenders	1	¹ 11,000	\$5,500.00			
Ammunition ships				1	² 4,405	\$5,506.25
Auxiliaries	1	² 2,969	3,711.25			
Battleships	5	¹ 122,650	61,325.00			
Cruisers	9	¹ 56,000	28,000.00	5	¹ 18,500	9,250.00
Destroyers	29	¹ 35,235	17,617.50	6	¹ 7,290	3,645.00
Destroyer tenders	2	¹ 21,200	10,600.00			
Hospital ships	1	¹ 3,963	2,972.25			
Mine layers	3	¹ 6,182	3,091.00			
Mine sweepers	8	¹ 7,600	3,800.00	1	¹ 950	475.00
Repair ships	1	¹ 3,771	2,715.12			
Submarines	17	¹ 13,336	6,668.00	3	¹ 1,854	927.00
Submarine tenders	1	¹ 2,872	2,154.00			
Supply ships	1	¹ 3,394	4,242.50	1	¹ 3,434	4,292.50
Tankers	2	¹ 11,772	14,126.40			
Tugs	4	¹ 3,575	1,787.50	2	¹ 2,000	1,000.00
U. S. Army vessels:						
Launches	2	¹ 20	15.00	2	¹ 20	15.00
Mine planters	3	¹ 3,624	1,812.00	4	¹ 4,832	2,416.00
Transports	2	¹ 7,816	9,770.00			
Tugs	2	¹ 274	205.50			
Totals, U. S. Government	94		180,113.02	25		27,526.75
Panaman Government vessels:						
Transports	1	¹ 98	73.50	1	¹ 98	73.50
Vessels for repairs:						
Tankers	2	¹ 3,189	2,391.75	2	¹ 3,189	2,391.75
Totals	97		182,578.27	28		29,992.00

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of January, 1929, carried cargo as follows: Atlantic to Pacific, 11,300 tons; Pacific to Atlantic, 3,147 tons; total, 14,447 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement transiting the Canal during the month of January, 1929. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Atlantic to Pacific.....	2	14	\$15.90	
Pacific to Atlantic.....	5	48	65.10	50
Totals.....	7	62	81.00	50

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of January, 1929, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons	107,644	33,005	140,649
Local cargo shipped..... tons	9,516	650	10,166
Transit cargo arriving..... tons	2,843,050	2,907,926	5,750,976
Transit cargo clearing..... tons	2,864,471	2,861,030	5,725,501
Cargo received for transshipment..... tons	53,303	2,922	56,225
Cargo transhipped..... tons	47,688	2,539	50,227
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	71	36	107
Number of withdrawals.....	484	425	909
Tons received.....	3,224	641	3,865
Tons withdrawn.....	2,966	588	3,554
Packages received.....	8,861	8,966	17,827
Packages withdrawn.....	9,097	12,085	21,182
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Co.....	89	6	95
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Co..... tons	27,564	217	27,781
Coal issued, miscellaneous:			
Panama Canal departments..... tons	125	89	214
U. S. Army, excepting vessels..... tons	47	10	57
Individuals and companies..... tons	166		166
Panama Railroad Company..... tons	27		27
Transferred to Navy..... tons	10,316		10,316
Total sales and issues..... tons	38,245	316	38,561
Coal on hand, January 1, 1929..... tons	38,261		38,261
Coal on hand, February 1, 1929..... tons	37,504		37,504
Coal received during month..... tons	37,488		37,488
Coal received from Navy..... tons		316	316
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls	7,484.36	22,375.36	29,859.72
Panama Railroad Company..... bbls	616.71		616.71
U. S. Army and Navy..... bbls		1,380.42	1,380.42
Individuals and companies..... bbls		371.83	371.86
Total sales and issues..... bbls	8,101.07	24,127.64	32,228.71
Fuel oil on hand, February 1, 1929..... bbls	43,066.49	67,916.50	110,982.99
Diesel oil sold during January..... bbls	168.33	1,342.00	1,510.33
Diesel oil received during January..... bbls		1,342.00	1,342.00
Diesel oil on hand, February 1, 1929..... bbls	25,066.87	1,835.25	26,902.12
Miscellaneous transfers..... bbls	975.99	1,600.55	2,576.54
Gasoline and kerosene pumped for The Panama Canal..... bbls	8,420.81	10,623.01	19,043.82
Gasoline pumped for individuals and companies..... bbls	872.26	19,920.86	20,793.12
Oil pumped for individuals and companies..... bbls	616,950.65	389,726.17	1,006,676.82
Oil pumped for U. S. Shipping Board..... bbls	3,020.57	2,791.91	5,812.48
Oil pumped for U. S. Navy..... bbls	58,563.80	29,705.00	88,268.80
Total fuel oil, gasoline, and kerosene handled..... bbls	697,003.48	479,837.14	1,176,840.62
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	31	4	35
Measured for Panama Canal net tonnage.....	9	1	10
Re-measured for Panama Canal net tonnage.....	24	5	29
Panama Canal net tonnage corrected.....	4	10	14
U. S. equivalent tonnage corrected.....	8	18	26

	Cristobal.	Balboa.	Total.
Services of harbor equipment:			
Tugs, total operating hours.....	708½	495	1,203½
Launches, total operating hours.....	1,840	2,425	4,265
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	21,876.80	14,246.25	36,123.05
Pilotage.....	22,348.00	9,292.00	31,640.00
Seamen.....	13,738.00	13,904.00	27,692.00
Launch service.....	2,625.05	3,901.00	6,526.00
Wharfage.....	20,509.95	5,529.40	26,039.35
Ships measured.....	280.00	50.00	33.00
Miscellaneous.....	2,235.20	998.00	3,233.20
Ships repaired at Panama Canal shops:			
Commercial.....	52	22	74
U. S. Army and Navy.....		9	9
Panama Canal equipment.....	9	9	18
Totals.....	61	40	101
Vessels dry-docked:			
Commercial.....	8	10	18
Panama Canal equipment.....	1	4	5
Totals.....	9	14	23
Clearances issued.....	357	311	668
Bills of health issued.....	352	313	665

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	755	4,196,503	2,693,901	795	4,489,918	3,082,200
Vessels entering port but not transiting Canal.	75	351,501	216,461	96	570,778	547,690
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	123	695,007	416,489	96	559,715	337,468
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	753	4,216,514	2,708,042	646	3,605,448	2,225,511
Vessels clearing port but not transiting Canal.	72	330,566	201,989	23	53,336	37,561
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	121	695,416	417,581	94	551,619	326,082

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,649	827	2,476	76	181	257
From Pacific ports.....	229	228	457	437	326	763
Total disembarking.....	1,878	1,055	2,933	513	507	1,020
Embarking:						
For Atlantic ports.....	1,122	567	1,689	52	33	85
For Pacific ports.....	360	379	739	336	96	432
Total embarking.....	1,482	946	2,428	388	129	517
Remaining on board:						
From Atlantic to Pacific ports.....	1,674	2,415	4,089	1,958	2,613	4,571
From Pacific to Atlantic ports.....	739	1,158	1,897	916	1,353	2,269
From Atlantic to Atlantic ports.....	2,454	81	2,535			
From Pacific to Pacific ports.....				11	363	374
Total remaining on board.....	4,867	3,654	8,521	2,885	4,329	7,214
Total arriving.....	6,745	4,709	11,454	3,398	4,836	8,234
Total departing.....	6,349	4,600	10,949	3,273	4,458	7,731

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	303	49	16.1
Pacific to Atlantic.....	300	62	20.6
Totals.....	603	111	18.4

In addition to the aforesaid, 65 passenger-carrying vessels called at the port of Cristobal and 5 at Balboa without transiting the Canal, making a total of 181 passenger-carrying vessels calling at Canal ports during the month.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of January, 1929:

	Ice.	Groceries.	Cold Storage.	Laundry.	Miscellaneous.	Totals.
Sales at Cristobal to:						
Commercial vessels.....	\$2,865.87	\$15,700.67	\$37,808.78	\$138.40	\$7,922.66	\$64,436.38
Government vessels.....	479.85	779.01	18,348.18	81.56	1,855.83	21,544.43
Panama Railroad vessels.....		42.12	1,635.29	1,018.56	390.98	3,086.95
Total sales, January, 1929...	3,345.72	16,521.80	57,792.25	1,238.52	10,169.47	89,067.76
Total sales, January, 1928...	2,218.04	16,013.77	34,650.52	862.64	6,829.12	60,574.09
Total sales, January, 1927...	2,542.76	25,752.50	64,002.45	819.65	10,651.28	103,768.64
Sales at Balboa to:						
Commercial vessels.....	2,355.59	11,847.22	23,650.00	414.25	4,668.22	42,935.28
Government vessels.....	2,408.57	5,689.53	27,332.39	176.50	15,565.53	51,172.52
Total sales, January, 1929...	4,764.16	17,536.75	50,982.39	590.75	20,233.75	94,107.80
Total sales, January, 1928...	1,763.22	14,454.53	37,851.35	734.46	5,831.39	60,634.95
Total sales, January, 1927...	1,559.71	10,236.79	30,148.42	467.66	3,781.58	46,194.16

The aggregate sales to Government vessels during the month was \$72,716.95; to Panama Railroad vessels, \$3,086.95, and to other commercial vessels, \$107,371.66; making the total sales to all vessels \$183,175.56.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of January, 1929, as compared with the corresponding month in 1928 and 1927:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial.			Jan., 1929.	Jan., 1928.	Jan., 1927.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	289	270	559	12	39	51	610	537	451
Pedro Miguel.....	270	279	549	13	52	65	614	567	471
Miraflores.....	265	258	523	6	34	40	563	562	468
Number of vessels put through locks.									
Gatun.....	300	303	603	43	114	157	760	608	554
Pedro Miguel.....	300	303	603	65	147	212	815	664	580
Miraflores.....	300	303	603	61	141	202	805	666	570

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	126	128	125
Panama Canal equipment.....	22	63	60
Launches (under 20 tons).....	3	15	11
Panaman Government vessels.....	2	2	2
Vessels for repairs.....	4	4	4

The total consumption of water for lockages and loss in leakage was as follows in January, 1929, as compared with the preceding month and the corresponding month in 1928:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	2,506,200,000	2,158,270,000	1,780,270,000
Leakage.....	20,000,000	30,500,000	20,000,000
Totals, January, 1929.....	2,526,200,000	2,188,770,000	1,800,270,000
Totals, December, 1928.....	2,291,000,000	2,072,370,000	1,880,030,000
Totals, January, 1928.....	2,246,010,000	1,771,190,000	1,760,420,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of January, 1929, are shown in comparative form in the following tabulation:

	January.		January—Years of record.		
	1929.	1928.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	1,691	2,160	5,050	682	1,970
Maximum momentary discharge for the month.....	6,845	3,460	50,200		
Gatun Lake watershed, total yield.....	2,975	3,396	9,298	1,473	3,109
Gatun Lake watershed, net yield.....	2,143	2,582	8,641	628	2,298
Draft on Gatun Lake for lockages and power.....	3,275	2,859	3,275	987	2,166

¹ January 29, 1909. ² Does not include January, 1914.

The total yield of the Gatun Lake watershed for January was 4 per cent below the 16-year average, or 2,975 c. f. s., compared with an average of 3,109 c. f. s. Deferred run-off from the December storms was responsible for this approximately normal yield. Maximum and minimum total yields of record are 9,298 c. f. s. in 1922 and 1,473 c. f. s. in 1926, respectively. The lake varied in elevation from 87.10 feet on the 1st to 86.16 feet on the 31st; averaged 86.74 feet, and ended at an elevation of 86.20 feet. Miraflores Lake varied from an elevation of 54.72 feet on the 17th to 53.52 feet on the 18th; averaged 54.11 feet, and ended at an elevation of 54.13 feet.

SEISMOLOGY.

Seismic disturbances were recorded during the month on the 12th, 17th, 19th, 20th, 22d, 23d, and 24th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,507,100 kilowatt hours, and the computed water consumption was 4,108,167,458 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 3,500 kilowatt hours, with a fuel oil consumption of 9.36 barrels.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were completed on 44 vessels during the month. There were 358 work orders issued during the month, as compared with 355 for the previous month.

MECHANICAL DIVISION.

During the month miscellaneous repairs were made on 61 vessels at Cristobal and 40 at Balboa. Nine vessels were dry-docked at Cristobal and 13 at Balboa. Work on four Peruvian submarines and annual overhaul and underwater work on Peruvian cruiser *Almirante Grau* were completed during the month. The steamers *Caroni* and *Monagas* were dry-docked for annual overhaul to deck and engineering departments. Minor running repairs were completed on four United States submarines during the month.

MUNICIPAL ENGINEERING DIVISION.

Work was carried forward on several improvement projects in the cities of Colon and Panama, and in the Canal Zone. On the Alhajuela Road, 6,000 feet were cleared, and 11,675 cubic yards of earth and 4,610 cubic yards of rock were excavated in connection with grading.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 783,839,000 gallons.

DREDGING DIVISION.

South Cucaracha Slide showed a slight movement during the month, while West Lirio, East and West Culebra slides remained quiescent. There were no other slides and no delays to shipping during the month.

The total excavation during January was 439,000 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gaillard Cut—			
Project No. 2, Lirio curve.....	6,600	59,300	65,900
Canal prism, Pacific entrance—			
Project No. 1.....	9,800	67,750	77,550
Maintenance.....	262,700	18,650	281,350
Balboa inner harbor—			
Project No. 1.....		13,700	13,700
Maintenance.....	500		500
Totals.....	279,600	159,400	439,000

The new 24-inch Diesel-electric pipeline suction dredge *Las Cruces*, built by the Ellicott Machine Corporation, Baltimore, arrived at the Isthmus on January 11, and final adjustment and conditioning were begun to prepare the dredge for service in the Pacific sea level section.

The ferry crossing at the north end of Pedro Miguel locks operated 31 days during the month. Five hundred and sixty-two trips were made, and 430 Panama Canal, 466 U. S. Army, and 2,933 other vehicles, a total of 3,829, were ferried across the Canal.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on January 31, 1929, totaled 21,795, composed of 7,509 Americans, 2,717 of whom were men, 2,247 women, and 2,545 children; 243 Europeans, 100 of whom were men, 37 women, and 106 children; and 14,043 West Indians, 4,236 of whom were men, 2,596 women, and 7,211 children. The total number of persons in quarters on January 31, 1928, was 21,404.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of January 16, 1929, with a comparison of the working force for the preceding month and for January, 1928:

	As of January 16, 1929.			Total employees.	
	Gold.	Silver.	Total.	December, 1928.	January, 1928.
Operation and Maintenance:					
Office.....	44	52	96	95	76
Electrical.....	153	202	355	330	331
Municipal Engineering.....	114	1,272	1,386	1,233	887
Lock Operation.....	283	1,168	1,451	999	865
Dredging.....	181	920	1,101	1,079	1,032
Mechanical.....	430	779	1,209	1,339	1,392
Marine.....	209	713	922	957	756
Fortifications.....	25	328	353	300	301
Totals.....	1,439	5,434	6,873	6,332	5,640
Supply Department:					
Quartermaster.....	195	1,775	1,970	1,961	1,920
Subsistence.....	8	116	124	110	113
Commissary.....	217	1,287	1,504	1,489	1,272
Cattle Industry.....	6	174	180	150	285
Hotel Washington.....	8	102	110	111	109
Transportation.....	61	217	278	268	253
Totals.....	495	3,671	4,166	4,089	3,952
Accounting Department.....	197	7	204	204	206
Health Department.....	268	814	1,082	1,075	1,131
Executive Department.....	511	298	812	813	790
Totals.....	979	1,119	2,098	2,092	2,127
Panama Railroad Company:					
Superintendent.....	49	317	366	353	303
Transportation.....	68	129	197	181	178
Receiving and Forwarding Agency.....	91	1,766	1,857	1,775	1,401
Coaling Stations.....	48	313	361	293	295
Totals.....	256	2,525	2,781	2,602	2,177
Grand totals, January, 1929.....	3,169	12,749	15,918		
Grand totals, December, 1928.....	3,120	11,464		15,115	
Grand totals, January, 1928.....	2,998	10,898			13,896

Additions to the gold force on the Isthmus in January were as follows: Employed in the United States, 3; reemployed in the United States, 8; employed on the Isthmus, 35; reemployed on the Isthmus, 23; total, 69. Separations from the gold force totaled 36, as follows: Resigned, 20; discharged, 12; retired, 2; died, 2. At the end of the month there were on file 153 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 177 deaths occurred during the month of January, 1929, among the population of the Canal Zone and the cities of Panama and Colon, which is equivalent to an annual death rate of 16.40 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 29; tuberculosis (various organs), 21; organic diseases of the heart, 20; nephritis (acute and chronic), 13; and diarrhea and enteritis, 8. There were 7 deaths from apoplexy, 6 from cancer, 2 each from measles, dysentery, and tetanus, and 1 each from typhoid fever, leprosy, and erysipelas. There were 27 deaths among nonresidents. These are not included in the above statistics.

There were 314 live births, and 19 stillbirths, reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 30.85 per 1,000 population. Deaths among children under 1 year of age numbered 29, giving an infant mortality rate based on the number of live births reported, of 92.36.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during January was 127, of whom 31 were employees (6 white and 25 colored), 20 were members of employees' families (1 white and 19 colored), 4 were Canal Zone agriculturists, 19 were other civilian nonemployees, and 53 were Army and Navy personnel. Of the 51 employees and members of employees families, 35 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There were 3 deaths from malaria, all colored nonemployees; two from Colon and one from Paraiso.

Five cases of smallpox were admitted to Gorgas Hospital; all of these were from the same building in Colon as the one case reported in December. Also, two non-residents suffering from smallpox were admitted, one from Colombia and one from Chorrera, Republic of Panama.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions and received on the Isthmus during the month totaled \$478,204.20, of which \$443,645.63 was for the Department of Operation and Maintenance and \$34,558.57 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material amounted to \$53,440.75.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of December, 1928, as compared with December, 1927, and the figures for the first six months of the current fiscal year as compared with the same period in the fiscal year 1928.

It is impossible to submit the figures for the month of January, at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	December, 1928.	December, 1927.	To end of December.	
			This year.	Last year.
Tolls.....	\$2,443,113.24	\$2,398,569.75	\$13,361,436.11	\$13,932,396.62
Other receipts.....	371,833.45	327,004.90	1,960,985.10	1,763,048.94
Total transit revenues.....	2,814,999.69	2,725,574.65	15,322,421.21	15,695,445.56
Total transit expenses.....	1,094,233.32	1,010,220.34	6,332,843.17	5,943,066.07
Net transit revenues.....	1,720,766.37	1,715,354.31	8,989,578.04	9,752,379.49
Three per cent capital charge.....	616,431.64	611,878.90	3,695,521.90	3,665,289.80
Transit surplus.....	1,104,334.73	1,103,475.41	5,294,056.14	6,087,089.69
Business revenues.....	1,347,569.14	1,407,258.55	7,958,368.71	7,599,234.30
Business expenses.....	1,267,242.35	1,327,406.60	7,522,087.54	7,160,048.95
Net business revenues.....	80,326.79	79,851.95	436,281.17	439,185.35
Three per cent capital charge.....	60,008.61	61,562.92	390,222.17	389,471.61
Business surplus.....	20,318.18	18,289.03	45,959.00	49,713.74

	December, 1928.	December, 1927.	To end of December	
			This year.	Last year.
Combined revenues.....	\$4,162,568.83	\$4,132,833.20	\$23,280,789.92	\$23,294,679.86
Combined expenses.....	2,361,475.67	2,337,626.94	13,854,930.71	13,103,115.02
Net revenues.....	1,801,093.16	1,795,206.26	9,425,859.21	10,191,564.84
Three per cent capital charge.....	676,440.25	673,441.82	4,085,844.07	4,054,761.41
Combined surplus.....	1,124,652.91	1,121,764.44	5,340,015.14	6,136,803.43

Respectfully,

H. BURGESS,
Governor.

Low Temperatures for Canal Zone.

Records of low temperatures occurring over the Canal Zone and adjacent areas during the 5 days, January 27 to 31, 1929, inclusive, are reported by the section of surveys. The lowest temperature recorded was 59° F., at Alhajuela on January 30. This equals the lowest temperature recorded during the period of American occupation, from 1904, 59° F. having been recorded at Bas Obispo on February 9, 1907, and at Alhajuela on February 4, 1924.

A geologist at San Juan, 10 miles above Alhajuela, on the morning of January 30, reported a sling-psychrometer reading of 58.5° F. and it is possible that lower temperatures occur in the upper Chagres valley. However, 59° F. is the lowest temperature yet registered officially by recording thermometers.

Hammond Line, Inc., to Establish New Intercoastal Service.

According to published statements, the sailing of the steamer *New Britain* on February 15 from Philadelphia and on February 19 from New York to Los Angeles, San Francisco, Oakland, Portland, Seattle, and Tacoma, will inaugurate a service of the new Hammond Line, Inc., which is to operate in the intercoastal trade. It is further stated that sailings every two weeks are to be provided as soon as possible.

The principal officials of the Hammond Line, Inc., including the president and general manager, Mr. A. P. Hammond, are said to have been officials of the California & Eastern Steamship Company.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending February 23, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Kenowis.....	U. S. Government.....	February 6.....	February 8.....	1,614	10
Santa Cruz.....	Grace Line.....	February 9.....	February 9.....		1
Laguna.....	Pacific Steam Navigation Co.....	February 12.....	February 12.....		50
Denderah.....	Kcsincs Line.....	February 12.....	February 13.....	413	3
Rakuyo Maru.....	Nippon Yusen Kaisha.....	February 12.....	February 13.....		46
Amsterdam.....	Dutch Line.....	February 16.....	February 17.....	297	
City of San Francisco.....	Panama Mail S. S. Co.....	February 16.....	February 17.....		4
Nora.....	Grace Line.....	February 16.....	February 17.....	4,655	
George Washington.....	Fred Olsen & Co.....	February 17.....	February 18.....	1,287	
Ecuador.....	Panama Mail S. S. Co.....	February 18.....	February 18.....	91	
El Salvador.....	Grace Line.....	February 18.....	February 19.....	160	
Buenos Aires.....	Spanish Line.....	February 20.....	February 21.....	159	
Frost.....	Hans Ericson.....	February 20.....	February 20.....	235	
California.....	Panama-Pacific Line.....	February 22.....	February 23.....		162

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending February 16, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cali.	North German Lloyd.		February 10.		235
Colombia.	Panama Mail S. S. Co.		February 10.		717
Santa Cruz.	Grace Line.		February 10.		410
Dinteldijk.	Holland-American Line.		February 10.		101½
Rialto.	Nav. Libera-Triestina.		February 10.		198
Oropesa.	Pacific Steam Navigation Co.		February 10.		15
Smyrna.	North German Lloyd.	February 10.	February 11.	597	337
Macabi.	United Fruit Co.	February 10.	February 11.	86½	632½
Saramacca.	United Fruit Co.	February 10.	February 11.	33½	41
Juan Sebastian Elcano.	Spanish Line.	February 10.	February 13.	199	304
Wanks.	Standard Fruit & S. S. Co.		February 11.		3½
Heredia.	United Fruit Co.		February 11.		120
Santa Elisa.	Grace Line.	February 11.	February 11.	27½	(¹)
Denderah.	Hamburg-American Line.	February 11.	February 12.	9	339½
Laguna.	Pacific Steam Navigation Co.	February 12.	February 12.	(¹)	230
La Plata Maru.	Csaka Shosen Kaisha.	February 12.	February 13.	68	(¹)
Oklahoma.	French Line.	February 12.	February 13.	576½	(¹)
Moveria.	Donaldson Line.	February 12.	February 14.	(¹)	368
Caldas.	National Navigation Co.		February 14.		275
Esparta.	United Fruit Co.	February 13.	February 14.	1,659	423
Zacapa.	United Fruit Co.	February 13.	February 14.	665	234
Cristobal.	Panama R. R. S. S. Line.	February 13.		3,622	
Minden.	North German Lloyd.	February 13.	February 14.	12	50
Ariguani.	Elders & Fyffes, Ltd.	February 13.	February 14.	10	63
Suriname.	United Fruit Co.	February 13.	February 14.	871	86
Glamorganshire.	Pacific Steam Navigation Co.	February 13.	February 15.	(¹)	749
Pacific Grove.	Furness, Withy & Co.	February 13.	February 16.	(¹)	332
Linda S.	R. Feuillebois.	February 14.	February 14.	(¹)	31
Ulva.	United Fruit Co.	February 14.	February 15.	701	206
Uribe.	Estrada G. Hermanos.	February 14.		593	
Dagchild.	Anglo-Saxon Petroleum Co.	February 14.	February 15.	13,535	(²)
Cerigo.	Hamburg-American Line.	February 14.		219	
Atlantian.	Leyland Line.	February 14.	February 15.	565	(¹)
Alvarado.	Pacific Steam Navigation Co.	February 14.	February 16.	1,160	43
Bogota.	Pacific Steam Navigation Co.	February 15.	February 15.	109½	(¹)
Coppename.	United Fruit Co.	February 15.	February 15.	76	164
Buenaventura.	Panama R. R. S. S. Line.	February 15.	February 15.	239	(¹)
Hessen.	Hamburg-American Line.	February 15.	February 16.	(¹)	1,278
Grunewald.	Hamburg-American Line.	February 15.	February 16.	180	65½
Atlantida.	Standard Fruit & S. S. Co.	February 15.	February 16.	480	454
Sutermco.	Grace Line.	February 16.	February 16.	(¹)	72
San Pablo.	United Fruit Co.	February 16.		22	
William M.	R. Feuillebois.	February 16.	February 16.	(¹)	43½
Wanks.	Standard Fruit & S. S. Co.	February 16.		81	
Mandeville.	United Fruit Co.	February 16.		85	
George Washington.	Fred Olsen.	February 16.	February 16.	93	(¹)
City of San Francisco.	Panama Mail S. S. Co.		February 16.		3,293
Manizales.	North German Lloyd.	February 14.	February 16.	645	160
Amsterdam.	Royal Netherlands S. S. Co.	February 14.	February 16.	350	268
Acajutla.	Pacific Steam Navigation Co.	February 14.		1,102	

* No cargo discharged.

* No cargo laded.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Publication of Notices and Circulars of Interest to Shipping

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, February 23, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From —	For —	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Laurel Branch.	17	1 40	17	6 20	17	17 05	17	18 12	British	F. & W. Ritson	360.0	46.0	23.2	Pt. Talbot, Eng.	Mollendo, Peru.	(¹)	4,773	4,182	3,047
Texmar	17	1 45	17	6 25	17	18 05	17	19 12	American	Calmar S. S. Corp.	410.5	54.0	22.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	6,776	6,567	4,909
Condor	17	6 35	17	7 50	17	19 16	17	20 16	Chilean	R. W. James & Co.	355.0	45.3	22.0	New York, N. Y.	Corral, Chile.	General	794	4,421	3,063
Hibland	17	6 40	17	7 45	17	19 23	17	20 16	British	Royal Mail S. P. Co.	390.0	52.0	18.0	S. Shields, Eng.	Seattle, Wash.	Ballast.		6,275	4,549
Heather	16	22 15	17	8 40	17	20 25	17	21 05	American	Amer-Hawaiian Line	471.0	57.2	19.8	Boston, Mass.	Portland, Oreg.	General	4,106	9,154	6,066
Texan	17	9 13	17	9 45	17	21 17	17	22 15	Japanese	Nippon Yusen Kaisha	445.0	58.0	22.6	Baltimore, Md.	Kobe, Japan	(²)	5,481	8,015	5,849
Isabon Maru	17	2 50	17	11 30	17	22 20	17	23 25	American	United Fruit Co.	336.0	44.0	19.1	Port Limon, C. R.	San Francisco, Cal.	Bananas, coffee.	8,815	3,673	2,367
Esparita	17	4 45	17	15 20	18	19 40	18	20 50	American	Tampa Intercoastal Co.	419.5	56.5	30.0	Pt. Arthur, Tex.	Far East.	(³)	9,356	8,690	6,316
Scottsburg	17	14 45	17	15 20	18	19 40	18	20 50	American	Tampa Intercoastal Co.	419.5	56.5	30.0	Pt. Arthur, Tex.	Far East.	(³)	9,356	8,690	6,316
Medusa	17	18 05	18	00 55	18	6 10			American	U. S. Navy	460.0	61.0	12.6	Gettin Lake, C. Z.	Balboa, C. Z.	General	956	5,710	4,023
El Salvador	17	7 00	18	6 00	18	18 23	19	1 58	American	Panama Mail S. S. Co.	330.2	52.0	24.5	New York, N. Y.	San Francisco, Cal.	Ballast		6,219	4,611
Aleksandar I.	18	6 10	18	7 20	18	20 32	18	21 50	Yugoslav	Baburizza & Co.	425.0	51.0	14.0	Marseillaise, France	Antofagasta, Chile	Ballast		7,367	5,561
Belgium Maru	18	11 05	18	11 25	18	21 35	19	3 44	Japanese	Kokusai Kisen Kaisha	385.0	51.0	14.0	Pto. Cabello, Venez.	Arica, Chile.	Basic slag	8,451	7,367	5,561
King Malcolm	18	13 00	18	13 20	18	22 40	19	8 30	British	Dodd-Thomson & Co.	403.3	59.0	24.8	Antwerp, Belgium	Auckland, N. Z.	General	6,750	5,919	4,389
Vancouver Maru	18	15 40	18	17 15	19	18 40	19	19 50	Japanese	Kokusai Kisen Kaisha	385.0	51.0	25.9	Calveston, Texas	Kobe, Japan	General		8,823	4,797
Mabriton	18	17 10	18	18 15	19	20 10	19	21 00	British	R. Chapman & Son	412.6	55.5	16.6	Algiers, Algeria	Vancouver, B. C.	Ballast	6,002	5,708	4,131
Dio	18	18 23	18	20 45	19	21 23	19	22 30	American	Redwood Line	381.0	52.5	23.0	New Orleans, La.	San Francisco, Cal.	(⁴)			
Edw. P. Nones	18		18		18	15 23			American	U. S. Army	301.0	23.5		Cristobal, C. Z.	Gatun, C. Z.	General	729	2,746	1,626
Cid	17	16 22	19	8 30	19	18 46	19	20 15	British	Pacific Steam Nav. Co.	265.0	41.2	16.0	New York, N. Y.	Callao, Peru	General	92	685	261
Ville de Paquette	18	16 00	19	9 05	19	20 05	19	21 20	French	French Phosphate Co.	164.0	29.5	13.0	Harve, France	Tabiti, Society Is.	General	2,214	9,038	6,164
Gaasterdijk	18	6 05	19	9 30	19	22 25	19	23 15	Dutch	Holland-American Line	450.0	58.0	17.0	Rotterdam, Holland	Vancouver, B. C.	General	6,216	8,460	6,162
Willabee	18	23 35	19	11 30	19	23 28	20	00 48	American	Williams S. S. Line	468.0	58.0	20.0	Boston, Mass.	Seattle, Wash.	General, case oil.	2,335	6,237	4,537
Keelung	19	2 35	19	14 00	20	00 29	20	1 39	British	Norton, Lilly & Co.	413.0	52.0	20.6	Newport News, Va.	Dunedin, N. Z.	Ballast		5,593	4,069
Uganda	19	9 20	19	15 25	20	1 27	20	2 40	British	Wessel, Duxal & Co.	410.0	52.2	16.7	Newport News, Va.	Chile	Ballast		8,451	3,326
El Lobo	19	11 35	19	16 04	20	3 38	20	3 20	British	Atlantic Refining Co.	385.0	51.0	18.0	New York, N. Y.	La Libertad, Echad.	Steel, general.	8,772	7,340	5,360
Sagadahoc	19	13 15	19	17 40	20	4 47	21	22 00	American	Ishmian S. S. Line	420.5	54.2	27.0	Baltimore, Md.	New Calidonia	Coal, coke	6,500	7,828	5,728
Artemisia	19	14 18	19	19 15	20	4 47	20	6 07	British	Gueret, L'Hyen & Mer	452.0	52.0	26.10	Newcastle, Eng.	Gatun, C. Z.	General		15	15
L-10			19		19	13 59			American	U. S. Army				Cristobal, C. Z.	Gatun, C. Z.	Ballast		15,563	4,496
No. 31057			19		19	13 59			American	United Fruit Co.	551.0	72.0	22.0	New York, N. Y.	Cruz Grande, Chile	Ballast		6,346	6,090
Americaland	19	16 55	20	6 30	20	14 57	20	21 18	Swedish	Ore S. S. Corp.	407.8	54.7	21.0	Amsterdam, Holl.	Les Angeles, Calif.	General	3,090	6,766	4,767
Britania	19	18 05	20	6 35	20	15 50	20	19 20	Norwegian	A. H. Mathessen	385.0	53.3	26.0	Brevik, Norway	Corral, Chile	General	6,550	5,572	4,134
Kina	19	21 15	20	7 35	20	18 55	20	20 30	Danish	Knut Knutsen	404.0	54.0	18.6	Boston, Mass.	Seattle, Wash.	General		5,786	3,627
Hawaiian	19	21 50	20	7 42	20	19 55	20	21 18	American	Amer-Hawaiian Line	378.0	50.2	26.0	New York, N. Y.	Manila, P. I.	General		8,600	6,741
Fordeford	19	23 35	20	8 50	20	20 58	20	22 00	Norwegian	Isbrandtsen Moller Co.	385.3	55.0	19.0	London, England	San Francisco, Cal.	Ballast		5,786	3,627
Lincoln Ellis									Norwegian	General Petroleum Co.	385.3	55.0	19.0	London, England	Antofagasta, Chile	Fuel oil		6,741	4,345
San Lamberto	20	3 47	20	11 05	20	23 00	21	00 27	Barge	Anglo-Mexican Pet. Co.	395.6	55.0	27.0	Aruba, D. W. I.	Antofagasta, Chile	General			

* Tanker. * Repair ship. * Motor ship. * Tug. * Launch. * Barge. * Patent fuel and coke. * Tobacco, tinplate, etc. * Cotton, phosphate, rock, and oil products. * Sulphur, coke, and general.

	20	4 05	20	12 15	20	24 00	21	1 50	American.	Lockenbach Line.	408.0	68.0	21.0	Boston, Mass.	Tacoma, Wash.	General.	4,891.11	487	8,762
Andrea F.	19	17 55	20 14 25	20 15 00	21	2 15	21	3 25	German.	North German Lloyd.	431.0	56.4	26.8	Hamburg, Germany.	San Antonio, Chile.	General.	6,659	7,196	4,956
Aachen	20	6 20	20 18 00	20 18 00	21	1 15	21	3 25	American.	Standard Oil Co.	430.0	59.0	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,093	5,402	
Altair	20	13 48	20 15 00	20 15 00	21	3 30	21	7 10	American.	The Texas Co.	416.8	56.1	21.6	Providence, R. I.	Wilmington, Calif.	Ballast.	6,336	4,301	
Illinois	20	16 05	20 18 25	20 18 25	21	3 30	21	7 10	American.	Munson S. S. Line.	381.0	51.6	22.4	Baltimore, Md.	Seattle, Wash.	General.	4,877	5,571	4,033
Minneaver	19	12 50	20 15 20	20 15 20	21	4 20	21	5 27	French.	French Line.	400.0	51.6	22.4	Havre, France.	Coronel, Chile.	General.	4,818	7,150	5,330
Illinois	20	16 10	20 15 20	20 15 20	21	4 20	21	5 27	French.	French Line.	400.0	51.6	22.4	Havre, France.	Coronel, Chile.	General.	4,818	7,150	5,330
Trinidad	20	16 10	20 15 20	20 15 20	21	4 20	21	5 27	French.	French Line.	400.0	51.6	22.4	Havre, France.	Coronel, Chile.	General.	4,818	7,150	5,330
Otra	20	16 10	20 15 20	20 15 20	21	4 20	21	5 27	French.	French Line.	400.0	51.6	22.4	Havre, France.	Coronel, Chile.	General.	4,818	7,150	5,330
Wearpool	20	18 25	21 6 30	21 6 30	22	2 30	22	3 05	British.	Shaw, Savill & Albion.	450.0	58.1	25.6	Newcastle-on-Tyne.	Auckland, N. Z.	General.	5,153	8,220	5,342
Pendovio.	20	18 25	21 6 30	21 6 30	22	2 30	22	3 05	British.	Shaw, Savill & Albion.	450.0	58.1	25.6	Newcastle-on-Tyne.	Auckland, N. Z.	General.	5,153	8,220	5,342
Lio	21	7 15	21 7 50	21 7 50	22	23 06	22	23 06	Yugoslav.	Gibbs and Sons	390.0	54.5	14.0	River Tyne, Eng.	Estay, Sask.	Ballast.	5,920	4,318	
Santa Maria	21	7 15	21 7 50	21 7 50	22	23 06	22	23 06	Yugoslav.	Gibbs and Sons	390.0	54.5	14.0	River Tyne, Eng.	Estay, Sask.	Ballast.	5,920	4,318	
Eleanor	21	5 25	21 9 08	21 9 08	22	20 45	22	1 50	American.	Standard Transp. Co.	431.0	59.0	22.0	New York, N. Y.	Tachuan, Chile	Ballast.	7,816	5,112	
Christenson	21	11 18	21 11 35	21 11 35	22	20 17	22	1 20	American.	Grace Line.	466.0	64.0	23.6	New York, N. Y.	Tachuan, Chile	General.	3,713	10,626	6,680
Galveston	21	11 18	21 11 35	21 11 35	22	20 17	22	1 20	American.	Christenson S. S. Co.	410.6	54.3	21.0	Baltimore, Md.	Seattle, Wash.	General.	5,193	6,572	4,788
Honduras	19	7 25	21 12 40	21 12 40	22	23 45	22	3 35	American.	U. S. Navy	292.0	44.0	18.11	High seas	Balboa, C. Z.	General.	1,486	6,029	4,312
Perene	18	7 25	21 12 40	21 12 40	22	23 45	22	3 35	American.	U. S. Navy	292.0	44.0	18.11	High seas	Balboa, C. Z.	General.	1,486	6,029	4,312
Orbita	21	15 05	21 14 22	21 14 22	22	1 37	22	2 45	Peruvian.	Peruvian Line	470.9	51.7	19.1	Havre, France.	Tachuan, Chile	General.	2,042	2,168	1,529
Loekkatrine	21	15 05	21 14 22	21 14 22	22	1 37	22	2 45	Peruvian.	Peruvian Line	470.9	51.7	19.1	Havre, France.	Tachuan, Chile	General.	2,042	2,168	1,529
California	21	00 30	22 6 25	22 6 25	23	20 58	23	21 55	British.	Pacific Steam Nav. Co.	550.3	67.3	30.0	Liverpool, England	Tachuan, Chile	General.	5,590	16,844	11,731
Bethore	21	6 45	22 7 30	22 7 30	23	22 05	23	3 15	American.	Royal Mail S. P. Co.	485.0	62.0	19.9	Rotterdam, Holland	Vancouver, B. C.	General.	1,398	10,802	7,595
President	22	6 45	22 7 30	22 7 30	23	22 05	23	3 15	American.	Panama-Pacific Line.	574.4	80.3	27.0	New York, N. Y.	San Francisco, Cal.	General.	3,787	21,506	17,565
Visurgis	22	6 45	22 7 30	22 7 30	23	22 05	23	3 15	American.	Panama-Pacific Line.	574.4	80.3	27.0	New York, N. Y.	San Francisco, Cal.	General.	3,787	21,506	17,565
Sunelco	22	6 45	22 7 30	22 7 30	23	22 05	23	3 15	American.	Panama-Pacific Line.	574.4	80.3	27.0	New York, N. Y.	San Francisco, Cal.	General.	3,787	21,506	17,565
Somme	22	6 35	22 9 55	22 9 55	23	23 30	23	3 45	French.	Dollar Line	502.0	62.0	27.10	New York, N. Y.	San Francisco, Cal.	General.	4,826	12,023	8,495
Davanger	22	6 35	22 9 55	22 9 55	23	23 30	23	3 45	French.	Dollar Line	502.0	62.0	27.10	New York, N. Y.	San Francisco, Cal.	General.	4,826	12,023	8,495
Albert Vogler	22	6 35	22 9 55	22 9 55	23	23 30	23	3 45	French.	Dollar Line	502.0	62.0	27.10	New York, N. Y.	San Francisco, Cal.	General.	4,826	12,023	8,495
Acutia	21	15 55	22 14 10	22 14 10	23	1 47	24	18 38	German.	Anglo-Saxon Pet. Co.	424.0	54.8	22.10	Hamburg, Germany	Valparaiso, Chile	General.	5,968	7,173	5,514
Ivo Racie	22	1 40	22 15 20	22 15 20	23	2 56	23	3 15	Yugoslav.	Baburiza & Co.	350.4	49.0	23.11	Cristobal, C. Z.	Antofagasta, Chile	Cement	1,112	1,273	706
Andromeda	21	16 40	22 10 55	22 10 55	23	2 50	23	3 45	French.	Messageries Maritimes	450.0	57.0	28.8	Dunkirk, France	Noumea, N. Caled	General.	2,589	7,984	5,472
Lea Luck-	22	6 05	22 17 55	22 17 55	23	3 54	23	5 10	American.	Lockenbach Line.	425.0	53.8	21.0	New Orleans, La	Seattle, Wash.	General.	6,211	7,217	5,295
Paul Shoup	22	11 20	22 19 25	22 19 25	23	4 54	23	6 05	American.	Tidewater Oil Co.	424.4	53.8	21.0	New York, N. Y.	San Francisco, Cal.	Ballast.	7,333	5,182	
Urile	14	18 40	22 19 25	22 19 25	23	4 54	23	6 05	American.	Tidewater Oil Co.	424.4	53.8	21.0	New York, N. Y.	San Francisco, Cal.	Ballast.	7,333	5,182	
Tisaren	22	12 35	23 6 20	23 6 20	24	5 03	24	6 15	Colombian.	Colomb. Maritime Co.	227.0	31.0	13.4	Cristobal, C. Z.	Buenaventura, Col.	General.	730	1,154	663
Havside	22	14 10	23 6 35	23 6 35	24	5 17	24	6 29	Colombian.	Transatlantic S. S. Co.	436.0	56.0	17.6	Gothenburg, Sweden	Los Angeles, Calif.	General.	2,598	7,691	5,346
Dean Emory	22	13 30	23 6 35	23 6 35	24	5 17	24	6 29	Colombian.	Transatlantic S. S. Co.	436.0	56.0	17.6	Gothenburg, Sweden	Los Angeles, Calif.	General.	2,598	7,691	5,346
Watertown	22	21 30	23 7 25	23 7 25	24	5 17	24	6 29	Colombian.	Transatlantic S. S. Co.	436.0	56.0	17.6	Gothenburg, Sweden	Los Angeles, Calif.	General.	2,598	7,691	5,346
Tiger	22	21 30	23 7 25	23 7 25	24	5 17	24	6 29	Colombian.	Transatlantic S. S. Co.	436.0	56.0	17.6	Gothenburg, Sweden	Los Angeles, Calif.	General.	2,598	7,691	5,346
Myrtle	23	3 10	23 8 50	23 8 50	24	23 34	24	23 39	American.	Huasteca Petroleum Co.	429.3	59.2	18.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,709	5,517	
Alaska	23	3 10	23 8 50	23 8 50	24	23 34	24	23 39	American.	Huasteca Petroleum Co.	429.3	59.2	18.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,709	5,517	
Gustaf E.	22	18 15	23 10 05	23 10 05	24	22 40	24	23 28	French.	Standard Transp. Co.	410.0	56.0	22.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	8,201	6,207	
Reuter	23	4 10	23 10 30	23 10 30	24	21 04	24	2 07	Swedish.	Union Oil Co.	419.0	55.0	19.0	Rouen, France	Los Angeles, Calif.	Ballast.	6,384	4,497	
Planter	23	17 00	23 13 13	23 13 13	24	1 04	24	2 07	Swedish.	Union Oil Co.	419.0	55.0	19.0	Rouen, France	Los Angeles, Calif.	Ballast.	6,384	4,497	
Florena	19	10 55	23 14 50	23 14 50	24	2 38	24	3 41	Colombian.	Colombian Transp. Co.	150.0	47.2	9.11	Cristobal, C. Z.	Buenaventura, Col.	General.	3,580	410	307
Pont Sar	23	12 55	23 15 18	23 15 18	24	1 05	24	1 04	American.	Gulf-Pacific Line.	324.0	40.0	20.9	Corpus Christi, Tex.	Vancouver, B. C.	General.	3,389	3,681	2,612
Willsole	23	10 49	23 16 20	23 16 20	24	2 15	24	3 15	American.	Williams S. S. Line.	435.0	57.6	20.0	Baltimore, Md.	Tacoma, Wash.	General.	3,849	7,983	5,882

* Tanker.

** Motor ship.

** Motor ship.

** Motor ship.

** Motor ship.

** Motor ship.

** Motor ship.

** Motor ship.

* Iron, steel, general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
William Blumer	16	14	30	17	13	00	17	13	45	C. H. Sorensen & Sons.	356.3	48.8	23.0	Junin, Chile.	Savannah, Ga.	Nitrates	5,904	8,987	6,612
Patrick Henry.	16	19	45	17	6	40	17	14	20	American-Pioneer Line	435.0	60.0	27.0	Shanghai, China.	New Orleans, La.	Wheat	10,332	6,193	4,465
Trestlin	17	1	00	17	7	22	17	15	40	Hain S. S. Co.	400.0	53.0	24.0	Vancouver, B. C.	Oran, Algeria.	Ballast	7,200	530	210
Wabala III	15	15	45	17	7	33	17	14	30	N. B. Woolworth	169.5	26.0		Balboa, C. Z.	New York, N. Y.	Ballast	3,464	2,473	
Riverton	17	4	00	17	8	41	17	17	18	R. Chapman & Son	409.6	51.0	25.0	Vancouver, B. C.	Hull, England.	Wheat	8,002	7,989	5,856
Takaoka Maru	17	6	15	17	9	45	17	17	42	Nippon Yusen Kaisha	445.0	58.0	26.9	Manila, P. I.	New York, N. Y.	General	9,447	8,561	5,815
Royalstar	17	7	43	17	11	10	17	19	17	Blue Star Line	450.0	58.0	26.9	New Westminster.	Hamburg, Germany	Frozen, general.	6,256	7,709	5,562
Sunbeam	17	10	00	17	12	05	17	20	05	Sun Oil Co.	429.3	59.2	26.0	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline	9,354	7,709	5,562
Capt. Ed. P. Nones	17	11	06	17	19	00				U. S. Army				Balboa, C. Z.	Cristobal, C. Z.				
Franklin K. Lane	17	11	00	17	12	55	17	21	40	Huasteca Petroleum Co.	435.0	56.2	26.4	Los Angeles, Calif.	Baltimore, Md.	Gasoline	9,674	7,405	5,131
Yeomo	17	14	00	17	5	34	18	13	20	Lyle De Grummond	229.6	37.8	12.6	Balboa, C. Z.	Pedro Miguel, C. Z.				
Visurgis	17	14	00	18	5	34	18	13	20	North German Lloyd				Cristobal, C. Z.		Ballast	1,406	854	
Julia Luckenbach	17	18	05	18	5	28	18	12	20	Luckenbach Line.	436.6	57.2	25.6	Portland, Oreg.	New Orleans, La.	Lumber, general.	6,274	8,543	6,402
Steel Trader	17	19	35	18	6	34	18	14	25	Isthmian S. S. Lines	424.2	56.2	25.9	Manila, P. I.	New York, N. Y.	Raw sugar	7,015	7,611	5,450
Sandpiper	17	22	10	18	7	31	18	15	15	U. S. Navy	410.0	52.3	23.3	Balboa, C. Z.	Cristobal, C. Z.	General	6,893	6,202	4,154
Dramatist	17	22	05	18	7	31	18	15	15	T. & J. Harrison	250.0	34.7	13.0	Vancouver, B. C.	Liverpool, England	General	381	1,680	987
Banan	18	9	07	18	10	06	18	19	30	Williams S. S. Line	409.5	51.2	24.0	Punta Arenas, C. R.	Port Limon, C. R.	Lumber	6,649	6,510	4,827
Willango	18	6	15	18	11	57	18	20	00	Soc. Anon. Lig. Arm't.	385.7	49.0	23.2	Aberdeen, Wash.	Philadelphia, Pa.	Lumber, wheat.	6,900	5,657	4,069
Surrey	18	13	25	18	14	23	19	00	10	Federal Steam Nav. Co.	460.4	62.8	22.0	San Francisco, Cal.	Grangermouth, Eng.	Frozen, general.	5,800	10,592	7,707
Ant.	18	17	15	18	15	40	19	3	05	M. Grummond, Ltd.	400.5	52.1	25.6	Sydney, Australia.	London, England.	Nitrates	8,160	6,617	4,792
Ecuador	18	17	15	18	15	40	19	3	05	Panama Mail S. S. Co.	386.6	48.7	23.6	Antofagasta, Chile.	Alexandria, Egypt	Nitrates	2,750	5,926	4,178
Homer City	18	18	00	18	23	40	19	8	40	Sir W. R. Smith & Sons	384.9	53.0	23.0	San Francisco, Cal.	New York, N. Y.	Coffee, general	7,154	5,517	3,953
Floreana	18	21	30	18	23	42	19	10	55	Colombian Transp. Co.	150.0	27.2	8.6	Vancouver, B. C.	Liverpool, England	Wheat	200	410	307
Curaca	18	18	45	18	23	50	19	9	40	Grace Line.	403.0	52.3	27.6	Pueaventura, Col.	Cristobal, C. Z.	Coffee, hides	9,982	6,804	4,897
Somerset	18	22	15	19	1	28	19	9	40	Federal Steam Nav. Co.	460.6	62.8	25.0	Tucupilla, Chile	New Orleans, La.	Nitrates	6,821	10,650	7,993
Maltran	18	23	50	19	2	31	19	10	25	Malory Line	333.8	48.0	23.0	Auckland, N. Z.	London, England	Frozen, general.	4,900	4,171	2,827
American	18	23	15	19	1	51	19	11	15	Amer.-Hawaiian Line.	404.6	53.9	27.0	Aberdeen, Wash.	New York, N. Y.	Lumber	6,189	6,777	4,761
Alunderby	19	2	30	19	3	35	19	13	05	Sir. R. Kopper & Co.	390.0	55.0	23.0	Portland, Oreg.	Boston, Mass.	General	7,620		
K. I. Luckenbach	19	4	45	19	5	50	19	13	55	Luckenbach Line.	446.0	56.1	28.8	Vancouver, B. C.	Hampton R'ds	Wheat	8,212	8,552	6,236
Victrolite	19	3	00	19	6	19	19	13	20	Imperial Oil Co., Ltd.	510.2	68.2	30.0	Portland, Oreg.	Boston, Mass.	Lumber, general	15,090	11,575	7,618
Virginian	18	10	42	19	7	45	19	16	10	Panama-Pacific Line	586.4	80.3	30.0	Talara, Peru	Haiti, N. S.	Crude oil	9,031	25,254	18,160
Wright	19	8	27	19	8	27	19	17	03	U. S. Navy	488.0	58.0		Balboa, C. Z.	New York, N. Y.	General	6,806	7,330	5,245
Steelmaker	19	4	50	19	10	28	19	18	25	Isthmian S. S. Lines	335.5	55.0	26.0	Seattle, Wash.	Cristobal, C. Z.	Lumber, general	779	4,033	2,261
La Perla	19	11	00	19	11	48	19	19	45	United Fruit Co.	325.2	48.1	19.8	San Francisco, Cal.	Port Limon, C. R.	General			

* Tanker.

** Motor yacht.

** Launch.

** Motor ship.

** Sugar, coffee, and general.

** For orders.

Ship	Date	Time	Origin	Destination	Cargo	Tonnage	Value	Remarks
Clan Matheson	19 11 40	19 12 10	British	Yayzer Irvine & Co.	Nitrates	7,650	6,085	4,179
Akwine	19 13 30	19 14 18	American	International S. S. Corp	Gas oil	13,000	9,391	6,306
Altine Mend.	19 14 00	19 14 57	Spanish	Sota & Aznar	Nitrates	8,800	6,282	4,517
Arcagua	19 20 45	20 01 10	Chile	Chilean Line	General	4,808	7,761	4,705
Birk	19 14 10	20 05 10	Norwegian	Anglo-Chilean N'te Co.	Nitrates	7,000	4,751	3,160
Barnforth	19 15 25	20 06 07	British	S. S. Daiglish, Ltd.	Wheat	7,040	5,581	3,688
S. C. T. Dodd	19 00 30	20 07 06	American	Standard Oil Co. of Cal.	Gasoline	9,346	7,481	4,975
Urubamba	20 2 40	20 08 44	Peruvian	Peruvian Line	General	2,327	4,803	2,951
Maria Petri- novic	20 7 00	20 09 16	Yugoslav	Baburizza & Co.	Nitrates	8,580	5,808	4,163
Wagenwald	20 9 45	20 10 48	German	Hamburg-American Line	Nitrates	7,811	6,536	4,516
Yorkmar	20 10 40	20 11 29	American	Calmar S. S. Corp	Lumber	7,606	6,737	4,919
Welsh City	20 14 00	20 14 46	British	Sir W. R. Smith & Sons	Wheat	9,023	6,957	5,133
R. D. Leonard	20 14 45	20 15 58	American	Atlantic Refining Co.	Gasoline	3,000	1,836	1,304
Buenos Aires	20 14 35	21 01 18	Spanish	Spanish Line	General	247	5,024	3,844
Ruguent Ares	20 20 20	21 01 18	American	B. L. Shipping Co.	Crude oil	10,177	7,324	5,099
Roads	21 1 40	21 08 00	American	Oil Transport Co.	Crude oil	10,511	8,093	6,347
S-15	21 8 02	21 16 55	American	U. S. Navy	Cristobal, Pa.			
Salinas	21 8 54	21 18 10	American	U. S. Navy	Cristobal, C. Z.			
Ripple	21 8 55	21 18 20	American	E. E. Bishop	Tampa, Fla.	294	130	
S-14	21 9 54	21 19 50	American	U. S. Navy	Cristobal, C. Z.			
S-16	21 9 54	21 19 50	American	U. S. Navy	Cristobal, C. Z.			
S-17	21 9 54	21 19 50	American	U. S. Navy	Cristobal, C. Z.			
Sunol	21 11 48	21 20 30	American	Sun Oil Co.	Los Angeles, Calif	13,670	9,610	6,393
O-6	21 10 05	21 19 50	American	U. S. Navy	Chesler, Pa.			
O-9	21 10 05	21 19 50	American	U. S. Navy	Cristobal, C. Z.			
Volunteer	21 10 05	21 19 50	American	U. S. Navy	Cristobal, C. Z.			
Mahia	21 10 25	21 13 57	British	American-Pioneer Line	New Orleans, La.	10,036	8,214	6,183
Kelsomoor	21 8 52	21 13 57	British	Shaw, Savill & Albion	London, England	5,000	11,109	7,984
W. H. Libby	21 14 05	21 23 15	British	W. Runciman & Co.	Falmouth, England	4,670	3,551	2,551
Canca	21 20 20	22 05 08	American	Standard Shipping Co	New York, N. Y.	10,504	8,461	6,104
Larry Doheny	21 17 00	22 05 02	Colombian	National Navigation Co	Cristobal, C. Z.	296	238	163
Hopkins	22 4 15	22 06 43	American	Richfield Oil Co.	Gasoline	10,500	7,494	5,198
Point Reyes	22 7 00	22 16 20	American	Tidewater Oil Co.	Gas oil	9,971	7,333	5,182
Wito	22 6 45	22 18 10	American	Swayze & Hoyt	Lumber, general	3,619	4,984	2,617
Missourian	22 10 00	22 18 25	German	Roland Line	General	7,791	6,585	4,631
Sirius	22 9 07	22 19 55	American	Amer-Hawayan Line	Lumber, general	9,661	8,567	6,020
Ruapcha	22 12 00	22 13 39	British	U. S. Navy	Boston, Mass	2,560		
Port Denison	22 15 00	22 22 25	British	N. Z. Shipping Co.	General	3,600	9,079	6,798
Barat	22 18 00	23 05 25	Dutch	Com'lt & Dom. Line	Frozen, general	7,536		
Mundela	22 23 30	23 15 25	American	Royal Neth. S. S. Co.	Cristobal, C. Z.	887	1,183	712
Tekoa	22 30 40	23 09 23	British	Munson, McCor'k Line	Lumber, general	6,414	5,668	4,297
Zenon	23 8 20	23 10 15	British	Anglo-Mexican Pet. Co.	Frozen, general	5,993	10,570	7,571
Doris	23 12 10	23 13 45	French	French Line	Gasoline	7,264	6,239	4,350
No. 31021	22 17 40	23 23 23	Panaman	United Fruit Co.	General	7,020	6,382	4,834
No. 31062	22 17 40	23 23 23	Panaman	United Fruit Co.	General			

* Tanker.

* Nitrates, mineral, and borax.

* Submarines.

* Barges.

* Sugar, coconut oil, and general.

* Towled by Doris.

* Towed by Doris.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
February 17...	No. 282 ²⁸	U. S. Navy.	Mobile Ala.	February 17	Cristobal	Panama Railroad S. S. Line.	New York via Haiti.
February 17...	Mayari	United Fruit Co.	New York, N. Y.	February 17	Mandeville	United Fruit Co.	Tela, Honduras.
February 17...	Cartago	United Fruit Co.	New Orleans via Habana.	February 17	Kungsholm	Swedish-American Line	New York via wayports.
February 19...	No. 8044 ²⁹	Pan-American Airways.	Miami via wayports.	February 18	Mayari	United Fruit Co.	New Orleans via wayports.
February 19...	Van Renselaer	Royal Netherlands S. S. Co.	Hamburg via wayports.	February 18	Cartago	United Fruit Co.	New Orleans via wayports.
February 20...	Iriona	United Fruit Co.	New Orleans, La.	February 18	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.
February 20...	Granada	Standard Fruit & S. S. Co.	New Orleans via Puerto Cabezas.	February 21	Inapaquima ³⁰	United Fruit Co.	Colon, R. P.
February 20...	Davanger	Anglo-Saxon Petroleum Co.	Curacao, D. W. I.	February 21	Iriona	United Fruit Co.	Pto. Colombia via Bocas.
February 20...	Santa Marta	United Fruit Co.	New York via Kingston.	February 21	Zacapa	United Fruit Co.	New York via wayports.
February 20...	No. 232 ²⁸	U. S. Navy.	Norfolk, Va.	February 21	Santa Marta	United Fruit Co.	New York via wayports.
February 20...	No. 242 ²⁸	U. S. Navy.	Norfolk, Va.	February 22	Pellerin de la Touche.	French Line.	Havre via wayports.
February 20...	No. 295 ²⁸	U. S. Navy.	Norfolk, Va.	February 22	Lizzie D. Peabody ³⁰	M. P. Martinez	Colon, R. P.
February 20...	Orinoco	Hamburg-American Line.	Hamburg via wayports.	February 22	Granada	Standard Fruit & S. S. Co.	New Orleans via Puerto Cabezas.
February 20...	Pellerin de la Touche	French Line	Havre via wayports.	February 22	Tolba	United Fruit Co.	New York via wayports.
February 20...	Lothgill	Royal Mail S. P. Co.	High seas for repairs.	February 22	Suriname	United Fruit Co.	New Orleans, La.
February 21...	Zacapa	United Fruit Co.	Colombian ports.	February 22	Dellian	Leyland Line	Curacao via Cartagena.
February 21...	Tolba	United Fruit Co.	New York via wayports.	February 23	No. 8044 ²⁹	Pan-American Airways	Miami via wayports.
February 21...	Inapaquima ³⁰	United Fruit Co.	Colon, R. P.	February 23	Orinoco	Hamburg-American Line.	Cartagena, Colombia.
February 22...	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.	February 23	Ripple ³¹	E. E. Bishop	Key West via Habana.
February 22...	Suriname	United Fruit Co.	Bocas del Toro, R. P.	February 23	Van Renselaer	Royal Netherlands S. S. Co.	Curacao, D. W. I. and wayports.
February 22...	Ripple ³¹	E. E. Bishop	High seas.				
February 23...	Parissima	United Fruit Co.	New Orleans via Habana.				
²⁸ Destroyer.				³⁰ Motor boat.			
²⁹ Airplane mail carrier.				³¹ Yacht.			
				³² Motor schooner.			
PORT OF BALBOA.							
February 22...	A. B. de Obarrío ³³	A. Valdez	Bayano River, R. P.	February 22	Dos Hermanos ³³	A. Valdez	Panama Bay, R. P.
February 22...	Dos Hermanos ³³	A. Valdez	Bayano River, R. P.	February 22	El Colon ³³	Hans Elliot	Panama Bay, R. P.
February 22...	El Colon ³³	Hans Elliot	Darien, R. P.	February 23	A. B. de Obarrío ³³	A. Valdez	Panama Bay, R. P.
February 23...	Ideal ³³	Hans Elliot	Sambu River, R. P.	February 23	Ideal ³³	Hans Elliot	Panama Bay, R. P.

* Other than ships passing through the Canal.

³³ Motor schooner.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors. An illustrated pamphlet explaining in detail the arrangement may be had upon application to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

On general merchandise the rates are as follows:

(a) For handling cargo from ship's side to storage place, the customary inward local charge of \$1 per ton.

(b) For delivery or reforwarding, customary outward local charge of \$1 per ton. (Total of 20 cents per ton more than regular transfer charge.)

(c) For storage, 3 cents per ton per day, except that no charge will be made for the first 35 days.

The Panama Railroad Company stores this cargo in four fireproof warehouses, 160 feet by 850 feet, at Cristobal, and in one of the same dimensions at Balboa.

Cargo stored for orders can be reforwarded from the Isthmus—each carrier to collect its proportion of the through rate instead of the local. This means that should a shipment move from New York to the Canal Zone, it will of course pay regular local rate to Balboa or Colon, as the case may be—but should owner wish to reforward to, say, "Guayaquil," he can do so by paying the oncarrier's proportion of the through rate. Upon evidence that the shipment or any part of it moved beyond the Canal Zone, the initial carrier will refund the difference between the through and local rate.

Cargo intended for warehousing at Cristobal or Balboa should be so indicated on the bill of lading, thus "Cristobal for orders" or "Balboa for orders." When so consigned it is not necessary for shippers to secure consular papers at original point of shipment, nor to have bills of lading consulated. Cargo consigned to Canal Zone for orders may be delivered in the Republic of Panama in which case it is necessary to prepare an invoice on which duties can be paid. When evidence of payment of duty is presented to the Canal Zone customs officers they will issue the necessary release and delivery can be taken in the usual way. For those on the Canal Zone who are allowed to import goods duty free the Panama Canal customs release is all that is necessary. For reshipment from storage to a foreign country the shipper takes out bill of lading, consular invoice and sobordo if necessary and cargo is forwarded as regular outward local.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," are shown in the pamphlet referred to above.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal- Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2.....	\$8.00	\$11.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
3. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
4. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds.....	11.00	14.00

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 13 years of operation.

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average temperature, Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9).....	1018	1020	1013	84.0
Balboa (dock 18).....	1011	1021	1005	83.0

(NOTE—The above is based on two months observations at Cristobal, and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal, Washington, D. C.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., March 6, 1929. No. 31.

Traffic Through the Panama Canal in February, 1929.

During the month of February, 1929, 522 commercial vessels and 23 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,211,961.20, and on the launches \$194.88, or a total tolls collection of \$2,212,156.08.

The daily average number of commercial transits for the month was 18.64, and the average tolls collection \$78,998.62, as compared with an average of 19.45 transits and \$80,735.97 in tolls for the previous month. The average amount of tolls paid by each of the commercial transits was \$4,237.47, as compared with \$4,150.61 for the month of January, 1928.

In the following tabulation, the number of commercial transits and the amount of tolls collected are shown for the first 8 months of the current fiscal year, with the daily averages of transits and tolls, together with the totals for the first 8 months of the fiscal years 1928 and 1927:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	509	\$2,109,083.19	16.41	\$68,034.94
August.....	526	2,199,069.31	16.97	70,937.72
September.....	487	2,111,230.56	16.23	70,374.35
October.....	557	2,274,945.30	17.97	73,385.33
November.....	527	2,225,937.48	17.57	74,197.91
December.....	579	2,443,029.39	18.67	78,807.39
January.....	603	2,502,815.12	19.45	80,735.97
February.....	522	2,211,961.20	18.64	78,998.62
Totals, first 8 months of fiscal year 1928.....	4,310	18,078,071.55	17.74	74,395.35
Totals, first 8 months of fiscal year 1927.....	4,394	18,398,340.46	18.01	75,403.03
Totals, first 8 months of fiscal year 1926.....	3,589	15,909,261.29	14.76	65,470.21

In comparison with the first 8 months of the fiscal year 1928, the corresponding period this year has had 84 fewer commercial transits and \$320,268.85 less tolls, a decrease of 1.2 per cent.

New Vessels for Hamburg-American Line.

The Hamburg-American Line announces that in addition to its present service between the north Pacific and Europe, afforded by the motor ships *Los Angeles*, *San Francisco*, *Portland*, and *Seattle*, the motor ship *Oakland* is expected to be ready in August of this year, and two more motor ships with passenger accommodations and refrigeration have been ordered and are to be ready early next year. These additional vessels are to be of the same type as the motor ships now engaged in the European-north Pacific service of the Hamburg-American Line, and will probably be named *Tacoma* and *Vancouver*.

With the addition of these three new vessels to the service, the company will render regular fortnightly sailings with refrigeration.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, March 2, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.		Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.				Gross.	Net.	
Virgilio ¹	22	6.25	24	6.00	24	13.53	24	21.16	Italian	Nav. Gen. Italiana	484.0	55.0	25.11	Genoa, Italy	Valparaiso, Chile	General	2,133	12,941	9,329
Bridge ²	23	6.00	24	6.08	24	17.35	24	19.46	American	U. S. Navy	400.0	55.2	25.11	Hampton Rds., Va.	Balboa, C. Z.	Naval supplies	1,600	15,551	4,297
Steele ³	22	15.55	24	7.25	24	18.45	24	19.46	American	Ore S. S. Corp.	550.3	72.2	20.5	Baltimore, Md.	Cruz Grande, Chile	Ballast	3,110	4,385	2,731
Isorlohn.....	23	6.55	24	7.15	24	17.26	24	18.38	German	Hamburg-American Line	338.7	47.4	20.0	Hamburg, Germany	San Jose de Guat.	General	4,292	7,396	5,688
Suscolano.....	24	2.20	24	7.55	24	20.04	24	21.43	American	Transmarine Lines	324.0	46.0	20.9	New York, N. Y.	San Francisco, Cal.	General	6,204	7,396	5,688
Asia ²	23	13.05	24	8.40	24	20.07	25	20.30	Danish	East Asiatic Co.	420.1	55.1	23.7	Copenhagen, Den.	Vancouver, B. C.	General	10,539	8,324	6,036
Pomona.....	23	19.45	24	9.05	24	21.12	24	22.29	American	Argonaut S. S. Co.	440.0	56.0	22.6	Baltimore, Md.	Tacoma, Wash.	Steel, general	7,434	5,210	2,131
Salina ¹	23	00.20	24	11.10	24	22.09	24	23.30	American	Gladstone Trans. Co.	425.0	57.0	22.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	3,645	9,305	6,790
Havel ¹	23	20.20	24	12.20	24	23.24	25	00.46	German	North German Lloyd	474.0	61.0	20.9	Bremen, Germany	Vancouver, B. C.	General	8,397	7,602	5,337
Algonquin ¹	24	1.20	24	13.55	25	00.26	25	00.46	American	Standard Trans. Co.	435.0	56.0	25.6	Beaumont, Texas	Los Angeles, Calif.	Batching oil	570	4,033	2,261
La Perla.....	24	2.40	24	15.58	25	1.45	25	1.26	American	United Fruit Co.	325.6	48.1	19.9	Port Limon, C. R.	San Francisco, Cal.	General, bananas	8,440	7,330	5,245
Neveadan.....	24	3.30	24	16.00	25	1.50	25	3.30	American	Isthmian S. S. Lines	395.6	55.0	27.5	Baltimore, Md.	Shanghai, China	Steel, general	3,575	7,829	4,627
Seelage.....	24	3.35	24	17.30	25	2.58	25	4.30	American	American Hawaiian Line	460.0	57.8	21.0	Boston, Mass.	Portland, Oreg.	General	2,904	3,256	2,010
Garfield.....	24	8.20	24	18.15	25	3.01	25	4.30	American	N. O. & S. A. S. S. Co.	299.4	45.0	22.0	New Orleans, La.	Tacahuano, Chile	General	3,925	3,984	2,628
Tashmoo.....	24	14.03	24	18.35	25	4.25	25	5.35	American	Charles Nelson & Co.	324.0	46.2	21.0	Charleston, S. C.	San Francisco, Cal.	General	6,040	6,630	4,916
Pacific Hemlock	24	9.20	24	19.55	25	4.25	25	5.35	American	Dimon S. S. Corp.	409.7	54.2	23.0	New York, N. Y.	Tacoma, Wash.	General	82	1,183	742
Bullaren ²	24	11.45	24	20.45	25	5.23	25	15.00	Swedish	Transatlantic S. S. Co.	436.8	56.2	15.6	Bremen, Germany	Los Angeles, Calif.	Ballast	11,319	7,956	4,866
Baralt.....	23	15.25	25	6.13	25	14.11	25	15.15	Dutch	Royal Neth. S. S. Co.	202.0	33.1	12.0	Cristobal, C. Z.	Buenaventura, Col.	General	8,931	7,470	5,529
Virginia ¹	24	12.25	25	6.19	25	14.07	25	15.15	American	Texas S. S. Co.	416.0	56.0	21.0	Pt. Arthur, Texas	Los Angeles, Calif.	Ballast	6,035	10,921	7,559
Cubore ¹	25	1.20	25	6.40	25	15.38	25	18.43	American	Calmar S. S. Corp.	450.7	57.0	28.0	Baltimore, Md.	Seattle, Wash.	Steel, general	7,629	5,325	
Robin Adair.....	25	5.28	25	7.45	25	17.23	25	22.00	American	Isthmian S. S. Lines	424.8	55.2	27.2	New York, N. Y.	Vancouver, B. C.	Steel, general	552	1,572	1,011
Limerick ²	25	5.40	25	7.55	25	18.13	26	18.40	British	N. Z. Shipping Co.	460.5	62.0	25.0	Liverpool, Eng.	Brisbane, Australia	General	3,952	5,170	3,542
David.....	25	8.00	25	9.18	25	19.15	25	20.30	American	Tidewater Oil Co.	430.0	59.0	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast	6,674	5,122	3,651
McKelvey ²	14	22.25	25	10.10	25	20.32	25	22.00	German	Hamburg-American Line	227.0	34.0	14.0	Cristobal, C. Z.	Buenaventura, Col.	General	548	2,472	1,513
Cerigo.....	25	6.25	25	10.20	25	20.25	25	22.00	American	Barber S. S. Line	357.6	51.2	21.5	New York, N. Y.	Shanghai, China	General	15	15	15
Tampa.....	25	13.10	25	19.40	26	3.51	26	4.50	Norwegian	N. Z. Shipping Co.	385.0	52.0	24.10	Antwerp, Belgium	New Plymouth, N. Z.	Basic slag	15	15	15
Marston.....	25	16.38	25	19.45	26	3.48	26	4.50	British	Colombian Mar. Co.	271.0	41.0	12.6	New York, N. Y.	Buenaventura, Col.	General	2,641	6,126	4,495
Finn ²	25	16.38	25	19.45	26	3.48	26	4.50	Swedish	Colombian Mar. Co.	271.0	41.0	12.6	New York, N. Y.	Buenaventura, Col.	General	5,345	5,503	3,814
No. 31072 ⁴	25	16.38	25	19.45	26	3.48	26	4.50	American	United Fruit Co.	271.0	41.0	12.6	Cristobal, C. Z.	Gatun, C. Z.	Unknown	352	238	163
No. 31073 ⁴	25	16.38	25	19.45	26	3.48	26	4.50	American	United Fruit Co.	271.0	41.0	12.6	Cristobal, C. Z.	Gatun, C. Z.	Unknown	7,425	7,085	5,254
No. 31074 ⁴	25	16.38	25	19.45	26	3.48	26	4.50	American	United Fruit Co.	271.0	41.0	12.6	Cristobal, C. Z.	Gatun, C. Z.	Unknown	2	2	2
Andy ⁵	25	16.12	26	6.15	26	17.40	26	18.43	American	United Fruit Co.	271.0	41.0	12.6	Cristobal, C. Z.	Gatun, C. Z.	Towing barges	2,641	6,126	4,495
Mandalay.....	25	16.12	26	6.15	26	17.40	26	18.43	British	Com'lth & Dom. Line	425.0	54.0	19.0	New York, N. Y.	Fremantle, Aust'lia.	General	5,345	5,503	3,814
Erington.....	26	5.20	26	7.30	26	19.14	26	20.30	British	Haldin & Co.	396.6	53.0	23.6	Barry, England	Honolulu, T. H.	Coal	352	238	163
Court.....	24	11.15	26	9.55	26	19.20	26	20.30	American	U. S. Navy	292.0	44.0	22.0	Honolulu, T. H.	Balboa, C. Z.	Coal	7,425	7,085	5,254
Denver ⁶	22	14.25	26	10.03	26	20.34	27	1.20	Colombian	National Navigation Co.	107.0	22.0	9.2	Cristobal, C. Z.	Buenaventura, Col.	General			
Cauca ²	26	9.45	26	11.25	26	20.36	26	22.00	British	Texas Gulf Sulphur Co.	425.8	56.0	24.7	Galveston, Texas	Geelong, Australia	Sulphur			
Baron Incheape	26	9.45	26	11.25	26	20.36	26	22.00	British	Texas Gulf Sulphur Co.	425.8	56.0	24.7	Galveston, Texas	Geelong, Australia	Sulphur			

* Tankers.

* Motor ship.

* Supply ship.

* Barges.

* Launch.

* Cruiser.

	7 Yacht.	8 Tug.	9 Barkentine.	10 U. S. Army Transport.	11 Balboa for dry-docking	12 Timpale and ammonia.												
Santa Isabel	26	13 40	26	13 55	26	21 44	27	4 00	American	Isthmian S. S. Lines	251.0	43.6	23.10	Baltimore, Md.	Ahukini, T. H.	2,904	2,823	1,740
Bravos	26	20 05	27	6 00	27	14 23	19	18	American	U. S. Navy	455.0	56.0		High Seas	Balboa, C. Z.	6,800		
Glenbank	27	22 35	27	7 50	27	15 17	27	19 18	British	Andrew Weir & Co.	420.4	53.9	24.0	Falmouth, Eng.	Los Angeles, Calif.	1,500	5,583	4,073
Nyanza	27	7 45	27	9 15	27	18 38	27	19 36	British	Wessel, Duval & Co.	403.0	52.0	18.0	Tampa, Fla.	Talcahuano, Chile	7,568	5,283	
Atlantic Sun	27	8 15	27	10 05	27	19 40	27	21 00	American	Sun Oil Co.	429.3	59.2	19.0	Southampton, Eng.	Los Angeles, Calif.	651	503	
Queen of Scots	24	14 00	27	10 25	27	23 02			American	A. J. Drexel	175.2	28.4	12.3	Cristobal, C. Z.	Balboa, C. Z.			
Serota	27	10 30	27	10 30	27	23 02			American	U. S. Navy	149.3	30.0		Cristobal, C. Z.	Balboa, C. Z.			
Horace	27	14 15	27	14 50	27	23 10	28	3 10	American	Lukenbach Line	445.0	58.0	22.6	New York, N. Y.	Seattle, Wash.	5,260	8,699	6,363
Luckenbach	27	14 15	27	14 50	27	23 10	28	3 10	American	Jacob Agricultural Co.	445.0	58.0	22.6	Cristobal, C. Z.	Gatun, C. Z.	8	8	
Circito	27	17 04	27	17 04	27	17 05			American	San Blas Develop. Co.	381.2	46.1	19.0	Cristobal, C. Z.	Gatun, C. Z.	515		
Trinidad	26	19 00	28	6 05	28	14 32	28	16 10	Peruvian	Peruvian Line	285.0	40.0	14.0	Covenas, Col.	Callao, Peru	2,033	1,835	
Urubamba	27	16 50	28	5 45	28	16 05	28	18 10	British	Com. Administradora	401.0	54.0	14.0	Antwerp, Belgium	London, England	6,752	5,161	
West Lynn	27	23 25	28	7 35	28	16 15	28	19 36	British	Readon Smith Line	401.0	54.0	14.0	Glasgow-England	Vancouver, B. C.	5,100	5,893	4,182
Canadian	28	9 30	28	9 35	28	19 45	28	21 25	British	Can. Nat. Steamships	409.6	52.0	22.0	Hull, England	Vancouver, B. C.	2,586	1,827	
Seigneur	28	6 20	28	9 35	28	19 45	28	21 25	British	A. P. Muller	299.8	42.4	20.0	New York, N. Y.	Kobe, Japan	7,107	9,139	6,666
Susan Maersk	27	2 55	28	12 52	28	20 54	28	22 00	German	Hamburg-American Line	462.0	61.0	24.7	Hamburg, Germany	Vancouver, B. C.	4,333	7,331	5,091
Portland	28	13 30	28	13 43	28	20 54	28	22 00	British	Anglo-Saxon Pet. Co.	471.0	62.0	19.0	Baltimore, Md.	Los Angeles, Calif.	2,263	1,022	
Atlephence	28	8 10	28	17 25	28	1 46	31	2 44	German	Columbian Mar. Co.	266.0	42.0	12.0	Rostock, Germany	Buenaventura, Col.	4,338	7,079	5,028
Margarethe	28	17 10	28	17 50	28	1 42	1	2 35	American	Amer-Hawaiian Line	407.7	53.7	20.0	Boston, Mass.	Portland, Oreg.	1,535	9,644	6,967
Lowan	27	11 35	31	6 10	31	13 57	1	15 00	British	Furness, Withy & Co.	451.0	60.0	19.3	Glasgow-England	Vancouver, B. C.	4,256	9,158	6,176
Pacific Reliance	28	20 20	1	7 10	1	15 42	1	16 45	British	Pacific Steam Nav. Co.	386.8	52.2	19.0	New York, N. Y.	Talcahuano, Chile	4,107	5,684	4,082
Essequibo	3-1	5 55	1	8 50	1	16 33	1	21 15	American	Black Diamond S. S. Co.	406.5	54.2	19.10	Hull, England	Seattle, Wash.	4,353	7,331	5,091
New Britain	2-28	6 30	1	10 30	1	19 00	2	1 54	British	Pacific Steam Nav. Co.	406.5	54.2	19.10	Hull, England	Valparaiso, Chile	4,353	7,331	5,091
Longa	28	21 25	1	11 35	1	22 10	3	3 45	British	Can. Nat. Steamships	430.0	56.0	25.6	Halifax, N. S.	Aelaide, Australia	4,350	7,680	5,494
Canadian Con- structor	3-1	7 55	1	13 20	1	21 40	2	00 05	Greek	Margaron Brothers	361.0	46.2	15.0	Algiers, Algeria	Arica, Chile	551	4,367	3,161
Andreas K	1	12 15	1	16 40	2	00 34	2	3 45	American	U. S. Army	436.0	56.0	23.6	Brooklyn, N. Y.	Balboa, C. Z.	7,460	6,903	5,185
Cambrai	1	12 15	1	16 40	2	00 34	2	3 45	British	Maple Leaf Milling Co.	400.0	53.0	24.3	New York, N. Y.	Taku Bar, China	922	1,714	938
Titanian	2-19	17 45	2	6 05	2	19 36			Italian	Nav. Gen. Italiana	397.0	52.0	15.0	Cunao, D. W. I.	Balboa, C. Z.	3,944	8,500	6,140
Sangro	27	7 10	2	6 07	2	19 20	2	20 53	German	North German Lloyd	290.0	37.0	17.3	Hamburg, Germany	San Juan del Sur	2,847	7,043	5,167
Cayalla	27	7 10	2	6 07	2	19 20	2	20 53	German	Funch Edgely & Co.	450.0	58.0	26.4	Dunedin, N. Z.	Dunedin, N. Z.	2,847	7,043	5,167
Port Curtis	3-1	19 30	2	7 25	2	21 07	3	1 49	British	Andrew Weir & Co.	420.0	53.0	18.0	Halifax, N. S.	San Francisco, Cal.	5,127	3,718	
Gedabank	2	3 30	2	8 45	2	22 10	3	7 07	American	Rosewell S. S. Co., S. B.	384.0	52.3	15.8	New York, N. Y.	Brisbane, Australia	2,922	4,951	3,592
Acturus	2	3 30	2	10 18	2	23 20	3	3 45	British	Dowdell Co.	384.0	52.3	15.8	Cardiff, England	San Francisco, Cal.			
Homside	2	9 25	2	11 40	3	00 20	3	3 45	British	F. & W. Ritson	394.6	49.8	21.0	London, England	Coronel, Chile			
Elder Branch	2	10 25	2	13 10	3	1 13	3	3 45	British									

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Otterpool.....	23	14
Sudawsonco.....	23	16
St. Mihiel ¹⁰	22	21
El Panquaco ¹³	24	5
Quebec City...	24	7

¹³ Coast guard.

Coast guard.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Salt Beam, water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.							Nature.	Tons.	Gross.	Net.
Salvador	24	9.30	24	10.44	24	19.35	British	Pacific Steam Nav. Co.	215.0	33.5	17.0	Champerio, Guat.	(²⁰)	912	1,270	735
Rolling Stone	24	12.05	24	10.35			Panaman.	Robert Wilcox.	51.0	15.0		Balboa, C. Z.			27	20
Wenworth	24	12.05	24	12.42	24	20.55	British	R. S. Dalglish & Co.	400.6	52.4	25.0	Dublin, Ireland	Barley	7,326	5,721	4,058
Antar	24	13.35	24	14.17	25	00.40	British	J. S. Dalglish & Co.	420.0	54.0	27.6	San Francisco, Cal.	Wheat	9,580	6,510	4,711
Maimoa	24	18.40	25	5.30	25	13.35	British	Shaw Savill & Albion.	477.9	63.0	24.0	Vancouver, B. C.	General	5,717.11	3,783	7,895
Santa Barbara	24	15.30	25	6.17	25	14.37	American	Grace Line	466.0	64.0	26.0	Dunedin, N. Z.	General	5,533.10	687	6,533
Sciota	24	22.50	25	6.59	25	14.40	American	U. S. Navy	155.0	30.0		Talcahuano, Chile	Gasoline	7,598	7,130	5,249
New Jersey	25	6.55	25	7.16	25	15.40	American	The Texas Co.	416.8	58.1	25.0	Balboa, C. Z.	Coffee	1,483	1,906	1,189
Banta	25	6.55	25	8.07	25	17.55	Norwegian	Chr. Wilhelmsen.	270.1	33.1	15.0	New York, N. Y.	General	3,800	3,984	2,612
Sutropeo	25	9.00	25	9.50	25	17.55	American	Transmarine Lines	324.0	46.2	23.4	Los Angeles, Calif.	Lumber	525	1,714	1,078
Britte	25	13.15	25	14.05	25	21.55	Swedish	Cia Mar. Colombiana	256.0	39.5	13.3	Port Newark, N. J.	General	10,000	8,353	6,113
Hogra	25	14.30	26	4.18	26	12.10	American	Hegira S. Co.	440.0	56.0	28.0	Port Newark, N. J.	Lumber	11,800	7,808	5,139
Felore	25	17.00	26	5.31	26	14.30	American	Ore S. Corp.	449.1	57.2	30.0	Everett, Wash.	Iron ore	5,300		
Bretagne	25	17.50	26	6.34	26	15.23	Danish	Danish French S. S. Co	316.8	48.7	21.0	Manila, P. I.	Sugar	7,710	5,889	4,198
Drakenpool	26	2.00	26	6.55	26	16.18	British	Sir R. Knap & Co.	390.0	55.0	33.5	Vancouver, B. C.	Wheat	21,161.15	551	4,297
Marore	26	5.30	26	8.22	26	18.30	American	Ore S. S. Corp.	550.3	72.2	32.8	Cruz Grande, Chile	Iron ore	2,418	9,760	6,236
Taormina	26	7.00	26	8.52	26	17.12	Italian	Nav. Gen. Italiana	482.0	58.3	24.6	San Antonio, Chile	General	9,000	9,274	6,865
Lillian	26	3.15	26	10.06	26	18.45	American	Luckenbach Line	448.9	60.2	32.4	Portland, Oreg.	Lumber, general	7,677	6,756	4,775
Montanan	26	6.00	26	10.40	26	19.35	American	Amer-Hawaiian Line	404.6	53.9	27.6	Boston, Mass.	General	2,808	2,221	1,469
Oilo	25	18.10	26	10.42	26	18.45	American	Geo. G. Fisk	59.5	11.0	5.6	Cartagena, Col.		1,451	3,670	2,353
Rassina	25	18.10	26	10.41	26	18.40	American	D. C. Roberts	60.2	13.7	6.0	Cartagena, Col.		9,020	6,673	4,763
Pacific	26	7.00	26	11.59	26	20.35	British	Furness, Withy & Co.	435.9	60.2	27.2	Glasgow, Scotland	General	6,175	5,831	4,341
Enterprise	26	7.35	26	13.33	26	22.55	British	S. & P. Lenox	385.0	53.0	24.6	Azores	Nitrates	5,001.11	911	8,945
Anton G.	16	18.02	26	13.35	26	22.15	Venezuelan	Venezuela Gulf Oil Co.	279.8	47.0	14.4	Antofagasta, Chile	Ballast	9,595	7,860	5,101
Cabinas	26	18.15	26	22.30	27	9.50	German	Knorr & Borchard	279.6	40.8	19.0	Maracaibo, Venez.	Rice	1,576	1,308	887
Pat	26	18.15	26	8.25	26		American	C. P. Morgan	30.0	8.5		Rotterdam, Holl.	Ballast	7,811	6,624	4,157
San Jose	26	23.05	27	00.48	27	9.23	American	United Fruit Co.	330.0	44.6	19.8	Gatun Lake, C. Z.	General	8,970	7,463	5,657
Paris City	26	19.15	27	4.38	27	12.40	British	Sir W. R. Smith & Sons	412.2	55.0	26.4	Port Limon, C. R.	Wheat			
Parthenia	26	20.50	27	5.33	27	14.00	British	Danish Bros. Ltd.	399.7	51.9	26.0	Falmouth, Eng.	General			
Remera	26	11.50	27	6.27	27	14.45	British	N. Z. Shipping Co.	485.0	62.3	23.6	Glasgow, Scotland	Frozen, general			
Francis E.	27	1.50	27	7.45	27	15.40	American	Atlantic Refining Co.	431.0	59.2	27.4	Wellington, N. Z.	Gasoline			
Powell	27	10.05	27	11.15	27	19.55	Norwegian	Thorvik & Gjerpren	228.8	35.2	14.8	Los Angeles, Calif.	Nitrates			
Pacific Spruce	27	12.50	27	13.41	27	23.25	American	Dumon S. S. Corp.	410.5	54.0	24.6	Iquique, Chile	Lumber			
Eastern	27	15.00	27	15.49	27	23.25	American	Arrow Line	415.0	55.7	28.2	Seattle, Wash.				
Knight	27	15.00	27	15.49	27	23.25	American	Motor ship.	145.0	55.7	28.2	Portland, Oreg.	Lumber, copper			

²⁰ Coffee, hides, wood, and gold.²¹ For orders.²² Launch.²³ Game south for dry-docking only.²⁴ Motor yacht.²⁵ Tug.²⁶ Motor ship.²⁷ Yacht.²⁸ Tanker.

27	20.45	27	23.35	28	9.05	28	28.40	Danish.	Orlent S. S. Co.	387.2	54.3	27.0	Vancouver, B. C.	Copenhagen, Den.	General.	9,550	7,133	5,265
27	12.05	28	5.10	28	13.20	28	13.20	American.	Williams S. S. Line...	415.0	55.7	28.0	Bellingham, Wash.	New York, N. Y.	Lumber, general.	9,385	7,750	5,805
28	9.15	28	7.27	28	18.10	28	19.30	American.	U. S. Army.	160.2	32.0		Balboa, C. Z.	Cristobal, C. Z.	Wheat.	7,312	5,730	4,061
									Dodd-Thomson & Co.	400.0	52.4	24.6	Portland, Oreg.	Ireland.				
28	12.20	28	14.50	28	22.30	3-1	1.20	British.	Can. Nat. Steamshurs	400.3	52.4	16.3	Adelaide, Australia	Halifax, N. S.	General.	1,358	5,891	4,114
28	14.55	28	15.55	3-1	9.30	1	14.20	British.	Pacific Steam Nav. Co.	400.0	54.3	25.0	Corral, Chile.	Liverpool, England	General.	7,286	5,816	4,113
28	20.50	28	21.48	1	10.45	1	10.45	British.	Common Brothers.	397.4	54.0	25.0	Vancouver, B. C.	Avonmouth, Eng.	Grain.	8,240	5,843	4,264
28	21.10	28	22.00	1	12.05	1	12.55	Swedish.	Axel Brostrom & Son.	350.0	51.0	22.0	Vancouver, B. C.	Denmark.	Wheat.	5,899	4,716	3,359
3	5.00	3-1	6.26	1	15.05	1	23.05	Dutch.	Royal Neth. S. S. Co.	447.2	62.7	27.0	Valparaiso, Chile.	Hamburg, Germany	Nitrates, general.	10,518	9,505	6,604
									Hamburg-American Line	409.8	53.8	23.0	Corral, Chile.	Hamburg, Germany	Nitrates, general.	6,300	7,173	5,514
1	7.30	1	8.52	1	16.40	2	1.55	German.	Anglo-Mexican Pet. Co.	400.2	52.0	21.8	Valparaiso, Chile.	Curacao, D. W. I.	Ballast.	6,082	3,892	
1	10.10	1	10.54	1	17.41	1	29.05	British.	Roland Line.	216.5	53.9	15.3	Guayaquil, Ecuador	Cristobal, C. Z.	(*)	294	1,105	698
1	11.35	1	14.52	1	23.25	3	15.10	German.	Amer-Hawaiian Line.	407.7	53.7	27.0	Tacoma, Wash.	Boston, Mass.	General.	8,120	7,107	5,041
1	14.15	1	16.03	1	23.20	1	23.20	American.	N. O. & S. A. S. S. Co.	298.6	40.0	23.6	Antofagasta, Chile	New Orleans, La.	Nitrates.	3,507	2,832	1,803
1	21.30	2	1.47	2	14.15	2	15.00	American.	N. Livings	360.3	51.9	24.0	Teopistola, Chile.	Europe	Nitrates.	6,950	4,776	3,433
2	1.00	2	2.54	2	11.00	2	10.15	Greek.	Anglo-Mexican Pet. Co.	401.7	54.2	25.7	Los Angeles, Calif.	England	Gasoline.	7,250	5,962	3,650
1	14.50	2	3.31	2	12.03	2	12.55	British.	Inter. Petroleum Co.	584.7	75.0	33.3	Talara, Peru.	New York, N. Y.	Crude oil	20,000	16,780	9,885
1	17.30	2	5.13	2	14.35	2	14.35	British.	Ore S. S. Corp.	549.6	72.2	34.6	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	20,000	14,538	9,348
1	20.30	2	6.29	2	16.25	2	16.25	American.	U. S. Navy	554.0	93.2		Balboa, C. Z.	Cristobal, C. Z.				
									U. S. Navy	600.0	97.0		Balboa, C. Z.	Cristobal, C. Z.				
									U. S. Navy	390.0	54.0		Balboa, C. Z.	Cristobal, C. Z.				
									U. S. Navy	450.0	60.0		Balboa, C. Z.	Cristobal, C. Z.				
									Standard Oil Co. of Cal.	440.0	58.0	29.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	10,000	9,033	5,938
1	23.20	2	13.00	2	22.00	2	22.00	American	C. T. Bowring & Co.	385.2	51.0	23.6	La Libertad, Feud.	Philadelphia, Pa.	Crude oil	6,170	4,851	3,326
1	7.00	2	14.28	2	22.30	2	22.30	British.	Union Sulphur Co.	356.0	51.6	25.3	Westport, Oreg.	Poughkeepsie, N.Y.	Lumber	5,400	5,357	2,925
1	18.50	2	15.18	3	8.45	3	8.45	American.	Pacific Steam Nav. Co.	220.3	34.0	13.5	Champerloo, Guat.	Cristobal, C. Z.	Cotton, bollion.	905	1,187	622
2	14.20	2	15.15	3	9.45	3	9.45	British.										

23: Battleship.

7; Battleship.

— Mine planter.

Tanker.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

[illegible]

MOVEMENTS OF OCEAN VESSELS.—Continued from page 437.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
February 27	Carare	Elders & Fyffes Line	Avonmouth via wayports	February 26	Linda S. ³³	A. L. Surgeon	Concepcion, Veraguas.
February 27	Duchess of Bedford	Canadian Pacific S. S. Co	New York via wayports.	February 27	Anachuena ³²	United Fruit Co	Colon, R. P.
February 27	Metapan	Royal Mail Steam Packet Co	High seas for repairs.	February 28	Inapaquina ³²	United Fruit Co	Colon, R. P.
February 27	Lochogol ³¹	United Fruit Co	Colon, R. P.	February 28	Carare	Elders & Fyffes Line	Avonmouth via Kingstons.
February 27	Inapaquina ³²	United Fruit Co	Colon, R. P.	February 28	Metapan	United Fruit Co	New York via wayports.
February 28	Anachuena ³²	United Fruit Co	New York via wayports.	February 28	Duchess of Bedford	Canadian Pacific S. S. Co	New York via David.
February 28	Calamares	United Fruit Co	New Orleans, La.	March 1	No. 9717 ³⁵	Pan-American Airways	Managua via David.
February 28	Coppename	United Fruit Co	Bocas, R. P.	March 1	Iritona	United Fruit Co	New Orleans, La.
March 1	Iritona	United Fruit Co	Puerto Colombia.	March 1	Calamares	A. L. Surgeon	Bluefields via Bocas.
March 1	Mayari	United Fruit Co	New Orleans, La.	March 1	Lochogol	Royal Mail Steam Packet Co	New York via wayports.
March 1	Atlantida	Standard Fruit & S. S. Co	Colon, R. P.	March 1	Inapaquina ³²	United Fruit Co	Rotterdam via wayports.
March 1	Inapaquina ³²	United Fruit Co	Colon, R. P.	March 1	Coppename	United Fruit Co	Colon, R. P.
March 1	Linda S. ³³	A. L. Surgeon	Colon, R. P.	March 2	Atlantida	Standard Fruit & S. S. Co	Port Limon and Bocas
March 1	Wanks	Standard Fruit & S. S. Co	San Blas, R. P.	March 2	Anachuena ³²	United Fruit Co	New Orleans via wayports.
March 2	William M. ³⁴	Leyland Line	Palo Alto, Cuba.	March 2	William M. ³⁴	G. I. Bryan	Colon, R. P.
March 2	Atlantida	United Fruit Co	New Orleans via Habana.	March 2	Mayari	United Fruit Co	Bluefields, Nicaragua.
March 2	Heredia	United Fruit Co		March 2			New York via Kingstons.
³¹ Motor ship.				³⁴ Schooner.			
³² Motor boat.				³⁵ Airplane mail carrier.			
PORT OF BALBOA.							
³³ Motor schooner.							
February 27	Ideal II ³⁶	Haus Elliot	Sambu River, R. P.	February 27	Ideal II ³⁶	Haus Elliot	Panama Bay, R. P.
February 27	Dos Hermanos ³⁶	A. Valdez	Bayano River, R. P.	February 27	Dos Hermanos ³⁶	A. Valdez	Panama Bay, R. P.
February 28	San Luis ³⁶	Chiriqui Land Co	Pto. Armielles, R. P.	February 28	Big Bill ³⁷	A. J. Duken	Panama Bay, R. P.
February 28	Big Bill ³⁷	A. J. Duken	Darien, R. P.	March 1	San Luis ³⁶	Chiriqui Land Co	Pto. Armielles, R. P.
				March 1	S. A. Perkins	James Griffith & Sons	San Francisco, Cal.

* Other than ships passing through the Canal.

³⁶ Motor schooner.³⁷ Motor yacht.

Salt Water Draft of Vessels Transiting the Canal in 1928.

During the calendar year 1928, the average salt water draft of 3,317 commercial transits of the Panama Canal from the Atlantic to the Pacific was 20.3 feet. From the Pacific to the Atlantic, the average draft of 3,017 commercial transits was 24.3 feet. The average draft of the total commercial transits during the year, 6,334, was 22.2 feet.

In the following table is shown the salt water draft of vessels through the Canal during 1928, separated in 1-foot intervals and segregated by direction of transit with the averages for 1928, 1927, and 1926:

Draft.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.	Percentage of total.
Under 10 feet.....	78	49	127	2.005
10 to 11 feet.....	20	11	31	.489
11 to 12 feet.....	20	31	51	.805
12 to 13 feet.....	41	40	81	1.279
13 to 14 feet.....	91	55	146	2.305
14 to 15 feet.....	122	46	168	2.652
15 to 16 feet.....	147	35	182	2.873
16 to 17 feet.....	169	34	203	3.205
17 to 18 feet.....	192	40	232	3.663
18 to 19 feet.....	264	35	299	4.721
19 to 20 feet.....	345	45	390	6.157
20 to 21 feet.....	322	47	369	5.826
21 to 22 feet.....	265	68	333	5.257
22 to 23 feet.....	231	121	352	5.557
23 to 24 feet.....	214	244	458	7.230
24 to 25 feet.....	217	378	595	9.394
25 to 26 feet.....	191	402	593	9.362
26 to 27 feet.....	170	438	608	9.599
27 to 28 feet.....	113	349	462	7.294
28 to 29 feet.....	59	228	287	4.531
29 to 30 feet.....	31	152	183	2.889
30 to 31 feet.....	9	61	70	1.105
31 to 32 feet.....	3	21	24	.379
32 to 33 feet.....	3	12	15	.237
33 to 34 feet.....	.....	26	26	.410
34 to 35 feet.....	.....	39	39	.616
35 to 36 feet.....	.....	10	10	.158
Totals.....	3,317	3,017	6,334	100.000
Average, 1928.....	20.3	24.3	22.2	.....
Average, 1927.....	22.4	25.2	23.8	.....
Average, 1926.....	20.8	24.6	22.6	.....

The vessel of the greatest draft transiting the Canal in 1928 was the steamship *Chilore*, carrying iron ore from Chile to the United States, drawing 36.0 feet. From the Atlantic to the Pacific, the vessel of the greatest draft was the steamship *Corinthic*, carrying general cargo in the London-New Zealand trade, with a draft of 32.0 feet.

It will be noted that the average draft of vessels transiting the Canal from the Pacific to the Atlantic is greater than vessels passing through in the opposite direction. This is accounted for by the fact that the Pacific-to-Atlantic traffic is made up largely of vessels carrying capacity cargoes such as mineral oils, iron ore, wheat, nitrates, and other bulk products, while the Atlantic to Pacific traffic is composed largely of vessels carrying miscellaneous manufactured goods which either are essentially not so heavy or else do not permit the fullest use of the stowage space of the vessels. Also, by far the greater proportion of the transits in ballast are included in the Atlantic-to-Pacific traffic.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

Westfal, Larsen Line to Inaugurate New Direct Service Between Brazil and West Coast of North America.

Beginning with the sailing from San Francisco in August, 1929, the Westfal, Larsen Line is to route its vessels through the Panama Canal from the Pacific for Rio de Janeiro, Santos, and Buenos Aires. This line has operated in the trade between the east coast of South America and the west coast of North America during the past three years, with approximately monthly sailings through the Canal on the voyages to the Pacific, the outward voyages by way of the Strait of Magellan. The present fleet in the service of the Westfal, Larsen Line consists of three steamers, the *Hardanger*, *Leikanger*, and *Evanger*, and the motor ships *Hoyanger* and *Brandanger*. Three new motor ships are now being built for the service and it is expected that the first of these is to be ready to enter the trade in August of this year.

A brief description of the new vessels appeared in THE PANAMA CANAL RECORD of October 10, 1928.

Summary of Passenger Movement at the Canal During 1928.

During the calendar year 1928 the number of passengers disembarking at Canal Zone ports was 44,116, and the number of embarkations during the same period was 40,694. Approximately 56 per cent of the arrivals and 58 per cent of the departures were carried as first class, and the remainder either as second, third, or steerage.

The following tabulation shows by months, the number of passengers embarking and disembarking at Canal Zone ports during the calendar year 1928, segregated as between first class and "others," with comparative totals for the calendar years 1927 and 1926:

Month.	Disembarking.			Embarking.		
	First class.	Others.	Totals.	First class.	Others.	Totals.
January	2,128	1,013	3,141	1,710	1,088	2,798
February	2,239	1,155	3,394	1,790	969	2,759
March	1,991	1,975	3,966	1,973	1,488	3,461
April	1,944	1,681	3,625	1,968	1,283	3,251
May	1,945	1,418	3,363	2,194	1,383	3,577
June	1,789	1,213	3,002	2,348	2,050	4,398
July	2,277	1,365	3,642	2,110	1,414	3,524
August	2,044	1,508	3,552	2,069	1,196	3,265
September	2,247	2,141	4,388	2,206	1,237	3,443
October	2,073	1,222	3,295	1,581	1,356	2,887
November	2,178	2,008	4,186	1,764	1,000	2,764
December	2,550	2,012	4,562	2,105	2,462	4,567
Totals, 1928	25,405	18,711	44,116	23,768	16,926	40,694
Totals, 1927	24,601	17,047	41,648	22,918	16,459	39,377
Totals, 1926	22,076	17,186	39,262	20,747	16,702	37,449

As compared with 1927 the calendar year 1928 shows a 3.2 per cent increase in the total number of arrivals and an increase of 3.3 per cent in the total number of departures.

During the past 3 calendar years approximately 81 per cent of the passenger movement to and from the Canal has been through the port of Cristobal as may be seen from the following tabulation in which the totals are given for the years 1928, 1927, and 1926.

	Port of Cristobal.			Port of Balboa.		
	1928.	1927.	1926.	1928.	1927.	1926.
Passengers disembarking	32,535	34,656	32,652	11,581	6,992	6,610
Passengers embarking	30,342	32,883	32,134	10,352	6,494	5,315

A further segregation of the passenger movement shows that 33,661 incoming and 29,820 outgoing passengers were brought from and were destined to ports on the Atlantic, and 10,455 incoming and 10,874 outgoing passengers were bound from and destined to ports on the Pacific.

In addition to the figures shown above of passengers embarking and disembarking, there were 173,315 passengers brought to the Isthmus by vessels calling at Canal Zone ports during 1928. For the calendar year 1927 this number was 172,684. Most of these passengers came ashore for a period of from 24 to 48 hours, but as they departed on the same vessel on which they arrived, they are not taken up in the above tabulation. This group of 173,315 passengers is segregated as follows:

	Calendar Year.		
	1928.	1927.	1926.
Remaining aboard vessels transiting Canal.....	149,570	151,845	152,479
Remaining on board vessels entering port of Cristobal, but not transiting the Canal.....	19,598	16,728	15,814
Remaining on board vessels entering port of Balboa, but not transiting the Canal.....	4,147	4,111	2,601
Totals.....	173,315	172,684	170,894

Segregating those remaining on board vessels transiting the Canal according to direction of transit for the 3 calendar years we have the following:

	Calendar year.		
	1928.	1927.	1926.
En route from Atlantic to Pacific ports.....	86,399	97,866	97,038
En route from Pacific to Atlantic ports.....	63,171	53,979	55,441

The above represents the strictly passenger traffic passing through the Canal and to and from Canal Zone ports. To get the total number of arrivals and departures of individuals at the Canal Zone ports during the year, it would be necessary to add the crews of 6,334 vessels and 513 noncommercial vessels which transited the Canal during the year, as well as some 1,135 vessels calling at the ports of Cristobal and Balboa during the year without transiting the Canal. In the aggregate the combined crews would considerably outnumber the passengers, though owing to the fact that many of the vessels made a number of transits or calls at the terminal ports during the year there would be considerable duplication insofar as the number of individuals was concerned in any figures compiled relative to crews.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending March 2, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Somme.....	U. S. Government.....	February 22..	February 23..	66	31
St. Mihiel.....	U. S. Government.....	February 22..	February 24..	1,060	80
Albert Voegler.....	Hamburg-American Line.....	February 22..	February 24..	391	48
Asia.....	East Asiatic Co.....	February 25..	February 25..	98	.....
Santa Tecla.....	N. O. & S. A. S. S. Co.....	March 1.....	March 2.....	3	.....
Jamaica.....	Pacific Steam Navigation Co.....	March 2.....	March 2.....	1	.....
E. A. Perkins.....	Jas. Griffiths & Sons.....	February 3...	March 1.....	.....	5,775
Remuera.....	New Zealand Shipping Co.....	February 26..	February 27..	29	.....

McCormick Steamship Line Adds Two Vessels to its West Coast North America-East Coast South America Fleet.

It is reported that the McCormick Steamship Company is to augment its service between the west coast of North America and the east coast of South America (Pacific-Argentine-Brazil Line) by the addition of two freight steamers recently purchased from the Shipping Board. The vessels acquired are the *West Ira*, 5,879 tons gross, 3,642 net, 8,759 tons deadweight, and the *West Ivis*, 5,866 tons gross, 3,634 net, 8,766 tons deadweight. The vessels, which were built in 1919 at Seattle, are fitted for oil fuel and have a speed of $11\frac{1}{2}$ knots. It is understood that the two newly acquired vessels and the *West Notus* are being fitted to carry refrigerated cargo and with the *West Camargo*, already so fitted, will maintain a service with sailings every 6 weeks.

Transits of the Canal are made on northward voyages, the outward trips being made through the Straits of Magellan. The present fleet of the McCormick Steamship Line in this service consists of the *West Nilus*, *West Notus*, *West Camargo*, and the *West Mahwah*.

Notices to Mariners.

Gas and Whistling Buoy Established—Caribbean Sea—Central America—East Coast of Panama.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 27, 1929.

No. 515.

On February 26, 1929, there was established a combination Gas and Whistling Buoy, in 156 feet of water, on the prolongation of the axis of the main entrance of the Panama Canal 6.2 miles from Cristobal Harbor, East Breakwater Light bearing $178^{\circ} 15'$, on the following position:

Latitude $9^{\circ} 29' 34''$ north.

Longitude $79^{\circ} 55' 18''$ west.

This buoy is surmounted by a pyramidal lattice-work steel structure $16\frac{1}{2}$ feet high, supporting a 375 mm. lens lantern, under which is located an 18-inch whistle operated by the action of the sea.

Characteristics: Flashing white, 1 second light, 4 seconds dark.

Color of buoy: Black and white vertical stripes.

Visibility: Eight miles.

A first-class spar buoy, similar in color, has been placed near the Gas and Whistling Buoy as a marker.

H. BURGESS,
Governor.

Colombia—Puerto Colombia—Light Established.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 28, 1929.

No. 517.

The following is quoted from Hydrographic Office Notice to Mariners, No. 7, of February 16, 1929:

The Master of the German steamer *Teutonia* reports that a fixed red light, visible 10 miles, is exhibited from a mast located at the head of the pier at Puerto Colombia. Approximate position: $11^{\circ} 00' N.$, $74^{\circ} 59' W.$

H. BURGESS,
Governor.

Colombia—Buenaventura Harbor—Wreck.

THE PANAMA CANAL EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 4, 1929.

No. 519.

The following cablegram was received by the Captain of the Port, Cristobal, C. Z. from the Captain of the Port, Buenaventura, Colombia, under date of March 2, 1929:

The wreck of the steamship *Tritonia* is sunk in the channel in front of the town of Buenaventura showing about 4 feet above high water. Wreck will be marked with buoys at early date. All ships prohibited from entering port without pilot until further notice.

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending March 2, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Esparta.....	United Fruit Co.....	February 17.....	February 17.....	14½	145
Cristobal.....	Panama Railroad S. S. Line.....	February 17.....	February 17.....		759
San Pablo.....	United Fruit Co.....	February 17.....	February 17.....		213½
Mandeville.....	United Fruit Co.....	February 17.....	February 17.....		89
Takaoka Maru.....	Nippon Yusen Kaisha.....	February 17.....	February 17.....	283	(*)
El Salvador.....	Panama Mail S. S. Co.....	February 17.....	February 18.....	359	386
Mayari.....	United Fruit Co.....	February 17.....	February 18.....	892	199
Cartago.....	United Fruit Co.....	February 17.....	February 18.....	1,340	10
Cid.....	Pacific Steam Navigation Co.....	February 17.....	February 19.....	30	55
Wanks.....	Standard Fruit & S. S. Co.....	February 17.....	February 18.....		11
Gaasterdijk.....	Holland-American Line.....	February 18.....	February 19.....	541	(*)
Banan.....	United Fruit Co.....	February 18.....	February 19.....	136	(*)
Ecuador.....	Panama Mail S. S. Co.....	February 18.....	February 20.....	1,589	268
Honduras.....	French Line.....	February 18.....	February 21.....	318	712
Visurgis.....	North German Lloyd.....	February 18.....	February 22.....	(*)	2,133
Curaca.....	Grace Line.....	February 19.....	February 19.....	46	(*)
La Perla.....	United Fruit Co.....	February 19.....	February 21.....	888	148
Illinois.....	French Line.....	February 19.....	February 20.....	621	268
Aachen.....	North German Lloyd.....	February 19.....	February 20.....	76	(*)
Perene.....	Peruvian Line.....	February 19.....	February 21.....	157	155
Floreana.....	Colombian Transport Co.....	February 19.....	February 23.....	190½	542
Van Rensselaer.....	Royal Netherlands S. S. Co.....	February 19.....	February 23.....	24	811
Aconagua.....	Chilean Line.....	February 20.....	February 20.....	29½	(*)
Wasgenwald.....	Hamburg-American Line.....	February 20.....	February 21.....	(*)	244
Iriona.....	United Fruit Co.....	February 20.....	February 21.....	661	64
Santa Marta.....	United Fruit Co.....	February 20.....	February 21.....	870	274
Pellerin de La Touche.....	French Line.....	February 20.....	February 22.....	334	556
Davanger.....	Anglo-Saxon Petroleum Co.....	February 20.....	February 22.....	9,600	(*)
Granada.....	Standard Fruit & S. S. Co.....	February 20.....	February 22.....	506	464
Orinoco.....	Hamburg-American Line.....	February 20.....	February 22.....	158	921
Urubamba.....	Peruvian Line.....	February 20.....	February 22.....	2,327	(*)
Zacapa.....	United Fruit Co.....	February 21.....	February 21.....	29	206
Santa Maria.....	Grace Line.....	February 21.....	February 21.....	1	1
Toloo.....	United Fruit Co.....	February 21.....	February 22.....	1,200	234
Andromede.....	French Line.....	February 21.....	February 22.....	(*)	56
Buenos Aires.....	Spanish Line.....	February 21.....	February 22.....	48	157½
Lochkatrine.....	Pacific Steam Navigation Co.....	February 21.....	February 22.....	11½	315
Orbita.....	Pacific Steam Navigation Co.....	February 21.....	February 22.....	69	96
Albert Voegler.....	Hamburg-American Line.....	February 21.....	February 22.....	215	351
Planter.....	T. & J. Harrison.....	February 21.....	February 23.....	836	(*)
Urbe.....	Estrada G. Hermanos.....	February 21.....	February 22.....		735
Acajutla.....	Pacific Steam Navigation Co.....	February 21.....	February 22.....		1,113
Delian.....	Leyland Line.....	February 21.....	February 22.....		636
Suriname.....	United Fruit Co.....	February 22.....	February 22.....	82	234
Alaska.....	French Line.....	February 22.....	February 23.....	11	5
Wanks.....	Standard Fruit & S. S. Co.....	February 22.....	February 22.....	55	
Cauca.....	National Navigation Co.....	February 22.....	February 22.....	296	
Wido.....	North German Lloyd.....	February 22.....	February 23.....	7	98
Havel.....	North German Lloyd.....	February 23.....	February 23.....	(*)	
Zenon.....	French Line.....	February 23.....	February 23.....	220	
Baralt.....	Royal Netherlands S. S. Co.....	February 23.....	February 23.....	885	
Asia.....	Danish East Asiatic Co.....	February 23.....	February 23.....	116	
Havel.....	North German Lloyd Line.....	February 23.....	February 24.....		106
Zenon.....	French S. S. Line.....	February 23.....	February 24.....		210
Iserlohn.....	Hamburg-American S. S. Line.....	February 23.....	February 24.....		239
La Perla.....	United Fruit Co.....	February 24.....	February 24.....	12½	53
Garfield.....	N. O. & S. A. S. S. Line.....	February 24.....	February 24.....	42	189
Parismina.....	United Fruit Co.....	February 24.....	February 25.....	916	377
Salvador.....	Pacific Steam Nav. Co.....	February 24.....	February 24.....	912	
Wanks.....	Standard Fruit & S. S. Co.....	February 24.....	February 25.....		8
Baralt.....	Royal Netherlands S. S. Line.....	February 24.....	February 25.....		82
Cerigo.....	Hamburg-American S. S. Line.....	February 24.....	February 25.....		551
Britte.....	Colombian Maritime Co.....	February 25.....	February 26.....	86	(*)
Linda S.....	R. Feuillebois.....	February 25.....	February 26.....		11½
Mayan.....	Gulf-Caribbean S. S. Line.....	February 26.....	February 26.....	87	30
Cauca.....	National Navigation Co.....	February 26.....	February 26.....		351
Taormina.....	Italian S. S. Line.....	February 26.....	February 27.....	43	1,060
Urubamba.....	Peruvian S. S. Line.....	February 26.....	February 27.....	(*)	424
Pacific Reliance.....	Furness, Withy & Co.....	February 26.....	March 1.....	8	315
Carare.....	Elder & Fyffes Ltd.....	February 27.....	February 27.....	1	423
Portland.....	Hamburg American S. S. Line.....	February 27.....	February 28.....	7	450
Ancon.....	Panama Railroad S. S. Line.....	February 27.....	February 27.....	3,465	
San Jose.....	United Fruit Co.....	February 27.....	February 28.....	1,671	39
Metapan.....	United Fruit Co.....	February 27.....	February 28.....	857	350
Cavalla.....	North German Lloyd Line.....	February 27.....	March 1.....	76	361
Loriga.....	Pacific Steam Nav. Co.....	February 28.....	March 1.....	243	186
Essequibo.....	Pacific Steam Nav. Co.....	February 28.....	March 1.....	81	(*)
Coppename.....	United Fruit Co.....	February 28.....	March 1.....	1,174	435

* No cargo discharged.

* No cargo laded.

* 120 packages.

* 27 packages.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z.—Continued.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Calamares.....	United Fruit Co.....	February 28..	March 1.....	1,518	350
Adolf von Baeyer.....	Hamburg-American S. S. Line.....	March 1.....	March 2.....	89½	279
Linda S.....	R. Feuillebois.....	March 1.....	March 1.....	(1)	36¾
Irons.....	United Fruit Co.....	March 1.....	March 1.....	1	326
Alkmaar.....	Royal Netherlands S. S. Line.....	March 1.....	March 1.....	144	7
Ballena.....	Pacific Steam Nav. Co.....	March 1.....	March 1.....	3	40
Cali.....	North German Lloyd Line.....	March 1.....	March 1.....	789	.....
Atlantida.....	Standard Fruit & S. S. Co.....	March 1.....	March 2.....	495	530
Mayari.....	United Fruit Co.....	March 1.....	March 2.....	98	1,124
Heredia.....	United Fruit Co.....	March 2.....	.....	765	.....
Boskoop.....	Royal Netherlands S. S. Line.....	March 2.....	.....	398	.....
Wanks.....	Standard Fruit & S. S. Co.....	March 2.....	.....	65	.....
William M.....	R. Feuillebois.....	March 2.....	March 2.....	(1)	34

* No cargo discharged.

* No cargo laded.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Official Circulars.

Appointment.

THE PANAMA CANAL, EXECUTIVE OFFICE
BALBOA HEIGHTS, C. Z., March 4, 1929.

To all concerned—Announcement is made of the appointment by the President on February 12, 1929, of Mr. James J. Lenihan as Judge of the District Court of the Canal Zone.

Judge Lenihan took oath of office on February 27, 1929.

H. BURGESS,
Governor.

Gorgas Hospital Schedule.

THE PANAMA CANAL, HEALTH DEPARTMENT.
GORGAS HOSPITAL, February 23, 1929.

To all concerned—The following changes in the weekly schedule of Gorgas Hospital, effective March 1, 1929, are hereby announced:

Ward Walks.....10 to 11 a. m. Tuesday
Clinic Journal Club...11 to 12 a. m. Tuesday
Medical Examining
Board.....8.30 a. m. Thursday

Kindly be governed accordingly.

G. M. EKWURZEL,
Superintendent.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide the means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective, in the course of handling large traffic through the Canal in over 13 years of operation.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office
at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., March 13, 1929. No. 32.

Arrangements of Rig and Construction to Facilitate Night Navigation.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., *March 2, 1929.*

To all Steamship Agents.—Some ships transiting the Canal possess certain features in rig and construction which make navigating after dark in restricted channels difficult. It is believed that steamship companies, when informed, would gladly correct these minor conditions. With this in mind the following suggestions are made to the end that corrective action may be initiated:

Booms should not be topped close to the mast with gear rigged.

Ventilators on forecastle head, which obstruct a clear view, should be unshipped for the transit whenever possible to do so.

Crows nests on the foremast should be placed at a height which will not obstruct the clear view ahead from the pilot house windows.

Were steel stringers running between the Sampson post forward of the bridge—on ore ships and other cargo vessels—bolted instead of riveted, and removed just prior to transiting, the navigating of these ships in the Panama Canal after dark would be materially simplified.

The obstructions between Sampson posts on certain ships could be removed either by raising or lowering the cross-girders sufficiently to afford a clear view.

Forecastle awnings should be removed for night transits.

Bridge and pilot-house windows should be so fitted as to permit their being fully opened instead of, for example, being only half windows with double sash in the middle (horizontally) where only the upper half can be lowered.

It is requested that all steamship agents of vessels affected recommend to their owners or masters that the above-mentioned faults be corrected as soon as possible.

C. H. WOODWARD,
Marine Superintendent.

Notice to Mariners.

Panama—Panama Bay—Danaide Rocks—Shoals.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., *March 11, 1929.*

No. 520.

The following appears in Hydrographic Office Notice to Mariners No. 8 of February 23, 1929:

The following shoals exist in the vicinity of Danaide Rocks, Panama Bay—

- (1) A shoal with a least depth of 11 feet at mean low water springs, on the bearings: Flamenco Island Lighthouse, $224^{\circ} 30'$, distant 5,175 yards. Signal station, Sosa Hill, 283° ; Point Paitillo, tangent, $320^{\circ} 30'$, distant 5,000 yards. Approximate position: $8^{\circ} 56' 21''$ N., $79^{\circ} 29' 37''$ W.
- (2) A shoal with a least depth of 17 feet at mean low water springs, on the bearings: Flamenco Island Lighthouse, 229° , distant 5,010 yards. Signal station, Sosa Hill, $285^{\circ} 30'$; Point Paitillo tangent, 322° , distant 5,400 yards. Approximate position: $8^{\circ} 56' 09''$ N., $79^{\circ} 29' 33''$ W.
- (3) A shoal with a least depth of 25 feet at mean low water springs, on the bearings: Flamenco Island Lighthouse, 234° , distant 5,140 yards. Signal station, Sosa Hill, $286^{\circ} 30'$; Point Paitillo tangent, 321° , distant 5,900 yards. Approximate position: $8^{\circ} 56' 00''$ N., $79^{\circ} 29' 21''$ W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, March 9, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.		Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Ermore	2	00.10	3	7.40	3	18.00	3	19.08	American	Ore S. S. Corp.	449 0	57.2	20.0	Norfolk, Va.	Cruz Grande, Chile	Ballast	.....	7,847	5,185
Sabotawan	2	22.10	3	9.05	3	20.43	3	22.30	American	Southern Lumber Co.	389 0	58.0	22.8	New Orleans, La.	San Francisco, Cal.	General	.....	5,786	4,138
O-6 ²	3	08.55	3	20.59	3	20.59	3	22.30	American	U. S. Navy	172 4	18.0	.....	Cristobal, C. Z.	Balboa, C. Z.	General	.....	.....	.....
O-10 ²	3	8.55	3	20.59	3	20.59	3	22.30	American	U. S. Navy	172 4	18.0	.....	Cristobal, C. Z.	Balboa, C. Z.	General	.....	.....	.....
S-21 ²	3	8.55	3	20.59	3	20.59	3	22.30	American	U. S. Navy	219 3	20.8	.....	Cristobal, C. Z.	Balboa, C. Z.	General	.....	.....	.....
Point Arena	2	23.30	3	11.00	3	23.12	4	00.20	American	Gulf-Pacific Line	335 6	46.0	20.3	New Orleans, La.	Portland, Oreg.	General	2,921	3,984	2,612
San Jose	3	6.15	3	10.55	3	23.58	3	23.47	American	United Fruit Co.	330 0	44.6	20.0	Port Limon, C. R.	San Francisco, Cal.	Bananas	499	3,670	2,333
Beckoop	2	13.42	3	12.20	3	23.15	5	3.35	Dutch	Royal Ned. S. S. Co.	400 6	58.3	26.3	Hamburg, Germany	Corral, Chile	General	6,445	7,817	6,097
Chitop	3	9.25	3	13.50	4	00.29	4	1.30	American	Chile S. S. Corp.	411 5	54.0	22.9	New York, N. Y.	Guamar, Chile	General	4,800	6,069	4,973
Salvador	2	24.19	3	14.53	4	00.30	4	5.05	British	Pacific Steam Nav. Co.	215 0	33.5	16.9	Cristobal, C. Z.	Champerico, Guat.	General	1,072	1,270	735
Cal.	3	1	23.23	3	15.10	4	2.05	3	German	North German Lloyd	216 5	32.9	14.4	Cristobal, C. Z.	Buenaventura, Col.	General	550	1,105	698
Pacific Pine	3	12.20	3	16.00	4	2.00	4	3.10	American	Dimon S. S. Corp.	410 5	54.3	22.0	New York, N. Y.	Seattle, Wash.	General	4,800	6,583	4,808
Motor Sailor No. 2	.....	.....	.....	.....	.....	.....	.....	.....	American	U. S. Navy	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	.....	.....	.....	.....
Fort Armstrong	3	14.35	4	6.56	4	19.00	4	20.05	American	Charles Nelson & Co.	324 0	46.0	19.9	Charleston, S. C.	Los Angeles, Calif.	General	3,633	3,984	2,628
Hoyanger ³	3	21.40	4	7.25	4	19.08	4	20.05	Norwegian	Westfal, Larsen Co.	381 0	53.6	17.6	Buenos Aires, Arg.	Vancouver, B. C.	General	2,854	6,289	4,723
Stockton	4	5.10	4	8.50	4	20.10	4	22.50	American	Gladstone Transp. Co.	425 8	57.0	25.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,485	5,231	.....
Rushpool	4	6.40	4	10.00	4	21.13	4	22.50	British	Simp'n, Spencer & Yong	429 0	54.0	15.0	Newcastle, Eng.	Vancouver, B. C.	Ballast	6,172	4,509	.....
Storsten ²	4	9.25	4	11.25	4	22.20	4	23.53	Norwegian	Tonsberg Rederi	388 1	52.7	19.0	Oslo, Norway	Los Angeles, Calif.	Ballast	5,464	3,764	.....
Iland ²	4	12.50	4	14.05	4	22.25	5	2.47	Danish	Islandsberg & Moller	326 2	50.1	19.6	Baltimore, Md.	Holito, P. I.	General	3,848	3,820	2,701
Gallope ²	4	14.55	4	15.25	4	23.43	5	3.35	Danish	Baltic-Amer. Pet. Co.	470 2	63.2	19.0	Hamburg, Germany	Talara, Peru.	Ballast	9,001	5,927	.....
Java Arrow ²	4	16.37	4	18.05	5	19.36	5	20.59	American	General Petroleum Co.	467 0	62.6	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast	10,084	7,388	.....
Binta ²	4	17.55	5	9.15	5	20.57	6	00.55	Norwegian	P. Oslerding	396 4	55.2	17.0	Falmouth, England	Los Angeles, Calif.	Ballast	8,313	6,872	4,973
Chincha ²	5	2.40	5	10.50	5	21.53	6	00.13	American	Isthmian S. S. Lines	403 0	52.4	28.2	Baltimore, Md.	Tacoma, Wash.	General, steel	5,815	7,956	5,681
Tsuyama Maru	5	9.35	5	12.05	6	02.55	6	00.20	Japanese	Nippon Yusen Kaisha	445 0	58.0	21.9	Kobe, Japan	Template, cotton	General	10,796	12,945	9,378
Huntingdon ²	5	12.50	5	13.40	6	00.07	6	7.49	British	Federal Steam Nav. Co.	520 0	64.0	31.0	Swansea, England	Auckland, N. Z.	General	.....	.....	.....
Oilfield ²	5	13.00	5	16.00	6	1.30	6	5.31	British	Hunting & Son	365 2	51.3	20.0	Newcastle, England	Los Angeles, Calif.	Ballast	.....	.....	.....
Colombia	5	4.35	6	6.15	6	19.38	7	3.20	American	Panama Mail S. S. Co.	379 9	48.5	22.5	New York, N. Y.	San Francisco, Cal.	General	1,614	6,015	4,281
West Malwah	5	21.55	6	7.28	6	21.57	6	23.52	American	Pac-Arg-Brazil Line	410 5	54.0	19.8	Buenos Aires, Arg.	San Francisco, Cal.	General	5,387	6,588	5,049
Hilda	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Knudsen ²	5	22.30	6	9.15	6	23.25	7	1.20	Norwegian	Russian Oil Prod., Ltd	470 0	62.0	20.0	Avonmouth, Eng.	Los Angeles, Calif.	Ballast	.....	9,474	6,489
Willford	6	7.12	6	10.10	7	00.34	7	2.20	American	Williams S. S. Line	386 8	52.0	23.6	New York, N. Y.	Tacoma, Wash.	General, steel	6,553	5,684	4,070
Rangitiki ²	6	15.38	6	11.00	6	21.16	7	9.10	British	N. Z. Shipping Co.	552 0	70.0	31.0	London, England	Wellington, N. Z.	General	6,924	.....	.....
Margaret	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Johnson ²	5	18.05	6	12.45	7	1.30	7	7.50	Swedish	Johnson Line	405 0	54.0	22.2	Stockholm, Sweden	Vancouver, B. C.	General	4,411	7,048	5,337
F. J. Luckenbach	6	12.10	6	14.10	7	2.33	7	3.55	American	Luckenbach Line	446 0	56.0	24.0	Boston, Mass.	Seattle, Wash.	General	5,561	8,508	6,179

* Coffee, cocoa, bones, and tinned meats.

* Motor ship.

* Submarine.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	Water draft.			Nature.	Tons.	Gross.	Net.
Witram.....	2	15.45	3	1.32	3	10.45	3	22.39	German.	North German Lloyd.	449.0	58.2	25.0	Vancouver, B. C.	Antwerp, Belgium.	General.	78.00	7,820	5,661
Breda.....	2	20.15	3	2.26	3	11.55	3	22.05	Dutch.	Royal Neth. S. S. Co.	402.6	53.8	27.0	Los Villos, Chile.	Hamburg, Germany.	General.	8,429	7,384	4,709
Chile Maru.....	2	20.35	3	3.50	3	13.45	3	14.30	Japanese.	Can-Amey Ship. Co.	385.0	51.0	25.6	Vancouver, B. C.	Hamburg, Germany.	Wheat.	7,618	5,923	4,409
Singapore Maru.....	2	21.15	3	5.06	3	14.35	3	16.00	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0	25.6	Vancouver, B. C.	Greece.	Wheat.	7,607	5,914	4,426
Richmond ¹¹	3	6.29	3	7.31	3	15.45	.....	.....	American.	U. S. Navy.	555.0	55.0	.....	Balboa, C. Z.	Cristobal, C. Z.	.....	.....	.....	.....
Marblehead ¹¹	3	7.31	3	7.31	3	15.45	.....	.....	American.	U. S. Navy.	555.0	55.0	.....	Balboa, C. Z.	Cristobal, C. Z.	.....	.....	.....	.....
Itaui.....	3	2.45	3	8.34	3	18.55	4	00.40	German.	Hamburg-American Line.	438.8	55.6	24.0	Valparaiso, Chile.	Hamburg, Germany.	Nitrates, ore.	8,221	7,004	5,017
Caldas ¹²	1	5.40	3	8.48	3	18.30	7	7.50	Colombian.	National Navigation Co.	116.0	21.1	9.6	Buenaventura, Col.	Cristobal, C. Z.	General.	265 ¹	211	124
Santa Cecilia.....	3	3.55	3	9.51	3	19.40	4	19.24	American.	Grace Line.	408.0	55.2	23.6	Chanaral, Chile.	New York, N. Y.	Copper, nitrates.	5,572	6,072	4,905
Cian MacKinlay.....	2	22.30	3	10.35	3	20.05	3	22.00	British.	Cayser Irvine & Co.	420.0	54.5	27.0	Cairns, Australia.	London, England.	(¹⁶)	8,253	6,978	4,893
American Star.....	3	6.45	3	12.34	3	20.55	3	22.00	American.	Charles Nelson & Co.	386.8	52.2	24.1	Port Angeles, Wash.	Baltimore, Md.	Lumber.	6,071	5,699	4,167
Suralco.....	3	9.20	3	12.40	3	20.50	3	22.00	American.	Transmarine Lines	324.0	46.2	24.2	Coos Bay, Ore.	Newark, N. J.	Lumber.	4,049	3,384	2,628
Solapa ¹	3	9.15	3	13.30	3	21.30	3	21.30	American.	Associated Oil Co.	419.5	56.5	26.0	San Francisco, Cal.	New York, N. Y.	Gasoline.	8,900	7,060	5,025
Golden Gate.....	3	9.45	3	15.00	3	23.00	3	23.00	Norwegian.	Scand.-So. Pacific Co.	381.5	53.1	22.6	Corral, Chile.	Oslo, Norway.	General.	6,454	5,616	3,879
Bradlyne.....	3	10.45	4	1.20	4	9.05	4	9.05	British.	Leeds Shipping Co.	400.2	54.2	25.6	Vancouver, B. C.	London, England.	Wheat.	8,030	6,961	5,365
Marcopa.....	3	14.00	4	2.10	4	10.10	4	10.10	Norwegian.	Wilh. Wilhelmsen	425.5	57.0	25.2	Talara, Peru.	Vallo, Norway.	Crude oil.	9,361	7,000	5,105
Congo.....	3	11.00	4	3.28	4	11.30	4	13.20	Italian.	Caroli & Carrado.	440.0	52.3	25.0	Louique, Chile.	Azores ¹⁷	Nitrates	8,251	6,287	4,529
Knoekherno.....	3	12.00	4	4.48	4	13.20	4	13.35	British.	Andrew Weir & Co.	400.0	52.3	25.0	Taltal, Chile.	Mobile, Ala.	Nitrates	7,820	5,828	4,095
Bridge ¹³	4	2.10	4	5.51	4	13.40	4	13.40	American.	U. S. Navy.	400.0	55.0	.....	Balboa, C. Z.	Cristobal, C. Z.	Ballast	.....	1,154	663
Florida ¹⁴	4	6.56	4	8.35	4	16.00	.....	.....	Colombian.	Colombian Mar. Co.	227.4	31.7	11.0	Pro. Arminelles	Cristobal, C. Z.	.....	.....	.....	.....
Cincinnati ¹¹	4	8.35	4	9.15	4	16.15	.....	.....	American.	U. S. Navy.	510.0	51.0	88.0	Balboa, C. Z.	Cristobal, C. Z.	.....	.....	.....	.....
Utah ¹⁴	4	9.15	4	9.15	4	18.40	.....	.....	American.	U. S. Navy.	555.6	54.7	.....	Balboa, C. Z.	Cristobal, C. Z.	.....	.....	.....	.....
Cambrai ¹⁵	1	23.10	4	11.02	4	19.35	6	11.15	American.	U. S. Army.	448.0	58.0	24.3	Balboa, C. Z.	Cristobal, C. Z.	.....	.....	.....	.....
Detroit ¹¹	4	3.00	4	13.04	4	22.05	5	1.23	American.	Pacific Steam Nav. Co.	450.0	57.8	24.6	Balboa, C. Z.	Cristobal, C. Z.	General	4,168	9,291	6,301
Elbro.....	3	12.00	4	13.54	4	23.25	5	1.23	British.	Oriental Navigation Co.	410.5	54.2	25.6	Valparaiso, Chile.	New York, N. Y.	Lumber, general.	6,960	7,555	4,887
Oran.....	3	15.05	4	22.27	5	8.45	5	8.45	American.	Argonaut S. S. Co.	410.3	54.3	25.0	San Francisco, Cal.	Philadelphia, Pa.	Lumber.	6,168	6,567	4,917
Canadian Transporter.....	3	15.15	4	23.30	5	9.20	5	9.20	British.	Can. Nat. Steamships	400.0	52.4	14.0	Auckland, N. Z.	Halifax, N. S.	General	2,465	6,228	4,491
Balboa ¹²	3	14.20	5	1.15	5	10.35	6	00.35	Swedish.	Johnson Line	425.0	56.0	23.7	San Francisco, Cal.	Gottenburg, Swed.	(¹⁸)	7,343	7,481	5,533
Kinderdijk.....	4	5.45	5	2.50	5	11.15	5	15.14	Dutch.	Holland-American Line.	469.4	58.4	26.0	Vancouver, B. C.	Antwerp, Belgium.	General	9,637	8,515	6,080
Bendorn.....	4	7.50	5	3.35	5	12.25	5	13.40	British.	W. Thomson & Co.	378.0	46.0	22.4	San Francisco, Cal.	Leith, Scotland.	Barley	5,344	4,232	2,986
Sommerstad ¹²	3	15.55	5	5.05	5	13.15	5	13.15	Norwegian.	Cities Service Corp.	381.0	55.2	27.0	Los Angeles, Calif.	Hull, England.	Gasoline.	7,886	5,994	3,876
Venezuela.....	4	14.30	5	6.14	5	14.55	6	15.15	American.	Panama Mail S. S. Co.	380.0	47.0	25.0	San Francisco, Cal.	New York, N. Y.	General	4,906	6,033	4,353
Arizona ¹⁴.....	.....	.....	5	7.06	5	16.10	.....	.....	American.	U. S. Navy.	600.0	98.0	.....	Balboa, C. Z.	Cristobal, C. Z.	.....	.....	.....	.....
Brazos ¹.....	.....	.....	5	8.46	.....	.....	.....	.....	American.	U. S. Navy.	475.0	56.0	18.3	Balboa, C. Z.	Cristobal, C. Z.	.....	.....	.....	.....
Dobbin.....	.....	.....	5	10.10	5	18.28	.....	.....	American.	U. S. Navy.	483.0	61.0	.....	Balboa, C. Z.	Cristobal, C. Z.	.....	.....	.....	.....

¹¹ Tanker ¹² Light cruiser. ¹³ Motor ship. ¹⁴ Auxiliary store ship. ¹⁵ Battleship. ¹⁶ Sugar, ore, and copper. ¹⁷ For orders. ¹⁸ Wheat, fruit, and coffee.

Canadian Ranger	4	11.30	5	11.00	5	20.35	5	22.25	British	Can. Nat. Steamships	400.3	59.0	24.0	Nanose Bay, B. C. Balboa, C. Z.	Halifax, N. S. Cristobal, C. Z.	Lumber, general.	6,000	5,879	4,121
No. 287 ¹⁹			5	11.12	5	20.55			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 293 ¹⁹			5	11.16	5	20.55			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
Manhattan Island	4	12.17	5	11.57	5	21.15	5	21.15	American	Redwood Line, Inc.	386.8	52.2	22.9	San Francisco, Cal.	Mobile, Ala.	Lumber, general.	5,855	5,696	4,125
No. 199 ¹⁹			5	12.15	5	20.55			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 249 ¹⁹			5	12.15	5	20.55			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
Archangelos ¹⁹	4	12.30	5	13.09	5	22.55	5	22.55	Greek	Livanos Brothers	405.1	52.0	26.0	Antofagasta, Chile	Azores ²¹	Nitrates	8,400	5,724	4,292
No. 250 ¹⁹			5	13.46	5	23.35			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 233 ¹⁹			5	13.46	5	23.35			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
Columbian	4	21.14	5	15.07	5	23.35	5	23.55	American	Amer-Hawaiian Line	404.6	53.9	27.4	Los Angeles, Calif.	Boston, Mass.	General	6,933	6,760	4,450
No. 231 ¹⁹			5	15.37	5	23.35			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 292 ¹⁹			5	15.37	5	23.35			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
Walter A. Luckenbach.	4	18.30	5	00.10	6	8.50	6	8.50	American	Luckenbach Line.	446.5	56.1	29.0	Portland, Oreg.	Boston, Mass.	General	8,425	8,785	6,567
Coquina	4	18.30	6	00.26	6	10.25			American	Panama Mail S. S. Co.	250.5	43.7	17.4	San Francisco, Cal.	Cristobal, C. Z.	General ⁽²⁴⁾	1,082	2,290	1,459
Limon	5	16.45	6	1.30	6	10.40			American	United Fruit Co.	330.6	44.5	19.6	San Francisco, Cal.	Port Limon, C. R.	General	1,019	3,075	2,234
Henry S. Grove.	5	20.15	6	1.40	6	11.37	6	13.55	American	Argonaut S. S. Line.	404.6	52.9	26.6	San Francisco, Cal.	Baltimore, Md.	Lumber, general.	7,446	6,755	4,688
Marenta	5	22.40	6	2.10	6	13.20			British	Royal Mail S. P. Co.	450.2	58.3	24.5	Vanconver, B. C.	Rotterdam, Holland	General	5,543	8,856	6,559
Trojanstar	4	16.00	6	4.18	6	15.35	6	15.35	British	Blue Star Line	473.8	60.0	29.0	N. Westminster	Newcastle, England	General ⁽²⁴⁾	7,200	10,405	7,401
Mongolia	5	13.20	6	7.16	6	14.35	6	15.05	American	Panama-Pacific Line	690.0	65.3	30.7	San Francisco, Cal.	New York, N. Y.	General	7,450	17,041	11,426
Wyoming ²⁰			6	7.14	6	16.30			American	U. S. Navy	554.0	93.3		Balboa, C. Z.	Cristobal, C. Z.				
Sweden ²¹	5	10.45	6	9.02	6	18.40	6	18.40	Swedish	Axel Brostrom & Son.	561.0	72.2	34.0	Cruz Grande, Chile	New York, N. Y.	Iron ore	21,457	15,425	4,421
Concord ²²			6	10.14	6	18.05			American	U. S. Navy	550.0	55.0		Balboa, C. Z.	Cristobal, C. Z.				
Herman Falk ¹	4	17.20	6	11.15	6	19.30	6	19.30	American	Oil Transport Co.	431.0	59.2	26.3	Los Angeles, Calif.	New York, N. Y.	Gasoline	10,904	7,862	5,049
No. 237 ¹⁹			6	11.27	6	20.45			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 239 ¹⁹			6	11.27	6	20.45			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
Lycia ¹	4	22.45	6	12.51	6	22.40	7	6.50	British	Canadian Transp. Co.	300.5	44.2	20.2	Bellingham, Wash.	Sagua Grande, Cuba	Lumber, general.	3,370	3,333	2,207
No. 238 ¹⁹			6	13.11	6	20.45			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 240 ¹⁹			6	13.11	6	20.45			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 243 ¹⁹			6	13.37	6	22.35			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 245 ¹⁹			6	13.37	6	22.35			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 244 ¹⁹			6	13.55	6	23.25			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 235 ¹⁹			6	13.55	6	23.25			American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
Havana Maru.	6	6.12	6	15.15	7	30.35	7	10.20	Japanese	Osaka Shosen Kaisha.	407.3	50.1	21.2	Kobe, Japan	New York, N. Y.	General	6,041	6,538	4,769
Manizales	6	10.00	6	15.25	7	30.35	7	10.11	German	Rolland Line.	216.5	32.9	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	567	1,132	741
Vredenburg	6	14.05	7	2.54	7	11.08	7	11.08	Dutch	Haleyon Lyn.	453.0	59.9	25.3	Vancouver, B. C.	Falmouth, England	Wheat	9,700	8,058	5,392
Santa Veronica.	6	17.40	7	3.10	7	11.15	7	11.15	American	Amer. & Cuban Line.	251.0	43.5	21.8	Portland, Oreg.	Baltimore, Md.	Gasoline ⁽²⁹⁾	2,347	2,823	1,740
Dixie Arrow ¹	6	6.15	7	4.41	7	12.20	7	12.20	American	Standard Transp. Co.	483.3	62.7	27.3	Los Angeles, Calif.	Boston, Mass.	Gasoline	11,177	9,744	7,140
New York ²⁰	6	8.00	7	6.41	7	15.05	7	18.00	American	U. S. Navy	565.0	95.2		Manila, P. I.	Guantanamo, Md.	Coconut oil	6,500		
Darden	6	14.00	7	5.28	7	13.35	7	13.35	American	T. P. Gallagher & Co.	391.9	51.2	26.0	Balboa, C. Z.	New York, N. Y.				
Whitney ²⁴	6	8.00	7	8.10	7	16.55	8	00.15	American	U. S. Navy	483.0	61.0		Balboa, C. Z.	Cristobal, C. Z.				
Robinson ²⁷	7	8.20	7	8.20	7	16.50	8	00.15	American	U. S. Navy	180.0	35.0		Balboa, C. Z.	Cristobal, C. Z.				
Boboliuk ²⁸	7	8.35	7	8.35	7	16.50	8	00.15	American	U. S. Navy	180.0	35.0		Balboa, C. Z.	Cristobal, C. Z.				
William H. Doherty ¹	6	14.25	7	9.41	7	18.20	7	18.20	American	Pan-Amer. Pet. & Tr. Co.	435.0	56.2	26.6	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline	9,800	7,406	5,111
No. 327 ¹⁹			7	9.46	7	19.30	8	00.15	American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 294 ¹⁹			7	9.46	7	19.30	8	00.15	American	U. S. Navy	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				

†Tanker.

‡Destroyer.

§Battleship.

¶Motor ship.

‡‡Auxiliary tug.

‡‡‡Cruiser.

‡‡‡‡Mine sweeper.

‡‡‡‡‡For order.

‡‡‡‡‡‡29 Lumber and machinery.

‡‡‡‡‡‡‡24 Lumber, copper, hides

‡‡‡‡‡‡‡‡25 Fresh apples and general.

‡‡‡‡‡‡‡‡‡26 Auxiliary.

*Auxiliary.

*Fresh apples and general.

*Lumber, copper, hides.

*Lumber and machinery.

*Motor ship.

*Auxiliary tug.

*Cruiser.

*Mine sweeper.

*For order.

*Battleship.

*Destroyer.

*Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Theodore Roosevelt ³⁰ .	6	19.30	7	10.22	7	20.50	8	14.30	Norwegian.	Fred Olsen & Co.	425.5	55.2	29.3	Vancouver, B. C.	Oslø, Norway.	Grain, general.	8,875	7,903	5,637
No. 283 ³¹ .			7	10.52	7	19.30	8	00.15	American.	U. S. Navy.	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 286 ³¹ .			7	10.52	8	00.15	8	00.15	American.	U. S. Navy.	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
San Francisco ³⁰ .			7	12.08	7	21.45	8	18.45	American.	Hamburg-American Line	432.3	59.1	25.0	Vancouver, B. C.	Hamburg, Germany	General.	6,862	8,454	6,344
No. 284 ³¹ .			7	12.30	7	23.21	8	00.15	American.	U. S. Navy.	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 285 ³¹ .			7	12.30	7	23.21	8	00.15	American.	U. S. Navy.	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
Indian City.			7	13.17	7	23.55	8	00.59	British.	Sir W. R. Smith & Sons	411.0	53.6	28.0	Vancouver, B. C.	Hamburg, Germany	Wheat.	9,020	6,512	4,465
No. 281 ³¹ .			7	13.34	7	23.55	8	00.15	American.	U. S. Navy.	310.0	31.0		Balboa, C. Z.	Cristobal, C. Z.				
Lark.			7	13.54	7	23.55	8	06.20	American.	U. S. Navy.	180.0	35.6		Balboa, C. Z.	Cristobal, C. Z.				
Port Hobart ³⁰ .	6	9.40	7	15.16	8	12.45	8	12.45	British.	Com'th & Dom. Line.	470.0	59.6	28.2	Melbourne, Aust'la	London, England.	Frozen, general.	7,044	10,041	7,271
Counselor.	7	13.25	8	2.06	8	11.05	8	13.50	British.	T. & J. Harrison.	395.5	52.5	24.1	Vancouver, B. C.	London, England.		6,573	5,753	3,857
Phoenixia ³⁰ .	7	14.00	8	3.15	8	12.10	9	15.00	German.	Hamburg-American Line	374.2	53.6	15.3	Champerico, Guat.	Hamburg, Germany		1,473	5,425	3,508
Lemopo.	7	18.00	8	4.42	8	13.35	8	13.35	British.	C. T. Bowring & Co.	435.0	55.8	26.0	Los Angeles, Calif.	London, England	Gas oil.	9,565	7,496	5,423
Cananea.			8	5.31	8	14.32	8	14.32	British.	Furness-Prince Line.	430.0	58.3	24.0	Seattle, Wash.	London, England	Apples.	4,486	8,956	6,563
O-6 ³² .			8	6.00	8	16.25	8	16.25	American.	U. S. Navy.	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.				
O-10 ³² .			8	6.00	8	16.25	8	16.25	American.	U. S. Navy.	175.0	16.4		Balboa, C. Z.	Cristobal, C. Z.				
Rochester ³³ .			8	7.15	8	16.30	9	10.10	American.	U. S. Navy.	384.0	64.9	25.7	Balboa, C. Z.	Cristobal, C. Z.				
Willboro.			8	8.07	8	18.15	9	6.32	American.	Williams S. S. Line.	414.7	55.7	29.0	Balboa, C. Z.	New York, N. Y.	Lumber, general.	9,000	7,717	5,763
S-9 ³² .	8	4.00	8	8.15	8	16.25	8	16.25	American.	U. S. Navy.	231.0	53.7	25.6	Balboa, C. Z.	Cristobal, C. Z.		4,834	7,072	4,944
Maliko.	8	6.30	8	9.21	8	19.08	8	19.08	American.	Matson Line.	415.0	53.7	25.6	Seattle, Wash.	Boston, Mass.	General.			
British Justice ³⁰ .	8	7.30	8	10.18	8	20.28	8	20.28	British.	Anglo-Persian Oil Co.	440.7	59.1	25.6	Los Angeles, Calif.	Land's End, Eng.	Gasoline.	9,298	7,625	5,197
Vesalia.	8	8.45	8	11.30	8	22.00	8	22.00	British.	DuPont de Nemours.	428.4	56.0	24.0	Iquique, Chile.	Pensacola, Fla.	Nitrates.	8,250	6,199	4,412
Salmonpool.	8	12.00	8	13.18	8	23.40	9	1.05	British.	Sir R. Ropner & Co.	390.1	55.5	23.6	Vancouver, B. C.	Hampton Rds.	Wheat.	7,666	8,801	4,412
Finn ³⁰ .	8	10.45	8	14.20	9	8.50	9	15.25	Swedish.	Colombian Mar. Co.	273.7	41.0	13.9	Buenaventura, Col.	New York, N. Y.		709	2,472	1,513
Boston Maru.	8	14.15	9	5.30	9	14.00	9	14.00	Japanese.	Wessel, Duval & Co.	400.0	53.0	25.8	Antofagasta, Chile.	Pensacola, Fla.	Nitrates.	7,497	5,876	4,240
Mureodak.	8	23.30	9	5.20	9	13.00	10	23.40	American.	Neison S. S. Co.	323.0	46.2	23.4	Los Angeles, Calif.	Baltimore, Md.		4,459	3,984	2,628
El Grillo.	9	1.00	9	7.31	9	15.05	9	15.05	British.	C. T. Bowring & Co.	440.5	57.5	23.0	Talara, Peru.	Halifax, N. S.	Crude oil.	9,575	7,468	5,042
Baltic ³⁰ .	8	22.00	9	8.01	9	16.35	9	16.20	Danish.	Standard Shipping Co.	509.5	64.1	29.0	Talara, Peru.	New York, N. Y.		13,200	10,550	7,888
No. 35 ³⁴ .			9	9.20	9	17.45	11	14.05	American.	U. S. Navy.	200.0	28.0		Balboa, C. Z.	Cristobal, C. Z.				
No. 58 ³⁴ .			9	9.05	9	17.45	11	15.04	American.	U. S. Navy.	200.0	28.0		Balboa, C. Z.	Cristobal, C. Z.				
S-10 ³² .			9	9.00	9	17.35	9	17.35	American.	U. S. Navy.	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
W. S. Rheem.	8	23.50	9	10.30	9	18.55	9	18.55	American.	Standard Oil Co. of Cal.	500.0	68.2	28.6	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	13,750	11,224	7,895
Castor ³⁰ .	8	23.30	9	11.47	9	20.00	9	20.00	Swedish.	Anglo-Saxon Pet. Co.	466.0	61.8	28.0	San Francisco, Cal.	Land's End, Eng.	Gasoline.	11,878	8,960	6,205
Orduna.	9	2.00	9	12.53	9	21.30	10	12.10	British.	Pacific Steam, Nav. Co.	550.3	67.3	31.6	Talcahuano, Chile.	Liverpool, England		6,465	17,146	12,015
Persens.	8	20.20	9	13.31	9	22.20	9	22.20	Greek.	Kulkundis & Marg. S.	390.0	57.2	27.7	Antofagasta, Chile.	Azores ³⁷ .	Nitrates.	7,701	6,283	4,619
Marguerite.																			
Cords.	9	6.45	9	13.56	9	23.30	10	1.20	German.	Colombian Mar. Co.	266.0	42.0	10.6	Buenaventura, Col.	Rio Hacha, Col.	Ballast.			

³⁷ For orders.³⁸ Coffee, honey, and sugar.³⁹ Tin ore and nitrates.⁴⁰ Grain, fruit, and lumber.⁴¹ Lumber, explosives, and general.⁴² Submarine.⁴³ Destroyer.⁴⁴ Coffee, hides, and general.⁴⁵ Motor ship.⁴⁶ Tanker.

Robin Good-fellow	9	4.05	9	14.41	10	00.05	10	00.05	American	Seas Shipping Co.	428.0	55.2	28.0	Seattle, Wash.	Philadelphia, Pa.	7.942	7.471	5.586
Pat. 41	9	9	9	13.48	9	9	9	9	American	C. P. Morgan	37.5			Balboa, C. Z.	Gatun Lake, C. Z.			
Doris 11	9	9	9		9	9	9	9	Panama	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.			
No. 31053 42	9	9	9		9	9	9	9	Panama	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.			
No. 31051 42	9	9	9		9	9	9	9	Panama	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.			
No. 31066 42	9	9	9		9	9	9	9	Panama	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.			

41 Commercial launch.

42 Barge.

43 Lumber and magnesite ore.

44 Towing barges.

45 Towed by Doris.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.																		
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—	* DEPARTURES.										
March 3	I. C. White.	Huasteca Petroleum Co.	Sam Nichols, D. W. I.	March 3	Arcon.	Panama Railroad S. S. Line.	New York via Haiti.											
March 3	No. 8944 46	Pan-American Airways	Miami via wayports.	March 4	Heed.	United Fruit Co.	New Orleans & wayports.											
March 3	No. 9717 46	Pan-American Airways	Managua via wayports.	March 4	I. C. White.	Huasteca Petroleum Co.	Aruha, D. W. I.											
March 3	Ulysses	Royal Netherlands S. S. Co.	Amsterdam via wayports.	March 6	Merian	Leyland Line	Palo Alto, Cuba											
March 4	Meridian	Royal Netherlands S. S. Co.	Amsterdam via wayports.	March 6	Wanda	Standard Fruit & S. S. Co.	San Blas, R. P.											
March 5	Brion	Royal Netherlands S. S. Co.	Curacao, D. W. I.	March 6	Gundeloupe	French Line	Havre via wayports											
March 5	Guydeloupe	French Line	St. Nazaire via wayports.	March 6	Anachucua 47	United Fruit Co.	Colon, R. P.											
March 6	Suriname	United Fruit Co.	St. Nazaire via wayports.	March 7	Inapaquina 47	United Fruit Co.	Colon, R. P.											
March 6	Sommerstad	A. F. Klavness	High seas for repairs.	March 7	Suriname	United Fruit Co.	Pto. Colombia											
March 6	Anachucua 47	United Fruit Co.	Colon, R. P.	March 8	Sixola	United Fruit Co.	New York via wayports.											
March 7	Inapaquina 47	United Fruit Co.	Colon, R. P.	March 8	Sommerstad	United Fruit Co.	Hull via wayports.											
March 7	Pastores	United Fruit Co.	New York via Kingston.	March 8	Copepume	United Fruit Co.	New Orleans.											
March 7	Macabi	United Fruit Co.	New York via wayports.	March 8	Pastores	United Fruit Co.	New Orleans via wayports.											
March 8	Anachucua 47	United Fruit Co.	Colon, R. P.	March 8	Anachucua 47	United Fruit Co.	Colon, R. P.											
March 8	California.	Standard Fruit & S. S. Co.	New York via wayports.	March 9	No. 8041 46	Pan-American Airways	Miami and wayports.											
March 8	Guinevald	United Fruit Co.	Colon, R. P.	March 9	Guinevald	Hamburg-American Line	Cartagena, Columbia											
March 8	Reliance	Standard Fruit & S. S. Co.	Roa, R. P.	March 9	Atlantian	Leyland Line	Liverpool via wayports.											
March 8	Manuel Armas	Hamburg-American Line	New York via wayports.	March 9	Amajala	Standard Fruit & S. S. Co.	New Orleans via wayports.											
March 8	Wanda	Spanish Line	Tampico via wayports.	March 9	Reliance	Hamburg-American Line	New York via wayports.											
March 8	San Pablo	Standard Fruit & S. S. Co.	Baredona via wayports.															
March 9	Cartago	United Fruit Co.	San Blas, R. P.															
March 9	No. 9728 46	United Fruit Co.	New York.															
March 9		Pan-American Airways	New Orleans via Habana.															
March 9			Port Limon, C. R.															

PORT OF BALBOA.

* ARRIVALS.																		
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—	* DEPARTURES.										
March 8	Ideal 48	Hans Eliot	Darien, R. P.	March 9	Ideal 48	Hans Eliot	Panama Bay, R. P.											
March 8	Des Hermanos 48	A. Valdez	Bayano River, R. P.	March 9	Des Hermanos	A. Valdez	Panama Bay, R. P.											
March 8	El Colon 48	Hans Eliot	Darien, R. P.	March 9	El Colon 48	Hans Eliot	Panama Bay, R. P.											
March 8	Dixie 49	Amador Juan Dias	Panama Bay, R. P.	March 9	Dixie 49	Amador Juan Dias	Panama Bay, R. P.											
March 8	Ksnes 49	Amador Juan Dias	Panama Bay, R. P.	March 9	Ksnes 49	Amador Juan Dias	Panama Bay, R. P.											

48 Motor schooner.

49 Barge.

* Other than ships passing through the Canal.

Origin and Destination of Cargo Passing Through the Panama Canal During the Calendar Year 1928.

On pages 454 to 457 of this issue will be found tables showing in detail the origin and destination of all cargo tonnage passing through the Canal in the calendar year ended December 31, 1928. This cargo, segregated according to direction, as compared with the calendar year 1927, and the differences, is shown in the following tabulation:

	Calendar year 1928.	Calendar year 1927.	Differences.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific	9,065,934	8,405,900	+660,034
Pacific to Atlantic	20,335,647	20,696,638	-360,991
Totals	29,401,581	29,102,538	+299,043

As will be noted above, tonnage from the Atlantic to the Pacific increased 660,034 tons over that in the calendar year 1927, and that from the Pacific to the Atlantic decreased 360,991 tons, or a net gain in the combined traffic over the calendar year 1927 of 299,043 tons. Nearly all of the larger commodities, with the exception of mineral oils, increased during the year. Atlantic-bound mineral oils decreased over 2,500,000 tons, but most of this loss was offset by the increases in other commodities.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Over 66 per cent of the cargo moving from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 25.2 per cent in Europe. Cargo originating in the United States increased 379,199 tons, or 6.7 per cent, and that from Europe increased 274,156 tons, or 13.7 per cent, over the calendar year 1927.

Destination.—Almost 42 per cent of all cargo from the Atlantic to the Pacific was destined to the west coast of the United States; 22.7 per cent to Asia; 15.1 per cent to Australasia; and 13.6 per cent to South America. Cargo to the west coast of the United States showed an increase of 364,508 tons, or 10.5 per cent, over the previous year; that to Asia a gain of 319,245 tons, or 18.3 per cent, and that to South America, a gain of 68,619 tons, or 5.8 per cent. Tonnage to Australasia showed a decrease of 71,703 tons, or 5 per cent.

PACIFIC-TO-ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 49.6 per cent originated on the west coast of the United States; 27.9 per cent in South America; 15.4 per cent in Canada; 3.4 per cent in Australasia; and 3.0 per cent in Asia. Cargo from the west coast of the United States decreased 2,339,134 tons, or 18.8 per cent under the previous year, on account of lessened mineral oil shipments. Tonnage from South America increased 527,178 tons, or 10.2 per cent; that from Australasia, an increase of 103,052 tons, or 17.4 per cent; and that from Asia, an increase of 57,417 tons, or 10.7 per cent.

Destination.—Segregated according to destination, 52.9 per cent of the cargo moving from the Pacific to the Atlantic during the year was destined to the eastern and Gulf seaboard of the United States, and 40.3 per cent in Europe. Tonnage destined to Europe increased 1,579,276 tons, or 23.9 per cent, and that to the United States decreased 1,051,468 tons, or 8.9 per cent, under the calendar year 1927. Heavy nitrate and wheat shipments contributed largely to the increase to Europe, while the slump in mineral oil movement accounted for the falling off of cargo to the United States.

PRINCIPLE COMMODITIES, ATLANTIC TO PACIFIC. *

From the cargo declarations submitted it was possible to classify almost 85 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 15 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic-to-Pacific bound commodities which aggregated more than 100,000 tons in either the calendar year 1928 or the calendar year 1927 are listed in the following tabulation, showing differences:

Commodity.	Calendar year 1928.	Calendar year 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia	94,010	104,325	-10,315
Automobiles	190,537	120,786	+69,751
Cement	298,823	244,106	+76,589
Coal and coke	268,040	208,573	+42,909
Cotton	309,718	384,128	-74,410
Manufactured goods:			
Iron and steel	2,351,051	2,020,342	+330,709
Machinery	180,775	212,217	+31,442
Railroad material	243,132	166,543	+76,589
Textiles and other	279,063	236,159	+42,904
Metals, various	191,925	82,415	+109,510
Oils, mineral	726,583	668,823	+57,760
Paper	196,638	187,674	+8,964
Phosphates	262,395	159,865	+102,530
Sugar	73,172	141,515	-68,343
Sulphur	201,416	223,366	-21,950
Tobacco	137,714	71,367	+66,347

The above 16 commodity groups make up a little more than 66 per cent of the total cargo carried from the Atlantic to the Pacific through the Canal during the calendar year 1928. It will be noted that all items excepting ammonia, cotton, machinery, sugar, and sulphur, show increases.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify approximately 99 per cent of all cargo moving from the Pacific to the Atlantic during the calendar year 1928. Commodities which aggregated more than 100,000 tons either in that or the previous calendar year, with the increase or decrease, are listed below:

Commodity.	Calendar year 1928.	Calendar year 1927.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley	246,777	309,128	-62,351
Beans	156,236	84,859	+71,377
Canned goods (fish, fruit, vegetables, etc.)	867,178	720,179	+146,999
Coffee	143,142	105,806	+37,336
Cold storage (food products) ¹	307,563	236,712	+70,851
Copra	103,245	85,856	+17,389
Cotton	100,528	108,172	-7,644
Flour	126,322	88,206	+38,116
Lumber	3,548,910	3,396,627	+152,283
Metals, various	667,479	583,359	+84,120
Nitrates	2,449,326	1,961,734	+487,592
Oils, mineral	4,728,106	6,953,795	-2,225,689
Ores, various	1,633,769	1,681,265	-47,496
Sugar	576,045	539,220	+36,825
Wheat	2,820,425	2,084,523	+785,902
Wool	158,894	139,641	+19,253
Fruit, dried	308,268	231,742	+76,526
Fruit, fresh	132,652	93,081	+39,571

¹ Fresh fruit not included.

The above 18 commodity groups comprise over 93 per cent of the cargo moving from the Pacific to the Atlantic during the calendar year 1928. Fourteen of the items show increases and 4 decreases. Mineral oil showed a heavy decrease, while wheat, nitrates, lumber and canned goods showed the heaviest increases.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, During the Calendar Year 1928.
(Figures represent tons of 2,240 pounds.)

From—	SOUTH AMERICA					NORTH AMERICA.						
	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	West coast of United States.	West coast of Canada.	West coast of Central America. ¹	Balboa. ²	Hawaii.	Total, North America.
NORTH AMERICA:												
UNITED STATES—												
North Atlantic ports.	137,726	33,598	8,846	69,591	67,292	317,053	2,433,731	12,652	29,480	1,387	74,676	2,551,975
South Atlantic ports.				1,220		1,220	46,031	3,455			50	48,556
Gulf ports.	31,399	2,825	2,735	6,739	4,334	48,032	435,461	20,619	3,937	5,782	4,041	532,922
Totals, United States	169,125	36,423	11,581	77,550	71,626	366,305	2,915,243	36,726	33,417	7,169	78,767	3,071,371
Cristobal, C. Z. ²												
East coast of Canada	12,237	34,193	12,474	9,569	13,356	81,869	46,530	99	79,498	713		126,840
West Indies	372	20		161	49	602	58,544	3,832	342	13,202		50,643
East coast of Mexico and Cen. America	11,381	2,650		600		14,631	34,633	24	6,350			75,940
Totals, North America	193,115	73,286	24,055	87,880	85,071	463,407	3,066,313	79,981	119,607	21,084	78,767	3,365,801
EUROPE:												
British Isles	167,735	1,246	5,055	39,047	56,519	269,602	84,318	52,265	16,541		14,241	170,555
Belgium	32,934	19,774	4,985	17,622	14,789	90,124	232,791	23,568	9,688	219	2,778	270,252
Denmark	1,042	2,611	173	78	12,105	16,009	149	17	196	75		61,886
France	13,361		418	3,132	10,402	27,336	56,182	4,887	812	5		98,260
Germany	24,757	8,381	4,689	18,314	25,674	81,815	62,080	9,643	14,353	3,786	8,105	77,041
Holland	6,835	788	1,549	4,685	2,772	16,632	67,702	6,097	186			18,276
Italy	4,549		110	934	8,064	13,657	11,256	3,767	3,253			93,817
Norway and Sweden	15,217	8,478	111	1,364	16,762	41,932	58,844	3,160	18,697	10,250	2,447	9,449
Spain and Portugal	2,046		162	721	4,896	7,825	7,680	1,751	18			133,211
Yugoslav												
Europe	15,133	2,424	760	9,260	171,589	199,166	73,749	10,098	34,798	372		933,184
Totals, Europe	283,635	43,722	18,012	95,157	323,572	764,098	654,751	115,253	98,542	14,707	27,574	1,093,334
East coast of South America												
North Africa	4	6,108		27	161	6,300	80,458	28,759		35	82	109,334
Grand totals, 1928	476,734	123,116	42,067	183,112	408,756	1,233,805	3,801,522	223,933	218,149	35,826	106,423	4,408,319
Grand totals, 1927	416,189	101,316	33,998	171,634	442,049	1,165,186	3,437,014	278,608	163,880	33,392	67,854	4,064,446
Per cent of total cargo, 1928	5.2	1.4	0.5	2.0	4.5	13.6	41.9	2.5	2.4	0.4	1.2	48.6
Per cent of total cargo, 1927	4.9	1.2	0.4	2.1	5.3	13.9	41.0	3.3	1.9	0.5	0.8	48.4

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, During the Calendar Year, 1928.

(Figures represent tons of 2,240 pounds.)

THE PANAMA CANAL RECORD

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From—	ASIA.					AUSTRALASIA.				GRAND TOTAL.		Per cent of total cargo, 1928.	Per cent of total cargo, 1927.
	Japan.	China.	Philippines	Far East. †	Total, Asia.	Australia.	New Zealand.	Australasia. ‡	Total, Australasia.	1928.	1927.		
NORTH AMERICA:													
UNITED STATES—													
North Atlantic ports	383,842	254,265	118,095	259,529	1,015,731	298,452	67,522	36,965	402,939	4,287,698	4,073,571	47.4	48.4
South Atlantic ports	64,097	6,801	3,543	30,855	108,296	1,301	1,301	.....	1,301	157,373	255,295	1.7	3.1
Gulf ports	576,527	193,427	44,155	78,043	892,152	87,025	30,370	36,074	153,469	1,563,493	1,300,499	17.2	15.5
Totals, United States	1,024,466	454,493	165,793	368,427	2,013,179	386,778	97,892	73,039	557,709	6,008,564	5,629,365	66.3	67.0
Cristobal, C. Z. ‡	23	2	.....	.....	25	8	.....	219	227	208,961	176,761	2.3	2.0
East coast of Canada	7,372	870	.....	5,121	13,363	58,405	60,647	7,043	126,095	190,101	189,448	2.1	2.3
West Indies	.....	14,267	.....	.....	14,267	.....	.....	.....	.....	90,809	160,298	1.0	1.9
East coast of Mexico and Central America	3,323	2,504	.....	7,500	13,327	45,563	14,071	.....	59,634	128,509	58,356	1.4	0.7
Totals, North America	1,035,184	472,136	165,793	381,048	2,054,161	490,754	172,610	80,301	743,665	6,627,034	6,214,228	73.1	73.9
EUROPE:													
British Isles	.....	1,915	.....	.....	1,915	20,461	444,872	46,912	512,245	952,402	825,066	10.6	9.8
Belgium	.....	.....	.....	.....	.....	5,834	41,722	.....	47,556	409,847	335,517	4.5	4.0
Denmark	.....	.....	.....	.....	.....	.....	.....	.....	.....	16,446	2,742	0.2	.....
France	.....	.....	.....	.....	.....	.....	.....	18,161	18,161	107,383	105,714	1.2	1.2
Germany	.....	.....	.....	.....	.....	555	.....	.....	555	180,630	215,778	2.0	2.6
Holland	.....	.....	.....	.....	.....	.....	.....	.....	.....	93,673	55,710	1.0	0.7
Italy	.....	.....	.....	.....	.....	.....	.....	.....	.....	31,933	40,566	0.3	0.5
Norway and Sweden	.....	.....	.....	.....	.....	4,512	.....	.....	4,512	140,261	80,336	1.5	1.0
Spain and Portugal	.....	.....	.....	.....	.....	.....	.....	.....	.....	17,274	26,650	0.2	0.3
Yugoslav	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,315	0.2	0.1
Europe ‡	.....	.....	.....	.....	.....	.....	178	.....	178	332,555	314,854	3.7	3.7
Totals, Europe	.....	1,915	.....	.....	1,915	31,362	486,772	65,073	583,207	2,282,404	2,008,248	25.2	23.9
East coast of South America	3,573	39	.....	2,024	5,166	.....	.....	.....	.....	120,800	183,312	1.3	2.2
North Africa	.....	.....	.....	.....	.....	.....	35,696	.....	35,696	35,696	112	0.4	.....
Grand totals, 1928	1,038,757	474,090	165,793	382,602	2,061,242	522,116	695,078	145,374	1,362,568	9,065,934	.....	100.0	.....
Grand totals, 1927	894,292	414,516	134,856	298,333	1,741,997	747,248	600,381	89,642	1,434,271	.....	8,405,900	.....	100.0
Per cent of total cargo, 1928	11.5	5.2	1.8	4.2	22.7	5.8	7.7	1.6	15.1	100.0	.....	.....	.....
Per cent of total cargo, 1927	10.6	4.9	1.6	3.6	20.7	8.9	7.1	1.0	17.0	100.0	.....	.....	.....

† General cargo not routed so as to allow segregation between definite ports.

‡ Includes both local and transit cargo.

Origin and Destination of Cargo Passing through the Panama Canal, from the Pacific to the Atlantic, During the Calendar Year 1928.
(Figures represent tons of 2,240 pounds.)

From—	United States.				NORTH AMERICA.					EUROPE.				
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total United States.	East coast of Canada.	West Indies.	East coast of Mexico.	Cristobal, C. Z. ²	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.
SOUTH AMERICA:														
Chile.....	1,848,222	411,283	232,322	2,491,827	17,950	8,800	34	9,969	2,528,580	304,799	61,860	454	94,005	219,971
Colombia.....	11,515		21,959	33,474				45,167	78,641		34			202
Ecuador.....	85,651		7,769	93,420				33,352	126,784	322	2,230	29	1,618	1,514
Peru.....	222,359	17,240	80	239,679	280,459	54		37,189	557,381	180,233	25,035	4,032	12,803	49,544
West coast of S. America ¹	917			917	12,195	19		5,753	18,884	6,352	2,725		943	266
Totals, S. America.....	2,108,664	428,523	262,130	2,859,317	310,604	8,885	34	131,430	3,310,270	491,706	91,884	4,515	109,369	271,497
NORTH AMERICA:														
West coast of Canada.....	337,888	786	8,956	387,630	101,968	39,813	2,104	1,432	532,947	1,136,352	167,747	10,540	61,914	237,181
West coast Cen. America.....	16,074	1,128		17,202		646	474	46,689	65,011	262	112	49	3,107	8,254
West coast United States.....	6,371,785	129,429	346,475	6,847,689	18,714	179,129	116,062	183,676	7,345,270	1,672,433	55,475	30,560	113,166	236,794
Hawaii.....	5,538		20,204	25,742					25,762	2,776	131			33
Bahia.....	2,901		919	3,820				220	4,040					
West coast N. America.....														
Totals, N. America.....	6,774,605	131,343	376,554	7,282,103	120,682	219,588	118,640	232,017	7,973,030	2,811,823	223,465	41,149	178,187	482,262
ASIA:														
China.....	54,254	49	1,062	55,365		20,024		2,573	77,962	4,892				
Japan.....	22,263	4,911		27,174				66	27,240					
Philippines.....	326,948	16,079	45,790	388,817					388,817					
Far East.....	20,363		390	20,753		38,902		400	60,655	12,465				14,068
Totals, Asia.....	423,828	21,039	47,242	429,109		58,926		3,039	554,074	17,357				14,068
AUSTRALASIA:														
Australia.....	47,665			47,665	13,059			224	60,978	3,733			3,072	
New Zealand.....	52,711			52,711	1,906			173	54,790	444,335	7,022		4,946	
Australasia ¹	10,850			10,850	4,650				15,500	34,730			23,971	1,783
Totals, Australasia.....	111,256			111,256	19,615			397	131,268	482,798	7,985		31,989	1,783
Grand totals, 1928.....	9,477,954	580,905	685,926	10,744,785	450,901	287,399	118,674	366,883	11,968,642	3,803,684	323,334	45,664	319,545	769,610
Grand totals, 1927.....	10,674,971	606,486	515,195	11,796,652	557,154	436,805	39,512	816,217	13,646,340	2,814,395	174,413	38,117	224,242	470,395
Per cent of total cargo, 1928.....	46.6	2.9	3.4	52.9	2.2	1.3	0.6	1.8	58.8	18.7	1.6	0.2	1.6	3.8
Per cent of total cargo, 1927.....	51.6	2.9	2.5	57.0	2.7	2.1	0.2	3.9	65.9	13.6	0.8	0.2	1.1	2.3

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, During the Calendar Year, 1928.

(Figures represent tons of 2,240 pounds.)

From—	EUROPE.						East coast of South America.	Egypt.	South Africa.	Grand totals, 1928.	Grand totals, 1927.	Per cent of total cargo, 1928.	Per cent of total cargo, 1927.
	Holland.	Italy.	Norway and Sweden.	Russia.	Spain and Portugal.	Europe. ¹	Total, Europe.						
SOUTH AMERICA:													
Chile.....	45,346	40,111	10,800	10,907	23,654	1,040,204	1,852,111	87,324		4,469,214	3,920,269	22.0	18.9
Colombia.....	1,184					61	481			79,726	45,579	0.4	0.2
Ecuador.....	1,041	3,889	20		1,703	1,725	14,181			141,180	98,134	0.7	0.5
Peru.....	36,912	9,835	29,890			27,520	375,804			971,722	971,871	4.6	4.7
West coast of S. America ²	1,268				28	3,550	15,132			34,016	101,827	0.2	0.6
Totals, South America	83,483	55,103	40,710	10,907	25,475	1,073,060	2,257,709	87,324		5,665,858	5,138,680	27.9	24.9
NORTH AMERICA:													
West coast of Canada.....	336,156	87,102	45,548		73,625	415,501	2,571,666		19,270	3,138,974	1,781,555	15.4	8.6
West coast Cen. America.....	3,398	11,209			7,944	59,592	55,012			120,023	86,071	0.6	0.4
West coast United States.....	141,972	77,139	29,757		53,562	285,995	2,696,253	9,300	7,258	10,088,180	12,427,294	49.6	60.0
Hawaii.....			1,424				4,364			30,126	7,102	0.1	
Bahoa.....						396	396			4,436	8,123		0.6
West coast North America ²						1,850	1,850			1,850	122,062		
Totals, North America	481,526	165,326	87,938		135,131	722,734	5,329,541	9,300	26,528	13,383,569	14,432,207	65.7	69.6
ASIA:													
China.....										77,962	38,066	0.4	0.2
Japan.....										32,132	51,158	0.2	0.2
Philippines.....							4,892			388,817	330,448	1.9	1.6
Far East ²						6,038	32,571			92,626	114,448	0.5	0.6
Totals, Asia						6,038	37,463			591,537	534,120	3.0	2.6
AUSTRALASIA:													
Australia.....							7,768			68,746	83,925	0.3	0.4
New Zealand.....						958	457,261			512,051	388,458	2.5	1.9
Australasia ²	6,203		23,200			8,499	98,386			113,886	119,248	0.6	0.6
Totals, Australasia	6,203		23,200			9,457	503,415			694,683	591,631	3.4	2.9
Grand totals, 1928	571,212	220,429	151,848	10,907	160,606	1,811,289	8,188,128	96,624	26,528	20,335,647	20,696,638	100.0	100.0
Grand totals, 1927	290,278	200,841	142,479	26,486	102,615	2,124,591	6,608,852	149,470	8,257				
Per cent of total cargo, 1928.....	2.8	1.1	0.7	0.1	0.8	8.9	40.3	0.5	0.1	100.0			
Per cent of total cargo, 1927.....	1.4	1.0	0.7	0.1	0.5	10.3	32.0	0.7		100.0			

¹ General cargo not routed so as to allow segregation between definite ports.² Includes both local and transit cargo.

Tanker Traffic Through the Panama Canal in February, 1929.

During the month of February, 1929, 82 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 448,427, on which tolls of \$388,410.67 were collected. Cargo amounted to 395,049 tons. In point of net tonnage, tanker traffic for the past month showed an increase of 15.7 per cent over the same traffic for the corresponding month a year ago, while cargo tonnage increased .86 per cent over the cargo tonnage of February, 1928.

Tank ships comprised 15.7 per cent of the total commercial transits through the Canal during the month; made up 18.5 per cent of the total Panama Canal net tonnage; were the source of 17.6 per cent of the total tolls collected; and carried 15.5 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of February, 1929, segregated by direction of transit and nationality of vessels, are shown in the following tabulations, with comparative totals, for the two preceding months and for February, 1928.

Nationality.	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	9	45,008	\$35,375.12	16,234
Norwegian.....	6	27,464	19,774.08	.....
Swedish.....	2	10,792	7,770.24	.....
United States.....	29	162,953	120,345.18	20,111
Totals, February, 1929.....	46	246,217	183,264.62	36,345
Totals, January, 1929.....	46	241,789	177,508.56	.....
Totals, December, 1928.....	44	229,747	171,163.47	15,700
Totals, February, 1928.....	32	173,091	127,926.09	23,276
<i>Pacific to Atlantic.</i>				
British.....	6	33,906	35,887.50	64,572
Danish.....	1	6,054	6,322.50	11,942
French.....	1	4,178	4,501.25	7,350
Norwegian.....	1	5,442	5,810.00	9,582
United States.....	27	152,630	152,642.80	275,258
Totals, February, 1929.....	36	202,210	205,146.05	358,704
Totals, January, 1929.....	53	278,631	291,033.60	521,554
Totals, December, 1928.....	37	194,903	198,667.64	345,004
Totals, February, 1928.....	36	214,628	197,867.50	368,385

Of the total tanker traffic shown above, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for February, 1928:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
February, 1929.....	31	170,099	\$124,280.17	8,397
January, 1929.....	32	174,269	125,631.30	.....
December, 1928.....	38	201,765	151,016.43	15,700
February, 1928.....	23	123,940	89,238.96	.....
<i>From Los Angeles.</i>				
February, 1929.....	26	143,336	143,518.55	257,589
January, 1929.....	40	206,611	215,099.85	391,511
December, 1928.....	26	136,116	137,683.75	243,385
February, 1928.....	25	154,113	135,786.25	254,025

Dimon Line Acquires Vessel from Shipping Board.

The United States Shipping Board has announced the sale of the steamer *West Hembrie* to the Dimon Steamship Corporation, operators in the United States intercoastal trade. After certain alterations, including the replacing of the present coal burning equipment with oil burning apparatus, and probably a change of name, the vessel is to be placed in the intercoastal service of the company. The ship is a steel cargo vessel 409.7 feet long, 54.2 feet beam, and of 8,570 deadweight tons.

The present fleet of the Dimon Line consists of the *Pacific Cedar*, *Pacific Spruce*, *Pacific Redwood*, *Pacific Hemlock*, *Pacific Fir*, and *Pacific Pine*.

Rare Birds in Cargo of "Canadian Cruiser."

A collection of 275 birds captured in New Guinea and in charge of Lee Saunders Crandall, curator of birds of the New York Zoological Park, passed through the Panama Canal on March 11, 1929, aboard the steamer *Canadian Cruiser*, en route from Australia for ports in eastern United States and Canada. The collection contained 40 birds of paradise, including nine species, and several species of wild pigeons and parrots of a kind which it is said have not been captured heretofore.

The *Canadian Cruiser* is owned by the Canadian National Steamships, and plys regularly in the trade between the east coast of North America and Australia.

Traffic by Nationality for February, 1929.

The following tabulation shows the commercial traffic through the Canal during the month of February, 1929, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with corresponding totals for February, 1928 and 1927:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	77	398,916	298,759	484,222	299,512	\$344,794.89	267,239
Chilean.....	2	7,735	6,033	10,889	6,233	7,541.25	4,016
Colombian.....	5	1,420	1,360	2,181	1,376	1,672.10	2,020
Danish.....	6	24,435	17,243	27,773	17,428	21,553.75	25,423
Dutch.....	6	28,923	19,565	33,556	19,675	24,456.25	16,796
Finnish.....	2	7,094	5,368	7,764	5,251	5,796.00	8,450
French.....	6	24,654	19,759	30,648	18,667	24,698.75	11,704
German.....	18	61,969	44,306	73,222	43,635	54,561.35	60,701
Greek.....	2	8,003	5,199	8,341	5,256	5,762.16	.....
Italian.....	3	19,775	13,975	25,539	14,808	15,973.12	3,978
Japanese.....	7	35,483	30,277	44,747	29,969	35,541.72	36,394
Norwegian.....	16	58,410	47,829	79,524	47,699	47,757.29	28,294
Panamanian.....	1	2,606	1,384	3,644	2,594	1,730.00	2,579
Peruvian.....	3	7,439	4,504	11,516	6,269	5,611.05	2,832
Spanish.....	1	4,051	3,606	5,853	3,624	2,916.72	.....
Swedish.....	10	43,434	32,009	71,254	38,818	33,123.21	13,838
United States.....	108	542,267	422,921	688,068	420,658	471,369.47	368,271
Yugoslav.....	4	17,090	13,075	20,667	13,116	14,230.81	11,749
Totals, February, 1929...	277	1,293,704	987,172	1,629,408	994,583	1,119,089.89	864,344
Totals, February, 1928...	267	1,207,793	917,832	1,498,684	916,250	1,043,679.76	713,293
Totals, February, 1927...	252	1,257,453	972,143	1,573,520	971,924	1,075,530.67	731,172

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,792	4,142	6,511	4,172	\$5,177.50	8,160
British.....	78	395,934	302,112	485,759	300,941	377,382.00	548,886
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	4,842
Colombian.....	4	1,257	1,196	1,948	1,210	1,493.10	1,161
Danish.....	5	21,324	16,029	25,996	16,132	19,446.81	36,260
Dutch.....	1	742	294	780	323	367.50	887
French.....	6	29,038	21,510	35,075	21,249	26,887.50	40,699
German.....	15	46,730	35,576	58,370	35,432	43,896.20	60,345
Greek.....	4	15,827	11,525	18,510	11,113	14,406.25	28,875
Italian.....	3	14,493	12,286	19,183	11,631	15,083.10	15,268
Japanese.....	3	15,196	12,975	18,663	12,781	16,218.75	24,331
Norwegian.....	10	30,451	24,998	39,916	24,201	31,226.90	53,212
Panamanian.....	3	7,523	5,413	8,867	5,466	6,761.90	10,131
Peruvian.....	1	2,951	1,506	4,744	2,673	1,882.50	2,327
Spanish.....	2	8,391	6,911	11,407	7,123	8,638.75	9,048
Swedish.....	6	21,115	16,904	37,284	20,455	21,130.00	47,906
United States.....	99	501,883	389,560	631,059	390,563	486,230.05	769,751
Yugoslav.....	3	12,474	9,848	15,530	9,825	12,310.00	24,065
Totals, February, 1929...	245	1,134,826	876,251	1,426,912	879,266	1,092,871.31	1,686,154
Totals, February, 1928...	280	1,252,318	964,811	1,575,146	969,195	1,210,075.51	1,947,132
Totals, February, 1927...	197	943,875	738,130	1,218,057	742,352	919,330.15	1,498,945

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,792	4,142	6,511	4,172	\$5,177.50	8,160
British.....	155	794,850	600,871	969,981	600,453	722,176.89	816,125
Chilean.....	3	12,440	9,499	18,199	10,209	11,873.75	8,858
Colombian.....	9	2,677	2,556	4,129	2,586	3,165.20	3,181
Danish.....	11	45,759	33,272	53,769	33,560	41,000.56	61,683
Dutch.....	7	29,665	19,859	34,336	19,998	24,823.75	17,683
Finnish.....	2	7,094	5,368	7,764	5,251	5,796.00	8,450
French.....	12	53,692	41,269	65,723	39,916	51,586.25	52,403
German.....	33	108,699	79,882	131,592	79,067	98,457.55	121,046
Greek.....	6	23,830	16,724	26,551	16,369	20,168.41	28,875
Italian.....	6	34,268	26,261	44,722	26,439	31,056.22	19,246
Japanese.....	10	50,679	43,252	63,410	42,750	51,760.47	60,725
Norwegian.....	26	88,861	72,827	119,440	71,900	78,984.19	81,506
Panamanian.....	4	10,129	6,797	12,511	8,060	8,491.90	12,710
Peruvian.....	4	10,390	6,010	16,260	8,942	7,493.55	5,219
Spanish.....	3	12,442	10,517	17,260	10,747	11,555.47	9,048
Swedish.....	16	64,549	48,913	108,538	59,273	54,253.21	61,744
United States.....	207	1,044,150	812,481	1,319,127	811,221	957,599.52	1,138,022
Yugoslav.....	7	29,564	22,923	36,197	22,941	26,540.81	35,814
Totals, February, 1929...	522	2,428,530	1,863,423	3,056,320	1,873,854	2,211,961.20	2,550,498
Totals, February, 1928...	547	2,460,111	1,882,643	3,073,830	1,885,445	2,253,755.37	2,660,425
Totals, February, 1927...	449	2,201,323	1,710,273	2,791,577	1,714,276	1,994,860.82	2,230,107

Two Vessels for Swayne & Hoyt.

Announcement has been made by Swayne & Hoyt of San Francisco of the purchase of two lake-type freighters, the *Houston* and *Minooka*, for operation in the company's Gulf-Pacific Line. They will be renamed *Point San Pedro* and *Point San Pablo* to conform with the "point" prefix in the names of the Swayne & Hoyt's Gulf-Pacific fleet.

The newly acquired vessels, which are sister ships, are 324 feet in length, 46.2 feet in beam, and of 3,545 gross tons.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Commercial Traffic Through the Panama Canal in February, 1929, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of February, 1929, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for February, 1928 and 1927. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tons.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	72	387,927	300,325	483,209	298,817	\$332,122.84	236,865
East coast of United States to west coast of South America:							
British	8	32,937	25,151	43,281	26,221	26,412.17	7,681
Chilean	2	7,735	6,033	10,889	6,233	7,541.25	4,018
Danish	1	3,468	2,256	3,718	2,307	2,820.00	4,018
Finnish	1	1,835	1,828	1,979	1,709	1,371.00	
Norwegian	1	4,730	4,105	6,583	4,119	3,405.60	
Peruvian	1	1,529	1,483	2,155	1,160	1,834.80	2,042
Swedish	4	11,508	9,779	33,959	11,042	9,286.49	1,115
United States	13	56,730	47,289	82,024	46,818	45,432.98	20,013
Totals	31	120,472	97,924	184,588	99,618	98,104.29	38,885
Europe to west coast Canada:							
British	12	64,249	46,236	72,231	44,526	48,754.45	5,159
Danish	2	10,874	8,680	13,650	8,706	10,850.00	12,473
Dutch	2	13,715	10,959	17,772	10,981	13,698.75	7,093
French	2	10,308	7,348	12,302	7,379	9,185.00	2,747
German	4	27,033	17,488	29,598	17,814	21,860.00	22,129
Italian	1	6,025	5,056	7,098	4,498	6,320.00	1,845
Norwegian	2	9,333	7,452	11,914	7,448	9,315.00	11,214
Swedish	1	4,919	2,878	4,960	3,665	3,597.50	2,676
Totals	26	146,456	106,097	169,525	105,017	123,580.70	65,396
Europe to west coast of South America:							
British	6	38,663	29,983	49,784	30,878	37,478.75	27,424
Danish	1	4,623	2,989	4,750	3,006	3,736.25	6,346
Dutch	2	13,724	8,018	14,224	8,048	10,022.50	9,431
French	2	8,613	7,426	11,694	7,332	9,282.50	6,277
German	6	23,604	18,339	28,327	17,323	22,126.75	29,239
Greek	2	8,003	5,199	8,341	5,256	5,762.16	
Italian	1	9,329	5,176	11,718	6,750	6,470.00	2,133
Spanish	1	4,051	3,606	5,853	3,624	2,916.72	
Yugoslav	4	17,090	13,075	20,667	13,116	14,230.81	11,749
Totals	25	127,700	93,811	155,358	95,333	112,026.44	92,599
Europe to west coast of United States:							
British	7	32,737	24,736	39,700	24,326	24,915.23	12,337
Italian	1	4,421	3,743	6,723	3,560	3,183.12	
Norwegian	5	22,548	19,370	33,012	19,239	16,234.56	
Swedish	4	21,661	15,884	26,547	19,811	15,904.22	7,449
Totals	17	81,367	63,733	105,982	66,936	60,237.13	19,786
East coast of United States to Far East:							
British	3	15,055	9,255	15,017	9,158	11,568.75	18,401
Danish	1	1,827	1,399	2,355	1,411	1,748.75	2,586
Japanese	5	25,051	21,834	31,642	21,363	27,009.30	34,004
Norwegian	1	3,542	2,889	4,694	2,816	3,611.25	3,952
United States	6	36,093	26,932	42,900	26,689	33,665.00	53,681
Totals	16	81,568	62,359	96,608	61,467	77,603.05	112,024
Europe to Australasia:							
British	11	76,394	55,970	91,017	56,746	69,746.74	63,608
French	2	5,733	4,985	6,652	3,956	6,231.25	2,680
Swedish	1	5,346	3,468	5,788	4,300	4,335.00	2,599
Totals	14	87,473	64,423	103,457	65,002	80,312.99	68,886

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to Australasia:							
British.....	10	57,187	43,459	67,586	43,595	\$54,173.55	59,076
United States.....	1	5,053	3,655	5,861	3,654	4,568.75	6,600
Totals.....	11	62,240	47,114	73,447	47,249	58,742.30	65,676
Cristobal, C. Z., to west coast of South America:							
Colombian.....	4	757	743	1,078	749	900.85	1,290
Dutch.....	2	1,484	583	1,560	646	735.00	272
German.....	3	2,450	1,743	3,194	1,778	2,178.75	1,336
Totals.....	9	4,691	3,074	5,832	3,173	3,814.60	2,898
East coast of United States to west coast of Canada:							
British.....	1	4,319	2,730	4,344	2,736	3,109.68	.....
United States.....	4	15,503	12,134	19,684	12,112	15,167.50	24,500
Totals.....	5	19,822	14,864	24,028	14,848	18,277.18	24,500
Europe to west coast Central America:							
German.....	3	7,172	5,292	9,491	5,286	6,590.85	4,177
Norwegian.....	2	1,238	1,090	1,827	1,007	891.36	.....
Totals.....	5	8,410	6,382	11,318	6,293	7,482.21	4,177
Cristobal, C. Z., to west coast of Central America:							
British.....	2	1,328	1,252	2,308	1,256	1,543.90	1,869
Colombian.....	1	663	617	1,103	627	771.25	730
German.....	2	1,710	1,444	2,612	1,434	1,805.00	3,820
Totals.....	5	3,701	3,313	6,023	3,317	4,120.15	6,419
East coast of Central America to west coast United States:							
United States.....	4	9,077	8,159	13,423	8,091	10,145.70	2,844
East coast of United States to Philippine Islands:							
British.....	2	10,480	6,873	12,012	6,933	8,591.25	13,920
Norwegian.....	1	4,134	3,214	5,242	3,204	4,017.50	6,550
Totals.....	3	14,614	10,087	17,254	10,197	12,608.75	20,470
Canadian intercoastal:							
British.....	3	12,486	9,846	16,260	10,141	12,307.50	17,399
South American intercoastal:							
Japanese.....	1	4,611	4,223	5,838	4,219	3,319.92	.....
Peruvian.....	2	5,910	3,021	9,361	5,100	3,776.25	850
Totals.....	3	10,521	7,244	15,199	9,319	7,096.17	850
West Indies to west coast of South America:							
British.....	2	8,237	7,120	11,676	7,034	8,900.00	16,234
Norwegian.....	1	4,916	4,315	7,102	4,434	3,539.52	.....
Totals.....	3	13,153	11,435	18,778	11,468	12,439.52	16,234
Africa to west coast of Canada:							
British.....	3	13,057	10,639	17,266	10,608	9,401.04	.....
East coast of United States to west coast of Central America:							
Norwegian.....	2	3,615	2,962	5,147	2,859	3,702.50	2,619
East coast of United States to Hawaiian Islands:							
United States.....	2	7,194	5,007	8,366	5,014	6,258.75	11,125
East coast of Canada to Aus- tralasia:							
British.....	1	4,402	3,257	5,370	3,260	4,071.25	3,038
United States.....	1	4,073	3,258	5,482	3,375	4,072.50	4,308
Totals.....	2	8,475	6,515	10,852	6,635	8,143.75	7,346
Europe to Far East:							
British.....	1	4,612	3,540	5,848	3,563	4,425.00	0,092
Finnish.....	1	5,259	3,540	5,785	3,542	4,425.00	8,450
Totals.....	2	9,871	7,080	11,633	7,105	8,850.00	14,542

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tons.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Around the world:							
United States.....	2	20,054	15,621	25,979	15,520	\$19,526.25	8,935
United States intercoastal— foreign vessels in ballast:							
British.....	1	6,287	5,366	8,782	5,144	4,526.64	.....
East coast of United States to Balboa, C. Z.:							
United States.....	1	240	230	514	230	172.80	.....
East coast of Canada to west coast of United States:							
British.....	1	3,826	2,968	4,703	2,957	3,710.00	3,849
East coast of Canada to west coast of South America:							
British.....	1	5,042	4,355	7,259	4,414	3,630.24	.....
West Indies to east coast of United States:							
Danish.....	1	3,643	1,919	3,300	1,998	2,398.75	.....
Europe to Balboa, C. Z.:							
United States.....	1	303	296	606	292	222.00	.....
Europe to Hawaiian Islands:							
British.....	1	3,814	2,986	4,913	2,988	3,732.50	5,345
East coast of Central America to Australasia:							
British.....	1	3,804	3,037	4,865	3,028	3,796.25	5,807
East coast of South America to west coast of Canada:							
Norwegian.....	1	4,354	2,432	4,003	2,483	3,040.00	3,959
East coast of South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	2,390
Cristobal, C. Z., to west coast of United States:							
Panaman.....	1	2,606	1,384	3,644	2,594	1,730.00	2,579
Cristobal, C. Z., to Balboa, C. Z.:							
United States.....	1	20	15	20	16	14.40	.....
Grand totals, Feb., 1929..	277	1,293,704	987,172	1,629,408	994,588	1,119,089.89	864,344
Grand totals, Feb., 1928..	267	1,207,793	917,832	1,498,684	916,250	1,043,679.76	713,293
Grand totals, Feb., 1927..	252	1,257,453	972,143	1,573,520	971,924	1,075,530.67	731,172

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	72	389,367	298,292	479,758	298,751	\$372,513.55	561,046
West coast Canada to Europe:							
British.....	34	160,879	121,088	193,579	119,768	151,200.60	261,326
French.....	1	4,834	3,223	5,390	3,219	4,028.75	7,020
German.....	1	6,680	4,909	8,116	4,887	6,136.25	8,382
Japanese.....	1	4,670	4,266	5,825	4,225	5,332.50	7,700
Norwegian.....	2	9,536	7,464	11,948	7,339	9,330.00	14,423
Swedish.....	2	8,219	5,897	9,242	7,057	7,371.25	10,864
United States.....	1	5,583	4,263	6,887	4,263	5,328.75	8,319
Totals.....	42	200,351	151,110	240,987	150,758	188,728.10	318,039
West coast South America to Europe:							
British.....	5	22,529	17,710	28,714	17,932	22,137.50	35,572
French.....	2	8,461	7,105	11,373	7,087	8,881.25	15,769
German.....	5	24,227	19,036	30,846	19,035	23,795.00	38,390
Greek.....	4	15,827	11,525	18,510	11,113	14,406.25	28,875
Italian.....	2	10,424	8,939	13,685	8,355	10,899.35	8,368
Spanish.....	2	8,391	6,911	11,407	7,123	8,638.75	9,048
Swedish.....	2	7,322	6,278	11,022	7,787	7,847.50	15,025
Yugoslav.....	3	12,474	9,848	15,530	9,825	12,310.00	24,065
Totals.....	25	110,655	87,352	141,097	88,257	108,915.60	175,112

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to east coast United States:							
British.....	9	40,765	33,970	55,401	34,613	\$42,363.90	71,106
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	4,842
German.....	1	1,167	998	1,423	813	1,247.50	1,023
Norwegian.....	5	13,297	10,961	16,906	10,275	13,576.25	27,529
Panamanian.....	1	4,897	4,014	6,386	4,067	5,017.50	8,872
Swedish.....	2	5,574	4,729	17,020	5,611	5,911.25	22,017
United States.....	15	63,785	52,413	90,520	53,122	65,310.70	145,348
Totals.....	34	134,190	110,451	194,971	112,477	137,759.60	280,737
West coast of United States to Europe:							
British.....	9	37,641	30,499	46,179	28,581	38,123.75	60,526
Danish.....	3	16,634	12,645	20,413	12,726	15,806.25	30,960
French.....	2	9,114	6,839	11,305	6,541	8,548.75	14,185
German.....	1	5,755	3,774	6,079	3,810	4,717.50	7,290
Italian.....	1	4,069	3,347	5,488	3,276	4,183.75	6,900
Norwegian.....	1	5,442	4,648	7,824	4,666	5,810.00	9,582
Totals.....	17	78,655	61,752	97,288	59,600	77,190.00	129,443
West coast South America to Cristobal, C. Z.:							
Colombian.....	4	1,257	1,196	1,948	1,210	1,493.10	1,161
Dutch.....	1	742	294	780	323	367.50	887
German.....	3	2,450	1,743	3,194	1,778	2,178.75	1,447
Peruvian.....	1	2,951	1,506	4,744	2,673	1,882.50	2,327
Totals.....	9	7,400	4,739	10,666	5,984	5,921.85	5,822
Australasia to Europe:							
British.....	13	104,745	74,582	120,467	75,518	93,227.50	79,619
French.....	1	5,629	4,343	7,007	4,402	5,423.75	3,725
Totals.....	14	110,374	73,925	127,474	79,920	98,656.25	83,344
Philippine Islands to east coast United States:							
Danish.....	1	2,967	1,920	3,177	1,931	2,400.00	5,300
Japanese.....	2	10,526	8,709	12,833	8,556	10,886.25	16,631
United States.....	3	17,711	14,102	20,993	13,098	17,627.50	26,905
Totals.....	6	31,204	24,731	37,008	24,585	30,913.75	48,836
West coast of United States to east coast of Central America:							
United States.....	4	9,239	8,276	13,504	8,281	10,296.75	4,907
West coast of Central America to Cristobal, C. Z.:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	2,015
German.....	2	1,710	1,444	2,612	1,434	1,231.20	.....
Totals.....	4	3,151	2,730	4,910	2,738	2,838.70	2,015
West coast of Central America to Europe:							
German.....	2	4,741	3,672	6,695	3,675	4,590.00	3,813
Norwegian.....	1	1,189	1,061	1,657	944	1,326.25	1,483
Totals.....	3	5,930	4,733	7,752	4,619	5,916.25	5,296
West coast of South America to east coast Canada:							
British.....	2	13,699	11,595	20,342	11,855	14,493.75	27,000
Australasia to east coast of Canada:							
British.....	2	8,301	6,571	10,862	6,586	8,213.75	4,553
Canadian intercoastal:							
British.....	1	4,186	3,322	5,439	3,336	4,152.50	6,005
West coast Canada to east coast United States:							
United States.....	1	4,465	3,637	5,869	3,637	4,546.25	6,246
West coast of United States to Cristobal, C. Z.:							
Panamanian.....	1	2,606	1,384	2,461	1,384	1,730.00	1,259
Central American intercoastal:							
Norwegian.....	1	987	964	1,581	977	1,184.40	190

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of Central America to east coast United States:							
British.....	1	1,748	1,489	2,478	1,448	\$1,861.25	1,159
West coast Central America to West Indies:							
Danish.....	1	1,723	1,464	2,406	1,475	1,240.56	.....
West coast South America to Egypt:							
Belgian.....	1	4,792	4,142	6,511	4,172	5,177.50	8,160
Australasia to east coast of United States:							
United States.....	1	4,881	3,374	5,428	3,374	4,217.50	6,638
Far East to east coast United States:							
United States.....	1	6,612	4,973	7,587	4,808	6,216.25	10,342
Balboa, C. Z., to east coast of United States:							
United States.....	1	240	230	513	229	172.80	.....
Balboa, C. Z., to Cristobal, C. Z.:							
Panaman.....	1	20	15	20	15	14.40	.....
Grand totals, Feb., 1929..	245	1,134,826	876,251	1,426,912	879,266	1,092,871.31	1,686,154
Grand totals, Feb., 1923..	230	1,252,318	964,811	1,575,146	969,195	1,210,075.51	1,947,132
Grand totals, Feb., 1927..	197	943,875	738,130	1,218,057	742,352	919,330.15	1,498,935

Executive Order.

By virtue of the authority conferred upon the President of the United States by the so-called Panama Canal Act approved August 24, 1912 (37 Stat. 560) and the so-called Air Commerce Act approved May 20, 1926 (44 Stat. 568), I hereby declare the Panama Canal Zone including the "three mile limit" to be a Military Airspace Reservation.

The following regulations, applying exclusively to private aircraft as herein described, will control aerial navigation in the Panama Canal Zone.

* * * * *

1. **Definitions.** The following shall be deemed to be state aircraft:

(a) Military and naval aircraft;

(b) Aircraft exclusively employed in state service, such as post, customs, and police. Every other aircraft shall be deemed to be a private aircraft.

All state aircraft, other than military, naval, customs and/or police aircraft shall be treated as private aircraft, and as such shall be subject to all the provisions of these regulations.

"AIRCRAFT" as used herein means "any contrivance now known or hereafter invented, used, or designed for navigation of or flight in the air, except a parachute or other contrivance designed for such navigation but used primarily as safety equipment."

"AIRSPACE" as used herein shall be construed to mean the air vertically overlying any area that may be designated.

2. Subject to the provisions of Executive Order No. 4971, dated September 28, 1928,¹ the control of civil aviation in the Panama Canal Zone shall be under the direction of the Governor of the Panama Canal.

3. Private aircraft shall be considered to have the nationality of the state in which it is duly registered, but no aircraft will be considered as validly registered in more than one state.

4. All private aircraft intending to enter the Panama Canal Zone or the airspace thereof shall carry in the custody of the aircraft commander:

(a) A certificate of registration, duly certified to according to the laws of the state in which it is registered;

(b) A certificate of airworthiness, as provided for by the laws of its country;

(c) Certificates of competency of the commander, pilots, engineers, and crew, as provided by the laws of its country, and in addition, the certificate shall set forth that the pilot has passed a satisfactory examination with regard to the provisions of regulations controlling aerial navigation in the Panama Canal Zone.

(d) If passengers are carried, a list of their names, addresses, and nationality.

(e) If carrying merchandise, the bills of lading, and manifests, and all other

¹Executive Order No. 4971 was published in THE PANAMA CANAL RECORD of October 24, 1928.

documents required by customs laws and regulations of the state from which the aircraft last cleared.

(f) Log books.

(g) If equipped with radio apparatus, the corresponding license.

5. Upon landing in the Panama Canal Zone, the private aircraft, its contents, crew, and passengers will be inspected by proper authorities designated by the Governor. This inspection will cover the papers of the aircraft including registrations, certificates, and licenses, prohibited articles, immigration, customs, police, and sanitary regulations in force or hereafter placed in force in the Panama Canal Zone.

6. (a) Every private aircraft engaged in air traffic in and through the airspace of the Panama Canal Zone will be required to enter, transit, and leave in accordance with prescribed routes, and to land at a designated airdrome in the Canal Zone, except in case of forced landing, which must be proved. If for any reason any private aircraft lands in the Panama Canal Zone at a point other than the airports designated, the aircraft commander shall immediately notify the nearest Panama Canal Zone authorities and hold himself, crew, passengers, and cargo at the point of landing until clearance for a take-off is granted by competent authority, except in an emergency which must be proved.

(b) Every private aircraft engaged in aerial navigation in and through the airspace of the Panama Canal Zone prior to its departure from the territorial jurisdiction of the Panama Canal Zone shall obtain such clearance as is required by the laws and/or regulations of the Canal Zone at the airdrome designated as point of departure for the Panama Canal Zone.

(c) All inspections, regulations, and administration of commercial aviation will be conducted at designated landing areas within the Panama Canal Zone.

(d) In addition to the provisions of this order, the Governor of the Panama Canal will prepare such other rules and regulations as may become necessary from time to time, governing air traffic, method of entering, leaving, and/or transiting the Canal Zone; designating prohibited areas, landing fields, signals, markings, and allied subjects. Such rules and regulations will be submitted to the Secretary of War for approval and will be forwarded by him to the Secretary of State for promulgation.

7. In special circumstances the Governor of the Panama Canal may suspend any or all aircraft operations over or within the Canal Zone.

8. *Prohibited articles.*

(a) The carriage by private aircraft of arms and munitions of war, and of such articles as are or may be prohibited by law and regulations of the United States in force in the Panama Canal Zone or of the state in which the aircraft is registered is prohibited.

(b) Express license and authority must be procured from authorized Panama Canal Zone officials for the carriage in private aircraft of arms for hunting or protection of crew and cargo, commercial explosives, photographic apparatus not boxed and sealed, and such other articles as the Governor of the Panama Canal may prescribe.

9. *Photography.* It is unlawful to use or to permit or procure the use of a private aircraft for the purpose of making any photograph, sketch, picture, drawing, map, or graphical representation of military and naval installations or equipment in the Panama Canal Zone, without first obtaining permission of the Governor of the Panama Canal and thereafter promptly and before any use is made thereof, submitting the product made to the same authority for censorship or such other action as he may deem necessary.

10. (a) Such services, supplies, and shelter as are or may be authorized by Army or Navy Regulations may be furnished to private aircraft when in the opinion of responsible officials measures for the defense of the Canal Zone will not be jeopardized or embarrassed thereby.

(b) Furnishing of other services, supplies, and shelter shall be by regulation promulgated by properly constituted authority.

(c) The Governor of the Panama Canal will regulate the use of military or naval landing areas as airports by private aircraft within the limits authorized by the War Department and the Navy Department to the extent which may be necessary for the maintenance of efficiency of installations for the defense of the Canal.

11. *Penalties.* Under authority of Section 10 of the Panama Canal Act (37 Stat. 560), any person violating any of the regulations promulgated herein or pursuant to this order shall be guilty of a misdemeanor, and on conviction in the District Court of the Canal Zone shall be punished by a fine not exceeding Five Hundred (\$500.00) Dollars, or by imprisonment not exceeding one year, or both, in the discretion of the Court.

CALVIN COOLIDGE

THE WHITE HOUSE,
February 18, 1929.

[No. 5047]

United States Intercoastal Traffic by Commodities for February, 1929.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for February, 1929, and the totals for February, 1928 and 1927. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise but they are indicative of the kind and quantity of the cargo in transit through the Canal. The figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Aeroplanes.....	28		28
Agricultural implements.....	1,989		1,989
Alfalfa meal.....		700	700
Ammonia.....	119		119
Asbestos.....	13		13
Asphalt.....	31	82	113
Automobiles.....	1,158	40	1,198
Automobile accessories.....	51	93	144
Bamboo.....		34	34
Beans.....	58	5,856	5,914
Borax.....		665	665
Bricks.....	179		179
Burlap.....	102	74	176
Calcium carbide.....	63		63
Camphor.....		221	221
Canned:			
Fish.....	759	9,822	10,581
Fruit.....	149	26,014	26,163
Meat.....	68		68
Milk.....	165	408	573
Soup.....	676		676
Vegetables.....	240	6,076	6,316
Miscellaneous.....	5,866	4,842	10,708
Celite filtered.....		705	705
Cement.....	706		706
Chalk.....	23		23
Charcoal.....	93		93
Chemicals.....	1,867	917	2,784
China and fire clay.....	299		299
Coal.....	2,100		2,100
Cocoanuts.....	30	106	136
Coffee.....	16	227	243
Cold storage:			
Cheese.....		13	13
Eggs.....		30	30
Lard.....	108	20	128
Meat.....		195	195
Other.....	161		161
Confectionery.....	621		621
Cork.....	165		165
Cotton.....	342	1,864	2,206
Cottonseed oil cake.....	28		28
Cyanide.....	83		83
Drugs.....	744	38	782
Earthenware.....	200		200
Explosives.....	162		162
Fertilizer.....		100	100
Flour.....	901	4,645	5,546
Fruit:			
Dried.....		10,684	10,684
Fresh.....	129		129
Furniture.....	518		518
General.....	52,350	10,668	63,018
Glass and glassware.....	1,534	22	1,556
Glue.....	28	157	185
Granite.....	24		24
Hair.....	13	11	24
Hardwoods.....	3,300	160	3,460
Hay.....		705	705
Hemp.....	22	1,435	1,457
Honey.....		67	67
Infusorial earth.....		350	350
Ink.....	95		95
Jute.....		66	66
Linoleum.....	1,216		1,216
Liquors.....	101		101

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Lumber.....	1,094	147,628	148,722
Malt.....	80		80
Manufactured goods:			
Iron and steel.....	100,404	120	100,524
Machinery.....	4,172	952	5,124
Railroad material.....	4,866		4,866
Tinplate.....	10,165		10,165
Textiles.....	4,882	92	4,974
Miscellaneous.....	6,801	6,095	12,896
Matches.....	170	14	184
Metals:			
Antimony.....		177	177
Copper.....	37	6,295	6,332
Iron.....	1,360	520	1,880
Scrap.....	92	207	299
Zinc.....	30	1,256	1,286
Other.....		40	40
Milk, powdered.....	90	314	404
Molasses.....	151		151
Nuts.....		329	329
Oats.....	26		26
Oils:			
Cocconut.....	30		30
Cottonseed.....	14		14
Crude.....	8,397	26,877	35,274
Gas oil, fuel oil.....		56,414	56,414
Gasoline, benzine, and naphtha.....		161,338	161,338
Kerosene.....		20,118	20,118
Lubricating and greases.....	2,168	628	2,796
Olive.....	13		13
Vegetable.....	575		675
Wood.....	2		2
Ores:			
Magnesite.....		1,257	1,257
Manganese.....		165	165
Other.....	58		58
Paint.....	487	33	520
Paper.....	3,768	3,074	6,842
Paper pulp.....		3,080	3,080
Paper roofing.....	11		11
Peanuts.....	121	80	201
Peas.....		50	50
Phosphates.....	3,706		3,706
Porcelain.....	50	980	1,030
Rags.....	20	639	659
Rice.....	830	244	1,074
Rope.....	151	12	163
Rosin.....	694		694
Rubber:			
Manufactured.....	1,339	147	1,486
Scrap.....		80	80
Salt.....	133		133
Seeds:			
Grass.....		87	87
Hemp.....		25	25
Other.....		160	160
Shells.....	1,665		1,665
Silk.....		23	23
Skins and hides.....	13	1,614	1,627
Slate.....	126		126
Soap.....	2,094	83	2,177
Soda.....	65		65
Soda, ash.....	2,037		2,037
Soda, bicarbonate.....	365		365
Soda, caustic.....	487		487
Starch.....	19		19
Sugar.....	278	6,170	6,448
Sulphur.....	12,774		12,774
Syrup.....	268		268
Talc.....	65	84	149
Tallow.....		117	117
Tar.....	132		132
Tea.....	110	37	147
Tobacco.....	1,420	44	1,464
Turpentine.....	58		58
Vegetables.....		62	62
Waste.....	21	679	700
Wax.....	195		195
Wheat.....		535	535
Wine.....	72	170	242
Wool.....		2,049	2,049
Totals, February, 1929.....	258,944	539,256	798,200
Totals, February, 1928.....	210,677	580,239	790,916
Totals, February, 1927.....	229,499	550,844	780,343

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., March 20, 1929. No. 33.

Canal Traffic During First Fifteen Days of March.

During the first 15 days of March, 271 commercial vessels and 7 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,194,314.32, and on the launches, \$70.50, or a total tolls collection of \$1,194,384.82.

The daily average of transits of commercial vessels was 18.06 and the average tolls collection, \$79,620.95. The average amount of tolls paid by each of the commercial transits was \$4,407.06, as compared with \$4,288.58 for the first 15 days of February. The total number of commercial transits for the first 15 days of March was 14 fewer than the number passing through in the first 15 days of February, while the tolls collected fell short by almost \$28,000.00 of the amount collected during the first 15 days of February.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 8½ months of the current fiscal year, with the daily averages of transits and tolls:

	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July	509	\$2,199,083.19	16.41	\$68,034.94
August	526	2,199,069.31	16.97	70,937.72
September	487	2,111,230.56	16.23	70,374.35
October	557	2,274,945.30	17.97	73,385.33
November	527	2,225,937.48	17.57	74,197.91
December	579	2,443,029.39	18.67	78,807.39
January	603	2,502,815.12	19.45	80,735.97
February	522	2,211,961.20	18.64	78,998.62
March (first 15 days)	271	1,194,314.32	18.06	79,620.95
Totals	4,581	19,272,385.87	17.75	74,699.17

Large Shipment of Refrigerated Apples.

The steamship *Canonesa* transited the Canal on March 7, 1929, en route from Portland and Seattle to Hamburg, Rotterdam, and London, with a full cargo of refrigerated apples, aggregating 4,486 long tons. This is believed to be the largest shipment of apples carried by any vessel transiting the Canal to date. Of this cargo, 3,619 tons were destined to Hamburg, 576 tons to Rotterdam, and 291 tons to London.

The *Canonesa* is operated by the Furness Prince Line.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference. It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

MOVEMENTS OF OCEAN VESSELS. *Week ending at midnight, March 16, 1929.*

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	To—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.			Gross.	Net.			
Pasaden	9	1 15	10	6 05	10	18 43	10	19 41	German	Hamburg-American Line	450	7	57	2 19	Hamburg, Germany	Valparaiso, Chile	General	4,387	7,681	5,234
Jadden	9	22 40	10	6 33	10	21 03	11	11 52	American	Kerr S. S. Co., S. B.	410	5	54	0 23	Baltimore, Md.	Shanghai, China	Cass oil, general	6,106	7,496	5,823
Comibank	9	23 55	10	7 50	10	21 00	11	3 48	British	Andrews W. & Co.	410	5	54	0 23	New York, N. Y.	Taku Bar, China	Cass oil, general	6,920	7,097	4,993
Sunbeam	10	00 10	10	8 55	10	21 55	10	22 53	American	Sun Oil Co.	423	3	59	2 19	Philadelphia, Pa.	Los Angeles, Calif.	Ballas	834	7,709	5,562
Jamaica	3	9 45	10	9 35	10	21 04	10	22 19	British	Pacific Steam Nav. Co.	423	0	34	0 14	Cristobal, C. Z.	Champerie, Guat.	General	834	1,187	622
V-4	8	2 15	10	9 40	10	23 08	11	1 17	American	U. S. Navy	381	0	35	0	High seas	Buenaventura, Col.	General	271	1,132	741
Manizales	6	23 50	11	05	10	23 08	11	23 25	German	North German Lloyd	216	5	32	0 13	Cristobal, C. Z.	San Francisco, Cal.	Ballas	558	3,689	2,234
Limon	10	3 40	10	10 55	10	23 17	11	1 17	American	United Fruit Co.	330	0	44	0 18	Port Limon, C. R.	Cruz Grande, Chile	General	7,481	4,973	2,234
Lebre	9	13 30	10	12 35	10	23 15	11	1 58	American	Ore S. S. Corp.	549	0	72	0 23	Baltimore, Md.	Kobe, Japan	General	6,772	5,928	4,381
India Maru	9	22 10	10	13 45	11	1 13	11	2 40	Japanese	Kawasiki Kisen Kaisha	385	0	51	0 23	Hull, England					
Montgomery	10	1 00	10	15 15	11	2 10	11	3 48	American	Isabrian S. S. Lines	424	2	56	2 35	Baltimore, Md.	Singapore, St. Sett.	General	8,180	7,611	5,450
City	10	1 10	10	16 40	11	3 04	11	4 35	British	Kerr S. S. Co.	425	0	58	0 21	New York, N. Y.	Colombo, C. yon	General	3,281	8,218	6,037
Silverbelle	10	2 40	10	17 40	11	3 55	11	4 49	American	Amer-Hawaiian Line	471	1	59	1 20	Boston, Mass.	Portland, Oregon	General	4,485	9,032	6,538
Nebraska	10	6 15	10	18 35	11	5 07	11	6 16	Greek	G. Z. Tyndaropulo	390	0	53	0 17	Barry, England	Arica, Chile	Ballas	3,000	4,709	3,623
Zachari	10	7 15	10	23 35	11	6 15	11	7 25	British	Burrell & Son	376	0	52	0 18	Cardenas, Cuba	Los Angeles, Calif.	Sugar	7,557	11,575	7,648
Strathorne	10	8 28	11	6 25	11	18 30	11	20 13	British	Anglo-Mexican Pet. Co.	400	0	62	0 26	Caracas, D. W. I.	Atafogafu, Chile	Fuel oil	8,522	6,347	4,453
San Zotic	10	19 24	11	6 25	11	19 45	11	21 19	British	Imperial Oil Co., Ltd.	510	0	68	0 27	Halifax, N. S.	Talara, Peru	Ballas	11,575	7,648	3,893
Vic-olette	10	8 30	11	9 35	11	20 45	11	22 00	American	Panama R. R. S. S. Line	251	0	43	0 20	New York, N. Y.	Guayquil, Ecuador	General	1,149	2,873	1,776
Buenaventura	11	10 33	11	21 00	11	22 00	11	23 00	American	U. S. Navy	231	0	21	10	Cristobal, C. Z.	Balboa, C. Z.				
S-14	11	10 33	11	21 00	11	22 00	11	23 00	American	U. S. Navy	231	0	21	10	Cristobal, C. Z.	Balboa, C. Z.				
S-16	11	10 33	11	22 25	11	22 25	11	23 25	American	U. S. Navy	231	0	21	10	Cristobal, C. Z.	Balboa, C. Z.				
S-17	11	10 33	11	22 25	11	22 25	11	23 25	American	U. S. Navy	231	0	21	10	Cristobal, C. Z.	Balboa, C. Z.				
Calmar	11	3 45	11	11 55	11	22 23	11	23 4	American	Calmar S. S. Corp.	384	6	51	2 28	Baltimore, Md.	Seattle, Wash.	Steel, general	8,522	6,347	4,453
Atlanta City	11	16 43	11	17 00	12	2 14	12	8 08	American	Isabrian S. S. Lines	425	0	56	0 20	Mobile, Ala.	Darien, China	(⁶)	8,261	7,611	5,450
Port Victor	11	18 12	12	6 25	12	21 50	12	22 00	British	Comth & Dom. Line	473	0	58	0 25	New York, N. Y.	Alelaide, A. S. relia	Cass oil, general	2,597	9,336	6,682
Persophone	11	23 05	12	7 25	12	21 50	13	19 30	Danish	Baltic-Amer. Pet. Co.	469	0	63	0 20	Hamburg, Germany	Los Angeles, Calif.	Ballas	9,336	6,338	3,638
Chetopa	12	1 05	12	8 55	12	22 55	13	00 40	American	Charles Nelson & Co.	324	0	46	2 20	Baltimore, Md.	Los Angeles, Calif.	General	3,289	3,984	2,628
Liverpool	12	2 50	12	10 23	12	23 00	13	4 11	Japanese	Kokuso Kisen Kaisha	385	0	51	0 23	Tampico, Mexico	Kobe, Japan	(⁷)	6,705	5,919	4,400
Sanfaro	11	13 25	12	11 50	12	23 48	13	1 25	American	Ore S. S. Corp.	450	1	57	0 20	Norfolk, Va.	Cruz Grande, Chile	Ballas	7,838	5,139	3,837
Bolton Castle	12	10 18	12	13 20	13	00 58	13	4 30	British	James Chambers & Co.	424	0	53	0 26	New York, N. Y.	Shanghai, China	General	6,360	6,537	4,837
Gen. Wm. M. Graham	12	18 15	12	18 15	12	19 39	13	15 50	American	U. S. Army	156	0	32	0	Cristobal, C. Z.	Gatun, C. Z.				
Santa Maru	12	17 20	13	6 05	13	14 47	13	15 50	Japanese	Casaka Shosen Kaisha	430	0	56	0 21	Buenos Aires, Arg.	Kobe, Japan	General, etc.	4,088	7,875	5,821
Asaka Maru	12	19 35	13	7 20	13	15 25	13	16 25	Japanese	Nippon Yusen Kaisha	440	0	57	0 25	Baltimore, Md.	Kobe, Japan	General	6,269	8,139	5,389
Curea	13	6 40	13	8 45	13	16 44	13	17 45	Panamanian	Grace Line	403	0	52	4 15	Mobile, Ala.	Toecapilla, Chile	Ballas	6,834	4,897	3,837
Bushnell	12	13 45	13	8 50	13	16 36	13	17 45	American	U. S. Navy	300	0	45	8	High seas	Balboa, C. Z.				
* Tanker.										* Motor ship.										
										* Submarine.										
										* Mine planter.										
										* Submarine tender.										
										* Steel, cotton, and general.										
										* Zinc, cotton, and lubricating oil.										

* Tanker.

* Motor ship.

* Submarine.

* Mine planter.

* Submarine tender.

* Steel, cotton, and general.

* Zinc, cotton, and lubricating oil.

City of Cam- bridge.....	12	19	50	13	11	55	13	18	28	13	19	45	British	Bucknell Line.....	454	0	58	0	27	0	New York, N. Y.	Fremantle, Aust'lia	General	10,944	9,183	6,954
Fella.....	12	15	35	13	9	34	13	19	13	13	20	45	Italian	Nav. Libera-Tristina.....	433	0	55	0	18	4	Tristate, Italy.....	Vancouver, B. C.	General	1,821	7,784	6,035
West	13	7	15	13	12	50	13	20	35	14	2	35	American	Roosevelt S. S. Co., S. B.	409	6	54	2	24	8	New York, N. Y.	Fremantle, Aust'lia	(*)	1,947	6,044	4,705
Loquasuek.....	13	7	45	13	14	00	13	21	30	13	22	55	Chilean	South American Line.....	421	0	56	2	25	0	New York, N. Y.	Valparaiso, Chile.	General	2,854	7,764	4,910
Aconagua.....	13	9	10	13	15	45	13	22	25	13	23	30	American	Amer.-Hawaiian Line.....	407	7	53	7	20	0	New York, N. Y.	Los Angeles, Calif.	General	3,822	7,098	5,063
Panama	13	13	15	13	16	45	13	23	36	14	1	30	American	Lockhart Line.....	445	0	58	0	25	0	Boston, Mass.	Portland, Oreg.	General	6,012	8,995	6,375
Robert	13	16	20	13	18	10	14	2	00	14	11	38	Greek	Reithymis & Kulafdis	410	7	54	0	15	0	Gibraltar	Arica, Chile.	Ballast	6,221	4,482	4,782
Atlantico	12	21	45	14	6	49	14	14	39	14	18	40	British	W. Ruchman & Co.	375	0	52	6	14	5	Lyce, England	Los Angeles, Calif.	Ballast	6,009	4,691	4,700
Vinmoor	16	10	25	14	6	14	14	14	43	14	16	39	American	Panama Mail S. S. Co.	251	0	43	0	16	3	Orizaba, C. Z.	San Francisco, Cal.	General	1,467	2,290	1,459
Coquima	13	17	47	14	6	35	14	16	10	11	17	25	Norwegian	A. F. Klavens & Co.	376	6	54	0	24	0	Pt. Tampa, Fla.	Shanghai, China.	(*)	7,054	6,264	4,706
Silvestad	13	21	30	14	7	50	14	22	12	14	23	47	American	American Oil Co.	416	8	56	1	22	0	Baltimore, Md.	Los Angeles, Calif.	Ballast	6,765	4,759	4,759
Geo. W.	14	09	35	14	9	10	14	17	00	14	18	20	British	Wessel, Duval & Co.	419	0	52	0	15	0	Baltimore, Md.	Iquique, Chile.	Ballast	5,634	4,172	4,172
Barnes	14	4	10	14	10	35	14	18	40	14	19	40	American	Gulf-Pacific Line.....	321	0	45	0	24	0	Galveston, Texas	Seattle, Wash.	General	4,421	3,984	2,617
Induna	14	11	10	14	11	45	14	19	40	15	4	47	British	Can. Nat. Steamship.	490	0	52	0	17	2	Halifax, N. S.	Dunedin, N. Z.	General	4,325	6,142	4,354
Point	12	9	15	14	12	01	14	19	46	15	3	57	Colombian	National Navigation Co.	107	4	22	0	9	1	Orizaba, C. Z.	Buenaventura, Col.	General	407	238	163
Canadian	14	9	25	14	10	03	15	00	46	15	00	46	American	U. S. Navy	538	0	44	0			Hingham	Bahama, C. Z.	Ballast		3	3
Challenger	14	15	30	15	7	22	15	17	26	15	18	20	British	San Blas Develop. Co.							Orizaba, C. Z.	Gatun, C. Z.	Ballast			
Calveson	14	15	30	15	7	22	15	17	26	15	18	20	British	Can. Nat. Steamship	493	0	52	0	20	0	Halifax, N. S.	Brisbane, Australia	General	2,799	5,833	4,058
Trinidad	13	23	30	15	6	15	15	25	31	15	16	40	American	Norton, Lyle & Co.	419	0	53	0	24	4	New York, N. Y.	Seattle, Wash.	General	10,597	8,310	6,005
Explorer	14	7	55	15	7	22	15	17	26	15	18	20	British	Furness, Withly & Co.	130	0	51	6	21	0	Glasgow-England	Vancouver, B. C.	General	1,347	9,633	6,998
Handy	14	11	00	15	7	40	15	19	15	16	14	00	Norwegian	Fred Olsen & Co.	452	0	59	5	23	9	Oslo, Norway	Vancouver, B. C.	General	6,148	9,082	6,140
P.C. C	14	18	20	15	9	38	15	17	43	15	19	00	American	Grace Line.....	381	0	51	2	19	8	New York, N. Y.	San Antonio, Chile	General	2,631	5,584	3,838
Benjamin	15	16	15	15	16	30	15	23	18	16	3	00	British	Anglo-Mexican Pet. Co.	197	0	53	4	18	0	Sydney, Eng.	Marine, Calif.	Ballast		5,967	4,069
Franklin	15	17	45	15	18	01	16	1	2	16	9	41	American	San Oil Co.	43	6	35	0	22	0	Cheser, Pa.	Los Angeles, Calif.	Ballast	643	9,610	6,396
Santa Cruz	15	19	15	15	19	50	16	2	28	16	22	2	American	U. S. Army	436	0	38	0	21	0	New York, N. Y.	San Francisco, Cal.	Army's supplies	1	183	742
San	14	15	45	16	6	05	16	16	3	16	17	47	British	R. J. North, S. S. Co.	439	0	33	0	12	0	Orizaba, C. Z.	Buenaventura, Col.	General	1	183	742
Tibureio	16	00	27	16	6	30	16	17	3	16	18	30	American	R. J. North, S. S. Co.	439	0	33	0	12	0	New York, N. Y.	Los Angeles, Calif.	Ballast		7,491	5,108
St. Michel	16	2	40	16	7	22	16	21	1	17	1	30	American	Williams S. S. Line.	115	0	53	0	21	0	Baltimore, Md.	Tacoma, Wash.	General	4,503	7,731	5,815
Barth	16	2	40	16	7	22	16	21	1	17	1	30	American	Reid & Smith Line.	101	6	54	3	14	0	Marine, Calif.	Vancouver, B. C.	Ballast		6,621	4,916
Larry Doherty	16	7	18	16	8	30	16	21	2	16	21	2	British	Avedo Petroleum Co.	305	6	51	2	12	0	Artha, D. W. I.	Bilboa, C. Z.	Ballast		8,438	9,200
Willzipo	16	7	45	16	9	28	16	22	0	16	21	2	American	Tampa Inter-ocean Co.	447	0	56	0	23	0	Beet, Grande, Fla.	Marilla, P. I.	General	8,438	9,200	6,842
Stenness	16	12	35	16	12	45	16	23	54	16	23	58	American	General Petroleum Co.	460	6	62	7	19	0	New York, N. Y.	Los Angeles, Calif.	Ballast	9,000	9,700	6,842
San C. S. O.	16	10	33	16	14	05	16	23	58	17	00	55	Norwegian	Halle & Petersen	440	9	58	4	21	0	Hammer, Norway	Seattle, Wash.	General		5,038	3,533
Independence	16	10	33	16	14	05	16	23	58	17	00	55	Norwegian	Roland Line.....	365	0	47	0	21	0	Hammer, Norway	Champerie, Guat.	General	834	5,038	3,533
Broad Arrow	16	14	00	16	17	25	17	30	58	17	2	00	German	Colombian Mar. Co.	277	0	37	0	13	8	New York, N. Y.	Buenaventura, Col.	General	567	1,718	1,167
Frontenac	16	14	10	16	18	30	17	2	37	17	3	55	American	Redwood Line.....	386	8	52	0	20	0	Mobile, Ala.	San Francisco, Cal.	General	5,012	5,795	4,167
Erft	16	18	10	16	18	30	17	2	37	17	3	55	American	Quaker Line.....	419	5	54	2	20	0	Philadelphia, Pa.	Portland, Oreg.	General	4,950	6,755	4,873
Heinrich Arp.	16	18	10	16	18	30	17	2	37	17	3	55	American	Quaker Line.....	419	5	54	2	20	0	Philadelphia, Pa.	Portland, Oreg.	General	4,950	6,755	4,873
D. et.	16	19	18	16	19	30	17	3	24	17	5	09	American	Quaker Line.....	419	5	54	2	20	0	Philadelphia, Pa.	Portland, Oreg.	General	4,950	6,755	4,873
Orion	16	19	18	16	19	30	17	3	24	17	5	09	American	Quaker Line.....	419	5	54	2	20	0	Philadelphia, Pa.	Portland, Oreg.	General	4,950	6,755	4,873

* Phosphates, cotton, and lubricating oil.

* General and automobiles.

* To Balboa, C. Z. for dry-docking.

* Transport.

* Launch.

* Cruiser.

* Motor ship.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	To—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Pilar de Larrinaga	9	6.50	10	2.51	10	10.30	10	12.15	British	Larrinaga & Co.	445.0	55.0	25.6	Vancouver, B. C.	Rotterdam, Holland	Grain	9,588	7,643	5,562
Port Antonio	9	23.45	10	2.58	10	10.20	12	21.25	Norwegian	United Fruit Co.	235.0	33.6	15.1	Puntarenas, C. R.	Port Limon, C. R.	General	375	1,326	725
Massmar	9	7.00	10	4.19	10	11.25	10	11.25	American	Calmar S. S. Corp.	385.0	51.2	25.7	Vancouver, B. C.	Boston, Mass.	Lumber	6,042	6,242	4,471
Edward Luckenbach	9	16.40	10	5.36	10	13.05	10	13.05	American	Luckenbach Line	435.0	57.2	29.0	Los Angeles, Calif.	Philadelphia, Pa.	General	6,343	8,543	6,429
Comitche	10	2.05	10	0.25	10	14.30	10	22.15	British	Slaw, Stirling & Albion	500.0	62.3	27.3	Wellington, N. Z.	London, England	Frozen, general	3,719	12,821	9,507
Felre	10	00.05	10	7.28	10	15.30	10	19.50	Italian	Nav. Libera-Fristina	136.6	55.4	26.0	Vancouver, B. C.	Triste, Italy	General	9,000	7,795	6,041
Osiris	10	00.45	10	8.52	10	16.40	10	16.40	American	Hamburg-American Line	376.2	51.7	24.5	Vancouver, B. C.	Hamburg, Germany	General	5,891	5,788	4,023
Guayquil	10	4.00	10	9.51	10	17.55	11	15.45	American	Panama R. R. S. S. Line	251.0	43.6	15.6	Guayaquil, Ecuador	New York, N. Y.	General	8,117	2,874	1,944
Ucayali	10	5.00	10	10.05	10	17.55	10	19.40	Peruvian	Peruvian Line	374.7	46.0	20.3	Ciudad, Peru	Cristobal, C. Z.	Copier, cotton	2,018	4,406	2,403
Chelatra	10	9.00	10	11.25	10	19.40	10	19.40	Greek	Cassos Steam Nav. Co.	368.5	52.6	24.2	Iquique, Chile	Azores	Nitrates	3,810	4,715	3,384
Vindland	10	9.45	10	13.05	10	21.20	10	21.20	Norwegian	Scand.-So. Pacific Co.	368.5	52.7	24.6	Iquique, Chile	London, England	General	7,000	5,413	3,965
Osborn	10	6.55	10	14.04	10	22.10	10	22.10	Norwegian	A. F. Klavness & Co.	471.8	64.4	27.7	San Francisco, Cal.	Land's End, Eng.	Gasoline	12,500	9,562	6,604
Holmden	10	12.10	10	14.45	10	23.25	10	23.25	American	Moore & McCormack	399.0	51.0	27.2	Iquique, Chile	Charleston, S. C.	Nitrates	7,700	6,190	4,458
Trader	10	12.30	11	5.36	11	14.35	11	14.35	Swedish	Ore S. S. Corp.	561.0	72.2	33.6	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,800	15,590	4,498
Americaland	10	12.30	11	5.36	11	14.35	11	14.35	Swedish	Ore S. S. Corp.	561.0	72.2	33.6	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,800	15,590	4,498
Birmingham	10	12.53	11	6.43	11	15.50	11	15.50	American	Isthmian S. S. Lines	395.5	55.0	25.6	N. Westminster, B. C.	Newark, N. J.	Lumber	7,122	7,304	5,188
Snaweeo	11	1.00	11	7.05	11	16.40	11	16.40	American	Transmarine Lines	324.0	46.2	23.0	Seattle, Wash.	New York, N. Y.	Lumber	4,000	3,984	2,612
Wirral	10	14.10	11	7.50	11	17.45	11	18.50	British	J. Edgar & Co.	385.0	52.0	23.0	Rahall, N. Guinea	New York, N. Y.	(¹⁹)	7,191	5,131	3,664
S-9	10	16.45	11	9.17	11	18.10	11	18.10	Panamanian	U. S. Navy	471.0	63.5	27.0	Bahama, C. Z.	Cristobal, C. Z.	Gasoline	12,771	9,178	6,450
Brunswick	11	5.20	11	10.13	11	18.58	11	18.58	American	Atlantic Refining Co.	509.7	70.3	29.4	Los Angeles, Calif.	Hamburg, Germany	Gasoline	17,234	12,514	8,427
Marv Ellen	11	5.20	11	10.13	11	18.58	11	18.58	American	The Texas Co.	509.7	70.3	29.4	Los Angeles, Calif.	Baltimore, Md.	Gasoline	17,234	12,514	8,427
O'Neil	11	5.20	11	10.13	11	18.58	11	18.58	American	Grace Line	360.2	51.6	25.6	Talcahuano, Chile	New York, N. Y.	General	3,928	5,726	4,083
Santa Teresa	11	4.40	11	13.12	11	22.06	12	1.05	Japanese	Kokosai Kisen Kaisha.	385.0	51.0	27.0	Victoria, B. C.	Groeca	Wheat	7,617	6,209	4,763
Kofuku Maru	11	5.30	11	13.48	11	22.00	11	22.00	American	Vacuum Oil Co.	425.0	57.0	26.7	Los Angeles, Calif.	Baltimore, Md.	Gasoline	9,460	7,502	4,982
Birkenhead	10	20.15	11	14.26	11	22.40	12	7.25	British	Can. Nat. Steamships	430.0	56.2	20.0	Sydney, Australia	Halifax, N. S.	General	2,578	7,680	5,518
Crusier	11	4.00	11	21.25	12	9.25	12	12.53	Japanese	Nippon Yusen Kaisha	445.0	58.0	24.7	Manila, P. I.	New York, N. Y.	General	9,289	8,015	5,716
Tatsuma Maru	11	20.20	11	22.35	12	9.50	12	12.53	Colombian	National Navigation Co.	107.0	22.9	9.0	Buenaventura, Col.	Cristobal, C. Z.	(¹⁹)	153	238	163
Cauca	11	6.45	11	22.50	12	10.30	12	10.30	American	Dimon S. S. Corp.	410.5	54.0	25.1	Seattle, Wash.	New York, N. Y.	Lumber	7,464	6,624	4,883
Pacific Fir	11	13.15	12	1.34	12	12.05	12	12.05	Swedish	Can.-Amer. Ship. Co.	418.5	55.1	29.0	Portland, Ore.	Belfast, Ireland	(²⁰)	9,569	7,274	5,213
Pajala	11	7.00	12	6.14	12	14.25	14	00.05	American	U. S. Navy	520.0	65.2	26.0	San Diego, Calif.	Philadelphia, Pa.	Lumber, general	7,426	6,433	4,668
Langley	12	4.50	12	7.24	12	16.00	12	16.00	American	Munson McCork'k Line	400.7	54.2	26.2	Seattle, Wash.	New York, N. Y.	Lumber, general	9,070	9,027	6,539
Mystic	12	8.00	12	9.10	12	17.20	12	17.20	American	Luckenbach Line	471.1	59.2	27.7	Portland, Ore.	Boston, Mass.	Lumber, general	9,070	9,027	6,539
Paul Luckenbach	12	8.00	12	9.10	12	17.20	12	17.20	American	Luckenbach Line	471.1	59.2	27.7	Portland, Ore.	Boston, Mass.	Lumber, general	9,070	9,027	6,539

¹⁹ Wheat, lumber, and general.²⁰ Coffee, gold, and platinum.²¹ Copra and chrome ore.²² Airplane carrier.²³ Submarine.²⁴ Motor ship.

Bantu	12	9 15	12	10 10	12	23 30	American	Norton, Lilly & Co.	369 0	47 0	25 3	Tooeppia, Chile	Savannah, Ga.	Nitrates	5,969	4,607	3,032
Sedgpool	12	11 50	12	12 37	12	21 15	British	Sir R. Roper & Co.	475 3	55 5	23 6	Vancouver, B. C.	Antwerp, Belgium	Wheat	8,390	6,641	4,812
Mexican	12	11 25	12	12 34	12	22 45	American	Amer-Hawaiian Line	412 3	57 2	23 3	Portland, Ore	Boston, Mass	Lumber, general	10,000	9,258	6,944
Charles	12	12 30	12	13 47	12	23 30	American	Arrow Line	409 7	54 2	21 9	Portland, Ore	Savannah, Ga.	Lumber	7,104	6,993	4,915
Christenson	12	13 00	12	15 24	13	10 35	British	Furness Pacific Line	450 4	58 0	28 2	Vancouver, B. C.	Glasgow, Scotland	General	7,503	8,529	5,993
London	12	13 00	12	22 30	13	8 55	American	United Fruit Co.	315 2	64 2	22 0	San Francisco, Cal.	Port Limon, C. R.	Coffee, general	882	3,496	2,111
San Mateo	12	18 46	13	2 17	13	11 50	American	Standard Oil Co. of N. Y.	468 3	62 7	28 0	Los Angeles, Calif	Providence, R. I.	(23)	12,013	9,811	6,985
Levant Arrow	12	14 30	13	3 15	13	12 58	British	Federal Steam Nav. Co.	520 0	64 2	22 0	Tinian, N. Z.	London, England	General	6,655	12,930	9,300
Cumberland	12	1 45	13	4 00	13	14 10	Danzig	Waried Tanks, Rhodes	470 2	63 2	25 1	Talara, Peru	Hamburg, Germany	Naphtha	11,251	9,001	5,927
Chateau	11	15 07	13	6 18	13	15 10	American	U. S. Army	448 0	58 0	24 0	Honolulu, T. H.	Brooklyn, N. Y.	Army supplies	164		
Royal Arrow	13	5 00	13	7 34	13	16 30	American	Standard Transp. Co.	476 6	62 7	26 6	Los Angeles, Calif	New York, N. Y.	Gasoline	11,180	9,699	6,895
Thurston	13	5 00	13	7 34	13	18 00	American	U. S. Navy	420 2	44 0		Balboa, C. Z.	Cristobal, C. Z.	Nitrates	10,100	6,591	1,730
Talithon	13	5 00	13	7 34	13	18 50	Norwegian	G. & F. H. Olsen	430 2	53 9	28 2	Iquique, Chile	New Orleans, La.	Gasoline	8,800	6,751	4,795
W. L. Steed	13	6 30	13	8 35	13	20 63	American	Huachuca Petroleum Co.	416 8	56 1	27 0	Los Angeles, Calif	Baltimore, Md	General	6,530		
Minnesota	13	6 40	13	9 30	13	21 40	French	French Line	412 3	50 6	25 1	Vancouver, B. C.	Hayre, France	General	8,017	6,583	4,626
Rapet	13	12 45	13	13 14	13	22 40	German	North German Lloyd	393 4	54 3	26 0	Buenaventura, Col.	Breinen, Germany	General			
Gen'l Wm. M.	13		13	13 17	13	30	American	U. S. Army	160 2	32 0		Pedro Miguel, C. Z.	Cristobal, C. Z.	Nitrates	7,400	5,798	4,118
Graham	13	16 00	13	5 00	14	12 35	British	Anglo-Chilean Nit. Co.	400 0	53 0	21 2	Tooeppia, Chile	Pensacola, Fla.	Wheat	8,556	6,840	5,014
Woodfield	14	2 00	14	6 15	14	14 18	Swedish	Axel Brostrom & Son	430 2	54 2	25 0	Vancouver, B. C.	Sunderland, Eng.	General	458	1,183	742
Sagoland	14	5 30	14	7 16	14	15 45	Dutch	Royal Neth. S. S. Co.	301 9	52 0	26 0	Guayaquil, Ecuador	Cristobal, C. Z.	Crude oil	7,351	5,403	3,753
Boralt	14	7 15	14	8 20	14	16 25	American	Gladstone Transp. Co.	391 9	52 0	26 0	Los Angeles, Calif	Baltimore, Md.	General	6,598	5,463	3,960
Dartford	14	8 05	14	8 52	14	17 10	British	P. & W. Ritson	400 0	51 8	24 0	Corral, Chile	Liverpool, Eng.	General	2,731	3,818	2,663
Cherry Branch	14	5 48	14	10 31	14	17 58	Panama	Panama Mail S. S. Co.	266 9	45 9	21 0	San Francisco, Cal.	Cristobal, C. Z.	(24)	6,284	12,442	8,451
City of	14	10 50	14	11 33	14	19 45	British	Shaw, Savill & Albion	500 9	63 3	25 0	Bluff, N. Z.	London, England	Frozen, general			
Panama	14	14 50	14	19 09	15	11 30	British	Anglo-Mexican Pet. Co.	335 3	55 2	29 0	Antofagasta, Chile	Curacao, D. W. I.	Ballast	6,741		4,345
San Llan-	14	20 15	15	5 27	15	13 58	Italian	Italian-Chilean Line	442 1	72 7	26 0	Tooeppia, Chile	New York, N. Y.	Copper ore	7,997	7,004	4,849
berto	15	00 20	15	6 35	15	15 55	American	Ore S. S. Corp.	550 3	72 2	34 0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	20,810	15,476	4,354
Impero	15	09 20	15	7 12	15	16 40	Norwegian	Grace Line	417 8	54 4	29 6	Magallanes, Chile	Charleston, S. C.	Nitrates	9,702	7,176	5,219
Bethore	15	23 00	15	8 15	15	16 55	British	Lamport & Holt	434 9	55 3	24 4	Vancouver, B. C.	Liverpool, Eng.	Metal, apples	4,165	7,594	4,836
Tobama	15	1 30	15	9 33	15	17 25	British	Wessel, Duval & Co.	402 4	62 5	25 0	Mojicones, Chile	Wilmington, N. C.	Nitrates	7,730	5,523	4,089
Milnia	15	4 15	15	12 33	15	21 10	British	Pacific Steam Nav. Co.	520 0	63 3	29 0	Talcahuano, Chile	Liverpool, Eng.	(25)	9,043	14,827	10,680
Uruca	15	4 15	15	12 33	15	21 10	British	Pacific Steam Nav. Co.	520 0	63 3	29 0	Talcahuano, Chile	Liverpool, Eng.	(26)	9,043	14,827	10,680
Ortega	15	4 15	15	12 33	15	21 10	British	Pacific Steam Nav. Co.	520 0	63 3	29 0	Talcahuano, Chile	Liverpool, Eng.	(27)	9,043	14,827	10,680
Radiant	15	13 53	15	14 18	15	22 50	British	Gladsone Transp. Co.	300 3	43 0	32 0	Iquique, Chile	Baltimore, Md.	Nitrates	7,500	5,708	4,694
Queen Eleanor	15	16 36	15	16 16	15	22 20	British	Thies, Dunlop & Sons	303 4	43 0	31 7	Callao, Peru	New York, N. Y.	General	7,933	2,851	1,776
Arani	15	16 36	15	16 16	15	22 20	British	Pacific Steam Nav. Co.	303 4	43 0	31 7	Callao, Peru	New York, N. Y.	Nitrates	8,200	6,009	4,651
Abodi Mendl	15	21 00	16	5 27	16	13 15	Spanish	Sota & Aznar	400 0	53 0	25 0	Tooeppia, Chile	Azure	(28)	12,427	9,698	6,783
Standard	15	19 20	16	6 33	16	14 23	American	Standard Transp. Co.	467 6	62 7	28 0	Long Beach, Cal.	Providence, R. I.	(29)	6,989	6,756	4,874
Arrow	15	21 20	16	7 20	16	15 15	American	Stats S. S. Co.	410 0	54 2	26 0	Everett, Wash.	Wilmington, Del.	Gasoline	10,737	8,561	5,997
Laurel	15	22 20	16	7 38	16	16 50	American	Citrus Service Corp.	404 7	60 2	27 4	Los Angeles, Calif	Philadelphia, Pa.	Lumber, general	6,699	5,651	4,123
Citrus Service	16	3 00	16	8 16	16	18 55	American	Nelson S. S. Co.	380 0	53 2	24 2	Port Angeles, Wash	Baltimore, Md.	Lumber, wheat	8,094		
Empire	16	4 15	16	9 02	16	18 30	British	Andrew Weir & Co.	419 6	53 9	26 0	Vancouver, B. C.	Rotterdam, Holland	General	9,095	7,156	5,094
Porthland	16	7 30	16	10 04	16	19 00	American	Amer-Hawaiian Line	407 7	53 7	28 0	Seattle, Wash.	Boston, Mass	Lumber, general	6,770	5,680	4,080
Dakota	16	8 40	16	11 16	16	19 55	American	Williams S. S. Line	386 8	52 2	24 9	Bellingham, Wash.	New York, N. Y.	(30)			
Willpoo	16	8 40	16	11 16	16	19 55	American	Williams S. S. Line	386 8	52 2	24 9	Bellingham, Wash.	New York, N. Y.	(31)			

* Tanker.

** Motor ship.

** Cruiser.

** Distilled kerosene.

** Coffee, wood, and general.

** Copper, sugar, and nitrates.

** Gasoline and crude oil.

** Lumber and paper pulp.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Cont'd. used.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Salt water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.			Gross.	Net.		
Santa Eulalia.	16	9 30	16	11 22	16	20 15	16	23 30	American	American-Cuban Lines	251.0	43.6	22.6	Kahului, T. H.	New York, N. Y.	Sugar	3,125	2,823	1,730
Sun ²⁸	16	13 00	16	11 14	16	23 00	16	23 00	American	Sun Oil Co.	480.6	66.0	23.6	San Francisco, Cal.	Chester, Pa.	Gasoline	13,451	9,621	6,424
Liberator.	16	8 13	16	14 58	16	23 20	16	23 20	American	Tampa Intercean Co.	410.0	56.0	28.0	Manila, P. I.	New York, N. Y.	Sugar, oil	9,360	8,234	6,219

²⁸ Motor ship.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.

* DEPARTURES.

Date.	Vessel.	From—	Line.	Date.	Vessel.	Line.	For—
March 10	Columbus	New York via wayports.	North German Lloyd.	March 10	California	Cunard Line	New York via wayports.
March 10	No. 9717 ²⁹	Managua via wayports.	Port-American Airways	March 10	No. 9726 ²⁹	Spanish-American Airways	Port Limon, C. R.
March 11	Suriname	Puerto Colombia, Col.	United Fruit Co.	March 11	Manuel Arnus	Spanish Steamship Line	Barcelona via wayports.
March 11	Cleveland ³⁰	Hig. s. s.	U. S. Navy	March 11	Cartago	United Fruit Co.	New Orleans via wayports.
March 12	Simon Bolivar	New York via wayports	Royal Netherlands S. S. Co.	March 11	Macao	United Fruit Co.	Puerto Colombia, Col.
March 12	Linda S. ³¹	Colon, R. P.	A. L. Sireon	March 11	Brión	Royal Netherlands S. S. Co.	Curacao, D. W. I.
March 13	Fritona	New Orleans, La.	United Fruit Co.	March 11	San Pablo	United Fruit Co.	Tela.
March 13	Chisobal	Panama R. R. S. Line	Panama R. R. S. Line	March 11	Suriname	United Fruit Co.	Bocas, R. P.
March 13	Cavina	Avonmouth via W. Indies.	Elders & Fyffes Line	March 12	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.
March 13	Zacapa	New York via Kingston	United Fruit Co.	March 12	Columbus	North German Lloyd	New York via wayports.
March 14	Anachucma ³²	Colon, R. P.	United Fruit Co.	March 12	Linda S. ³¹	A. L. Sireon	Bluefields, Nicaragua.
March 14	Inapaquina ³²	Colon, R. P.	United Fruit Co.	March 13	Simon Bolivar	Royal Netherlands S. S. Co.	Port Limon, C. R.
March 14	Ulua	New York via wayports.	United Fruit Co.	March 13	Cavina	Elders & Fyffes Line	Avonmouth via Kingston.
March 15	Suriname	Colon, R. P.	United Fruit Co.	March 14	Inapaquina ³²	United Fruit Co.	Colon, R. P.
March 15	Simon Bolivar	New Orleans, C. R.	Royal Netherlands S. S. Co.	March 14	Anachucma ³²	United Fruit Co.	Colon, R. P.
March 15	Atlantida	New Orleans via wayports.	Standard Fruit & S. S. Co.	March 14	Irigua	United Fruit Co.	Port Limon via Bocas.
March 15	Volendam	New York via Kingston.	Holland-American Line	March 14	Zacapa	United Fruit Co.	New York via wayports.
March 15	Wanks	San Blas, R. P.	Standard Fruit & S. S. Co.	March 15	Suriname	Suriname	New Orleans.
March 15	Port Antonio	Colon, R. P.	United Fruit Co.	March 15	Ulua	United Fruit Co.	New York via wayports.
March 16	Inapaquina ³²	Colon, R. P.	United Fruit Co.	March 15	Port Antonio	United Fruit Co.	Puerto Castilla.
March 16	William M. ³³	Colon, R. P.	G. I. Bryn	March 16	Inapaquina ³²	United Fruit Co.	Colon, R. P.
March 16	Anachucma ³²	Colon, R. P.	United Fruit Co.	March 16	William M. ³³	Holland-American Line	Bluefields, Nicaragua.
March 16	Norvia	Liverpool via wayports.	Liverpool Line	March 16	Volendam	Standard Fruit & S. S. Co.	New York via wayports.
March 16	Camden	Curacao, D. W. I.	United Fruit Co.	March 16	Atlantida	Standard Fruit & S. S. Co.	New Orleans via wayports.
March 16	Parishina	New Orleans via Habana.	United Fruit Co.	March 16	Anachucma ³²	United Fruit Co.	Colon, R. P.

²⁹ Airplane mail carrier. ³⁰ Cruiser. ³¹ Motor schooner. ³² Motor boat. ³³ Schooner.

PORT OF BALBOA.

Date.	Vessel.	From—	Line.	Date.	Vessel.	Line.	For—
March 11	San Luis ³⁴	Pto. Armuellas, R. P.	Chiriqui Land Co.	March 11	San Luis ³⁴	Chiriqui Land Co.	Pto. Armuellas, R. P.
March 14	Ideal II ³⁴	Bayamo River, R. P.	Hans Elliot.	March 14	Ideal II ³⁴	Hans Elliot.	Panama Bay, R. P.
March 14	Dos Hermanos ³⁴	Bayamo River, R. P.	A. Valdez	March 14	Dos Hermanos ³⁴	A. Valdez	Panama Bay, R. P.

³⁴ Motor schooner.

* Other than ships passing through the Canal.

Cargo Through Canal During February, 1929.

On pages 478 and 479 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in February, 1929. This cargo, segregated according to direction, as compared with February, 1928, and the differences, is shown in the following tabulation:

	February, 1929.	February, 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	864,344	713,293	+151,051
Pacific to Atlantic.....	1,686,154	1,947,132	-260,978
Total.....	2,550,498	2,660,425	-109,927

As will be noted above, cargo tonnage from the Atlantic to the Pacific increased 151,051 tons over that passing through in that direction in February, 1928, while that in the opposite direction decreased 260,978 tons, showing a decrease in both directions under the corresponding month a year ago of 109,927 tons. The decrease in cargo from the Pacific was attributed to a great extent to lessened wheat shipments from North America, there having been over 170,000 tons less of this commodity than the amount passing through in February, 1928. The increase in cargo from the Atlantic to the Pacific represents a general expansion over practically all routes of trade.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-one per cent of the cargo moving from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 29.6 per cent in Europe. Cargo originating in the United States was 85,177 tons, or 19.3 per cent greater than the amount coming from that area in February, 1928, although the proportion of the whole was slightly greater in February, 1928. Cargo from Europe increased 53,605 tons, or 26 per cent over that passing through in this direction in February, 1928, while the proportion of the total cargo was also slightly greater in February, 1929.

Destination.—Almost 39 per cent of the Pacific-bound cargo was destined to the United States; 18.6 per cent to Asia; 17.5 per cent to South America; and 17.1 per cent to Australasia. Tonnage to all these regions with the exception of Asia, showed actual increases in the amounts of 53,430 tons, or 18.9 per cent to the United States; 48,570 tons, or 47.3 per cent to South America; and 41,665 tons, or 39 per cent to Australasia, over February of last year. The percentage of the total to these areas was slightly greater last month than in February, 1928, with the exception of that to the United States. The amount of cargo destined to Asia was approximately the same in February, 1929, as in February, 1928, and the percentage of the whole was greater in February, 1928.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 43.4 per cent originated on the west coast of the United States; 29.5 per cent in South America; 17.1 per cent in Canada; 5.6 per cent in Australasia; and 3.5 per cent in Asia. Cargo from the United States showed an actual decrease of 95,137 tons, or 11.5 per cent; that from South America, a

decrease of 30,831 tons, or 5.8 per cent, and that from Canada a decrease of 147,367 tons, or 33.9 per cent, under the tonnage from these regions in February, 1928. The proportion of the total cargo coming from the United States and South America in February, 1929, was approximately the same as in February, 1928, while that from Canada last month was only 17.1 per cent of the total as compared with 22.4 per cent in February, 1928. Tonnage from Australasia and Asia showed relative as well as actual increases of 6,093 tons, or 6.9 per cent, and 13,160 tons, or 28.8 per cent, respectively, over February, 1928.

Destination.—Segregated according to destination, 53.8 per cent of the cargo in this direction went to ports of the United States, and 42.1 per cent to Europe. Tonnage to the United States decreased 88,678 tons, or 8.8 per cent, while that to Europe decreased 106,723 tons, or 13.1 per cent under the cargo destined to these areas passing through in February, 1928. The percentage of the total cargo passing through to the United States in February, 1928, was 51.2 per cent, and to Europe 41.9 per cent.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify 85 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 15 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for February, 1928, or February, 1927, are listed in the following tabulation, showing differences:

Commodity.	February 1929.	February 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	7,178	11,912	-4,734
Asphalt.....	7,115	13,143	-6,028
Automobiles.....	17,239	6,081	+11,158
Cement.....	50,890	26,814	+24,076
Coal and coke.....	38,886	21,950	+16,936
Cotton.....	17,469	17,522	-53
Flour.....	14,390	2,578	+11,812
Manufactured goods:			
Iron and steel.....	200,125	173,983	+26,142
Machinery.....	12,918	9,558	+3,360
Railroad material.....	24,503	27,662	-3,159
Textiles.....	11,567	5,023	+6,544
Miscellaneous.....	13,385	4,655	+8,730
Metals, various.....	13,438	15,279	-1,841
Oils, mineral.....	84,175	62,555	+21,620
Paper.....	18,814	12,868	+5,946
Phosphates.....	14,169	14,950	-781
Slag.....	25,698	22,260	+3,438
Sulphur.....	32,500	6,728	+25,772

The above 18 commodity groups comprise about 70 per cent of the cargo from the Atlantic to the Pacific during February, 1928. Twelve of the items showed increases while 6 showed decreases. The heaviest increases were iron and steel, sulphur, mineral oils, cement, and coal and coke. The majority of the decreases were comparatively slight.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 98 per cent of all cargo moving from the Pacific to the Atlantic during the month of February, 1929. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month a year ago are listed below, showing differences:

Commodity.	February, 1929.	February, 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley	28,070	8,082	+19,988
Beans	8,283	14,454	-6,171
Canned goods (fish, fruit, vegetables, etc.)	65,829	64,976	+853
Coffee	20,737	18,422	+2,315
Cold storage (food products) †	44,782	49,940	-5,158
Copra	11,444	3,200	+8,244
Fruit, dried	17,353	26,300	-8,947
Fruit, fresh	18,058	13,378	+4,680
Lumber	202,002	274,878	-72,876
Metals, various	54,295	51,168	+3,127
Nitrates	250,588	276,509	-25,921
Oils, mineral	369,388	369,212	+176
Ores (principally iron)	136,463	142,815	-6,352
Sugar	68,854	55,147	+13,707
Wheat	261,273	432,690	-171,417
Wool	20,034	23,390	-3,356

† Does not include fresh fruit.

The above 16 commodity groups comprise over 93 per cent of the cargo from the Pacific to the Atlantic during February, 1929. Wheat and lumber decreased heavily under February, 1928, while barley and sugar showed the heaviest increases.

(Continued on next page.)

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective March 11, 1929:

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.22
Brass, sheet, average	Lb.	.35
Bronze, Tobin, average	Lb.	.21
Gasoline, motor grade	Gal.	1.14½
Metal, yellow	Lb.	.24
Oakum, Navy, spun	Lb.	.15
Oakum, Navy, unspun	Lb.	.17
Oil, Diesel, at Cristobal only, in bulk, no surcharge	Bbl. of 42 gals.	1.80
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.28
Oil, burning, Celza	Gal.	1.08
Oil, engine, gas, in drums, Gulftriton Med. No. 2135	Gal.	.43
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250	Gal.	.58
Oil, engine, gas, extra heavy, in drums, Gulftriton No. 2250	Gal.	.50
Oil, kerosene, in drums	Gal.	.11
Oil, marine engine	Gal.	.54
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.13
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.13
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.15
Waste, cotton, white	Lb.	.16

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, February, 1929.—Continued from page 477.
(Figures represent tons of 2,240 pounds.)

From—	SOUTH AMERICA.					NORTH AMERICA.							ASIA.			AUSTRALASIA.			Per cent of total cargo.					
	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America.*	Total, South America.	West coast of United States.	West coast of Canada.	West coast of Central America.	West coast of North America.*	Balboa, C. Z.*	Hawaii.	Total, North America.	Japan.	China.	Philippines.	Far East.*	Total, Asia.		Australia.	New Zealand.	Australasia.*	Total, Australasia.	
NORTH AMERICA:																								
UNITED STATES—																								
North Atlantic ports	13,703	3,294	835	5,032	6,614	30,236	199,913	1,233	2,192	...	11	5,716	209,065	25,948	25,650	8,392	30,289	90,279	33,699	5,212	7,133	46,044	375,654	43.5
South Atlantic ports	1,837	161	42	614	2,623	5,337	51,853	37	...	...	...	84	7,163	30,040	19,720	25	573	58,996	7,098	7,425	10,052	24,575	140,897	16.3
Gulf ports.....													51,989	30,040	19,720	3,157	6,079	58,996	7,098	7,425	10,052	24,575	140,897	16.3
Totals, U. S. . . .	15,637	3,455	928	6,296	9,237	35,573	258,944	1,270	2,192	...	11	5,830	268,247	48,177	45,395	11,549	36,943	152,064	40,797	12,637	17,185	70,619	526,503	61.0
Cristobal, C. Z.	396	2,509	1,300	816	1,085	6,109	3,313	1	12,131	...	...	...	15,445	...	...	...	...	...	...	...	...	50	21,604	2.5
East coast of Canada	16,269	...	...	...	17	16,285	2,618	17,390	...	...	...	18,630	2,618	2,618	4,130	4,308	...	...	...	...	...	8,438	27,068	3.1
West Indies.....	...	...	...	...	...	...	2,216	...	...	...	...	2,216	...	...	...	...	...	...	...	...	...	5,807	8,047	0.9
E. Coast Cen. Amer.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals, N. Amer.	32,325	3,964	2,228	7,112	10,379	57,968	233,346	13,670	11,321	...	11	5,830	307,187	48,177	45,395	11,549	36,943	152,064	44,927	16,945	23,042	84,914	502,126	69.7
EUROPE:																								
British Isles.....	16,070	122	318	6,083	2,347	25,781	8,050	2,845	...	...	...	5,315	16,240	8,450	...	...	...	8,450	...	29,078	6,500	35,578	86,049	9.9
Belgium.....	6,952	2,023	48	1,798	843	12,116	21,772	5,147	1,516	453	...	...	31,883	...	...	...	...	...	...	21,995	...	21,995	63,023	7.6
Denmark.....	2,113	...	...	...	...	...	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
France.....	3,773	912	190	489	5,683	11,034	2,113	1,011	92	...	...	...	3,216	...	...	...	...	...	...	2,630	...	2,630	16,320	2.0
Germany.....	2,587	391	633	1,192	4,114	9,117	7,833	436	2,517	756	...	...	11,573	...	...	...	...	...	...	...	...	...	...	
Holland.....	2,366	54	13	3,428	621	4,369	2,151	1,911	...	...	...	...	4,035	...	...	...	...	...	...	...	...	...	...	
Italy.....	5,226	...	...	...	...	5,226	531	68	...	...	...	...	1,210	...	...	...	...	...	...	...	...	...	...	
Norway and Sweden	4,663	...	94	1,672	1,138	7,837	7,081	162	4,497	1,981	...	...	13,723	162	145	...	...	...	2,598	...	...	...	...	
Spain and Portugal	1,940	...	...	...	...	1,940	145	456	...	...	...	...	10,525	...	...	...	...	...	...	...	...	...	...	
Europe*.....	42,428	3,414	1,731	15,941	27,027	92,541	62,839	12,637	8,672	...	3,199	5,345	92,603	8,459	...	...	...	8,450	2,598	51,073	9,130	62,891	256,485	29.6
Totals, Europe	42,428	3,414	1,731	15,941	27,027	92,541	62,839	12,637	8,672	...	3,199	5,345	92,603	8,459	...	...	...	8,450	2,598	51,073	9,130	62,891	256,485	29.6
E. coast of S. America.																								
Grand totals	74,753	9,938	3,959	33,035	39,356	151,069	337,993	31,387	22,975	...	3,201	11,187	404,633	66,627	45,776	11,561	36,943	139,907	47,525	68,018	32,172	147,715	864,344	100.0
Per cent of total cargo:																								
February, 1929.....	8.6	1.2	0.5	2.7	4.5	17.5	38.8	3.6	2.7	...	0.4	1.3	46.8	7.7	5.3	1.3	4.3	18.6	5.5	7.9	3.7	17.1	190.0	.....
February, 1928.....	4.3	0.8	0.3	1.7	7.2	14.3	39.6	4.2	2.0	1.3	0.1	1.1	48.3	11.2	4.4	0.9	6.0	22.5	4.8	9.2	0.9	14.5	100.0	.....
February, 1927.....	3.8	1.2	...	0.9	5.7	11.6	37.7	1.8	2.0	1.9	0.1	0.4	43.9	13.1	7.0	0.7	4.0	24.8	10.3	8.1	1.3	19.7	100.0	.....

* General cargo not routed so as to allow aggregation between definite ports.

* Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, February, 1929.

(Figures represent tons of 2,240 pounds.)

From—	North America.								Europe.											Grand totals.	Per cent of total cargo.			
	United States.				Central America.				British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ¹	Total, Europe.			East coast of South America.	Egypt.	
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	West Indies.	East coast of Central America.	Cristobal, C. Z. ²																Total, North America.
SOUTH AMERICA:																								
Chile.....	151,211	32,836	62,093	246,134	.....	656	.....	338	247,168	15,918	1,694	.....	1,984	3,166	892,835	.....	103	123,385	149,166	108,160	.....	.....	404,504	24.0
Colombia.....	1,006	.....	1,006	.....	.....	.....	.....	3,263	4,289	395	.....	.....	.....	15	.....	.....	.....	.....	416	.....	.....	.....	4,679	0.3
Ecuador.....	11,937	.....	.....	11,937	28	.....	.....	1,537	13,529	28	.....	.....	65	84	.....	.....	.....	.....	175	20	.....	.....	13,715	0.8
Peru.....	19,902	.....	.....	19,902	21,000	.....	.....	2,165	49,068	12,617	529	.....	4	218	4,971	.....	.....	5,031	23,360	.....	.....	.....	72,428	4.3
West coast of South America ¹	142	.....	.....	142	.....	77	.....	324	543	54	.....	.....	56	381	.....	.....	.....	471	962	.....	.....	.....	1,505	0.1
Totals, South America.	181,198	32,836	62,093	279,121	27,003	743	.....	7,704	314,568	29,001	2,223	.....	2,109	3,864	5,051	2,835	.....	103	128,887	174,073	308,160	.....	496,831	29.5
NORTH AMERICA:																								
West coast of Canada.....	18,132	.....	965	19,096	6,005	1,833	7	.....	26,935	111,920	18,174	12,940	6,342	38,535	7,502	.....	2,096	7,700	55,353	260,562	990	.....	288,487	17.1
West coast Cen. America.....	132	.....	.....	132	.....	.....	.....	206	7,733	1,487	.....	.....	151	986	2,837	.....	705	.....	1,808	8,060	.....	.....	15,793	0.9
West coast United States.....	199,162	10,710	29,387	239,259	.....	2,853	2,420	3,837	548,401	105,166	1,394	6,410	9,990	16,917	5,992	.....	2,568	7,711	27,502	182,750	144	.....	731,293	43.4
Hawaii.....	.....	.....	412	412	.....	.....	.....	.....	412	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	412	.....
Totals, North America.	517,419	10,710	30,761	558,890	6,003	4,774	2,633	11,179	583,481	218,569	19,508	19,359	16,483	55,538	16,331	.....	5,369	15,411	84,753	451,372	1,134	.....	1,035,987	61.4
ASIA:																								
China.....	4,074	.....	115	4,189	.....	.....	106	.....	4,295	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,295	0.3
Japan.....	936	.....	.....	936	.....	.....	30	.....	966	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	966	.....
Philippines.....	21,770	.....	31,700	53,470	.....	.....	65	.....	53,470	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53,470	3.2
Far East ¹.....	.....	.....	.....	.....	.....	.....	.....	.....	65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	65	.....
Totals, Asia.	26,786	.....	31,815	58,595	.....	.....	201	.....	58,796	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	58,796	3.5
AUSTRALASIA:																								
Australia.....	6,730	.....	.....	6,730	.....	.....	.....	.....	6,730	7,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,000	.....	.....	13,730	0.8
New Zealand.....	3,274	.....	.....	3,274	18	.....	.....	.....	3,292	72,527	.....	.....	.....	.....	.....	.....	.....	.....	.....	72,527	.....	.....	75,819	4.5
Australasia ¹	1,286	.....	.....	1,286	.....	.....	.....	.....	1,286	.....	.....	.....	3,725	.....	.....	.....	.....	.....	3,725	.....	.....	.....	4,991	0.3
Totals, Australasia.	11,270	.....	.....	11,270	18	.....	.....	.....	11,288	79,527	.....	.....	3,725	.....	.....	.....	.....	.....	83,252	.....	.....	.....	94,540	5.6
Grand Totals.	739,567	43,546	94,866	907,876	33,023	5,517	2,834	18,885	998,133	337,097	21,791	19,350	22,317	59,402	21,382	2,835	5,369	15,514	213,640	708,697	1,164	8,160	1,689,154	100.0
Per cent of total cargo:																								
February, 1929.....	43.8	2.6	7.4	53.8	1.9	0.3	0.2	1.1	57.3	19.4	1.3	1.2	1.3	3.5	1.3	0.2	0.3	0.9	12.7	42.1	0.1	0.5	100.0	.....
February, 1928.....	41.4	5.6	4.8	51.2	2.7	0.5	0.5	2.5	57.2	17.3	2.7	0.1	1.4	5.6	4.1	1.8	0.8	.....	8.1	41.9	.....	0.9	100.0	.....
February, 1927.....	51.8	1.2	3.5	56.5	2.3	1.1	0.1	4.6	65.4	12.2	1.9	0.3	0.4	2.1	1.4	1.0	1.0	0.5	12.4	33.8	0.8	.....	100.0	.....

* General cargo not routed so as to allow segregation between definite ports.

¹ Includes both local and transit cargo.

Supplement No. 11—Tariff No. 9.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., March 1, 1929.

ITEM 17.—MEDICAL AND HOSPITAL TREATMENT.

(Effective April 1, 1929.)

Change to read as follows:

1. Ward treatment for seamen, \$3.00 per day. Operations, 25 per cent of scheduled price, that is, from \$1.00 to \$125.00. X-ray examinations, \$1.50 to \$15.00. Office consultation at hospital or dispensary, \$2.00; surgical dressings without consultation, \$1.00.

2. Ward treatment for passengers and others, \$5.00 and \$6.00 per day; private room, \$7.50 and \$9.00 per day. Charges for operations, X-ray examinations and other services are at scheduled prices and are in accordance with charges for the same services in other hospitals. Office consultation at hospital or dispensary, \$3.00; surgical dressings without consultation, \$1.50.

3. When a private bathroom, used by one patient only, is furnished, a charge of \$2.00 per day will be made; when used by two patients occupying rooms connecting with common bathroom, \$1.00 per day. Telephone service in private rooms, when furnished, will be charged at the rate of \$1.00 per week or fraction thereof.

4. Visit of physician to vessels alongside dock, \$5.00; to vessels in harbor at anchor, or transiting the Canal, \$10.00; to vessels at outer anchorage, Balboa, \$25.00; except for visits to two or more in the same family, or two or more members of crew, in which case full price will be charged for first, and \$2.50 for each additional patient. Launch service for such visits, after the first hour, will be charged for at the rate of \$3.00 for each half hour or fraction thereof. When a physician has to remain on ship, while in transit through Miraflores Lake, due to inability to complete his services while at Miraflores or Pedro Miguel Locks, a charge of \$7.50 will be made in addition to the regular charge for the visit of a physician to vessels transiting the Canal.

H. BURGESS,

Governor, The Panama Canal,
President, Panama Railroad Company.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Cristobal, C. Z., for Two Weeks Ending March 16, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon.....	Panama R. R. S. S. Line.....	.....	March 3.....	.....	2,072
Cali.....	North German Lloyd.....	.....	March 3.....	.....	335
Salvador.....	Pacific Steam Nav. Co.....	.....	March 3.....	.....	1,072½
Boskoop.....	Royal Neth. S. S. Co.....	.....	March 3.....	.....	359
San Jose.....	United Fruit Co.....	March 3.....	March 3.....	71	71
Witran.....	North German Lloyd.....	March 3.....	March 3.....	(²)	130
Breda.....	Royal Neth. S. S. Co.....	March 3.....	March 3.....	130	½
Horodia.....	United Fruit Co.....	.....	March 4.....	.....	14½
Santa Cecilia.....	Grace Line.....	March 3.....	March 4.....	174	44½
I. C. White.....	Huasteca Petroleum Co.....	March 3.....	March 4.....	11,136	(²)
Itauri.....	Hamburg-American Line.....	March 3.....	March 4.....	(¹)	157
Jamaica.....	Pacific Steam Nav. Co.....	March 3.....	.....	905	.....
Caldas.....	National Navigation Co.....	March 3.....	March 7.....	293	252
Padilla.....	Colombian S. S. Co.....	March 3.....	March 8.....	(¹)	2,628
Ulysses.....	Royal Neth. S. S. Co.....	March 3.....	March 8.....	23	1,337
Ebro.....	Pacific Steam Nav. Co.....	March 4.....	March 5.....	4	5½
Mercian.....	Leyland S. S. Line.....	March 4.....	March 6.....	816	(²)
Uribe.....	Estrada G. Hermanos.....	March 4.....	March 9.....	(²)	1,031
Wanks.....	Standard Fruit & S. S. Co.....	.....	March 6.....	.....	6
Kinderdijk.....	Holland-American Line.....	March 5.....	March 5.....	(¹)	133
Venezuela.....	Panama Mail S. S. Co.....	March 5.....	March 6.....	1,437	285
Guadeloupe.....	French S. S. Line.....	March 5.....	March 6.....	134	204
Balboa.....	Johnson S. S. Line.....	March 5.....	March 6.....	(¹)	412
Margaret Johnson.....	Johnson S. S. Line.....	March 5.....	March 6.....	201	(²)
Colombia.....	Panama Mail S. S. Co.....	March 5.....	March 6.....	295	260

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z.—Continued.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Paraguay	Hamburg-American Line	March 6	March 6	155	49
Modavia	Donaldson Bros., Ltd.	March 6	March 6	(¹)	315
Limon	United Fruit Co.	March 6	March 7	1,211	152
Coquina	Panama Mail S. S. Co.	March 6	March 6	1,082	
Suriname	United Fruit Co.	March 6	March 7	1,117	66
Narenta	Pacific Steam Nav. Co.	March 6	March 7	(¹)	378
Santa Elisa	Grace Line	March 6	March 7	(¹)	1
Hayana Maru	Osaka Shosen Kaisha	March 6	March 7	69	(²)
La Marseillaise	French Line	March 6	March 8	196	70
Manizales	North German Lloyd	March 6	March 6	567	
Oroya	Pacific Steam Nav. Co.	March 7	March 8	64	212
Theodore Roosevelt	Norway Pacific Line	March 7	March 8	(¹)	476
San Francisco	Hamburg-American Line	March 7	March 8	(¹)	380
Sixaola	United Fruit Co.	March 7	March 8	805	425
Pastores	United Fruit Co.	March 7	March 8	1,456	172
Macabi	United Fruit Co.	March 7	March 7	49	
Lochmonar	Royal Mail S. P. Co.	March 8	March 9	33	321
Grunewald	Hamburg-American Line	March 8	March 9	(¹)	108
Phoenixia	Hamburg-American Line	March 8	March 9	8	1,224
Amapala	Standard Fruit & S. S. Co.	March 8	March 9	267	465
Wanks	Standard Fruit & S. S. Co.	March 8	March 8	70	
Manuel Arnus	Spanish Line	March 8	March 8	244	
Copenname	United Fruit Co.	March 8	March 8	2½	160
Atlantian	Leyland S. S. Line		March 9		373
Marsodak	Nelson S. S. Line	March 9	March 9	120	(²)
Cartago	United Fruit Co.	March 9		1,102	
Poseidon	Hamburg-American Line	March 9		56	
Finn	Colombian Transp. Co.	March 9	March 9	245	(²)
San Pablo	United Fruit Co.	March 9		627	
Orduna	Pacific Steam Nav. Co.	March 9		7	
Jamaica	Pacific Steam Nav. Co.		March 10		834½
Manizales	North German Lloyd		March 10		185½
Poseidon	Hamburg-American Line		March 10		643
Limon	United Fruit Co.	March 10	March 10	2	41
Buenaventura	Panama R. R. S. S. Line	March 10	March 11	460	1
Guayaquil	Panama R. R. S. S. Line	March 10	March 11	340	394
Ucayali	Peruvian Line	March 10		2,018	
Macabi	United Fruit Co.		March 11		416
Manuel Arnus	Spanish Line		March 11		187
Cartago	United Fruit Co.		March 11		2
Port Antonio	United Fruit Co.	March 10	March 12	296	200
Suriname	United Fruit Co.	March 11	March 11	229	138
Tatsuno Maru	Nippon Yusen Kaisha	March 12	March 12	184	(²)
Linda S.	R. Feuillebois	March 12	March 12	(¹)	28
Wanks	Standard Fruit S. S. Co.		March 12		8
Santos Maru	Osaka Shosen Kaisha	March 12	March 13	114	(²)
Simon Bolivar	Royal Netherlands S. S. Co.	March 12	March 13	60	(²)
Fella	Nav. Libera-Triestina	March 12	March 13	227	(²)
Cauca	National Navigation Co.	March 12	March 14	171	406½
Cavina	Elders & Fyfes, Ltd.	March 13	March 13	(¹)	388
Minnesota	French Line	March 13	March 13	522	184
Iriona	United Fruit Co.	March 13	March 14	1,020	31
Cristobal	Panama R. R. S. S. Line	March 13		3,302	
San Mateo	United Fruit Co.	March 13	March 14	1,144	130
Zacapa	United Fruit Co.	March 13	March 14	711	586
Coquina	Panama Mail S. S. Co.		March 14		1,485
Rapot	North German Lloyd	March 13	March 14	250	50
Ulua	United Fruit Co.	March 14	March 15	452	255
Baralt	Royal Netherlands S. S. Co.	March 14	March 16	455	146
City of Panama	Panama Mail S. S. Co.	March 14		2,731	
Benjamin Franklin	Fred Olsen & Co.	March 14	March 15	281	230
Erfurt	Roland Line	March 14	March 16	76	2,000
Pacific Exporter	Furness, Withy & Co.	March 14	March 15	(¹)	319
Santa Cruz	Grace Line	March 14	March 15	(¹)	421
Suriname	United Fruit Co.	March 15	March 15	85	352
Atlantida	Standard Fruit S. S. Co.	March 15	March 16	400	548
Eemdijk	Holland-American Line	March 15		716	
Simon Bolivar	Royal Netherlands S. S. Co.	March 15	March 16	(¹)	960
Oropesa	Pacific Steam Nav. Co.	March 15	March 15	14	(²)
Novian	Leyland S. S. Line	March 16		490	
Arana	Pacific Steam Nav. Co.	March 16	March 16	273	13
Heinrich Arp	Colombian Maritime Co.	March 16	March 16	2	(²)
Wanks	Standard Fruit S. S. Co.	March 16		125	
Camden	United Fruit Co.	March 16		9,174	
Parismina	United Fruit Co.	March 16		943	
William M.	R. Feuillebois	March 16	March 16	(¹)	28½

* No cargo discharged.

* No cargo laded.

Supplement No. 12—Tariff No. 9.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., March 1, 1929.

ITEM 34.—STEVEDORING AND TRANSFERRING CARGO.
(Effective April 1, 1929.)

1. Stevedoring—Rates amended as follows:

	Cargo.	
	Ex.	Per.
(a) General cargo.....	\$0.20	\$0.25
(b) Cotton, wool, kapok, hemp, bark, leather, hides, hay, straw, and similar commodities per ton of 2,000 lbs.....	.40	.50
If offered on measurement basis, rates will be the general cargo rate.		
(c) Boilers, locomotive parts, machinery, railroad cars, etc., scrap machinery, and scrap boiler, etc., and other heavy weights of over 2 tons..... per ton..	.35	.40
(d) Structural steel, iron pipe, etc., over 35 feet long..... per ton..	.35	.40
(e) Loose brick, conduit, sewer pipe, terra cotta, and tile..... per ton..	.35	.40
(f) Loose scrap iron of irregular shape, pieces not over 2 tons per ton..	.40	.50
(g) Lumber, switch and cross ties..... per M. ft. BM..	.70	.85
(h) Rough timber and logs..... per ton..	.40	.50
(i) Piling..... per linear foot..	.01	.00½
(j) Horses, mules and donkeys..... per head..	.70	.85
(k) Cattle..... per head..	.50	.60
(l) Calves, goats, dogs, hogs, and sheep..... per head..	.35	.40
(m) Live stock, other than above indicated, when crated... per ton..	.70	.85
(n) Mail, baggage, and specie..... per ton..	1.00	1.25
(o) Explosives..... per ton..	2.00	2.00
(p) Nitrates..... per ton..	.35	.40
(q) Bananas..... per ton..	.45	.45

H. BURGESS,
Governor, The Panama Canal,
President, Panama Railroad Company.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Balboa, C. Z., for Two Weeks Ending March 16, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cambrai	U. S. Army	March 1.....	March 4.....	870	580
Salvador	Pacific Steam. Nav. Co.	March 3.....	March 3.....		17
Montebello	Union Oil Co.	March 3.....	March 5.....	11,000	
Boskoop	Royal Neth. S. S. Co.	March 3.....	March 4.....	386	
Venezuela	Panama Mail S. S. Co.	March 4.....	March 5.....	254	45
Coquina	Pisbury & Curtis	March 4.....	March 5.....	44	
Colombia	Panama Mail S. S. Co.	March 6.....	March 7.....	28	62
Virginia	Panama-Pacific Line.....	March 8.....	March 8.....		190
President Wilson	Dollar S. S. Line.....	March 8.....	March 9.....		3
Tatsuno Maru	Nippon Yusen Kaisha.....	March 11.....	March 11.....	130	
Chateau Thierry	U. S. Army	March 11.....	March 12.....	999	52
City of Panama	Panama Mail S. S. Co.	March 14.....	March 14.....	5	
Benjamin Franklin	Fred Olsen & Co.	March 15.....	March 16.....	671	
St. Mihiel	U. S. Army.....	March 16.....	March 16.....	34	4

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy seas n. Average tempera- ture, Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9)	1018	1020	1013	84.0
Balboa (dock 18)	1011	1021	1005	83.0

(NOTE—The above is based on two months observations at Cristobal, and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2.....	\$8.00	\$11.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
3. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
4. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds.....	11.00	14.00

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 13 years of operation.

Notaries Public in the Canal Zone.

The following is a list of notaries public commissioned in the Canal Zone as of November 23, 1928. The list gives, by towns, the name, where stationed, and the date of expiration of commission:

ANCON.

Bowen, Vollie S., Land Office, February 27, 1930.
 Boyd, Oscar S., Municipal Division, July 30, 1931.
 French, A. W., Gorgas Hospital, May 14, 1929.
 Latimer, J. G., Ancon Laundry, April 30, 1930.
 McGahhey, J. T., Clubhouse, August 12, 1930.
 Ohlson, Elmer F., Gorgas Hospital, December 3, 1930.
 Russell, C. V., Gorgas Hospital, April 29, 1930.
 Shaeffer, L. E., Office J. O. Collins, April 6, 1929.
 Sheibley, F. H., District Court, October 27, 1929.
 Walker, J. J., District Court, November 22, 1931.

BALBOA.

Hyde, W. H., Port Captain's Office, March 6, 1930.
 Kalar, J. D., Port Captain's Office, April 13, 1929.
 Kelley, Thomas H., Mechanical Division, August 18, 1930.
 Lefever, John E., Fort Amador, February 28, 1931.
 Prager, J. F., Balboa storehouse, December 13, 1929.
 Smith, Walter R., Balboa storehouse, September 4, 1931.
 Stillwell, J. L., Fort Amador, April 20, 1931.

BALBOA HEIGHTS.

Attaway, E. F., Administration Building, room 343, October 28, 1930.
 Boggs, W. B., Administration Building, room 316, August 4, 1931.
 Buehler, G. H., Administration Building, room 205, August 17, 1931.
 Fenton, John A., Administration Building, room 203, July 28, 1930.
 Illwitzer, P. G., Administration Building, room 270, October 12, 1929.
 Schecker, C. A., Administration Building, room 244, January 19, 1930.
 Sims, Walter H., Quarry Heights, December 1, 1930.
 Taylor, R. G., Administration Building, room 318, April 30, 1930.
 Ungar, J., Administration Building, room 301, February 2, 1929.
 Wang, Frank H., Administration Building, room 305, April 29, 1929.

COROZAL.

Grimm, G. L., Corozal Hospital, October 6, 1929.
 Johnson, Mrs. Anna O., Panama Ordnance Depot, February 26, 1930.

CRISTOBAL.

Atwood, H. E., Commissary Division, April 8, 1930.
 Campbell, J. S., District Court, January 28, 1929.
 Clarke, V. J., Commissary Division, January 14, 1929.
 Cotton, Charles, Coaling Plant, March 20, 1929.
 Daly, E. J., United Fruit Co., May 26, 1929.
 Flood, Arthur, Customs office, November 15, 1931.
 Hargy, F. F., Port Captain's office, May 28, 1930.
 MacSparran, E. S., Receiving & Forwarding Agency, December 1, 1930.
 Murray, P. E., Magistrate, October 13, 1929.
 Scarborough, W. W., clubhouse, January 21, 1930.
 Slocum, E. L., Chase National Bank, August 10, 1929.
 Walsh, M. H., Customs Office, August 5, 1929.
 Ellis, Edward E., Coaling Plant, May 24, 1930.

GATUN.

P. L. Malone, Railroad Station, November 23, 1931.

PARAISO.

Holzappel, A. F., Dredging Division, August 10, 1929.

PEDRO MIGUEL.

Norris, R. N., Municipal Division, August 11, 1930.
 Rader, T. C., Pacific Locks, January 21, 1930.
 Wright, A. M., Dredging Division, January 21, 1930.
 Cauthers, R. A., Municipal Division, June 16, 1930.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal, Washington, D. C.

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at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., March 27, 1929. No. 34.

Notices to Mariners.

Gas and Whistling Buoy Established—Caribbean Sea—Central America—East Coast of Panama.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., *February 27, 1929.*

No. 515.

On February 26, 1929, there was established a combination gas and whistling buoy, in 156 feet of water, on the prolongation of the axis of the main entrance of the Panama Canal 6.2 miles from Cristobal Harbor, East Breakwater Light bearing $178^{\circ} 15'$, on the following position:

Latitude $9^{\circ} 29' 34''$ north.

Longitude $79^{\circ} 55' 18''$ west.

This buoy is surmounted by a pyramidal lattice work steel structure $16\frac{1}{2}$ feet high, supporting a 375 mm. lens lantern, under which is located an 18-inch whistle operated by the action of the sea.

Characteristics: Flashing white, 1 second light, 4 seconds dark.

Color of buoy: Black and white vertical stripes.

Visibility: Eight miles.

A first class spar buoy, similar in color, has been placed near the gas and whistling buoy as a marker.

H. BURGESS,
Governor.

Colombia—Buenaventura—Explosive Anchorage.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., *March 22, 1929.*

No. 523.

The following cablegram was received by the Captain of the Port of Cristobal from the Captain of the Port of Buenaventura, dated March 22, 1929:

All vessels carrying explosives are directed to anchor 6 miles below the town of Buenaventura off Bazan Point and await pilot from Saldado Point.

(Signed) ACTING CAPTAIN OF THE PORT,
BUENAVENTURA, COLOMBIA.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., *March 26, 1929.*

No. 524.

The following is quoted from Notice to Mariners, Washington, D. C., March 16, 1929:

1. *Central America, Costa Rica, Nicoya Gulf, Puntarenas Light Discontinued.*—The Commanding Officer of the U. S. S. *Holland* reports under date of March 7, 1929, that the fixed white light formerly exhibited at Puntarenas has been discontinued.

A new light will be exhibited from the new pier now under construction when this is completed.

Approximate position: $9^{\circ} 58' 23''$ N., $84^{\circ} 49' 50''$ W.

2. *Central America, West Coast, Gulf of Fonseca, La Union Approach, Colima Rock, Buoy Established.*—The master of the American steamer *Saramacca* reports that a white can buoy has been established to mark Colima Rock in the entrance channel to La Union.

Approximate position: $13^{\circ} 17' 45''$ N., $87^{\circ} 46' 43''$ W.

3. *Central America, West Coast, Salvador, Amapala Point Light Reported Extinguished.*—The master of the American steamer *Saramacca* reports that Amapala Point Light was not burning on the night of January 30, 1929.

Approximate position: $13^{\circ} 09' 12''$ N., $87^{\circ} 54' 10''$ W.

4. *Central America, Salvador, La Libertad, Information Concerning Lights.*—The master of the American steamer *Saramacca* reports under date of January 28, 1929, as follows concerning lights at La Libertad:

(a.) The light on the end of the pier is fixed red, and not fixed white as heretofore shown.

(b.) The occulting white light at La Libertad was not to be found nor could a lighthouse or anything resembling it be seen. In view of this and other reports, this light is believed not to exist and will be expunged from the charts.

Approximate position: $13^{\circ} 28' 45''$ N., $89^{\circ} 19' 15''$ W.

H. BURGESS,
Governor.

CANAL WORK IN FEBRUARY, 1929.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of February, 1929.

BALBOA HEIGHTS, C. Z., March 18, 1929.

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

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of February, 1929:

NUMBER OF TRANSITS.

During the month 522 commercial vessels passed through the Canal. In addition to these, 23 nonseagoing launches measuring under 20 tons, and 55 vessels belonging to the United States Government transited the Canal. There were also 2 transits of a Panaman Government vessel and 4 transits of vessels solely for repairs, on which no tolls were collected, making a total of 606 transits for the month, or a daily average of 21.64.

Tolls on the 522 commercial vessels amounted to \$2,211,961.20, and on the launches to \$194.88, a total of \$2,212,156.08, or a daily average on all traffic of \$79,005.57.

Total commercial traffic for the past month was somewhat lower than that in February, 1928 (with 547 commercial ships). This was due to a decrease in shipping from Pacific to Atlantic. In the traffic from Atlantic to Pacific there were 10 more transits of commercial vessels last month than in the corresponding month a year ago, while the transits from the Pacific were 35 fewer than in February, 1928. This decrease was attributed principally to the greatly decreased wheat movement from the west coast of North America, and in a less degree to curtailed shipments of lumber and nitrates.

The total numbers of craft of all kinds transiting the Canal during the month of February, 1929, as compared with the same month in 1928 and 1927, are shown in the following tabulation:

	February, 1929.	February, 1928.	February, 1927.
Commercial vessels	522	547	449
Noncommercial vessels (Army and Navy)	55	40	38
Launches under 20 tons measurement	23	8	28
Panaman Government vessels	2		
Vessels for repairs	4	2	1
Totals	606	597	516

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun	5	3	8
Pedro Miguel	36	30	66
Miraflores	17	21	38
Totals	58	54	112

COMMERCIAL TRAFFIC. ¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the fiscal year 1929, to the end of February, 1929, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1927-8	1928-9	1927-8.	1928-9.	1927-8.	1928-9.	1927-8.	1928-9.
July	509	509	2,406,955	2,318,395	2,450,468	2,291,955	\$2,215,515.99	\$2,109,083.19
August	543	526	2,513,614	2,437,246	2,429,947	2,425,336	2,274,040.55	2,199,069.31
September	540	487	2,532,942	2,295,053	2,397,753	2,313,011	2,294,432.34	2,111,230.56
October	567	557	2,585,752	2,515,380	2,717,646	2,582,477	2,389,115.97	2,274,945.30
November	559	527	2,591,717	2,468,297	2,488,882	2,501,630	2,369,267.99	2,225,937.48
December	589	579	2,616,728	2,698,140	2,573,828	2,714,987	2,39,459.75	2,443,029.39
January	540	603	2,422,770	2,771,280	2,372,061	2,858,835	2,212,752.50	2,502,815.12
February	547	522	2,460,111	2,428,530	2,660,425	2,550,498	2,253,758.37	2,211,961.20
Totals	4,334	4,310	20,130,589	19,932,321	20,091,010	20,238,729	18,398,340.46	18,078,071.55

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States Government, including merchant vessels chartered by the Government, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for February, 1929, as compared with the corresponding month in 1928 and 1927, and the monthly averages for the calendar year 1928:

	February, 1929.	February, 1928.	February, 1927.	Average per month for calendar year 1928.
Number of vessels.....	522	547	449	528
Panama Canal net tonnage.....	2,428,530	2,460,111	2,201,328	2,411,953
United States net tonnage.....	1,863,423	1,882,643	1,710,273	1,851,471
Registered gross tonnage.....	3,056,320	3,073,830	2,791,577	3,029,975
Registered net tonnage.....	1,873,854	1,885,445	1,714,276	1,855,554
Tolls.....	2,211,961.20	2,253,755.37	1,994,860.82	2,197,996.86
Tons of cargo carried.....	2,550,498	2,660,425	2,230,107	2,450,132

The average daily number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for cal- endar year 1928.
	February, 1929.	February, 1928.	February, 1927.	
Number of transits.....	18.64	18.86	16.03	17.31
Panama Canal net tonnage.....	86,733	84,831	78,618	79,080
Tolls.....	78,998.62	77,715.70	71,245.02	72,065.47
Tons of cargo carried.....	91,089	91,738	79,646	80,332

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during February, 1929, as compared with February, 1928, and 1927, are shown in the following tabulation:

	Average per vessel.		
	February, 1929.	February, 1928.	February, 1927.
Panama Canal net tonnage.....	4,652	4,497	4,902
United States net tonnage.....	3,570	3,442	3,809
Registered gross tonnage.....	5,855	5,619	6,217
Registered net tonnage.....	3,500	3,447	3,822
Tolls.....	4,237.47	4,120.21	4,442.89
Tons of cargo (including vessels in ballast).....	4,886	4,863	4,966
Tons of cargo (laden vessels only).....	5,890	5,873	6,317

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and 72 cents per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per ton nor be less than 75 cents per ton as determined in accordance with the United States rules for measurement of the registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined both in accordance with the Panama Canal and the United States rules of measurement.

Due to this limiting proviso the tolls actually collected on laden vessels averaged \$0.948 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.72 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of February, 1929, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$5,177.50	\$4,792.00		\$385.50
British.....	722,176.89	747,064.80	\$24,887.91	
Chilean.....	11,873.75	12,440.00	566.25	
Colombian.....	3,165.20	2,677.00		488.20
Danish.....	41,000.56	43,612.60	2,612.04	
Dutch.....	24,823.75	29,665.00	4,841.25	
Finnish.....	5,796.00	6,360.00	564.00	
French.....	51,586.25	53,692.00	2,105.75	
German.....	98,457.55	107,366.20	8,908.65	
Greek.....	20,168.41	20,628.80	460.39	
Italian.....	31,056.22	32,499.60	1,443.38	
Japanese.....	51,760.47	48,834.60		2,925.87
Norwegian.....	78,984.19	75,488.20		3,495.99
Panaman.....	8,491.90	10,121.00	1,629.10	
Peruvian.....	7,493.55	10,390.00	2,896.45	
Spanish.....	11,555.47	10,821.60		733.87
Swedish.....	54,253.21	54,511.80	258.59	
United States.....	957,599.52	972,534.80	14,935.28	
Yugoslav.....	26,540.81	25,794.80		746.01
Totals.....	2,211,961.20	2,269,294.80	66,109.04	8,775.44
Net increase for all traffic...			57,333.60	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$14,476.41
United States foreign trade.....	516.47
United States-Canal Zone trade.....	* 57.60
Net increase.....	14,935.28

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in February, 1929, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Belgian.....		1.70	1.70
British.....	.96	1.39	1.21
Chilean.....	.52	1.03	.71
Colombian.....	1.42	.92	1.19
Danish.....	1.22	1.85	1.53
Dutch.....	.58	1.19	.60
Finnish.....	1.61		1.61
French.....	.47	1.40	.98
German.....	1.01	1.34	1.15
Greek.....		1.83	1.83
Italian.....	.26	1.05	.64
Japanese.....	1.18	1.60	1.32
Norwegian.....	1.13	1.74	1.47
Panaman.....	.99	1.35	1.26
Peruvian.....	.39	.79	.50
Spanish.....		1.08	1.08
Swedish.....	.75	2.27	1.56
United States.....	1.01	1.53	1.32
Yugoslav.....	1.52	1.93	1.73
Average, February, 1929.....	.96	1.49	1.26
Average, February, 1928.....	.85	1.56	1.28
Average, February, 1927.....	.92	1.59	1.28

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of February, is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	4	20,520	\$20,705.00	35	202,210	\$205,146.05
Ballast.....	42	225,697	162,559.62			
General cargo ships:						
Laden.....	190	878,919	814,666.45	203	928,793	884,957.55
Ballast.....	38	168,005	120,749.62	3	3,433	2,471.76
Noncargo-carrying ships:						
Yachts.....	3	563	409.20	3	390	295.95
Totals.....	277	1,293,704	1,119,089.89	245	1,134,826	1,092,871.31
Method of propulsion:						
Steam.....	216	992,851	875,899.70	218	1,018,318	984,487.26
Motor.....	60	299,018	241,819.19	27	116,508	108,384.05
Sail.....	1	1,835	1,371.00			
Totals.....	277	1,293,704	1,119,089.89	245	1,134,826	1,092,871.31

Of the 434 steam-driven vessels, 246 were oil burning, 185 coal burning, and 3 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of February, 1929. If tolls had been assessed against these vessels at commercial rates, the amount would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Aircraft tenders.....				1	3,943	\$4,928.75
Cargo ships.....				1	3,415	4,268.75
Cruisers.....	2	2,640	\$3,200.00			
Hospital ships.....				1	3,963	2,972.25
Mine sweepers.....	2	1,900	950.00	4	3,800	1,900.00
Patrol vessels.....	2	1,230	615.00			
Repair ships.....	1	10,000	5,000.00	1	10,000	5,000.00
Store ships.....	1	3,394	4,242.50	1	3,869	2,785.68
Submarines.....	3	2,584	1,292.00	7	4,998	2,499.00
Tankers.....	3	19,206	20,598.24	6	34,717	24,996.24
Tankers.....	2	11,321	14,151.25			
Tugs.....	1	1,000	500.00	2	2,000	1,000.00
U. S. Army vessels:						
Launches.....	2	20	15.00	2	20	15.00
Mine planters.....	1	1,208	604.00	1	1,208	604.00
Transport.....	2	7,361	9,201.25	2	7,816	9,770.00
Tugs.....	3	320	240.00			
Treasury Department vessels:						
Coast Guard.....	1	2,075	1,037.50			
Totals, U. S. Government.....	26		61,646.74	29		60,739.67
Panaman Government vessels:						
Transports.....	1	101	72.72	1	101	72.72
Vessels for repairs:						
Tankers.....	2	2,722	2,041.50	2	2,730	2,047.50
Grand totals.....	29		63,760.96	32		62,859.89

* Indicates displacement tonnage. * Indicates Panama Canal net tonnage. * Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of February, 1929, carried cargo as follows: Atlantic to Pacific, 15,584 tons; Pacific to Atlantic, 2,939 tons; total, 18,523.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement transiting the Canal during the month of February, 1929. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	14	118	\$124.95
Pacific to Atlantic.....	9	88	69.93
Totals.....	23	206	194.88

STATEMENT OF TERMINAL OPERATIONS.

Details of business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of February, 1929, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons	61,874	29,199	91,073
Local cargo shipped..... tons	6,959	6,132	13,091
Transit cargo arriving..... tons	2,548,333	2,510,890	5,059,223
Transit cargo clearing..... tons	2,534,194	2,571,769	5,105,963
Cargo received for transshipment..... tons	44,215	34	44,249
Cargo transhipped..... tons	45,932	367	46,299
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	89	36	125
Number of withdrawals.....	478	556	1,034
Tons received.....	5,324	573	5,897
Tons withdrawn.....	2,353	507	2,860
Packages received.....	8,401	8,936	17,337
Packages withdrawn.....	6,651	7,756	14,407
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	84		84
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons	30,307		30,307
Coal issued, miscellaneous:			
Panama Canal departments..... tons	66	4	70
U. S. Army, including vessels..... tons	11	1	12
Individuals and companies..... tons	118	261	379
Panama Railroad Company..... tons	5		5
Transferred to Navy..... tons	266		266
Total sales and issues..... tons	30,773	266	31,039
Coal on hand, February 1, 1929..... tons	37,500		37,500
Coal on hand, March 1, 1929..... tons	24,371		24,371
Coal received during month..... tons	17,644		17,644
Coal received from Navy..... tons		266	266
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls.	5,131.78	14,662.69	19,794.47
Panama Railroad Company..... bbls.	268.57		268.57
U. S. Army and Navy..... bbls.		772.03	772.03
Individuals and companies..... bbls.		107.62	107.62
Total sales and issues..... bbls.	5,400.35	15,542.34	20,942.69
Fuel oil on hand, March 1, 1929..... bbls.	37,882.02	52,590.03	90,472.05
Diesel oil received during February..... bbls.		1,853.38	1,853.38
Diesel oil sold during February..... bbls.	118.27	1,853.38	1,971.65
Diesel oil on hand, March 1, 1929..... bbls.	22,941.89	493.25	23,435.14
Miscellaneous transfers..... bt/s	44,233.33	16,925.87	61,159.20
Gasoline and kerosene pumped for The Panama Canal..... bbls.	1,765.98	4,184.43	5,950.41
Gasoline pumped for individuals and companies..... bbls.	631.36	5,862.19	6,493.55
Oil pumped for individuals and companies..... bbls.	449,494.27	297,038.23	746,532.50
Oil pumped for U. S. Shipping Board..... bbls.		4,795.19	4,795.19
Oil pumped for U. S. Navy..... bbls.	146,147.50	93,520.00	239,667.50
Total fuel oil, gasoline, and kerosene banded..... bbls.	647,791.06	439,721.63	1,087,512.69
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	26	3	29
Measured for Panama Canal net tonnage.....	14	3	17
Remeasured for Panama Canal net tonnage.....	18	3	21
Panama Canal net tonnage corrected.....	4	2	6
U. S. equivalent tonnage corrected.....	12	8	20
Services of harbor equipment:			
Tugs, total operating hours.....	528	561 $\frac{1}{2}$	1,089 $\frac{1}{2}$
Launches, total operating hours.....	1,616 $\frac{1}{2}$	2,083 $\frac{1}{2}$	3,700

	Cristobal.	Balboa.	Total.
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	16,961.25	16,065.00	33,026.25
Pilotage.....	22,015.00	10,354.00	32,369.00
Seamen.....	12,816.00	11,322.00	24,138.00
Launch service.....	2,271.00	3,175.00	5,446.00
Wharfage.....	19,124.94	7,709.68	26,834.62
Ships measured.....	285.00	25.00	310.00
Miscellaneous.....	1,269.40	1,224.25	2,493.65
Ships repaired at Panama Canal shops:			
Commercial.....	69	11	80
U. S. Army and Navy.....	5	8	13
Panama Canal equipment.....	5	5	10
Totals.....	79	24	103
Vessels dry-docked:			
Commercial.....	9	4	13
U. S. Army and Navy.....		2	2
Panama Canal equipment.....	1	4	5
Totals.....	10	10	20
Clearances issued.....	315	279	594
Bills of health issued.....	312	302	614

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	614	3,697,300	2,253,333	555	3,191,094	1,982,760
Vessels entering port but not transiting Canal.	63	381,910	225,542	15	46,050	31,349
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	115	657,389	401,518	91	552,240	335,749
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	616	3,682,497	2,243,142	587	3,344,464	2,114,297
Vessels clearing port but not transiting Canal.	66	393,398	232,466	35	135,539	115,789
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	117	646,359	393,985	92	564,978	343,740

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,317	909	2,226	281	134	415
From Pacific ports.....	264	247	511	414	282	696
Total disembarking.....	1,581	1,156	2,737	695	416	1,111
Embarking:						
For Atlantic ports.....	1,180	972	2,152	104	233	337
For Pacific ports.....	418	148	566	402	196	598
Total embarking.....	1,598	1,120	2,718	506	429	935
Remaining on board:						
From Atlantic to Pacific ports.....	1,852	2,100	3,952	1,989	2,114	4,103
From Pacific to Atlantic ports.....	1,345	1,507	2,852	1,505	1,521	3,026
From Atlantic to Atlantic ports.....	5,302	31	5,333			
From Pacific to Pacific ports.....				40	402	442
Total remaining on board.....	8,499	3,601	12,100	3,534	4,037	7,571
Total arriving.....	10,080	4,757	14,837	4,229	4,453	8,682
Total departing.....	10,097	4,721	14,818	4,040	4,466	8,506

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	277	54	19.5
Pacific to Atlantic.....	245	59	24.1
Totals.....	522	113	21.6

In addition to the aforesaid, 58 passenger-carrying vessels called at the port of Cristobal and 3 at Balboa without transiting the Canal, making a total of 174 passenger-carrying vessels calling at Canal ports during the month.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of February, 1929:

	Ice.	Groceries.	Cold Storage.	Laundry.	Miscellaneous.	Totals.
Sales at Cristobal to:						
Commercial vessels.....	\$4,055.50	\$13,333.62	\$37,099.70	\$226.26	\$6,643.50	\$61,358.58
Government vessels.....	270.90	1,957.36	11,885.35	120.84	1,088.21	15,322.66
Panama Railroad vessels.....	5.40	.58	1,896.92	564.66	369.00	2,836.56
Total sales, February, 1929...	4,331.80	15,291.56	50,881.97	911.76	8,100.71	79,517.80
Total sales, February, 1928...	2,831.84	12,233.68	43,876.33	964.58	7,898.14	67,804.57
Total sales, February, 1927...	2,366.23	12,755.41	37,519.68	947.66	6,673.26	60,262.24
Sales at Balboa to:						
Commercial vessels.....	994.34	8,820.92	16,093.23	261.73	3,803.86	29,974.08
Government vessels.....	7,788.26	17,662.33	57,389.66	259.91	22,356.85	105,457.01
Panama Railroad vessels.....				37.46		37.46
Total sales, February, 1929...	8,782.60	26,483.25	73,482.89	559.10	26,160.71	135,468.55
Total sales, February, 1928...	1,611.22	14,313.50	39,737.15	977.70	4,562.70	61,202.27
Total sales, February, 1927...	1,189.00	12,767.47	26,815.10	1,801.17	3,605.21	46,177.95

The aggregate sales to Government vessels during the month was \$120,779.67; to Panama Railroad vessels, \$2,874.02; and to other commercial vessels \$91,332.66, making the total sales to all vessels, \$214,986.35.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of February, 1929, as compared with the corresponding month in 1928 and 1927.

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial.					
	North.	South.	Total.	North.	South.	Total.	Feb., 1929.	Feb., 1928.	Feb., 1927.
Gatun.....	234	246	480	13	10	23	503	531	444
Pedro Miguel.....	218	250	468	24	23	47	515	560	468
Miraflores.....	211	231	442	15	9	24	466	556	461
Number of vessels put through locks.									
Gatun.....	243	276	519	47	45	92	611	620	551
Pedro Miguel.....	245	276	521	86	67	153	674	650	559
Miraflores.....	245	276	521	58	57	115	636	654	576

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	54	67	56
Panama Canal equipment.....	8	66	38
Launches (under 20 tons).....	14	14	15
Panaman Government vessels.....	2	2	2
Vessels for repairs.....	4	4	4

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in February, 1929, as compared with the preceding month and the corresponding month in 1928:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,554,820,000	1,358,890,000	1,462,720,000
Leakage.....	20,000,000	30,500,000	20,000,000
Maintenance.....			4,180,000
Totals, February, 1929.....	1,574,820,000	1,389,390,000	1,486,900,000
Totals, January, 1929.....	2,526,200,000	2,188,770,000	1,800,270,000
Totals, February, 1928.....	2,118,880,600	1,742,930,000	1,765,700,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of February, 1929, are shown in comparative form in the following tabulation:

	February.		February—Years of record.		
	1929.	1928.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	773	1,695	3,315	516	1,237
Maximum momentary discharge for the month.....	1,084	6,477	43,500	400	.....
Gatun Lake watershed, total yield.....	1,250	2,226	5,077	705	1,857
Gatun Lake watershed, net yield.....	226	1,398	4,207	287	932
Draft on Gatun Lake for lockages and power.....	2,247	2,919	2,919	1,106	2,041

The total yield of the Gatun Lake watershed for February was 33 per cent below the 16-year average, or 1,250 c. f. s., compared with an average of 1,857 c. f. s. In 16 years of record the total yield for February has been higher in 11 years and lower in 4 years, varying from 5,077 c. f. s. in February, 1915, to 705 c. f. s. in February 1920. The elevation of the lake fell steadily from 86.20 feet at midnight on January 31 to 85.08 feet at midnight on February 28, a total draft on storage of 1.12 feet depth. The mean elevation for the month was 85.59 feet. Miraflores Lake varied from an elevation of 54.54 feet on the 1st to 53.00 feet on the 13th, averaged 53.74 feet and ended at an elevation of 53.56 feet.

SEISMOLOGY.

Seismic disturbances were recorded during the month on the 1st, 4th, 10th, 15th, 22d, 23rd, and 25th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 3,277,900 kilowatt hours, and the computed water consumption was 2,521,512,489 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 1,642,100 kilowatt hours, with a fuel oil consumption of 3,469.79 barrels.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were completed on 30 vessels during the month. There were 295 work orders issued during the month, as compared with 358 for the previous month.

MECHANICAL DIVISION.

During the month miscellaneous repairs were made on 79 vessels at Cristobal and 24 at Balboa. Ten vessels were dry-docked at Cristobal and ten at Balboa. The U. S. S. *Richmond* was dry-docked for repairs to propeller, and light running repairs were performed on the Navy tug *Sciota*.

MUNICIPAL ENGINEERING DIVISION.

Work was carried forward on several improvement projects in the cities of Colon and Panama, and in the Canal Zone. On the Alhajuela Road, 5,400 feet of right of way were cleared, and 13,570 cubic yards of earth and 10,300 cubic yards of rock were moved in connection with grading.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 749,341,250 gallons.

DREDGING DIVISION.

South Cucaracha slide showed only a slight movement during the month. Cucaracha, West Lirio, East and West Culebra slides showed no movement during the month. There were no other slides and no delays to shipping during the month.

The total excavation during February was 505,150 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Pacific entrance.....		55,200	55,200
Maintenance.....	430,000	19,950	449,950
Totals.....	430,000	75,150	505,150

The new 24-inch Diesel-electric pipe line suction dredge *Las Cruces* was placed in commission in the Pacific sea level section, starting on a one-shift basis on February 2. It worked until the 4th, inclusive, at which time an accident, in the dropping of a spud with the clutch in, resulted in placing the dredge out of service. From the 5th to the 14th the damage was repaired, supplementary equipment was installed to prevent similar accidents, and various adjustments and improvements were made in the machinery and accessories. The dredge resumed operation on the 15th, and on the 17th started operating on a two-shift basis. On the 25th operations on three-shift basis were begun, and the dredge continued working 24 hours a day to the end of the month. The *Las Cruces* worked 280 hours in the month and excavated 128,000 cubic yards from the Pacific channel.

The ferry crossing at the north end of Pedro Miguel locks operated 28 days during the month. Six hundred and fourteen trips were made, and 247 Panama Canal, 1,054 U. S. Army, and 3,799 other vehicles, a total of 5,100, were ferried across the Canal.

OCCUPANTS OF QUARTERS.

The number of persons including men, women, and children, occupying Panama Canal quarters on February 28, 1929, totaled 22,002, composed of 7,577 Americans, 2,739 of whom were men, 2,261 women, and 2,577 children; 244 Europeans, 101 of whom were men, 37 women, and 106 children; and 14,181 West Indians, 4,336 of whom were men, 2,608 women, and 7,237 children. The total number of persons in quarters on February 28, 1928, was 21,429.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of February 20, 1929, with a comparison of the working force for the preceding month and for February, 1928:

	As of February 20, 1929.			Total employees.	
	Gold.	Silver.	Total.	January, 1929.	February, 1928.
Operation and Maintenance:					
Office.....	44	62	106	96	78
Electrical.....	154	196	350	355	343
Municipal Engineering.....	124	1,723	1,847	1,386	940
Lock Operation.....	281	1,138	1,419	1,451	865
Dredging.....	189	977	1,166	1,101	1,029
Mechanical.....	442	782	1,224	1,209	1,340
Marine.....	209	751	960	922	929
Fortifications.....	29	425	454	353	326
Totals.....	1,472	6,054	7,526	6,873	5,850
Supply Department:					
Quartermaster.....	197	1,938	2,135	1,970	1,923
Subsistence.....	8	120	128	124	121
Commissary.....	214	1,329	1,543	1,504	1,319
Cattle Industry.....	5	160	165	180	285
Hotel Washington.....	8	116	124	110	113
Transportation.....	66	221	287	278	257
Totals.....	498	3,884	4,382	4,166	4,018
Accounting Department.....	194	7	201	204	205
Health Department.....	268	813	1,081	1,082	1,172
Executive Department.....	516	297	813	812	789
Totals.....	978	1,117	2,095	2,098	2,166
Panama Railroad Company:					
Superintendent.....	49	285	334	366	307
Transportation.....	68	131	199	197	182
Receiving and Forwarding Agency.....	93	2,451	2,544	1,857	1,256
Coaling stations.....	48	304	352	351	373
Totals.....	258	3,171	3,429	2,781	2,118
Grand totals, February, 1929.....	3,206	14,226	17,432		
Grand totals, January, 1929.....	3,169	12,749		15,918	
Grand total, February, 1928.....	3,010	11,142			14,152

Additions to the gold force on the Isthmus in February were as follows: Employed in the United States, 2; reemployed in the United States, 2; employed on the Isthmus, 24; reemployed on the Isthmus, 9; total, 37. Separations from the gold force totaled 26, as follows: Resigned, 15; discharged, 6; retired 3; died, 2. At the end of the month there were on file 178 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 188 deaths occurred during the month of February, 1929, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 17.42 per 1,000 population. The leading causes of death were: Tuberculosis (various organs, 30; pneumonia (broncho and lobar), 30; diarrhea and enteritis, 17; organic diseases of the heart, 11; and syphilis, 8. There were 7 deaths each from cancer, apoplexy and chronic nephritis, 2 each from measles and dysentery, and 1 from paratyphoid fever. There were 24 deaths among non-residents. These are not included in the above statistics.

There were 277 live births, and 15 stillbirths, reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 27.06 per 1,000 population. Deaths among children under 1 year of age numbered 41, giving an infant mortality rate based on the number of live births reported of 148.01.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during February was 93, of whom 20 were employees (7 white and 13 colored), 12 were members of employees' families (2 white and 10 colored), 5 were Canal Zone agriculturists, 19 were other civilian nonemployees, and 37 were Army personnel. Of the 32 employees and members of employees' families, 25 were probably infected outside our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There was one death from malaria, a colored female living in Colon.

All of the five cases of smallpox admitted during January were discharged well, and no further cases have been reported.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions and received on the Isthmus during the month totaled \$487,401.06, of which \$478,181.48 was for the Department of Operation and Maintenance and \$9,219.58 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap and obsolete and second-hand material amounted to \$43,166.24.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of January, 1929, as compared with January, 1928, and the figures for the first seven months of the current fiscal year as compared with the same period in the fiscal year 1928.

It is impossible to submit the figures for the month of February at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	January, 1929.	January, 1928.	To end of January.	
			This year.	Last year.
Tolls.....	\$2,502,896.12	\$2,212,855.81	\$15,864,332.23	\$16,145,252.43
Other receipts.....	359,431.26	294,852.09	2,320,416.36	2,057,901.03
Total transit revenues.....	2,862,327.38	2,507,707.90	18,184,748.59	18,203,153.46
Total transit expenses.....	1,099,118.93	1,040,809.65	7,431,962.10	6,983,875.72
Net transit revenues.....	1,763,208.45	1,466,898.25	10,752,786.49	11,219,277.74
Three per cent capital charge...	615,760.80	612,586.13	4,311,282.70	4,277,875.93
Transit surplus.....	1,147,447.65	854,312.12	6,441,503.79	6,941,401.81
Business revenues.....	1,719,614.60	1,267,135.48	9,677,983.31	8,866,369.78
Business expenses.....	1,583,092.32	1,179,520.75	9,105,179.86	8,339,569.70
Net business revenues.....	136,522.28	87,614.73	572,803.45	526,800.08
Three per cent capital charge.....	61,161.92	61,520.28	451,484.09	450,991.89
Business surplus.....	75,360.36	26,094.45	121,319.36	75,808.19
Combined revenues.....	4,581,941.98	3,500,419.44	27,862,731.90	25,149,465.49
Combined expenses.....	2,682,211.25	1,945,906.46	16,537,141.96	13,403,887.67
Net revenues.....	1,899,730.73	1,554,512.98	11,325,589.94	11,746,077.82
Three per cent capital charge.....	676,922.72	674,106.41	4,762,766.79	4,728,867.82
Combined surplus.....	1,222,808.01	880,406.57	6,562,823.15	7,017,210.00

Respectfully,

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, March 23, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Tainui	16	20 45	17	6 10	17	15 38	17	22 05	British.	Shaw, Savill & Albion.	477.8	61.0	29.0	London, England.	Wellington, N. Z.	General.	4,600	10,657
New Jersey	16	23 20	17	6 28	17	17 20	17	18 44	American.	The Texas Co.	416.8	56.0	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,130	5,219
Sacramento	17	1 45	17	7 30	17	19 42	18	22 39	American.	Charles Nelson & Co.	380.0	53.2	17.0	Norfolk, Va.	San Francisco, Cal.	(*)	3,700	5,653
Pacific Cedar	17	4 35	17	7 25	17	20 43	17	23 55	American.	Dimon S. Corp.	400.0	54.7	21.0	New York, N. Y.	Seattle, Wash.	General.	3,663	4,354
Oloian	17	6 45	17	8 55	17	21 15	17	23 55	American.	Amer-Hawaiian Line.	407.7	53.7	20.4	Boston, Mass.	Portland, Oreg.	General.	3,761	7,103
Baron Fairlie	17	7 10	17	9 30	17	22 10	17	23 55	British.	The Texas Co.	440.0	57.3	24.6	Port Arthur, Texas	Freemantle, Aust'lia	Case oil.	8,000	7,366
San Mateo	17	1 40	17	12 05	17	19 56	17	21 28	American.	United Fruit Co.	315.2	44.2	19.6	Port Limon, C. R.	San Francisco, Cal.	(*)	346	3,496
Herbhorn	17	6 35	17	13 28	17	23 00	18	2 10	Norwegian.	A. S. Herbjorn.	441.1	59.2	19.0	Gothenburg, Swe'n.	Los Angeles, Calif.	Ballast.	8,085	5,725
Amnos	17	.....	17	.....	17	10 24	.....	.....	American.	United Fruit Co.	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	Towing barges.	8	8
No. 31075	17	.....	17	13 24	.....	.....	.....	.....	American.	United Fruit Co.	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	Ballast.	15	15
Marore	17	3 00	17	17 13	18	13 31	18	14 30	American.	United Fruit Co.	550.3	72.2	20.5	New York, N. Y.	Cruz Grande, Chile	Ballast.	15,551	4,297
Ucayali	10	17 10	18	6 15	18	14 30	18	16 30	Peruvian.	Ore S. S. Corp.	374.7	46.3	18.6	Cristobal, C. Z.	Callao, Peru.	General.	610	4,466
Almagro	17	15 10	18	6 13	18	14 38	18	16 20	British.	Pacific Steam Nav. Co.	303.4	43.0	18.8	New York, N. Y.	Callao, Peru.	General.	2,819	2,820
Emadik	15	18 23	18	7 35	18	15 18	18	16 20	Dutch.	Holland-American Line.	469.0	58.3	20.6	Rotterdam, Holland	Manzanillo, B. C.	General.	2,173	8,166
Saale	17	11 05	18	8 35	18	16 10	18	16 50	German.	North German Lloyd.	470.0	61.0	21.10	Hamburg, Germany	Vancouver, B. C.	General.	3,765	9,335
Ecuador	17	6 10	18	9 57	18	17 03	19	17 44	American.	Panama Mail S. S. Co.	380.6	48.7	23.7	New York, N. Y.	San Francisco, Cal.	General.	2,000	5,926
City of Lille	18	6 20	18	11 00	18	19 04	18	20 00	British.	Amer-Manchurian Line	445.0	58.0	28.0	New York, N. Y.	Shanghai, China.	General.	9,113	8,555
Markland	18	7 45	18	11 55	18	20 15	18	21 30	Norwegian.	Anglo-Saxon Pet. Co.	408.3	55.3	18.6	London, England	San Francisco, Cal.	Ballast.	6,474	4,321
Cambridge	18	10 35	18	13 10	18	22 12	19	4 53	British.	N. Z. Shipping Co.	324.0	63.3	23.0	Avonmouth, Eng.	Dunedin, N. Z.	General.	8,160	12,485
Deryline	18	13 37	18	15 20	18	23 05	19	3 16	American.	The Texas Co.	435.0	56.0	21.0	Port Arthur, Tex.	Los Angeles, Calif.	Ballast.	7,446	5,173
Birk	19	9 10	19	9 40	19	17 09	19	18 42	Norwegian.	Anglo-Chilean Nfte Co.	359.0	52.0	11.0	Mobile, Ala.	Tocopilla, Chile.	Ballast.	4,751	3,160
Cuyana	19	10 19	19	13 40	19	23 40	20	1 15	American.	U. S. Navy.	455.0	56.0	21.0	Cristobal, C. Z.	San Francisco, Cal.	General.	4,036	7,150
Minnesota	19	16 05	19	16 35	20	00 24	20	1 49	American.	Amer-Hawaiian Line.	407.0	53.0	19.0	Boston, Mass.	Seattle, Wash.	General.	8	8
Grictio	19	.....	19	19 15	19	15 54	.....	.....	American.	San Blas Develop. Co.	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	Ballast.	4	4
Spillway	19	.....	19	.....	19	15 54	.....	.....	American.	Geo. Hardy	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	(*)	6	6
Hull Mand	19	.....	19	.....	19	15 54	.....	.....	American.	Geo. Hardy	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	General.	8	8
Chicasaw	20	00 40	20	6 20	20	14 45	20	19 48	American.	U. S. Steel Products Co.	411.6	55.0	26.6	New York, N. Y.	Tacoma, Wash.	Steel, general.	8,550	7,322
City	20	2 20	20	7 15	20	15 49	20	16 55	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0	27.0	Baltimore, Md	Yokohama, Japan.	General.	7,728	6,214
England Maru	20	11 55	20	12 05	20	18 43	20	19 50	American.	Standard Oil Co.	440.0	58.0	22.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	9,083	5,938
K. R. Kingsbury	20	11 35	20	12 45	20	21 45	.....	.....	American.	U. S. Navy.	292.0	44.0	.....	High seas	Barboa, C. Z.	Ballast.	288	101
El Panquiao	20	12 10	20	12 50	20	21 45	.....	.....	Panama.	Panama Government.	125.0	23.0	.....	Cristobal, C. Z.	Barboa, C. Z.	Ballast.	6,771	6,079
Snead	20	16 15	20	16 20	20	21 00	21	1 35	Norwegian.	Fern Line.	377.0	54.0	24.0	Houston, Tex.	Yokohama, Japan.	Sugar	6,800	5,776
Tregnell	20	15 20	20	19 55	21	10 29	21	11 49	British.	Andrew Weir & Co.	400.0	52.0	26.0	Pto. Manati, Cuba.	Auckland, N. Z.	General.	6,255	7,756
Murla	19	15 15	21	6 10	21	13 32	22	1 43	German.	Roland Line.	450.0	58.0	26.0	Hamburg, Germany	Valparaiso, Chile.	General.	6,255	7,756
Saint Joseph	19	15 45	21	7 15	21	15 10	21	16 10	Norwegian.	J. Lund	258.0	39.7	11.3	Tampa, Fla.	Punta Arenas, C. R.	Ballast.	1,820	1,134

* Tanker. * Motor ship. * Launch. * Barge. * Cruiser. * Transport. * Coal, steel, and general. * Bananas, coffee, and cocoa. * Towing Hull Maud. * Phosphate, lubricating oil, and cotton.

Cedar Branch.	20	22	40	21	7	25	21	15	16	21	16	35	British.	F. & W. Ritsen.	390	0	51	0	21	0	Mid'borough, Eng.	Talcahuano, Chile.	General.	4,100	4,927	3,597
Lewis	20	21	58	21	9	00	21	16	04	21	16	55	American.	Luckenbach Line.	496	0	68	2	22	0	Boston, Mass.	Seattle, Wash.	General.	6,000	11,487	8,762
Santa	21	5	40	21	10	10	21	16	58	22	00	20	American.	Grace Line.	466	0	64	0	23	6	New York, N. Y.	Talcahuano, Chile.	General.	2,908	10,087	6,633
Barbara	20	23	35	21	11	25	21	19	38	21	21	10	Norwegian.	Brugsard Line.	390	0	54	0	27	0	Antwerp, Belgium.	Vancouver, B. C.	General.	6,900	5,746	4,232
Hermion.	20	23	35	21	11	45	21	21	40	21	21	40	American.	U. S. Navy.	231	0	21	10			Cristobal, C. Z.	Balboa, C. Z.	(*)			
S-H	21	7	15	21	12	00	21	20	30				British.	Blue Star Line.	425	9	53	9	18	6	Liverpool, England	Vancouver, B. C.	Ballast.	7,506	5,261	
Oregonstar.	21	7	20	21	12	45	21	21	55	21	22	48	British.	Laneashire Shipping Co.	428	0	56	0	23	0	New York, N. Y.	Shanghai, China.	Case oil, general.	6,077	7,596	5,179
Greystroke	21	10	10	21	13	25	21	22	25	22	3	00	American.	Arrow Line.	409	0	54	2	20	6	Baltimore, Md.	Seattle, Wash.	General.	6,287	6,615	4,966
Castle	21	12	43	21	14	10	22	10	19	22	11	45	British.	Blue Star Line.	499	8	64	0	20	0	Newcastle, England	Vancouver, B. C.	Ballast.	11,673	8,143	
Christenson.	21	9	30	22	6	10	22	14	05	22	15	00	British.	Pacific Steam Nav. Co.	511	6	62	0	26	2	Liverpool, England.	Talcahuano, Chile.	General.	3,314	12,417	8,305
Dortstar.	21	22	50	22	7	10	22	19	18	22	20	40	American.	McCormick S. S. Co.	409	6	54	1	23	0	New York, N. Y.	Tacoma, Wash.	General.	5,154	6,627	4,993
Orcoma.	21	23	05	22	7	30	22	16	04	22	21	25	American.	Dollar Line.	502	0	62	2	29	0	New York, N. Y.	San Francisco, Cal.	General.	5,309	12,023	8,495
Abaroka	21	23	05	22	8	45	22	20	20	22	23	28	British.	Anglo-Saxon Pet. Co.	400	0	53	0	24	0	Falmouth, England	Los Angeles, Calif.	Ballast.	6,128	4,062	
President	21	13	05	22	8	45	22	20	20	22	23	28	British.	Royal Mail S. P. Co.	450	0	58	0	20	3	Rotterdam, Holland	Bananas, general	1,852	8,878	6,588	
Van Buren.	21	20	05	22	9	00	22	18	58	23	14	05	American.	Margaret S. Hardwick.	174	2	27	6	10	6	Miami, Fla.	Gallapagos Island.	Ballast.	591	263	
La Orescenta	22	7	10	22	10	42	22	23	15	23	00	36	American.	Luckenbach Line.	436	0	57	0	26	0	Houston, Tex.	Seattle, Wash.	General.	6,952	8,543	6,402
Nebraska.	21	18	50	22	11	25	23	00	15	23	1	12	American.	Chas. R. McCormick.	334	0	46	0	23	0	Texas City, Tex.	Los Angeles, Calif.	Sulphur	4,692	4,053	2,649
Areadia	21	15	20	22	11	45	22	21	35	22	22	50	German.	Hamburg-American Line	227	0	34	0	13	2	Cristobal, C. Z.	Guayaquil, Ecuador.	General.	1,342	1,572	1,011
Julia	22	4	35	22	11	35	23	00	11	23	1	22	Norwegian.	Moore & McCormack.	342	0	48	0	11	6	New York, N. Y.	Valparaiso, Chile.	General.	1,000	3,929	2,798
Hutchinson.	23	2	20	23	6	30	23	18	05	23	19	20	American.	J. R. Powell.	419	5	56	5	20	6	Cristobal, C. Z.	Gatun, C. Z.	Ballast.	7,060	5,025	2
Cerigo.	23	8	25	23	8	55	23	16	15	23	23	56	American.	Tide-water Oil Co.	600	0	65	3	28	0	New York, N. Y.	San Francisco, Cal.	Ballast.	3,605	17,041	11,426
Novasi.	23	9	00	23	9	30	23	19	47	24	3	35	British.	Panama-Pacific Line.	481	0	64	0	26	6	New York, N. Y.	San Francisco, Cal.	General.	6,190	11,729	8,373
Faith	23	12	05	23	12	15	23	20	35	24	1	35	American.	Shaw, Savill & Albion.	462	0	60	2	20	0	London, England	Nelson, N. Z.	Ballast.	8,461	6,104	
Solana	22	11	00	23	13	15	23	20	35	24	3	35	American.	Standard Shipping Co.	374	0	54	0	20	0	New York, N. Y.	Los Angeles, Calif.	General.	4,459		
Koranea	22	7	50	23	14	30	23	22	15	23	23	38	American.	Hamburg-American Line	449	1	57	2	19	6	Hamburg, Germany	Valparaiso, Chile.	General.	7,808	5,139	
W. H. Libby	23	14	20	23	14	30	23	22	57	24	14	10	Colombian.	Ore S. S. Corp.	116	0	21	1	0	8	Baltimore, Md.	Cruz Grande, Chile.	Ballast.	424	211	124
Palatia	23	10	30	23	15	35	24	00	32	24	1	35	British.	National Navigation Co.	385	0	52	0	23	6	Cristobal, C. Z.	Buenaventura, Col.	General.	5,726		
Feltore.	23	7	35	23	16	30	23	00	30	25	10	36	American.	Andrew Weir & Co.	334	0	46	2	24	8	Pt. Arthur, Tex.	Geelong, Australia.	Case oil	4,475	3,984	2,612
Caldas	23	13	18	23	17	35	24	1	10	24	2	15	American.	Transmarine Lines.	491	5	58	2	21	0	Mobile, Ala.	San Francisco, Cal.	General.	4,300	10,491	7,901
Saguna	23	16	45	23	18	55	24	2	10	24	3	35	American.	Amer.-Hawaiian Line.	409	8	54	2	17	2	Boston, Mass.	Portland, Oreg.	General.	3,300	6,581	4,784
River	23	16	45	23	18	55	24	2	10	24	3	35	American.	Union Sulphur Co.							Galveston, Tex.	Pt. Alice, B. C.	Sulphur.			
Sugillenco.	23	16	45	23	18	55	24	2	10	24	3	35	American.													
Virginian.	23	16	45	23	18	55	24	2	10	24	3	35	American.													
J. R. Gordon.	23	16	45	23	18	55	24	2	10	24	3	35	American.													

Helen Olmsted	16	13	50	17	5	00	17	13	30	17	13	30	American.	The Texas Co.	425	8	57	0	26	0	Los Angeles, Calif	Philadelphia, Pa	Gasoline.	9,176	7,481	5,216
Sungiteco.	16 <td>15</td> <td>55</td> <td>17<td>5</td><td>18</td><td>17<td>14</td><td>25</td><td>17<td>14</td><td>25</td><td>American.</td><td>Transmarine Lines.</td><td>334</td><td>0</td><td>32</td><td>4</td><td>25</td><td>0</td><th>Aberdeen, Wash.</th><th>New York, N. Y.</th><th>Lumber.</th><td>2,615</td><td>3,984</td><td>2,628</td></td></td></td>	15	55	17 <td>5</td> <td>18</td> <td>17<td>14</td><td>25</td><td>17<td>14</td><td>25</td><td>American.</td><td>Transmarine Lines.</td><td>334</td><td>0</td><td>32</td><td>4</td><td>25</td><td>0</td><th>Aberdeen, Wash.</th><th>New York, N. Y.</th><th>Lumber.</th><td>2,615</td><td>3,984</td><td>2,628</td></td></td>	5	18	17 <td>14</td> <td>25</td> <td>17<td>14</td><td>25</td><td>American.</td><td>Transmarine Lines.</td><td>334</td><td>0</td><td>32</td><td>4</td><td>25</td><td>0</td><th>Aberdeen, Wash.</th><th>New York, N. Y.</th><th>Lumber.</th><td>2,615</td><td>3,984</td><td>2,628</td></td>	14	25	17 <td>14</td> <td>25</td> <td>American.</td> <td>Transmarine Lines.</td> <td>334</td> <td>0</td> <td>32</td> <td>4</td> <td>25</td> <td>0</td> <th>Aberdeen, Wash.</th> <th>New York, N. Y.</th> <th>Lumber.</th> <td>2,615</td> <td>3,984</td> <td>2,628</td>	14	25	American.	Transmarine Lines.	334	0	32	4	25	0	Aberdeen, Wash.	New York, N. Y.	Lumber.	2,615	3,984	2,628
Steele	17 <td>00<td>30</td><td>17<td>6</td><td>13</td><td>17<td>16</td><td>20</td><td>17<td>16</td><td>20</td><td>American.</td><td>Ore S. S. Corp.</td><td>550</td><td>3</td><td>72</td><td>2</td><td>34</td><td>0</td><th>Cruz Grande, Chile</th><th>Baltimore, Md</th><th>Iron ore</th><td>20,000</td><td>15,551</td><td>4,297</td></td></td></td></td>	00 <td>30</td> <td>17<td>6</td><td>13</td><td>17<td>16</td><td>20</td><td>17<td>16</td><td>20</td><td>American.</td><td>Ore S. S. Corp.</td><td>550</td><td>3</td><td>72</td><td>2</td><td>34</td><td>0</td><th>Cruz Grande, Chile</th><th>Baltimore, Md</th><th>Iron ore</th><td>20,000</td><td>15,551</td><td>4,297</td></td></td></td>	30	17 <td>6</td> <td>13</td> <td>17<td>16</td><td>20</td><td>17<td>16</td><td>20</td><td>American.</td><td>Ore S. S. Corp.</td><td>550</td><td>3</td><td>72</td><td>2</td><td>34</td><td>0</td><th>Cruz Grande, Chile</th><th>Baltimore, Md</th><th>Iron ore</th><td>20,000</td><td>15,551</td><td>4,297</td></td></td>	6	13	17 <td>16</td> <td>20</td> <td>17<td>16</td><td>20</td><td>American.</td><td>Ore S. S. Corp.</td><td>550</td><td>3</td><td>72</td><td>2</td><td>34</td><td>0</td><th>Cruz Grande, Chile</th><th>Baltimore, Md</th><th>Iron ore</th><td>20,000</td><td>15,551</td><td>4,297</td></td>	16	20	17 <td>16</td> <td>20</td> <td>American.</td> <td>Ore S. S. Corp.</td> <td>550</td> <td>3</td> <td>72</td> <td>2</td> <td>34</td> <td>0</td> <th>Cruz Grande, Chile</th> <th>Baltimore, Md</th> <th>Iron ore</th> <td>20,000</td> <td>15,551</td> <td>4,297</td>	16	20	American.	Ore S. S. Corp.	550	3	72	2	34	0	Cruz Grande, Chile	Baltimore, Md	Iron ore	20,000	15,551	4,297
Spryria	16 <td>18</td> <td>30</td> <td>17</td> <td>7</td> <td>17</td> <td>17</td> <td>10</td> <td>18</td> <td>10</td> <td>00</td> <td>00</td> <td>German.</td> <td>Roland Line.</td> <td>260</td> <td>4</td> <td>37</td> <td>1</td> <td>15</td> <td>2</td> <th>Champerio, Guat</th> <th>Bremen, Germany</th> <th>(10)</th> <td>956</td> <td>1,715</td> <td>933</td>	18	30	17	7	17	17	10	18	10	00	00	German.	Roland Line.	260	4	37	1	15	2	Champerio, Guat	Bremen, Germany	(10)	956	1,715	933
Britan Allen.	16 <td>16</td> <td>40</td> <td>17</td> <td>7</td> <td>20</td> <td>17</td> <td>17</td> <td>40</td> <td>17</td> <td>17</td> <td>40</td> <td>American.</td> <td>Tampa Intercean Co.</td> <td>439</td> <td>6</td> <td>60</td> <td>2</td> <td>27</td> <td>0</td> <th>Manila, P. I.</th> <th>Baltimore, Md</th> <th>(17)</th> <td>10,817</td> <td>8,978</td> <td>6,525</td>	16	40	17	7	20	17	17	40	17	17	40	American.	Tampa Intercean Co.	439	6	60	2	27	0	Manila, P. I.	Baltimore, Md	(17)	10,817	8,978	6,525
Ethan.	17	4	25	17	8	05	17	18	25	17	18	25	Norwegian.	A. H. Mathiesen.	407	8	54	7	25	7	Los Angeles, Calif	Land's End, Eng.	Gasoline	7,895	6,539	4,252
Cuyaya	17	7	00	17	9	07	17	20	20	19	13	40	American.	U. S. Navy.	475	0	56	2	27	6	Los Angeles, Calif	Cristobal, C. Z.	Gas and oil	8,315		

Tanker.	11	Motor ship.	12	Submarine.	13	Yacht.	14	Launch.	15	Sand, coke, and general.
THROUGH THE CANAL—PACIFIC TO ATLANTIC.										

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100															
16 Coffee, honey, and sugar.																																																																																																			

101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200																																																																																																				
10 Sugar, coconut oil, and tapioca.																																																																																																																																																																																																							

13 Sand, coke, and general.

14 Lumber.

15 Yacht.

16 Sugar, coconut oil, and tapioca.

17 Motor ship.

18 Tanker.

19 Coffee, honey, and sugar.

20 Cotton, wool, and other goods.

21 For orders.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Helen Olmsted	16	13	50	17	5	00	17	13	30	American	The Texas Co.	425	8	57	0	26	0	Los Angeles, Calif	Philadelphia, Pa	Gasoline	9,176	7,481	5,216
Stungento	16	15	55	17	5	18	17	14	25	American	Transmarine Lines	324	0	46	2	25	0	Aberdeen, Wash	New York, N. Y.	Lumber	2,615	3,984	2,628
Stedore	17	00	30	17	6	13	17	16	20	American	Ore S. S. Corp.	550	3	72	3	34	0	Cruz Grande, Chile	Baltimore, Md	Iron ore	20,000	15,551	4,297
Snyria	16	18	30	17	7	11	17	17	10	German	Roland Line	260	4	37	1	15	2	Champerico, Guat	Bremen, Germany	(*)	956	1,715	993
Ethan Allen	16	16	40	17	7	20	17	17	40	American	Tampa Inter-ocean Co.	439	6	60	2	27	0	Manila, P. I.	Baltimore, Md	(*)	10,817	8,978	6,525
Britia	17	4	25	17	8	05	17	18	25	Norwegian	A. H. Matheson	407	8	54	7	25	7	Los Angeles, Calif	Land's End, Eng.	Gasoline	7,885	6,539	4,252
Cuyama	17	7	00	17	9	07	17	20	19	American	U. S. Navy	473	0	56	2	27	6	Los Angeles, Calif	Cristobal, C. Z.	Gas and oil	8,315		

¹⁶ Coffee, honey, and sugar.

¹⁷ Sugar, coconut oil, and tapioca.

¹⁸ For orders.

13 For orders.

14 Sugar, coconut oil, and tapioca.

15 Motor ship.

16 Tanker.

17 Coffee, honey, and sugar.

18 Cotton, wool, and other goods.

19 For orders.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.				
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.		
Harry Luckenbach	17	6 49	17	9 44	17	20 30	17	20 30	American	Luckenbach Line	448 9	60 2	29 6	Seattle, Wash	Mobile, Ala.	General.	7,560	9,262	6,853			
King City	17	7 45	17	10 30	17	21 18	17	21 18	British	Sir W. R. Smith & Sons.	414 7	53 4	24 5	Vancouver, B. C.	Manchester, Eng.	General	7,515	6,993	5,397			
Challenger ¹⁹	17	10 20	17	11 15	17	21 45	17	21 45	American	Islandian S. S. Lines	410 0	56 0	30 0	Seattle, Wash.	London, England	Lumber, general.	9,673	7,780	5,811			
Simsburn	17	13 15	17	14 05	17	22 40	17	22 40	British	Common Brothers	390 0	53 5	25 6	Portland, Oreg.	Dublin, Ireland.	Wheat.	8,050	5,625	4,158			
Sydlund	17	16 00	17	17 22	18	9 00	18	9 00	Swedish	Axel Cronstrom & Son	450 0	54 0	28 0	Prince Rupert, B. C.	Avonmouth, Eng.	Grain in bulk.	8,747	6,771	4,891			
Port Caroline	17	19 55	17	23 25	18	10 40	18	14 15	British	Com'lth & Don. Line	482 7	62 4	27 0	Auckland, N. Z.	London, England	Frozen, general.	7,660	10,740	7,829			
Nordlys	17	18 40	18	00 15	18	11 30	18	14 15	Danish	Peter Brown & Co.	382 0	51 5	23 7	Tahiti, Chile	Jacksonville, Fla.	Nitrates	6,350	4,932	3,468			
Oakmar	18	00 05	18	1 20	18	12 43	18	12 43	American	Calmar S. S. Corp.	384 4	51 2	25 9	Gray's Har., Wash.	Boston, Mass.	Lumber	6,394	4,328	4,433			
Altair	17	17 10	18	3 00	18	14 15	18	14 15	American	Standard Transp. Co.	429 3	59 2	28 0	New York, N. Y.	New York, N. Y.	Gas oil	10,400	7,695	5,402			
Teno	17	23 10	18	6 37	18	16 00	18	20 50	Chilean.	Chilean Line.	421 8	56 0	27 4	Talcahuano, Chile.	New York, N. Y.	General.	4,745	7,764	4,672			
Queen Maud	18	6 00	18	7 11	18	17 10	18	18 25	British	Thos. Dunlop & Sons	400 2	52 8	25 0	Tooeopila, Chile.	Baltimore, Md.	Nitrates	7,700	5,748	3,955			
Pat Doherty	18	6 50	18	8 16	18	18 25	18	18 25	American	Richfield Oil Co.	430 2	59 2	25 3	Los Angeles, Calif.	New York, N. Y.	(²⁰)	9,187	7,978	5,840			
Gracia	18	14 50	18	15 28	18	23 40	19	4 15	British	Donaldson Line.	415 5	54 2	27 2	Vancouver, B. C.	London, England	General.	6,564	6,809	4,842			
Abron	18	17 20	18	22 18	19	8 55	19	8 55	American	Redwood Line.	386 8	52 2	22 3	San Francisco, Cal.	New Orleans, La.	Lumber, general.	5,199	5,732	4,131			
Leeds City	18	21 45	18	23 21	19	9 25	19	12 30	British	Sir W. R. Smith & Sons	400 2	54 5	26 8	Vancouver, B. C.	Manchester, Eng.	Wheat.	8,030	6,997	5,461			
Guatemala	18	13 10	19	5 31	19	11 50	21	2 00	American	Panama Mail S. S. Co.	360 2	51 6	24 6	San Francisco, Cal.	New York, N. Y.	Coffee, general.	2,982	5,776	4,081			
California	18	11 36	19	6 09	19	13 30	19	14 05	American	Panama-Pacific Line	574 4	80 3	30 5	San Francisco, Cal.	New York, N. Y.	General.	7,400	24,506	17,565			
Illinois	18	23 39	19	7 20	19	15 10	19	15 10	American	The Texas Co.	416 8	56 1	25 6	Wilmington, Calif.	New York, N. Y.	Gasoline.	7,662	7,160	5,330			
Congo	18	23 55	19	7 41	19	15 25	19	15 25	German	Hamburg-American Line	227 4	34 4	13 0	Guayaquil, Ecuador.	New York, N. Y.	General.	396	1,572	1,011			
Aleksandar I.	18	23 55	19	8 16	19	16 40	19	17 30	Yugoslav	Yugoslav Lloyd	423 0	56 0	26 0	Antofagasta, Chile	Cristobal, C. Z.	Nitrates	9,700	6,561	4,701			
Acapulca	19	3 00	19	8 22	19	16 50	19	16 50	British	Pacific Steam Nav. Co.	215 7	33 5	17 7	Champerico, Guat.	Cristobal, C. Z.	(²¹)	1,124	1,273	706			
Lina L. D.	19	5 35	19	9 30	19	17 55	19	19 55	French	Louis Dreyfus & Co.	420 0	54 0	24 0	San Francisco, Cal.	Genoa, Italy	Asphalt.	8,120	7,075	5,301			
Dorothy	19	9 00	19	10 21	19	18 30	19	18 30	American	Luckenbach Line	448 9	60 2	31 0	Portland, Oreg.	Boston, Mass.	Lumber, general.	9,800	9,294	6,861			
Luckenbach.	18	20 15	19	11 07	19	20 10	19	20 10	British	Com'lth & Don. Line	477 3	63 2	25 6	Wellington, N. Z.	London, England	General.	6,837	10,684	7,796			
Port Alma ¹⁹	19	12 00	19	13 07	19	20 55	19	20 55	American	United Fruit Co.	336 7	42 0	19 0	San Francisco, Cal.	Port Limon, C. R.	General.	1,099	3,668	2,308			
Saramacca	19	14 00	19	15 00	19	23 05	19	23 05	British	Imperial Oil Co., Ltd.	510 2	68 2	30 0	Cabo Blanco, Peru.	Halifax, N. S.	Crude oil.	16,300	11,575	7,648			
Victrolite ¹⁹	19	14 15	19	15 36	19	23 20	19	23 20	American.	Swayne & Hoyt	324 0	46 2	21 3	Portland, Oreg.	New Orleans, La.	General.	3,040	3,984	2,617			
Point Fernu	19	18 45	19	19 50	20	9 20	20	14 50	Dutch.	Royal Neth. S. S. Co.	449 7	58 2	26 0	Corral, Chile.	Europe.	Nitrates, general.	8,232	7,849	5,861			
Bennetkom	19	18 45	19	19 50	20	9 20	20	14 50	Dutch.	Royal Neth. S. S. Co.	449 7	58 2	26 0	Corral, Chile.	Europe.	Nitrates, general.	8,232	7,849	5,861			
Saint Louis	20	1 25	20	5 11	20	13 45	20	13 45	French	French Line	337 9	50 3	24 3	Valparaiso, Chile	Le Havre, France.	(²²)	6,696	5,867	4,166			
Annie Johnson ¹⁹	20	2 20	20	6 13	20	13 55	20	13 55	Swedish.	Johnson Line.	332 2	52 6	25 3	Seattle, Wash.	Stockholm, Sweden	General.	5,811	6,650	4,919			
Gustaf E.	20	4 40	20	7 04	20	15 25	20	16 50	Swedish	Rederiaktiebolaget.	418 8	55 1	27 6	Los Angeles, Calif.	Hamburg, Germany	Gasoline.	8,310	6,384	4,497			
Renter ¹⁹	20	6 45	20	8 20	20	17 00	20	17 00	American	Standard Transp. Co.	410 0	56 0	27 4	Los Angeles, Calif.	New York, N. Y.	Gas oil.	8,721	8,201	6,207			
Tiger ¹⁹	20	11 00	20	13 30	20	22 00	20	22 00	Colombian.	Colombian Transp. Co.	150 0	27 2	11 2	Buenaventura, Col.	Cristobal, C. Z.	General.	500	410	307			
Floresca ¹⁹	20	17 10	20	18 18	21	9 05	21	9 45	British	Common Brothers	390 0	56 8	26 0	Vancouver, B. C.	Rotterdam, Holland	Wheat.	8,250	5,766	4,286			
Newbrough	20	17 25	20	20 08	21	10 30	22	14 05	Dutch.	N. Pacific Coast Serv.	485 5	62 3	27 0	Vancouver, B. C.	Rotterdam, Holland	General.	8,102	10,793	7,619			
Drechtidijk ¹⁹	20	17 25	20	20 08	21	10 30	22	14 05	Dutch.	N. Pacific Coast Serv.	485 5	62 3	27 0	Vancouver, B. C.	Rotterdam, Holland	General.	8,102	10,793	7,619			
Feodosia	20	20 00	20	22 46	21	12 04	21	17 00	German.	Hamburg-American Line	337 8	48 3	12 8	Champerico, Guat	Hamburg, Germany	Ballast.	4,310	4,316	3,142			
* Tanker.																			¹⁹ Motor ship.	²⁰ Gasoline and canned paint.	²¹ For cargo.	²² Coffee, sugar, and nitrates.

* Tanker.

¹⁹ Motor ship.²⁰ Gasoline and canned paint.²¹ For orders.²² Coffee and silver bars.

Ship	Date	Vessel	Line	From—	Date	Vessel	Line	For—
Nicoline	21	2 30 21	5 08	21 13 55	21 15 00	Danish	A. P. Moller	Nitrates.....
Maersk ²⁴	21	3 15 21	5 28	21 14 20	23 14 30	Colombian	National Navigation Co.	General.....
Caldas ²⁴	21	1 00 22	5 16	22 13 15	22 14 45	American	Pan-Am. Pac. & Tr. Co.	Gasoline.....
Dean Enery	21	21 00 22	5 16	22 13 15	22 14 45	American	Pan-Am. Pac. & Tr. Co.	Crude oil.....
Solina	22	8 00 22	10 58	22 19 42	22 19 42	American	Gladstone Transp. Co.	Wheat.....
Brighton	22	10 00 22	11 54	22 21 35	22 22 25	British	R. Chapman & Sons	Crude oil.....
Via regia	22	11 00 22	13 03	22 21 25	23 19 10	German	Panama Mail S. S. Co.	Crude oil.....
Schwen	22	11 15 22	15 03	22 23 15	23 19 10	German	North German Lloyd	Crude oil.....
San Castro ²⁵	16	20 23 22	15 38	22 23 45	22 23 45	British	Eagle Oil Transport Co.	General.....
Kansan	22	11 39 22	15 46	22 23 45	22 23 45	American	Amer.-Hawian Line	Ballast.....
Schofield ²⁴	22	8 00 23	5 28	23 13 10	23 13 10	American	Standard Oil Co. of Cal.	General.....
Atago Maru ²⁴	22	13 00 23	6 10	23 14 00	23 14 00	Japanese	Nippon Yusen Kaisha	Fuel, gas oil.....
Notre Dame	22	15 00 23	7 06	23 16 05	24 12 14	French	French Line	Sugar, general.....
De Fourviere	22	1 30 23	8 01	23 16 55	23 16 55	American	Hefron S. S. Co.	(²⁶)
Hefron	22	2 05 23	8 58	23 18 10	23 18 10	American	Nelson S. S. Co.	Lumber.....
Buffalo Bridge	23	6 50 23	9 28	23 19 50	23 30 30	British	Lawler Latta & Co.	Lumber, copper.....
Anglo Chilean	23	10 00 23	11 01	23 20 45	23 30 45	American	Standard Transp. Co.	(²⁷)
Algonquin	23	10 20 23	11 46	23 21 55		German	Roland Line	Kerosene.....
Cal	23	10 30 23	12 26	23 23 05	24 00 20	American	Tidewater Oil Co.	(²⁸)
David McKelvey	23	13 15 23	15 00	23 23 10	24 10 28	Japanese	Oaska Shosen Kaisha	Gasoline.....
Hamburg Maru	23	13 15 23	15 00	23 23 10	24 10 28	Japanese	Oaska Shosen Kaisha	Sugar, general.....

1 Tanker.

24 Motor ship.

25 Transited south March 15 for dry-docking only.

26 Wheat, coffee, and copper.

27 Zinc, concentrates, and wool.

28 Cacao, coffee, and ivory nuts.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Ship	Date	Vessel	Line	From—	Date	Vessel	Line	For—
March 17	March 17	Macabi	United Fruit Co.	Puerto Colombia, Col.	March 17	Wanka	Standard Fruit & S. S. Co.	San Blas, R. P.
March 17	March 17	Minerva	Royal Netherlands S. S. Co.	Hamburg via waypoints.	March 17	Novian	Leyland Line	Moro, Cuba.
March 17	March 17	Magdalena	Pan-American Airways	Miami, Fla. via waypoints.	March 17	No. 9717 ²⁹	Pan-American Airways	David, R. P.
March 19	March 19	Magdalena	Hamburg-American Line	Hamburg via waypoints.	March 17	Cumede	United Fruit Co.	Guacabo, D. W. I.
March 20	March 20	Linda S. ³⁰	A. L. Surgeon	Colon, R. P.	March 17	Cristobal	Panama Railroad Line	New York via Haiti
March 20	March 20	Coppanne	United Fruit Co.	New Orleans, La.	March 17	Simon Bolivar	Royal Netherlands S. S. Co.	Amsterdam via waypoints.
March 20	March 20	Santa Marta	United Fruit Co.	New York via Kingston.	March 17	Macabi	United Fruit Co.	New York via Kingston.
March 20	March 20	Mercan	Leyland Line	Palo Alto, Cuba.	March 18	All America ³¹	All America Cable Co.	High seas.
March 21	March 21	Flandre	French Line	Havre via waypoints.	March 18	Parandha	United Fruit Co.	New Orleans via waypoints.
March 21	March 21	Tolon	United Fruit Co.	New York via waypoints.	March 20	Linda S. ³⁰	A. L. Surgeon	Bluefields, Nicaragua.
March 21	March 21	Wauata	Standard Fruit & S. S. Co.	Puerto Cabezas.	March 21	Annetta I. ³¹	A. Tagarapulos	Colon, R. P.
March 21	March 21	Inapaquina ³¹	United Fruit Co.	Colon, R. P.	March 21	Inapaquina ³¹	United Fruit Co.	Colon, R. P.
March 21	March 21	Annetta I. ³¹	United Fruit Co.	Colon, R. P.	March 21	Coppanne	United Fruit Co.	Puerto Colombia.
March 21	March 21	Annapala	Standard Fruit & S. S. Co.	New Orleans, La.	March 21	Santa Marta	United Fruit Co.	New York via waypoints.
March 22	March 22	Iriana	United Fruit Co.	Bocas, R. P.	March 22	No. 8044 ²⁹	Pan-American Airways	Miami via waypoints.

29 Airplane mail carrier.

30 Motor schooner.

31 Motor boat.

32 Cable ship.

* Other than ships passing through the Canal.

(Continued on next page, column 2.)

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Transit and Harbor Regulations of The Panama Canal," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.

The Hydrographic Office at Cristobal maintain at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometric comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 12 cents per pound and forequarters at 9½ cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Trips Through the Canal.

The following lines operating passenger vessels through the Canal carry local passengers from one terminal to the other: Panama Mail Steamship Company, Pacific Steam Navigation Company, Grace Line, Chilean Line, Navigazione Generale Italiana, Hamburg-American Line, The Panama Mail and Hamburg-American Line charge \$6 for the trip, the others \$10 for first-class passage. The Chilean Line has also a rate of \$4 for intermediate class, and the Panama-Pacific Line a rate of \$6 for tourist class. The several services together afford about 4 transits of the Canal each way every week.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Ships' Chandlery Supplies.

Panama Canal storehouses stock a complete line of ships' chandlery supplies available for sale to shipping at cost prices plus 25 per cent surcharge, which surcharge includes freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 499.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	Line.	Date.	Vessel.	Line.
March 22	Wanks	Standard Fruit & S. S. Co.	March 22	Minerva	Royal Netherlands S. S. Co.
March 23	Heredia	United Fruit Co.	March 22	Flunder	French Line
March 23	Carmania	R. Feuillebois	March 22	Tulosa	United Fruit Co.
			March 22	Mercian	Leyland Line
			March 23	Iriona	United Fruit Co.
			March 23	Anapala	Standard Fruit & S. S. Co.
			March 23	Magdalena	Hamburg-American Line
			March 23	Waunta	Standard Fruit & S. S. Co.
** Motor schooner.			PORT OF BALBOA.		
March 18	Nora	W. R. Grace & Co.	March 19	Nora	W. R. Grace & Co.
March 20	Neches	U. S. Navy	March 20	Ginyo Maru	Nippon Yusen Kaisha
March 20	H. M. Storey	Standard Oil Co. of Calif.	March 21	H. M. Storey	Standard Oil Co. of Calif.
March 20	Ginyo Maru	Nippon Yusen Kaisha	March 21	Neches	U. S. Navy
					Los Angeles, Calif.
					Hongkong, China.
					Los Angeles, Calif.
					Los Angeles, Calif.

* Other than ships passing through the Canal.

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OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII.

Balboa Heights, C. Z., April 3, 1929.

No. 35.

Traffic Through the Panama Canal in March, 1929.

During the month of March, 1929, 536 commercial vessels and 15 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,343,865.55, and on the launches \$144.24, or a total tolls collection of \$2,344,009.79.

The daily average number of commercial transits for the month was 17.29, and the average tolls collection \$75,608.57, as compared with an average of 18.64 transits and \$78,998.62 in tolls for the previous month. The average amount of tolls paid by each of the commercial transits was \$4,372.88, as compared with \$4,237.47 for the month of February, 1929.

In the following tabulation, the number of commercial transits and the amount of tolls collected are shown for the first 9 months of the current fiscal year, with the daily averages of transits and tolls, together with the totals for the first 9 months of the fiscal years 1928 and 1927:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	509	\$2,109,083.19	16.41	\$68,034.94
August.....	526	2,199,069.31	16.97	70,937.72
September.....	487	2,111,230.56	16.23	70,374.35
October.....	557	2,274,945.30	17.97	73,385.33
November.....	527	2,225,937.48	17.57	74,197.91
December.....	579	2,443,029.39	18.67	78,807.39
January.....	603	2,502,815.12	19.45	80,735.97
February.....	522	2,211,961.20	18.64	78,998.62
March.....	536	2,343,865.55	17.29	75,608.57
Totals, first 9 months of fiscal year 1929.....	4,846	20,421,937.10	17.68	74,532.62
Totals, first 9 months of fiscal year 1928.....	4,936	20,621,711.03	17.95	74,988.04
Totals, first 9 months of fiscal year 1927.....	4,085	18,127,174.49	14.90	66,157.57

As compared with the first 9 months of the fiscal year 1928, the corresponding period this year has had 90 fewer transits and \$199,773.93 less tolls.

Beginning of Tri-weekly Air-Mail Service Between Canal Zone and United States.

An airplane of the Pan-American Airways, Inc., which left France Field on the morning of April 2, carrying 18 pounds of mail, was reported by the local representative of the operating Company to have been the first northward flight in what will be maintained as a tri-weekly air-mail service between the Canal Zone and Miami, Florida. Beginning in February, 1929, the Pan-American Airways, Inc., established a semimonthly mail service between Cristobal and Miami. Beginning with the flight started on April 2 it is purposed to make dispatches every Tuesday, Thursday, and Saturday.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, March 30, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Asby	23	05	24	6	40	24	13	57	24	15	45	55	405.0	53.6	15.0	British Columbia	Ballast	5,858	4,300
Floresca	20	22	00	24	6	08	24	17	00	25	2	30	150.0	27.0	9.4	Pro. Armuelles, R.P.	General	430	410
Santa Tecla	23	15	55	24	6	15	24	15	19	24	16	40	298.6	40.0	22.7	Talcahuano, Chile	General	2,782	2,832
Saramacca	23	19	05	24	6	10	24	13	50	24	16	40	336.7	42.0	19.8	San Francisco, Cal.	Bananas, etc	733	3,668
Atlantic City	23	16	20	24	7	52	24	16	58	24	16	40	411.7	54.5	27.3	Taku Bar, China	Flour	8,678	6,555
India Arrow	23	23	05	24	7	28	24	16	58	24	18	15	468.3	62.7	19.6	Los Angeles, Calif.	Ballast	10,084	7,426
Hollywood	23	23	25	24	8	45	24	18	56	24	23	00	427.0	54.0	21.1	San Francisco, Cal.	General	5,065	6,584
Panama	14	17	55	24	9	10	24	18	58	24	22	04	296.0	46.0	19.10	San Francisco, Cal.	General	2,163	3,848
Margarette	24	1	25	24	9	18	24	19	56	24	21	12	265.0	42.0	14.6	Tunaco, Col.	Salt	1,894	2,263
San Lamberto	23	21	50	24	10	24	20	05	24	21	12	British	395.6	55.0	27.0	Antofagasta, Chile	Oil	8,628	6,741
El Lobo	24	6	53	24	11	55	24	21	18	24	22	41	385.2	51.0	18.0	La Libertad, Ecuador	Ballast	4,851	3,326
Svealand	24	7	20	24	12	10	24	21	23	24	22	41	324.0	46.2	19.0	Newark, N. J.	General	2,141	3,984
Brielle	24	7	35	24	13	25	24	22	23	23	3	50	561.0	72.0	20.0	Cruz Grande, Chile	Ballast	15,425	4,421
Swiwell	22	4	30	24	15	20	25	00	21	25	1	40	324.0	58.0	21.0	Corral, Chile	General	3,170	7,322
Howick Hall	24	14	15	24	16	00	25	00	27	25	1	40	403.0	46.2	19.6	Tacoma, Wash.	General	3,300	3,983
Maltran	24	13	35	24	18	55	25	2	44	25	3	50	400.0	51.0	26.6	Corral, Chile	Steel, general	6,366	9,935
Ponte Gorda	24	18	20	25	6	25	25	15	41	25	17	10	333.0	48.0	20.0	Seattle, Wash.	(¹)	3,460	4,171
San Cecilia	25	1	05	25	6	38	25	15	44	25	17	10	324.0	46.2	24.0	Vancouver, B. C.	General, etc.	3,889	3,984
City of	24	18	58	25	7	45	25	17	09	25	18	10	404.6	54.0	28.2	Vancouver, B. C.	Steel, general	8,218	6,745
Kimberly	24	21	10	25	8	40	25	18	04	25	19	20	416.0	56.0	26.6	Adelaide, Australia	General	5,564	7,987
Chastine	24	23	00	25	9	00	25	18	52	25	19	50	378.0	50.0	25.0	Adelaide, Australia	General	7,300	5,526
Maersk	25	5	10	25	11	05	25	19	48	25	23	54	385.0	51.2	28.0	Iloilo, P. I.	General	8,094	6,224
Pennmar	25	6	15	25	12	27	25	20	38	25	24	46	370.0	53.1	18.0	Seattle, Wash.	Steel, general	4,084	4,465
Agwistar	25	6	20	25	13	27	25	21	30	25	26	10	420.0	53.1	18.0	Talcahuano, Chile	General	2,509	5,523
Remore	24	23	00	25	13	27	25	21	30	25	22	40	370.0	53.1	18.0	Freemantle, Aust.	General	2,082	6,448
Albertolite	25	5	55	25	13	40	25	22	30	25	23	35	414.5	55.2	20.0	Los Angeles, Calif.	Ballast	6,437	4,442
El Ciervo	25	11	45	25	13	05	25	23	20	25	3	44	407.4	53.0	17.0	Los Angeles, Calif.	Ballast	6,046	4,326
Sachsen	24	19	30	25	16	30	25	00	24	26	1	40	468.8	58.3	18.10	Valparaiso, Chile	General	1,754	9,624
Silvermaple	25	12	37	25	17	55	25	12	02	25	2	25	425.0	58.3	20.0	Vancouver, B. C.	General	4,383	8,216
Laurel	25	12	37	25	17	55	25	12	02	25	2	25	425.0	58.3	20.0	Manila, P. I.	General	4,383	8,216
Orazio	25	4	45	26	6	05	26	13	38	26	19	16	484.0	61.8	24.0	Gatun, C. Z.	General	1,963	12,977
W. S. Rheem	25	22	30	26	7	25	26	19	26	26	20	30	500.0	68.2	18.6	Valparaiso, Chile	Ballast	11,224	7,895
Pacific	26	2	00	26	8	40	26	18	35	26	23	50	400.0	56.0	27.0	Tacoma, Wash.	Steel, general	7,901	6,517
Major Pullen	26	2	00	26	8	40	26	18	35	26	23	50	400.0	56.0	27.0	Tacoma, Wash.	Steel, general	7,901	6,517
West Katoo	26	5	35	26	10	10	26	20	26	26	21	25	410.5	54.3	22.2	Gatun, C. Z.	General	5,938	6,573

* Cardboard containers.

* Launch.

* Motor ship.

* Motor schooner.

* Tanker.

Lobos ⁶	25	12	20	26	11	15	26	21	18	27	1	25	British.	Pacific Steam, Nav. Co.	405	0	54	2	19	6	Hull, England	Corral, Chile	General	3,839	7,151	4,756
Polana	26	13	00	26	13	15	26	22	28	27	1	25	Norwegian.	Scand.-So. Pacific Co.	360	7	52	2	24	5	Oslo, Norway	San Antonio, Chile.	(*)	6,255	5,451	3,820
City of Adelaide	26	12	50	26	18	25	27	2	11	27	3	28	British.	Hall Line, Ltd.	450	0	57	5	13	7	New York, N. Y.	Dunedin, N. Z.	General	4,033	8,547	6,646
Yangtze	26	18	25	26	18	25	27	3	09	27	7	31	Swedish.	Transatlantic S. S. Co.	422	0	53	9	14	1	Dunkirk, France.	Los Angeles, Calif.	Ballast	6,972	5,122	
Astral	26	19	10	26	21	00	27	13	24	27	14	40	American	Standard Transp. Co.	438	5	58	0	21	9	New York, N. Y.	Los Angeles, Calif.	Ballast	8,913	6,210	
Visurgis	26	21	25	27	6	55	27	16	17	27	17	20	German	North German Lloyd	231	0	37	8	15	8	Cristobal, C. Z.	Punta Arenas, C. R.	General	2,200	1,408	855
American	26	20	45	27	7	15	27	16	11	27	17	20	American	Amer.-Hawaiian Line	404	6	53	9	19	0	Boston, Mass.	Tacoma, Wash.	General	3,788	6,777	4,761
J. L. Luckenbach	26	19	15	27	8	45	27	17	09	27	18	25	American	Luckenbach Line	448	9	60	2	24	0	Boston, Mass.	Seattle, Wash.	General	5,700	9,294	6,861
Ontario	26	23	10	27	10	27	19	14	28	3	30	27	British.	Imperial Oil Co., Ltd.	470	0	63	0	28	0	Yanouver, B. C.	Vancouver, B. C.	Grande oil.	12,072	9,191	5,278
Sylvafield	27	00	55	27	12	10	27	19	43	28	00	22	British.	Hunting & Son	395	0	52	5	20	3	Tyne, England	Los Angeles, Calif.	Ballast	5,900	8,993	
Francis E. Powell	27	4	55	27	13	45	27	22	10	27	23	04	American	Atlantic Refining Co.	431	0	50	2	20	0	Fall River, Mass.	Los Angeles, Calif.	Ballast	7,860	5,101	
Elisa	27			27	9	00	27	16	06				Panaman.	Robert Wilcox	38	0	9	6			Cristobal, C. Z.	Balboa, C. Z.	Ballast	14	12	
Herman Falk	27	17	00	27	18	15	28	1	23	28	2	25	American	Tide-water Oil Co.	431	0	59	2	18	0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,862	5,049	
Wayfarer	27	8	00	28	6	17	28	13	05	28	14	30	British.	T. & J. Harrison	395	0	52	0	18	0	Liverpool, England	Williamshead, B. C.	Ballast	5,728	3,855	
Chilore	27	14	47	28	7	15	28	15	12	28	17	10	American	Ore S. S. Corp.	549	0	72	0	21	6	Baltimore, Md.	Cruz Grande, Chile	Ballast	14,538	9,348	
Abadan	27	14	55	28	7	35	28	17	12	28	22	00	Swedish.	Anglo-Saxon Pet. Co.	417	5	55	2	16	0	Falmouth, England	Los Angeles, Calif.	Ballast	6,362	4,245	
Willmott	27	23	10	28	8	55	28	18	46	28	19	55	American	Williams S. S. Line	390	0	54	0	28	4	Norfolk, Va.	Seattle, Wash.	Iron, general	7,050	6,162	4,417
Modani	27	17	20	28	9	40	28	19	39	28	22	25	Norwegian.	Ivar & Christensen	371	0	51	0	16	0	Antwerp, Belgium	Punta Arenas, C. R.	Iron pipes	1,500	5,007	8,702
Pacific Pioneer	27	13	50	28	14	17	28	21	00	28	22	00	British.	Furness, Withly & Co.	435	0	60	0	20	0	Glasgow-England	Vancouver, B. C.	Bananas, general	1,823	9,630	6,943
Arkansas	28	2	15	28	16	49	29	00	04	29	1	20	French.	French Line	448	0	53	0	18	0	Havre, France	Vancouver, B. C.	General	594	7,678	5,563
R. D. Leonard	28	17	25	28	18	30	29	3	33	29	8	25	American	Union Oil Co.	276	10	39	0	18	6	Philadelphia, Pa.	Oelun, Calif.	Lubricating oil.	2,324	1,936	1,304
Divine Arrow	28	19	20	28	19	25	29	3	45	29	4	25	American	Standard Oil Co.	468	3	62	7	21	0	Boston, Mass.	Los Angeles, Calif.	Ballast	9,744	7,140	
Ebro	28	17	50	29	6	05	29	14	22	29	15	31	British	Pacific Steam Nav. Co.	450	0	56	0	26	5	New York, N. Y.	Talcahuano	General	4,303	9,291	6,301
Memphis City	28	21	35	29	7	10	29	16	57	29	18	11	American	Iskham S. S. Lines	425	0	56	0	26	0	Baltimore, Md.	Shanghai, China.	Steel, general	7,562	7,611	5,450
Peter Kerr	28	22	20	29	7	35	29	17	41	29	18	35	American	Arrow Line	415	0	55	6	21	0	Baltimore, Md.	Los Angeles, Calif.	General	4,885	7,704	3,707
Atholl	29	2	40	29	8	55	29	19	05	29	20	00	British	Norton, Lilly & Co.	385	5	48	7	20	7	New York, N. Y.	Freemantle, Aust'ia	General	4,950	4,830	3,556
Mary Ellen	29	5	25	29	9	37	29	19	52	29	21	00	American	The Texas Co.	509	7	70	3	21	0	Baltimore, Md.	Los Angeles, Calif.	Ballast	12,514	8,427	
O'Neil	29	20	10	29	11	10	29	19	13	30	00	10	Norwegian.	Rajnar Moltau	250	9	43	0	17	6	Rotterdam, Holland	Punta Arenas, C. R.	Iron pipes	1,700	2,229	1,368
Rendal	29	9	40	29	11	10	29	20	45	30	3	36	American	Rosevelt S. S. Co., S. B.	402	6	53	0	18	2	New York, N. Y.	Adelaide, Australia	General	2,175	6,570	4,768
Oakpark	29	6	55	29	12	28	29	21	55	30	10	19	Norwegian.	Rosevelt S. S. Co., S. B.	450	8	61	0	20	0	Tyne, England	Los Angeles, Calif.	Ballast	8,168	5,452	
Sydhav	29	12	30	29	13	40	29	22	50	30	13	25	Norwegian.	Anglo-Saxon Pet. Co.	470	0	62	2	20	0	Rotterdam, Holland	Talca, Peru.	Ballast	9,198	6,287	
Storstad	29	3	25	30	6	20	30	14	45	30	18	41	Swedish.	Standard Shipping Co.	561	0	72	0	22	5	Baltimore, Md.	Cruz Grande, Chile	Ballast	15,560	4,496	
Amerikland	30	5	40	30	7	45	30	15	38	30	17	10	American	Ore S. S. Corp.	324	0	46	2	18	6	New Orleans, La.	Vancouver, B. C.	General	2,321	3,984	2,617
Point Reyes	30	9	40	30	9	50	30	16	29	30	17	35	Japanese	Swayne & Hoyt	385	0	51	0	13	0	Philadelphia, Pa.	Arica, Chile.	Ballast	6,213	4,665	
Glasgow	30	11	45	30	12	00	30	19	15	31	2	00	British	N. Y. Shipping Co.	526	0	61	4	28	3	London, England	Auckland, N. Z.	General	7,565	12,846	9,439
Maru	30	21	25	30	13	45	30	21	25	30	22	45	German	North German Lloyd	216	5	32	9	15	3	Cristobal, C. Z.	Buenaventura, Col.	General	850	1,105	698
Rotoma	30	15	10	30	15	35	31	00	15	31	1	41	British.	Can. Nat. Steamships	400	0	52	0	19	0	Halifax, N. S.	Vancouver, B. C.	General	1,381	5,892	4,186
Cal	30	18	17	30	16	45	31	1	25	31	5	33	Norwegian.	H. C. Stevenson	183	2	30	0	12	3	Cristobal, C. Z.	Pto. Armuelles, R. P.	General	800	780	
Canadian Miller	30	15	10	30	15	35	31	00	15	31	1	41	British.	Can. Nat. Steamships	400	0	52	0	19	0	Halifax, N. S.	Vancouver, B. C.	General	1,381	5,892	4,186
Martha	1-18	17	30	30	16	45	31	1	25	31	5	33	Norwegian.	H. C. Stevenson	183	2	30	0	12	3	Cristobal, C. Z.	Pto. Armuelles, R. P.	General	800	780	

* Explosives and general.

† Launch.

* Motor ship.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Huruni.....	23	23.36	24	5.13	24	13.30	24	14.40	British.....	N. Z. Shipping Co.....	470.0	62.5	23.6	Port Pirie, Austr'ia	London, England..	Frozen, general.	6,916	10,174	7,209	
Charles R.....	24	3.50	24	6.04	24	14.48	24	14.48	American.....	McCormick S. S. Co.....	401.4	53.2	27.0	Seattle, Wash.....	Baltimore, Md.....	Lumber, general.	7,030	7,082	5,667	
Watertown.....	24	4.00	24	6.47	24	16.30	24	16.30	American.....	Cities Service Trans. Co.	416.9	56.2	27.4	Los Angeles, Calif	Providence, R. I.....	Gasoline.....	9,200	6,717	4,778	
Adria.....	24	1.25	24	7.47	24	17.47	25	3.45	German.....	Atlantic Tank Roderel.	412.0	55.1	25.6	Los Angeles, Calif	Liverpool, England	Benzine.....	8,388	6,579	4,574	
Commercial Guide.....	24	12.15	24	13.02	24	22.13	25	1.10	American.....	Moore & McCormack	406.7	55.2	25.4	Antofagasta, Chile.	Charleston, S. C.....	Nitrates.....	7,700	6,597	4,752	
Edgemont.....	24	12.40	24	14.52	25	9.15	25	9.15	American.....	Rosevelt S. S. Co., S.B.	409.6	54.0	27.5	Manila, P. I.....	Delaware River.....	Sugar.....	8,450	7,448	5,868	
Santa Maria.....	24	11.45	25	3.19	25	10.35	25	21.15	American.....	Grace Line.....	406.0	64.0	26.0	Talcahuano, Chile.	New York, N. Y.....	Copper, general.	5,203	10,626	6,880	
Atlantic Sun.....	25	1.25	25	4.41	25	13.25	25	13.25	American.....	Sun Oil Co.....	429.4	59.2	26.0	Los Angeles, Calif	Miami, Fla.....	Gasoline.....	9,242	7,568	5,283	
Firmore.....	25	4.50	25	5.42	25	15.00	25	15.00	American.....	Ore S. S. Corp.....	449.1	57.2	29.0	Cruz Grande, Chile	Baltimore, Md.....	Iron ore.....	11,613	7,847	5,185	
Bushnell.....	25	9.22	25	17.27	25	17.27	25	17.27	American.....	U. S. Navy.....	300.0	48.0	22.0	Balboa, C. Z.....	Cristobal, C. Z.....					
S-6.....	25	9.37	25	18.15	25	18.15	25	18.15	American.....	U. S. Navy.....	231.0	22.0	22.0	Balboa, C. Z.....	Cristobal, C. Z.....					
S-8.....	25	9.37	25	19.15	25	19.15	25	19.15	American.....	U. S. Navy.....	231.0	22.0	22.0	Balboa, C. Z.....	Cristobal, C. Z.....					
S-3.....	25	9.43	25	19.15	25	19.15	25	19.15	American.....	U. S. Navy.....	231.0	22.0	22.0	Balboa, C. Z.....	Cristobal, C. Z.....					
S-7.....	25	9.43	25	19.15	25	19.15	25	19.15	American.....	U. S. Navy.....	231.0	22.0	22.0	Balboa, C. Z.....	Cristobal, C. Z.....					
Perene.....	25	10.00	25	11.14	25	20.05	26	17.10	Peruvian.....	Peruvian Line.....	284.1	39.1	17.0	Callao, Peru.....	New York, N. Y.....	General.....	2,020	2,168	1,529	
Queenswood.....	25	18.40	25	23.34	26	9.25	26	9.25	British.....	Can-Am. S. S. Co.....	370.5	56.3	23.0	Portland, Oreg.....	Liverpool, England	Lumber, general	6,295	4,973	3,581	
S-14.....	25	23.36	26	9.20	26	9.20	26	9.20	American.....	U. S. Navy.....	231.2	22.0	22.0	Balboa, C. Z.....	Cristobal, C. Z.....					
S-16.....	25	23.36	26	9.20	26	9.20	26	9.20	American.....	U. S. Navy.....	231.2	22.0	22.0	Balboa, C. Z.....	Cristobal, C. Z.....					
Peradovic.....	25	21.45	26	00.47	26	11.15	26	11.15	Yugoslav.....	Baburizza & Co.....	420.5	54.5	25.8	Talita, Chile.....	Azores.....	Nitrates.....	8,200	6,362	4,722	
S-15.....	26	1.05	26	11.00	26	11.00	26	11.00	American.....	U. S. Navy.....	231.2	22.0	22.0	Balboa, C. Z.....	Cristobal, C. Z.....					
S-17.....	26	1.05	26	11.00	26	11.00	26	11.00	American.....	U. S. Navy.....	231.2	22.0	22.0	Balboa, C. Z.....	Cristobal, C. Z.....					
Camden.....	26	4.31	26	14.05	26	14.05	26	14.05	American.....	U. S. Navy.....	389.2	48.0	22.0	Balboa, C. Z.....	Cristobal, C. Z.....					
S-12.....	26	4.40	26	12.45	26	12.45	26	12.45	American.....	U. S. Navy.....	231.0	22.0	22.0	Balboa, C. Z.....	Cristobal, C. Z.....					
S-13.....	26	4.40	26	12.45	26	12.45	26	12.45	American.....	U. S. Navy.....	231.0	22.0	22.0	Balboa, C. Z.....	Cristobal, C. Z.....					
S-1.....	26	4.57	26	14.10	26	14.10	26	14.10	American.....	U. S. Navy.....	219.3	20.8	20.8	Balboa, C. Z.....	Cristobal, C. Z.....					
S-18.....	26	4.57	26	14.10	26	14.10	26	14.10	American.....	U. S. Navy.....	219.3	20.8	20.8	Balboa, C. Z.....	Cristobal, C. Z.....					
S-21.....	26	5.46	26	14.10	26	14.10	26	14.10	American.....	U. S. Navy.....	219.2	20.8	20.8	Balboa, C. Z.....	Cristobal, C. Z.....					
S-23.....	26	5.46	26	14.10	26	14.10	26	14.10	American.....	U. S. Navy.....	219.2	20.8	20.8	Balboa, C. Z.....	Cristobal, C. Z.....					
Seattle.....	26	3.35	26	6.36	26	15.25	26	18.05	German.....	Hamburg-American Line	461.5	62.0	24.0	Seattle, Wash.....	Hamburg, Germany	General.....	7,484	9,267	6,834	
Falcon.....	26	6.48	26	17.30	26	17.30	26	17.30	American.....	U. S. Navy.....	180.0	35.0	21.9	Corral, Chile.....	Cristobal, C. Z.....					
Carl Legien.....	26	4.40	26	7.43	26	17.00	26	17.00	German.....	Hamburg-American Line	409.8	53.9	21.9	Portland, Oreg.....	Hamburg, Germany	General.....	7,795	7,145	5,474	
Oregonian.....	26	5.20	26	8.05	26	17.10	26	17.10	American.....	Amor-Hawaiian Line.....	404.6	53.9	27.0	Portland, Oreg.....	Boston, Mass.....	General.....	6,570	6,754	4,800	
Karina.....	26	6.45	26	8.30	26	18.05	26	18.05	American.....	Luckenbach Line.....	446.0	56.1	29.4	Portland, Oreg.....	Boston, Mass.....	General.....	8,470	8,508	6,179	
Luckenbach.....	26	9.24	26	19.25	26	19.25	26	19.25	American.....	U. S. Navy.....	180.0	33.6	26.6	Balboa, C. Z.....	Cristobal, C. Z.....	Towing raft.....				
Lark.....	26	8.40	26	10.08	26	19.15	27	13.35	British.....	Shaw, Savill & Albion.	478.0	63.2	26.6	Wellington, N. Z.....	London, England.....	Frozen, general.	8,400	11,192	8,149	
Tarao.....	26	9.35	26	11.05	26	20.35	26	21.20	Norwegian.....	Brusgaard Co.....	389.8	54.1	23.6	Seattle, Wash.....	Antwerp, Belgium.....	Lumber, general.	7,390	5,693	4,230	
Hesperos.....	26	9.35	26	11.05	26	20.35	26	21.20	Norwegian.....	Brusgaard Co.....	389.8	54.1	23.6	Seattle, Wash.....	Antwerp, Belgium.....	Lumber, general.	7,390	5,693	4,230	

*** For orders.

** Submarine.

* Motor ship.

** Tanker

* Motor ship.

* Tanker

** Submarine.

26	Treløkke	26	10.30	26	12.03	26	20.40	27	15.05	British	Foster, Hain & Read.	400.2	52.1	23.0	Vancouver, B. C.	Greece.	Wheat.	7.034	5.767	4.319
26	Grootendijk.	26	11.55	26	13.38	26	22.10			Dutch	Holland-American Line.	450.6	58.2	29.6	Victoria, B. C.	Hamburg, Germany	General.	8.273	8.730	5.860
26	Unden	26	14.50	26	22.05	27	9.58	27	11.10	Swedish	Transatlantic S. S. Co.	375.0	58.2	24.0	Tocopilla, Chile	Azores ²⁴	Nitrates.	7.109	5.336	3.708
26	Esparita	26	15.15	26	22.10	27	9.30			American.	United Fruit Co.	330.6	44.6	24.0	San Francisco, Cal.	Port Limon, C. R.	Coffee, general.	1.536		
26	Jersey City.	26	15.10	27	1.00	27	11.08	27	12.05	British.	Sir W. R. Smith & Sons	411.6	55.0	28.0	Vancouver, B. C.	London, England	Wheat in bulk.	9.130	6.952	5.005
26	Cape Ortega.	26	17.00	27	3.12	27	13.20	27	14.35	British.	Can-Am. Ship. Co.	405.0	52.5	24.0	Vancouver, B. C.	Hamburg, Germany	Wheat, lumber.	6.930	5.650	4.071
26	Ormoc.	26	18.00	27	4.16	27	16.15	27	16.15	American.	Quaker Line.	376.4	52.4	24.0	Gray's Har, Wash.	Wilmington, Del.	Lumber.	6.500	5.455	3.902
26	Jefferson Myers	26	17.57	27	5.15	27	16.15	27	16.15	American.	Quaker Line.	440.0	56.0	29.0	Portland, Ore.	New York, N. Y.	(¹⁵)	10.031	8.300	6.020
27	West Mingo	27	6.10	27	8.41	27	17.35	27	17.35	American.	Quaker Line.	410.0	54.0	24.0	Seattle, Wash.	Philadelphia, Pa.	Lumber	6.921	6.476	4.682
27	Salvador	27	12.45	27	13.34	27	22.00			British.	Pacific Steam Nav. Co.	215.0	33.5	17.0	Champerico, Guat.	Cristobal, C. Z.	(¹⁶)	1.025	1.270	735
27	Manilius	27	19.30	27	20.50	28	9.35	28	14.10	British.	Shaw, Savill & Albion.	477.5	63.1	25.0	Dunedin, N. Z.	Glasgow, Scotland	(¹⁷)	6.700	11.588	8.232
27	Lagarto ¹²	27	19.00	28	5.34	28	14.40	28	23.12	British.	Pacific Steam Nav. Co.	385.6	52.0	23.2	Corral, Chile	Liverpool, England	General	5.962	5.656	3.823
28	S-11 ¹³	28	9.40	28	6.11	28	14.05			American.	U. S. Navy.	231.0	22.0		Balboa, C. Z.	Cristobal, C. Z.	Nitrates.	5.962	5.656	3.823
28	Belgium Maru.	28	9.40	28	6.11	28	14.05	28	22.00	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0	21.0	Tocopilla, Chile	Savannah, Ga.	Nitrates.	8.250	6.219	4.611
28	Shipper ¹⁴	28	9.50	28	11.06	28	20.07	29	3.10	British.	Furness, Withy & Co.	420.0	58.0	26.0	Vancouver, B. C.	Glasgow, Scotland	General	7.694	7.892	5.858
28	Isawh.	28	13.15	28	13.54	28	22.20	28	22.20	American.	Argonaut S. S. Co.	400.7	54.2	26.0	Tacoma, Wash.	Baltimore, Md.	(¹⁸)	6.806	6.616	4.617
28	Cauca	28	17.15	28	22.57	29	9.10			Colombian.	National Navigation Co.	107.4	23.2	24.0	Buenaventura, Col.	Cristobal, C. Z.	(¹⁹)	224	238	168
28	Minocla	28	22.05	28	23.18	29	9.45	29	12.15	American.	N. O. & S. A. S. S. Co.	398.0	40.0	24.0	London, England	New Orleans, La.	Nitrates, garlic.	3.505	2.835	1.805
29	Skranstad	29	2.30	29	4.32	29	18.25	29	19.20	Norwegian.	Fearnley & Eger.	382.7	53.4	26.0	London, England	Havana, Cuba	Rice	7.450	6.082	4.236
29	Whilho.	28	17.50	29	6.42	29	14.50	29	14.50	American.	Williams S. S. Line	434.0	37.7	25.8	Seattle, Wash.	New York, N. Y.	Lumber, general	8.547	7.983	5.859
29	Cid	28	6.45	29	7.28	29	16.00	30	20.18	British.	Pacific Steam Nav. Co.	204.8	41.2	13.8	Callao, Peru	New York, N. Y.	(²⁰)	6.856	16.814	11.731
29	Orbita	28	21.05	29	7.52	29	17.45	29	21.15	British.	Pacific Steam Nav. Co.	550.3	67.3	30.0	Talcahuano, Chile	Liverpool, England	General	6.856	16.814	11.731
29	Virgilio ¹²	28	7.45	29	9.28	29	17.50	31	20.05	Italian.	Nav. Gen. Italiana	502.7	61.8	23.3	Valparaiso, Chile	Genoa, Italy	General	3.632	12.941	9.329
29	Californian ¹²	29	3.50	29	9.45	29	18.45	29	18.45	American.	Amer.-Hawian Line	445.1	59.8	26.0	Seattle, Wash.	Boston, Mass	General	8.368	8.567	6.020
29	Northumber-	29	11.30	29	12.06	29	21.05	29	23.45	British.	N. Z. Shipping Co.	530.0	63.0	29.0	Port Chalmers, N. Z.	London, England	Frozen, general.	7.026	13.268	9.124
29	land	29	11.35	29	13.44	29	22.00	29	23.15	American.	The Texas Co.	416.8	56.6	27.0	Los Angeles, Calif.	Baltimore, Md	Gas oil	8.940	6.817	4.945
29	Virginia ¹	29	16.00	29	21.40	30	9.05	30	14.30	German.	Colombian Mar. Co.	257.0	36.0	12.9	Buenaventura, Col.	New York, N. Y.	(²¹)	476	1.718	1.167
29	Leinrich Arp.	29	20.00	29	21.10	30	10.45	30	12.00	British.	Sir R. Roper & Co.	405.0	53.6	24.0	Vancouver, B. C.	Europe	Wheat	7.788	5.875	4.288
30	Manspool	30	4.15	30	5.11	30	16.25	30	16.25	American.	Ore S. S. Corp.	549.6	72.2	33.9	Crux Grande, Chile	New York, N. Y.	Iron ore	20.000	14.325	4.635
30	Lebori	30	4.15	30	5.11	30	16.25	30	16.25	American.	Ore S. S. Corp.	549.6	72.2	33.9	Crux Grande, Chile	New York, N. Y.	Iron ore	20.000	14.325	4.635
29	Argylehire.	29	19.00	30	6.40	30	15.35	30	20.25	British.	Turballi, Martin & Co.	526.3	61.4	23.6	Wellington, N. Z.	London, England	Frozen, general.	6.050	12.237	8.672
30	Java Arrow	30	12.20	30	13.45	30	21.25	30	21.25	American.	Standard Oil Co. of N. Y.	458.3	62.7	28.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	11.573	10.084	7.388
30	Kia Ora	30	12.30	30	14.30	30	22.15	31	2.10	British.	Shaw, Savill & Albion.	448.3	50.6	23.0	Wellington, N. Z.	London, England	Frozen, general.	4.000	8.237	5.771
30	Gothistar	30	12.30	30	14.30	30	22.15	31	2.10	British.	Shaw, Savill & Albion.	448.0	54.7	25.0	N. Westminister	Newcastle, England	(²²)	6.060	7.521	5.852

¹² Motor ship.

¹³ Submarine.

¹⁴ For orders.

¹⁵ Lumber, copper, and wheat.

¹⁶ Coffee, broom root, and balsam.

¹⁷ Meat, cheese, and tallow.

¹⁸ Pulp, shingles, and lumber.

¹⁹ Coffee, hides, and platinum.

²⁰ Balm, coffee, cocoa, and hides.

²¹ Coffee, hides, and cylinders.

²² Chilean hides and general.

¹ Tanker. ¹² Motor ship. ¹³ Submarine. ¹⁴ For orders. ¹⁵ Lumber, copper, and wheat. ¹⁶ Coffee, cocoa, and hides. ¹⁷ Meat, cheese, and tallow. ¹⁸ Pulp, shingles, and lumber. ¹⁹ Coffee, hides, and cylindeers. ²⁰ Coffee, hites, and cylindeers. ²¹ Chilled apples and general.

PORT OF CRISTOBAL.

* ARRIVALS.

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
March 24	Copename	United Fruit Co.	Port Limon, C. R.	March 24	Wanka	Standard Fruit & S. S. Co.	San Blas, R. P.
March 25	Cyrenus	Royal Netherlands S. S. Co.	Hamburg via wayports.	March 25	Heredia	United Fruit Co.	New Orleans via wayports.
March 25	Anetta I. ²¹	A. Tagarapulos	Colon, R. P.	March 25	Copename	United Fruit Co.	Port Limon via Bocas.
March 25	Anachucuna ²²	United Fruit Co.	Colon, R. P.	March 25	Anachucuna ²¹	United Fruit Co.	Colon, R. P.
March 25	Inapacuna ²³	United Fruit Co.	Colon, R. P.	March 25	Inapacuna ²¹	United Fruit Co.	Colon, R. P.
²¹ Motor boat.							

²¹ Motor boat. ²² Other than ships passing through the Canal.

MOVEMENTS OF OCEAN VESSELS.—Continued.
PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
March 26	Camden	United Fruit Co	Curacao, D. W. I.	March 26	Crynsen	Royal Netherlands S. S. Co.	Port Limon, C. R.
March 26	Ufowana ²⁴	A. Armour	New London	March 27	Camden	United Fruit Co.	Curacao, D. W. I.
March 27	Ariguaní	United Fruit Co	New York via wayports.	March 27	Ariguaní	Elders & Fyffes Line.	Avonmouth via wayports.
March 27	Ariguaní	Elders & Fyffes Line	Avonmouth via wayports.	March 28	Inapaquina ²⁵	United Fruit Co.	Colon, R. P.
March 27	Ariguaní	United Fruit Co	Avonmouth via wayports.	March 28	Metapan	United Fruit Co.	New York via wayports.
March 27	Ariguaní	United Fruit Co	New York via Haiti.	March 29	Amnetta I. ²⁵	A. Tagrapulos	Colon, R. P.
March 27	Ariguaní	Panama Railroad S. S. Line	New York via wayports.	March 29	Mayari	United Fruit Co.	Puerto Colombia.
March 27	Ariguaní	United Fruit Co	Barraquilla, Col.	March 29	C-33 ²⁷	Seadta Airplane Co	Barraquilla, Col.
March 28	Camden	United Fruit Co	Port Limon, C. R.	March 29	Coppename	United Fruit Co.	New Orleans, La.
March 28	Camden	United Fruit Co	Colon, R. P.	March 29	Calamares	United Fruit Co	Port Limon via wayports.
March 28	Camden	United Fruit Co	Bocas, R. P.	March 29	Suriname	United Fruit Co	Port Limon via Bocas.
March 29	Camden	United Fruit Co	New Orleans via wayports	March 30	Carmania ²⁸	R. Feuillebois	Colon, R. P.
March 29	Camden	United Fruit Co	New Orleans, La.	March 30	William M. ²⁶	G. I. Bryan	Bluefields, Nicaragua.
March 29	Camden	United Fruit Co	Palo Alto, Cuba.	March 30	Atlantida	Standard Fruit & S. S. Co	New Orleans via wayports.
March 29	Camden	United Fruit Co	Saint Blas, R. P.	March 30	Crynsen	Royal Netherlands S. S. Co	Amsterdam via wayports.
March 30	Camden	United Fruit Co	Colon, R. P.				
* ARRIVALS.				* DEPARTURES.			
March 26	Camden	United Fruit Co	Curacao, D. W. I.	March 26	Crynsen	Royal Netherlands S. S. Co.	Port Limon, C. R.
March 26	Ufowana ²⁴	A. Armour	New London	March 27	Camden	United Fruit Co.	Curacao, D. W. I.
March 27	Ariguaní	United Fruit Co	New York via wayports.	March 27	Ariguaní	Elders & Fyffes Line.	Avonmouth via wayports.
March 27	Ariguaní	United Fruit Co	Avonmouth via wayports.	March 28	Inapaquina ²⁵	United Fruit Co.	Colon, R. P.
March 27	Ariguaní	United Fruit Co	New York via Haiti.	March 28	Metapan	United Fruit Co.	New York via wayports.
March 27	Ariguaní	Panama Railroad S. S. Line	New York via wayports.	March 29	Amnetta I. ²⁵	A. Tagrapulos	Colon, R. P.
March 27	Ariguaní	United Fruit Co	Barraquilla, Col.	March 29	Mayari	United Fruit Co.	Puerto Colombia.
March 28	Camden	United Fruit Co	Port Limon, C. R.	March 29	C-33 ²⁷	Seadta Airplane Co	Barraquilla, Col.
March 28	Camden	United Fruit Co	Colon, R. P.	March 29	Coppename	United Fruit Co.	New Orleans, La.
March 28	Camden	United Fruit Co	Bocas, R. P.	March 29	Calamares	United Fruit Co	Port Limon via wayports.
March 29	Camden	United Fruit Co	New Orleans via wayports	March 29	Suriname	United Fruit Co	Port Limon via Bocas.
March 29	Camden	United Fruit Co	New Orleans, La.	March 30	Carmania ²⁸	R. Feuillebois	Colon, R. P.
March 29	Camden	United Fruit Co	Palo Alto, Cuba.	March 30	William M. ²⁶	G. I. Bryan	Bluefields, Nicaragua.
March 29	Camden	United Fruit Co	Saint Blas, R. P.	March 30	Atlantida	Standard Fruit & S. S. Co	New Orleans via wayports.
March 30	Camden	United Fruit Co	Colon, R. P.	March 30	Crynsen	Royal Netherlands S. S. Co	Amsterdam via wayports.
* ARRIVALS.				* DEPARTURES.			
March 26	Camden	United Fruit Co	Curacao, D. W. I.	March 26	Crynsen	Royal Netherlands S. S. Co.	Port Limon, C. R.
March 26	Ufowana ²⁴	A. Armour	New London	March 27	Camden	United Fruit Co.	Curacao, D. W. I.
March 27	Ariguaní	United Fruit Co	New York via wayports.	March 27	Ariguaní	Elders & Fyffes Line.	Avonmouth via wayports.
March 27	Ariguaní	United Fruit Co	Avonmouth via wayports.	March 28	Inapaquina ²⁵	United Fruit Co.	Colon, R. P.
March 27	Ariguaní	United Fruit Co	New York via Haiti.	March 28	Metapan	United Fruit Co.	New York via wayports.
March 27	Ariguaní	Panama Railroad S. S. Line	New York via wayports.	March 29	Amnetta I. ²⁵	A. Tagrapulos	Colon, R. P.
March 27	Ariguaní	United Fruit Co	Barraquilla, Col.	March 29	Mayari	United Fruit Co.	Puerto Colombia.
March 28	Camden	United Fruit Co	Port Limon, C. R.	March 29	C-33 ²⁷	Seadta Airplane Co	Barraquilla, Col.
March 28	Camden	United Fruit Co	Colon, R. P.	March 29	Coppename	United Fruit Co.	New Orleans, La.
March 28	Camden	United Fruit Co	Bocas, R. P.	March 29	Calamares	United Fruit Co	Port Limon via wayports.
March 29	Camden	United Fruit Co	New Orleans via wayports	March 29	Suriname	United Fruit Co	Port Limon via Bocas.
March 29	Camden	United Fruit Co	New Orleans, La.	March 30	Carmania ²⁸	R. Feuillebois	Colon, R. P.
March 29	Camden	United Fruit Co	Palo Alto, Cuba.	March 30	William M. ²⁶	G. I. Bryan	Bluefields, Nicaragua.
March 29	Camden	United Fruit Co	Saint Blas, R. P.	March 30	Atlantida	Standard Fruit & S. S. Co	New Orleans via wayports.
March 30	Camden	United Fruit Co	Colon, R. P.	March 30	Crynsen	Royal Netherlands S. S. Co	Amsterdam via wayports.

* Other than slips passing through the Canal.

* Other than slips passing through the Canal.

* Other than slips passing through the Canal.

* Other than slips passing through the Canal.

Executive Order.**Amending Executive Order of September 25, 1925, Establishing Rules Governing Navigation of the Panama Canal and Adjacent Waters.**

By virtue of the authority vested in me by the provisions of the Act of Congress approved August 21, 1916, entitled "An Act extending certain privileges of Canal employees to other officials on the Canal Zone, and authorizing the President to make rules and regulations affecting the health, sanitation, quarantine, taxation, public roads, self-propelled vehicles and police powers on the Canal Zone, and for other purposes, including provisions as to certain fees, money orders and interest deposits," I do hereby amend Rule 120 of the Executive Order of the President, dated September 25, 1925, relating to exclusion of undesirables, to read as follows:

"Rule 120. *Undesirable Persons.* The following classes of persons are hereby forbidden to enter or remain upon or pass over any part of the Canal Zone, and the Governor is hereby authorized, at his discretion, to deport any such persons when found in the Canal Zone: The insane or persons who have been insane within five years previous to their attempted entry into the Canal Zone, imbeciles or feeble-minded persons, epileptics, persons suffering from a loathsome or dangerous contagious disease, criminals, those who have been convicted of felony, paupers or professional beggars, persons of notoriously bad character, anarchists, those whose purpose it is to incite insurrection, and any other persons whose presence, in the judgment of the Governor, would be a menace to the public health or welfare of the Canal Zone, or whose presence would tend to create public disorder or obstruct the operation or maintenance of the Canal, or who are liable to become a public charge."

This order shall take effect from and after this date.

CALVIN COOLIDGE

THE WHITE HOUSE,
February 28, 1929.

[No. 5065]

Visit of Spanish Training Ship "Juan Sebastian Elcano."

With 31 midshipmen aboard, the *Juan Sebastian Elcano*, training ship for the Spanish Navy, arrived at Balboa on March 27, 1929, en route from San Francisco to Cadiz, Spain, via Habana and New York. The vessel is a 3,470-ton auxiliary motor ship of recent construction, and, in addition to the midshipmen, carries a crew of 160 men. She will transit the Canal on April 4th.

The present training cruise of the *Juan Sebastian Elcano* was started last August when the ship sailed from Cadiz, and has included visits to Cape Verde, Montevideo, Buenos Aires, Cape Town, Adelaide, Melbourne, Sydney, Suva, and San Francisco, her last port of call before arriving at Balboa.

Pacific Steam Navigation Company to Build New Ship.

The Pacific Steam Navigation Company is building a new combination passenger and cargo motor vessel of 18,000 tons, quadruple screw, for its service between Europe and the west coast of South America, via the Panama Canal. The new vessel is to be of the same type as the Royal Mail liners *Asturias* and *Alcantara*, which are operated in the service between England and Buenos Aires, but will embody improved features as a result of the experience gained with the two vessels mentioned. It is stated that this addition to the fleet of "O" vessels which transit the Canal, will maintain a sea speed of 18 knots per hour.

Notice to Mariners.

Canal Zone—Colon Harbor—Dummy Mines Planted.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z. April 3, 1929.

No. 525.

Five dummy mines have been planted near the center of the explosive anchorage in Colon Harbor. The position of each mine is marked by a red can buoy. These dummy mines will remain in position for about six months.

H. BURGESS,
Governor.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Cristobal, C. Z., for Week Ending March 23, 1929.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
San Mateo.....	United Fruit Co.	March 17	March 17	9	14
Cristobal.....	Panama R. R. S. S. Line	March 17	March 17		3,201
Wanks.....	Standard Fruit S. S. Co.	March 17	March 17		4
Macabi.....	United Fruit Co.	March 17	March 17	(²)	73
Ucayali.....	Peruvian Line	March 17	March 18		610
Parissima.....	United Fruit Co.	March 17	March 18		97
Eemdjik.....	Holland-American Line	March 17	March 18		163
Ecuador.....	Panama Mail S. S. Co	March 17	March 18	366	503
Smyrna.....	North German Lloyd	March 17	March 18	50	186
Saale.....	North German Lloyd	March 17	March 18	4	65
Almagro.....	Pacific Steam Nav. Co.	March 17	March 18	3	140
Minerva.....	Royal Netherlands S. S. Line	March 17	March 22	6	561
Teno.....	Chilean Line	March 18	March 18	48	6
Acajutla.....	Pacific Steam Nav. Co	March 19	March 19	1,124	
Murla.....	North German Lloyd	March 19	March 20	108	472
Cerigo.....	Hamburg-American Line	March 19	March 22	445	179
Magdalena.....	Hamburg-American Line	March 19	March 23	322	2,774
St. Joseph.....	J. Lund	March 19	March 21	1,892	(²)
Saramacca.....	United Fruit Co.	March 19	March 21	1,291	175
Guatemala.....	Panama Mail S. S. Co	March 19	March 21	1,608	604
Linda S.....	R. Feuillebois	March 20	March 20	(¹)	39
Saint Louis.....	French Line	March 20	March 21	690	29
Annie Johnson.....	Johnson S. S. Line	March 20	March 21	(¹)	238
Bennekom.....	Royal Netherlands S. S. Co	March 20	March 20	29	(²)
Santa Marta.....	United Fruit Co.	March 20	March 21	976	451
Coppename.....	United Fruit Co.	March 20	March 21	826	128
Floreana.....	Colombian Transp. Co.	March 20	March 20	345	
Mercian.....	Leyland S. S. Line	March 20	March 22	(²)	184
Santa Barbara.....	Grace Line	March 21	March 21	(²)	373
Oroona.....	Pacific Steam Nav. Co.	March 21	March 22	97	114
Nebraska.....	Royal Mail S. P. Co	March 21	March 22	23	365
Flandre.....	French Line	March 21	March 22	334	431
Drechtidijk.....	Holland-American Line	March 21	March 22	(¹)	529
Tolosa.....	United Fruit Co.	March 21	March 22	1,305	609
Caldas.....	National Navigation Co.	March 21	March 23	189	424
Waunta.....	Standard Fruit S. S. Co	March 21	March 23	670	(²)
Irióna.....	United Fruit Co.	March 22	March 23	9	529
Amapala.....	Standard Fruit S. S. Co.	March 22	March 23	193	489
Palatia.....	Hamburg-American Line	March 22	March 23	287	119
Schwaben.....	North German Lloyd	March 22	March 23	(¹)	65
Brielle.....	Royal Netherlands S. S. Co	March 22	March 22	557	
Visurgia.....	Panama Mail S. S. Co.	March 22	March 22	222	
Wanks.....	Standard Fruit S. S. Co.	March 23	March 23	156	
Notre Dame de Fourviere.....	French Line	March 23	March 23	190	
Cali.....	North German Lloyd	March 23	March 23	678	
Saramacca.....	United Fruit Co.	March 23	March 23	20	
Santa Tecla.....	N. O. & S. A. S. S. Co.	March 23	March 23	62	
Hollywood.....	McCormick S. S. Co	March 23	March 23	41	
Heredia.....	United Fruit Co.	March 23	March 23	364	
Hamburg Maru.....	Osaka Shosen Kaisha	March 23	March 23	83	

¹ No cargo discharged.² No cargo laded.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Balboa, C. Z., for Two Weeks Ending March 30, 1929.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Ecuador.....	Panama Mail S. S. Co	March 18	March 19	32	2
Guatemala.....	Panama Mail S. S. Co.	March 18	March 19	378	156
H. M. Storey.....	Standard Oil Co.	March 20	March 21	15,460	
Ginyo Maru.....	Nippon Yusen Kaisha	March 20	March 20	5	56
Murla.....	North German Lloyd	March 21	March 21	506	
Santa Barbara.....	Grace Line	March 21	March 21	1	
Caldas.....	National Navigation Co	March 23	March 23		19
Floreana.....	Colombian Transp. Co	March 24	March 25		120
Anyo Maru.....	Nippon Yusen Kaisha	March 24	March 24	10	
Agwistar.....	N. Y. & Cuban Mail S. S. Co.	March 25	March 26	19	
Lobos.....	Pacific Steam Nav. Co.	March 26	March 26		50

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII.

Balboa Heights, C. Z., April 10, 1929.

No. 36.

Tanker Traffic Through the Panama Canal in March, 1929.

During the month of March, 1929, 96 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 521,563, on which tolls of \$462,994.22 were collected. Cargo amounted to 531,659 tons. In point of net tonnage, tanker traffic showed an increase of 46.1 per cent over the same traffic for the corresponding month a year ago, while cargo tonnage increased 98.6 per cent over the cargo tonnage of March, 1928.

Tank ships comprised 17.9 per cent of the total commercial transits through the Canal during the month; made up 20.3 per cent of the total Panama Canal net tonnage; were the source of 19.7 per cent of the total tolls collected; and carried 19.4 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of March, 1929, segregated by direction of transit and nationality of vessels, are shown in the following tabulations, with comparative totals, for the two preceding months and for March, 1928:

Nationality.	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	11	49,081	\$40,355.02	28,257
Danzig.....	2	12,265	8,830.80	.....
Norwegian.....	8	40,412	30,662.94	9,000
Swedish.....	1	4,245	3,056.40	.....
United States.....	24	137,020	99,187.32	2,324
Totals, March, 1929.....	46	243,023	182,092.48	39,581
Totals, February, 1929.....	46	246,217	183,264.62	36,345
Totals, January, 1929.....	46	241,780	177,508.56	.....
Totals, March, 1928.....	40	215,806	157,510.16	11,115
<i>Pacific to Atlantic.</i>				
British.....	9	48,408	49,264.39	78,158
Danzig.....	2	13,815	13,271.25	24,454
Norwegian.....	4	19,837	21,362.50	37,643
Panamanian.....	1	6,450	7,062.50	12,772
Swedish.....	2	10,792	11,278.75	20,188
United States.....	32	179,238	178,662.35	318,863
Totals, March, 1929.....	50	278,540	280,901.74	492,078
Totals, February, 1929.....	36	202,210	205,146.05	358,704
Totals, January, 1929.....	53	278,631	291,033.60	521,554
Totals, March, 1928.....	26	141,187	145,340.00	256,475

* Includes 6,500 tons of coconut oil.

Of the total tanker traffic shown above, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months, and for March, 1928:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
March, 1929.....	33	181,815	\$130,979.85	
February, 1929.....	31	170,099	124,280.17	8,397
January, 1929.....	32	174,269	125,631.30	
March, 1928.....	30	171,037	123,146.64	
<i>From Los Angeles.</i>				
March, 1929.....	35	192,325	193,401.10	344,736
February, 1929.....	26	143,336	143,518.55	257,589
January, 1929.....	40	206,611	215,099.85	391,511
March, 1928.....	19	102,123	104,988.75	186,242

Traffic by Nationality for March, 1929.

The following tabulation shows the commercial traffic through the Canal during the month of March, 1929, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with corresponding totals for March, 1928 and 1927.

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAOE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	75	402,673	294,604	482,238	295,943	\$345,627.47	281,868
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	2,854
Colombian.....	6	2,887	2,508	4,210	2,570	3,116.50	5,064
Danish.....	2	6,857	5,017	8,350	5,127	6,271.25	11,148
Danzig.....	2	12,265	10,443	17,700	10,067	8,830.80	
Dutch.....	4	17,703	12,342	20,881	12,366	15,427.50	11,936
French.....	2	11,143	8,519	13,893	8,552	10,648.75	2,381
German.....	15	42,927	30,589	49,727	29,835	38,151.00	35,493
Greek.....	3	11,930	8,416	13,847	8,533	8,589.60	
Italian.....	3	19,829	14,042	24,837	15,122	16,030.62	3,784
Japanese.....	8	39,774	33,942	50,793	33,625	40,089.75	42,988
Norwegian.....	21	87,722	67,831	111,650	67,021	69,481.70	49,982
Panaman.....	2	7,500	5,397	8,847	5,451	5,254.59	2,163
Peruvian.....	2	2,506	1,073	3,465	1,599	1,341.25	761
Swedish.....	5	23,621	17,182	47,556	21,414	16,740.73	4,411
United States.....	115	571,809	443,599	715,796	443,684	502,843.42	387,108
Yugoslav.....	1	3,969	3,178	4,995	3,214	2,857.68	
Totals, March, 1929.....	267	1,269,820	962,148	1,586,095	968,099	1,095,635.11	841,941
Totals, March, 1928.....	289	1,315,708	1,014,987	1,644,988	1,017,251	1,129,332.95	743,747
Totals, March, 1927.....	270	1,283,218	1,005,773	1,632,344	1,007,192	1,097,072.80	791,570

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	71	385,680	294,544	479,293	295,256	\$365,210.64	473,190
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	4,746
Colombian.....	6	1,544	1,473	2,388	1,485	1,523.06	1,313
Danish.....	2	7,951	4,751	7,912	4,839	5,938.75	13,750
Danzig.....	2	13,815	10,617	17,750	10,137	13,271.25	24,454
Dutch.....	8	42,892	31,713	52,192	31,058	39,641.25	64,153
French.....	4	19,362	14,914	24,366	14,858	18,642.50	29,293
German.....	20	69,185	49,050	80,970	48,154	60,429.84	80,357
Greek.....	4	15,728	10,153	16,226	10,165	12,691.25	29,861
Italian.....	4	24,748	19,049	31,367	19,247	23,582.30	28,280
Japanese.....	9	42,911	36,460	54,193	35,799	45,229.50	57,945
Norwegian.....	12	52,458	42,371	68,290	42,332	52,717.80	94,954
Panaman.....	2	9,053	7,033	12,591	8,245	8,791.25	15,445
Peruvian.....	2	3,934	2,472	5,460	2,683	3,071.05	4,038
Swedish.....	12	54,551	41,822	86,903	49,552	52,277.50	120,496
United States.....	108	540,234	425,925	685,648	423,818	532,023.75	841,652
Yugoslav.....	2	9,423	7,118	11,289	7,201	8,897.50	17,900
Totals, March, 1929.....	269	1,298,141	1,002,898	1,644,148	1,008,805	1,248,230.44	1,901,827
Totals, March, 1928.....	253	1,125,369	875,286	1,420,460	875,940	1,094,037.62	1,684,915
Totals, March, 1927.....	226	1,130,781	893,654	1,448,585	899,352	1,120,840.40	1,741,955

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	146	788,353	589,148	961,531	591,199	\$710,838.11	755,058
Chilean.....	2	9,377	6,899	14,620	7,952	8,623.75	7,600
Colombian.....	12	4,431	3,981	6,598	4,055	4,639.56	6,377
Danish.....	4	14,808	9,768	16,262	9,966	12,210.00	24,898
Danzig.....	4	26,080	21,060	35,450	20,204	22,102.05	24,454
Dutch.....	12	60,595	44,055	73,073	43,424	55,068.75	76,089
French.....	6	30,505	23,433	38,259	23,410	29,291.25	31,674
German.....	35	112,112	79,639	130,697	77,989	98,580.84	115,850
Greek.....	7	27,658	18,569	30,073	18,698	21,280.85	29,861
Italian.....	7	44,577	33,091	56,204	34,369	39,612.92	32,064
Japanese.....	17	82,685	70,402	104,986	69,424	85,319.25	100,933
Norwegian.....	33	140,180	110,202	179,940	109,353	122,199.50	144,936
Panamanian.....	4	16,553	12,430	21,438	13,696	14,045.84	17,608
Peruvian.....	4	6,440	3,545	8,925	4,282	4,412.30	4,799
Swedish.....	17	78,172	59,004	134,459	70,966	69,018.23	124,907
United States.....	223	1,112,043	869,524	1,401,444	867,502	1,034,867.17	1,228,760
Yugoslav.....	3	13,392	10,296	16,284	10,415	11,755.18	17,900
Totals, March, 1929.....	536	2,567,961	1,965,046	3,230,243	1,976,904	2,343,865.55	2,743,768
Totals, March, 1928.....	542	2,441,077	1,890,273	3,065,448	1,893,191	2,223,370.57	2,428,662
Totals, March, 1927.....	496	2,413,999	1,899,427	3,080,929	1,906,544	2,217,913.20	2,533,525

Alhajuela Project Named "Madden."

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 2, 1929.

TO ALL CONCERNED:

An extract from Public No. 843, 70th Congress—An Act Making appropriations for the military and nonmilitary activities of the War Department for the fiscal year ending June 30, 1930, and for other purposes—quoted below, is published for the information and guidance of all concerned.

H. BURGESS,
Governor.

* * * * *

That in recognition of the exceptionally distinguished services in Congress for nearly twenty-four years of Honorable Martin B. Madden, the late chairman of the Committee on Appropriations, and in appreciation of his active and efficient interest in the Panama Canal throughout its entire construction and operation, and in recently causing the commencement of the construction of said dam across the Chagres River at or near Alhajuela, the said dam and the lake created thereby and the entire plant and the road leading thereto shall hereafter be known and designated on the public records as the Madden Dam, lake, plant, and road.

* * * * *

Approved, February 28, 1929.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 5, 1929.

No. 527.

The following was received by the Hydrographic Office through the Colon Radio:

Yacht *Utawana*, 4.45 p. m., April 4, 14 miles, 281° true from Colon Breakwater Light sighted two mast heads standing upright about 5 feet above water and 20 feet apart, apparently attached to small sunken vessel.

Approximate position: 9° 27' north, 80° 08' west.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, April 6, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.												
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.													
Esparta.....	3-30	18.55	31	6.05	31	12.44	31	14.20	American	United Fruit Co.	330.0	44.6	17.0	Port Limon, C. R.	San Francisco, Cal.	(7)	482	3,679	2,373											
Nikola.....	30	23.00	31	6.35	31	14.11	31	15.45	Yugoslav	Baburizza & Co.	400.6	52.3	17.6	Blyth, England	Arica, Chile	Ballast	5,826	3,969												
Mihonovic.....	31	6.15	31	8.30	31	15.09	31	16.50	American	Amer-Hawaiian Line	462.0	60.0	17.6	Boston, Mass.	Portland, Oreg.	General	4,625	8,067												
Missourian.....	19	16.50	31	10.55	31	17.34	31	19.30	British	Pacific Steam Nav. Co.	215.7	33.5	16.4	Cristobal, C. Z.	Champerio, Guat.	General	1,125	1,273												
Acapulia.....	31	18.10	4-1	6.25	4-1	16.06	4-1	17.20	American	T. P. Gallagher Co.	391.9	51.2	19.6	New York, N. Y.	Yokohama, Japan	Ballast	5,410	3,622												
Darden.....	31	20.28	1	7.30	1	15.13	1	16.35	American	Dimon S. Corp.	410.5	54.0	21.2	New York, N. Y.	Seattle, Wash.	General	5,863	6,624												
Pacific Spruce.....	4-1	00.45	1	8.15	1	16.59	1	18.30	British	Anglo-Saxon Pet. Co.	420.5	54.0	17.6	Falmouth, England	Los Angeles, Calif.	Ballast	6,055	4,757												
Lunula.....	1	1.10	1	9.40	1	17.47	1	23.57	American	Munson S. S. Line	370.0	53.1	24.1	Baltimore, Md.	Tacoma, Wash.	General	6,500	5,777												
Munaires.....	1	1.30	1	11.00	1	20.25	1	21.45	American	Isthmian S. S. Lines	424.2	56.2	26.8	Baltimore, Md.	Seattle, Wash.	Steel, general	8,347	7,611												
Steel Mariner.....	1	6.08	1	12.10	1	21.16	1	22.25	British	Canadian Transp. Co.	450.0	55.5	24.0	Nuevitas, Cuba	Seattle, Wash.	Sugar	7,000	7,999												
Glentworth.....	1	7.50	1	13.50	1	22.10	1	23.12	British	Federal Steam Nav. Co.	520.0	64.2	27.0	Liverpool, England	Auckland, N. Z.	General	6,109	12,963												
Norfolk.....	1	8.45	1	15.05	1	22.55	1	23.57	British	Prince Line, Ltd.	450.4	58.6	26.3	New York, N. Y.	Manila, P. I.	General	6,564	8,594												
Royal Prince.....	1	9.10	1	16.20	2	1.33	2	2.56	American	Isthmian S. S. Lines	395.5	55.0	27.1	New York, N. Y.	Seattle, Wash.	Steel, general	8,567	7,330												
Steelmaker.....	1	9.10	1	16.20	2	1.33	2	2.56	American	Isthmian S. S. Lines	395.5	55.0	27.1	New York, N. Y.	Seattle, Wash.	Steel, general	8,567	7,330												
Britvic.....	1	14.55	1	17.50	2	2.46	2	3.55	Swedish	Colombian Mar. Co.	256.0	39.6	13.4	New York, N. Y.	Buenaventura, Col.	General	380	1,714												
Baron Behaven.....	1	15.50	1	17.55	2	2.49	2	6.32	British	Trinder Andersen	435.2	57.3	26.8	Antwerp, Belgium	Auckland, N. Z.	General	8,327	7,289												
Sciotia.....	1	15.50	1	17.55	2	2.49	2	6.32	British	Trinder Andersen	435.2	57.3	26.8	Antwerp, Belgium	Auckland, N. Z.	General	8,327	7,289												
Vino Tinto.....	1	.....	1	17.45	2	1.33	2	1.33	American	U. S. Navy	149.3	30.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Towing barges	.....	7												
No. 39.....	1	.....	1	15.04	1	15.04	1	15.04	American	Stand. Fruit S. S. Co.	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	Ballast	.....	7												
No. 40.....	1	.....	1	15.04	1	15.04	1	15.04	Honduran	Stand. Fruit S. S. Co.	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	Ballast	.....	18												
Venezuela.....	3-31	18.20	2	6.10	2	13.20	3	00.31	American	Panama Mail S. S. Co.	380.0	48.7	22.8	New York, N. Y.	San Francisco, Cal.	General	2,634	6,033												
Caica.....	29	9.10	2	6.00	2	18.10	2	22.50	Colombian	National Navigation Co.	107.2	22.0	9.0	Cristobal, C. Z.	Buenaventura, Col.	General	275	238												
Isis.....	4-1	10.47	2	6.20	2	18.19	3	20.20	German	Hamburg-American Line	376.0	51.0	20.0	Hamburg, Germany	Valparaiso, Chile	General	3,364	4,027												
Vestalia.....	2	1.40	2	7.30	2	20.10	2	21.40	British	Du Pont de Nemours	423.0	56.0	18.0	Norfolk, Va.	Iquique, Chile	Ballast	6,199	4,412												
C. O. Stillman.....	2	2.35	2	8.45	2	21.10	2	22.50	British	International Pet. Co.	565.0	75.6	23.0	New York, N. Y.	Los Angeles, Calif.	Ballast	16,780	9,885												
Alvarado.....	1	00.30	2	9.35	2	20.23	2	21.40	British	Pacific Steam Nav. Co.	303.0	43.0	18.0	New York, N. Y.	Salaverry, Peru	General	1,193	2,844												
Van.....	2	4.05	2	11.10	2	22.35	2	23.52	Belgian	Cia. Inter. de Comm.	400.4	58.0	19.0	Barry, England	Arica, Chile	Ballast	9,068	6,211												
Willango.....	2	13.55	2	13.55	2	23.35	2	23.35	American	Quaker Line	460.4	58.0	19.0	Barry, England	Arica, Chile	Ballast	9,068	6,211												
Nontan.....	2	14.45	2	13.55	2	13.55	2	23.35	American	Quaker Line	460.4	58.0	19.0	Barry, England	Arica, Chile	Ballast	9,068	6,211												
Los Angeles.....	1	10.55	2	19.15	3	11.16	3	14.30	German	Hamburg-American Line	404.0	53.0	20.0	Boston, Mass.	Seattle, Wash.	General	5,557	6,510												
Manhattan.....	1	10.55	2	19.15	3	11.16	3	14.30	German	Hamburg-American Line	404.0	53.0	20.0	Boston, Mass.	Seattle, Wash.	General	5,557	6,510												
Island.....	2	19.10	2	20.20	3	4.05	3	5.01	American	Redwood Line	386.0	52.2	22.6	Mobile, Ala.	San Francisco, Cal.	Sulphur, general	5,605	5,696												
K. I. Luckenbach.....	3-28	13.20	3	6.00	3	12.51	.....	.....	British	British Government	425.0	43.6	17.6	Aruba, D. W. I.	Esquimalt, B. C.	Ballast	.....	.....												
Bravo.....	4-3	00.20	3	8.05	3	15.05	3	16.10	American	Luckenbach Line	446.0	56.0	23.0	New York, N. Y.	Tacoma, Wash.	General	4,502	8,552												
Tanker.....	2	17.40	3	9.40	3	17.48	.....	.....	Mexican	Mexican Government	246.0	32.10	10.6	Vera Cruz, Mexico	High Seas	Ballast	.....	6,236												
																* Motor ship.			* Tug.		* Launch.		* Barge.		* Cruiser.		* Coffee, cocoa, and bananas.		* Phosphate and basic slag.	

* Phosphate and basic slag.

* Coffee, cocoa, and bananas.

* Cruiser.

* Barge.

* Launch.

* Tug.

* Motor ship.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Duan Silmi	1	1 30	1	2 36	1	12 00	Yugoslav	Barburizza & Co.	421.0	55.1	25.0	Iquique, Chile.	Azores ¹⁷ .	Nitrates	8,250	6,420
Dio	1	3 00	1	3 58	1	13 50	American	Redwood Line	373.9	51.6	23.0	San Francisco, Cal.	New York, N. Y.	Sugar, general	6,887	5,708
El Salvador	3-31	6 30	1	4 50	1	12 45	American	Panama Mail S. S. Co.	360.2	51.6	23.0	San Francisco, Cal.	New York, N. Y.	Coffee, general	2,038	5,710
Hilda	31	16 05	1	5 41	1	15 00	Norwegian	K. Knutsen & Co.	470.3	64.5	27.2	Los Angeles, Calif.	London, England	Gasoline	12,319	9,474
Stockton	31	21 00	1	6 33	1	18 00	American	Gladstone Transp. Co.	425.8	57.0	29.6	Los Angeles, Calif.	Crude oil	Crude oil	10,400	7,485
Scotia	4-1	4 10	1	6 35	1	17 15	American	U. S. Navy	155.0	37.0	20.6	Balboa, C. Z.	Cristobal, C. Z.	Towing barge	3,928	9,158
Essequibo	3-2	19 36	1	7 45	1	16 40	British	Pacific Steam Nav. Co.	450.0	57.5	25.0	Talcahuano, Chile.	New York, N. Y.	Nitrates	7,667	5,926
Sangro	4-1	19 36	1	8 22	1	19 55	Italian	Italian Line	387.0	51.0	21.4	Balboa, C. Z.	New Orleans, La.	Ballast	6,141	1,831
Holland Maru.	4	14 05	1	14 48	1	25.05	Japanese	Kawasaki Kisen Kaisha	385.0	51.0	25.8	Vancouver, B. C.	Europe	Wheat	6,141	1,831
El Lobo	1	14 30	1	15 36	1	23 50	British	C. T. Bowring & Co.	285.0	51.0	23.4	La Libertad, Per. dr.	Philadelphia, Pa.	Crude oil	7,611	6,537
Pacific Redwood	1	20 30	2	1 19	2	10 45	American	Dimon S. S. Corp.	409.9	54.1	27.3	Olympia, Wash.	New York, N. Y.	Lumber	8,800	7,226
Trontolite ¹⁶	1	21 10	2	2 23	2	11 25	British	Imperial Oil Co., Ltd.	420.8	57.2	27.0	Talara, Peru	Halifax, N. S.	Crude petroleum	5,047	4,142
Laurel Branch.	1	22 30	2	4 04	2	12 15	British	F. & W. Ritson	300.2	45.0	23.0	Puerto Rico	Liverpool, England	General	7,280	5,676
Hazelside	1	23 20	2	4 47	2	13 35	British	Charlton S. S. Co.	395.0	52.7	23.6	Portland, Ore.	Europe	Wheat	8,010	5,680
Heracles	2	2 15	2	5 29	2	16 35	Norwegian	Brinsguard Line	389.8	54.1	24.8	San Francisco, Cal.	Liverpool, England	General	5,895	6,576
Moveria	2	2 15	2	6 07	2	16 10	British	Donaldson Line	385.6	51.3	27.0	Vancouver, B. C.	London, England	General	3,653	2,564
Virginia	1	11 00	2	8 36	2	15 25	American	Panama-Pacific Line	586.4	80.3	27.6	San Francisco, Cal.	New York, N. Y.	Drugs, general	7,772	6,573
Wierand	2	6 00	2	8 47	2	17 50	German	North German Lloyd	353.2	54.3	21.0	Antofagasta, Chile.	Hamburg, Germany	General	836	4,033
San Zoticco	2	6 55	2	9 31	2	19 15	British	Anglo-Mexican Pet. Co.	400.2	52.3	21.0	San Antonio, Chile.	Aruba, D. W. I.	Ballast	9,295	9,154
La Perla	2	8 00	2	9 57	2	18 30	American	United Fruit Co.	325.2	48.1	28.6	San Francisco, Cal.	Port Limon, C. R.	General	831	1,132
Texas	2	6 42	2	10 45	2	20 20	American	Auer-Hawaiian Line	471.0	57.2	23.3	Portland, Ore.	Boston, Mass.	General	8,263	6,188
Manizales	2	7 30	2	11 09	2	20 50	German	Roland Line	210.0	33.0	14.6	Guayaquil, Ecuador	Cristobal, C. Z.	General	10,159	7,433
Binta ¹⁶	2	3 30	2	12 57	2	21 45	Norwegian	Anglo-Saxon Pet. Co.	396.4	55.0	25.6	Los Angeles, Calif.	Land's End, Eng.	Kerosene	13,126	11,487
Mojave ¹⁶	2	11 55	2	14 52	2	23 55	American	Gen'l Petroleum Corp.	435.0	56.2	28.0	Los Angeles, Calif.	New York, N. Y.	Gas oil	7,180	5,408
Andrea F.	2	18 30	3	9 02	3	9 05	American	Luckenbach Line	496.0	68.2	30.0	Portland, Ore.	Boston, Mass.	General	9,363	7,204
Heathfield	3	00 05	3	2 49	3	10 35	British	Woods, Taylor & Brown	400.0	57.2	27.6	Vancouver, B. C.	Aarhus, Denmark	Wheat	6,665	5,485
Bohemian	2	21 30	3	4 06	3	11 45	American	Atlantic Refining Co.	425.0	51.3	26.6	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline	11,220	7,808
Oilfield	2	22 00	3	5 11	3	13 40	British	Hunting & Son	365.2	51.3	26.6	Los Angeles, Calif.	Le Havre, France	Gasoline	7,211	7,476
Santore	3	4 15	3	6 25	3	14 25	American	Ore S. S. Corp.	450.0	57.0	28.3	Cruz Grande, Chile	Baltimore, Md.	Iron ore	4,280	3,983
Canada ¹⁶	3	4 35	3	8 32	3	16 32	Swedish	Johnson Line	426.9	56.2	26.0	Vancouver, B. C.	Gothenburg, Swed.	Lumber, general	3,000	7,380
Plover City	3	10 00	3	10 24	3	18 55	American	Charles Nelson & Co.	324.0	46.3	23.0	Seattle, Wash.	Baltimore, Md.	Frozen, general	8,491	10,786
Saxony	3	9 30	3	12 11	3	20 15	British	Blue Star Line	420.0	54.0	24.0	New Westminster	Newcastle, England	General	7,998	6,046
Dundalk ¹⁶	3	11 37	3	12 43	3	21 00	Dutch	Holland-American Line	485.6	62.0	27.5	Vancouver, B. C.	Rotterdam, Holland	Crude oil	3,920	3,872
El Cervo	3	15 35	4	1 58	4	10 15	British	C. T. Bowring & Co.	407.4	52.2	25.7	La Libertad, Equa.	Philadelphia, Pa.	Lumber	7,329	6,824
El Cervo	3	17 30	4	2 09	4	11 30	American	Charles Nelson & Co.	321.7	50.0	21.0	South Bend, Wash.	Philadelphia, Pa.	General	13,126	11,487
Texas	3	17 30	4	3 01	4	13 00	French	French Line	409.8	52.5	25.6	Vancouver, B. C.	Le Havre, France.	Wheat, coffee and general	7,180	5,408

¹⁶ Motor ship.

¹⁷ For orders.

¹⁸ Wheat, coffee and general.

¹⁹ South for dry-docking only.

²⁰ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.
PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
April 1	Anachucuna ²⁵	United Fruit Co	Colon, R. P.	April 1	Inapaquina ²⁵	United Fruit Co	Colon, R. P.
April 1	Anachucuna ²⁵	United Fruit Co	Colon, R. P.	April 1	Anachucuna ²⁵	United Fruit Co	Colon, R. P.
April 1	Annetta I ²⁵	United Fruit Co	Colon, R. P.	April 2	Annetta I ²⁵	United Fruit Co	Colon, R. P.
April 1	Perou	French Line	St. Nazaire via wayports.	April 2	Linda S. ²⁶	A. L. Surgeon	Bluefields, Nicaragua.
April 2	Linda S. ²⁸	A. L. Surgeon	Colon, R. P.	April 2	No. 9664 ²⁶	Pan-American Airways	Tela, Honduras.
April 2	Marques de Comillas.	Spanish Steamship Line	Barcelona via wayports.	April 3	Perou	French Line	Have via wayports.
April 2	Swiftwind	Eastern Shell Oil Co	Curacao, D. W. I.	April 3	Reliance	Hamburg-American Line	New York, N. Y.
April 3	Irioua	United Fruit Co	New Orleans, La.	April 3	Mayan	Gulf-Caribbean S. S. Line	Maracaibo via wayports.
April 3	Reliance	Hamburg-American Line	New York via wayports.	April 4	Inapaquina ²⁵	United Fruit Co	Colon, R. P.
April 3	Sixada	United Fruit Co	New York via Kingston.	April 4	Cundinamarca	United Fruit Co	Barranquilla, Colombia.
April 3	Mayan	Gulf Caribbean S. S. Line	New Orleans, La.	April 4	Irioua	United Fruit Co	Puerto Colombia.
April 3	Cundinamarca	United Fruit Co	Barranquilla, Colombia.	April 4	No. 33 ²⁶	United Fruit Co	Tela via wayports.
April 3	Annetta I ²⁵	A. Tagaropulos	Colon, R. P.	April 4	No. 9685 ²⁶	Pan-American Airways	New York via wayports.
April 3	Inapaquina ²⁵	United Fruit Co	Colon, R. P.	April 4	Sixada	United Fruit Co	Port Limon, Costa Rica.
April 4	Pastores	United Fruit Co	New York via wayports.	April 4	Utwana ²⁷	A. Armour	Colon, R. P.
April 4	No. 9726 ²⁶	Pan-American Airways	David, R. P.	April 4	Annetta I ²⁵	A. Tagaropulos	Colon, R. P.
April 4	No. 9664 ²⁶	Pan-American Airways	David, R. P.	April 5	Anachucuna ²⁵	United Fruit Co	Colon, R. P.
April 4	Camden	United Fruit Co	Curacao, D. W. I.	April 5	Annetta I ²⁵	United Fruit Co	Colon, R. P.
April 4	Suriname	United Fruit Co	Port Limon, Costa Rica.	April 5	Pastores	United Fruit Co	New York via Habana.
April 5	Suriname	United Fruit Co	New Orleans via wayports.	April 5	Novian	Leyland Line	Curacao via Cartagena.
April 5	Trigonia	Anglo-Saxon Petroleum Co	Curacao, D. W. I.	April 5	Suriname	United Fruit Co	New Orleans via wayports.
April 5	Winks	Standard Fruit S. S. Co.	San Blas, R. P.	April 5	Annapala	Standard Fruit S. S. Co.	New Orleans via wayports.
April 5	Anachucuna ²⁵	United Fruit Co	Colon, R. P.	April 6	Marques de Comillas.	Spanish Steamship Line	Barcelona via wayports.
April 5	Annetta I ²⁵	A. Tagaropulos	Colon, R. P.	April 6	Camden	United Fruit Co	Curacao, D. W. I.
April 6	J. A. Moffett, Jr.	United Fruit Co	New York via wayports.	April 6	No. 9664 ²⁶	Pan-American Airways	Tela via wayports.
April 6	Peusum	Standard Shipping Co	Baton Rouge, La.	April 6	Mayari	United Fruit Co	New York, N. Y.
April 6	Parismina	Royal Netherlands S. S. Co.	Amsterdam via wayports.				
April 6	Rugia	United Fruit Co	New Orleans via Habana.				
April 6	No. 9685 ²⁶	Hamburg-American Line	Hamburg via wayports.				
April 6		Pan-American Airways	Tela via wayports.				
²⁵ Motor boat. ²⁶ Airplane mail carrier. ²⁷ Yacht. ²⁸ Motor schooner. PORT OF BALBOA.							
April 2	Durazzo	Hamburg-American Line	Puntarenas, Costa Rica.	April 4	Durazzo	Hamburg-American Line	Puntarenas, Costa Rica.
April 6	San Luis ²⁹	Chiriqui Land Co	Pto. Armuelles, R. P.				

* Other than ships passing through the Canal.

²⁹ Motor schooner.

Commercial Traffic Through the Panama Canal in March, 1929, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of March, 1929, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for March, 1928 and 1927. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	79	409,734	316,088	511,926	318,178	\$355,050.39	278,686
East coast of United States to west coast of South America:							
British	6	26,356	20,073	34,488	21,733	22,023.48	11,378
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	2,854
German	1	1,167	998	1,428	813	1,247.50	567
Japanese	1	4,665	4,268	5,831	4,227	3,358.80	.....
Norwegian	2	5,958	4,209	6,857	4,165	4,800.20	1,000
Panaman	1	4,897	4,014	6,386	4,067	3,525.84	.....
Swedish	2	8,917	7,486	37,676	8,762	6,420.24	.....
United States	14	61,198	48,920	81,275	48,495	49,554.28	25,291
Totals	28	117,863	93,434	174,251	96,238	95,262.84	41,090
Europe to west coast of United States:							
British	7	30,821	24,293	40,210	24,265	23,850.24	1,853
Danzig	1	6,338	5,236	8,956	5,041	4,563.36	.....
Italian	1	4,421	3,764	6,107	3,883	3,183.12	.....
Norwegian	9	46,754	39,563	65,590	39,091	37,384.63	15,148
Swedish	3	14,704	9,696	16,880	12,652	10,320.49	4,411
Totals	21	103,038	82,552	137,743	84,932	79,301.84	21,412
Europe to west coast of South America:							
British	7	38,734	31,058	50,851	31,390	37,303.47	23,122
Danzig	1	5,927	5,207	8,744	5,026	4,267.44	.....
Dutch	2	10,895	7,185	12,446	7,244	8,981.25	9,615
German	4	18,088	11,984	19,722	11,960	14,980.00	19,035
Greek	2	8,769	6,172	10,245	6,281	6,313.68	.....
Italian	1	9,373	5,223	11,669	6,779	6,528.75	1,963
Norwegian	2	10,107	7,807	12,884	7,552	7,442.89	6,255
Peruvian	1	101	84	160	85	105.00	150
Yugoslav	1	3,969	3,178	4,995	3,214	2,857.68	.....
Totals	21	105,963	77,898	131,716	79,531	88,780.16	60,140
East coast of United States to Far East:							
British	9	47,028	30,655	49,543	30,499	38,318.75	63,114
Japanese	4	20,507	16,785	25,958	16,498	20,981.25	25,423
Norwegian	2	9,240	4,959	8,415	4,972	6,198.75	13,825
United States	4	22,173	16,663	23,931	15,609	20,828.75	30,109
Totals	19	98,948	69,062	107,847	67,578	86,327.50	132,471
Europe to west coast Canada:							
British	11	64,452	44,182	70,225	42,432	48,378.96	9,485
Dutch	1	6,066	4,863	7,655	4,799	6,078.75	2,173
French	2	11,143	8,519	13,893	8,552	10,648.75	2,381
German	2	13,574	9,437	15,371	9,316	11,796.25	5,824
Italian	1	6,035	5,055	7,061	4,460	6,318.75	1,821
Norwegian	1	4,232	2,712	4,342	2,726	3,390.00	6,900
Totals	18	105,504	74,768	118,547	72,285	86,611.46	28,584
East coast of United States to Australasia:							
British	9	49,793	34,609	55,599	34,841	43,261.25	47,210
United States	3	14,875	11,190	17,800	11,038	13,987.50	6,969
Totals	12	64,668	45,799	73,399	45,879	57,248.75	54,179

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Cristobal, C. Z., to west coast of South America:							
Colombian.....	4	1,074	1,007	1,750	1,011	\$1,249.35	2,007
Dutch.....	1	742	294	780	323	367.50	148
German.....	4	3,148	2,361	4,217	2,394	2,951.25	1,813
Peruvian.....	1	2,405	989	3,305	1,514	1,236.25	611
Totals.....	10	7,369	4,651	10,052	5,242	5,804.35	4,579
Cristobal, C. Z., to west coast of Central America:							
British.....	3	2,063	1,990	3,436	1,906	2,353.80	3,032
Colombian.....	1	307	302	405	308	368.40	430
German.....	1	855	722	1,306	717	902.50	2,200
Norwegian.....	1	504	423	732	391	523.75	890
United States.....	1	1,459	1,308	2,141	1,281	1,635.00	1,467
Totals.....	7	5,188	4,655	8,020	4,603	5,788.55	7,929
Europe to Australasia:							
British.....	7	65,454	47,177	77,406	48,404	58,971.25	52,343
East coast of United States to Philippine Islands:							
British.....	2	12,282	6,861	12,036	6,750	8,576.25	10,864
Danish.....	2	6,857	5,017	8,350	5,127	6,271.25	11,148
United States.....	2	11,810	10,169	11,498	10,076	12,711.25	14,249
Totals.....	6	30,949	22,047	34,884	21,953	27,558.75	36,261
East coast of Central America to west coast United States:							
United States.....	5	11,409	10,131	16,319	9,977	12,663.75	2,618
Europe to west coast Central America:							
German.....	2	4,471	3,493	5,771	3,508	4,327.10	4,160
Norwegian.....	2	5,070	4,408	6,457	4,340	5,510.00	3,200
Totals.....	4	9,541	7,901	12,228	7,848	9,837.10	7,360
East coast of Canada to Aus- tralasia:							
British.....	4	20,046	16,063	26,312	16,220	20,078.75	15,328
East coast of South America to west coast United States:							
Norwegian.....	1	4,723	2,728	4,624	2,765	3,410.00	2,854
United States.....	2	10,079	7,059	11,118	7,058	8,823.75	10,482
Totals.....	3	14,802	9,787	15,742	9,823	12,233.75	13,336
East coast of United States to west coast Canada:							
United States.....	3	10,044	7,498	12,127	7,457	9,372.50	9,510
Foreign vessels in ballast— U. S. intercoastal:							
British.....	2	9,458	7,013	11,375	7,040	6,827.76	.....
West Indies to west coast of South America:							
British.....	2	8,237	7,120	11,676	7,034	8,900.00	16,185
Around the world:							
United States.....	2	19,028	14,573	24,661	14,515	18,216.25	7,727
Canadian intercoastal:							
British.....	1	4,186	3,322	5,439	3,336	4,152.50	1,381
East coast of Canada to west coast South America:							
British.....	1	7,648	6,391	11,410	6,711	5,506.56	.....
East coast of Canada to Far East:							
Japanese.....	1	4,381	4,361	5,873	4,254	5,257.20	6,772
Central American intercoastal: Norwegian.....	1	1,134	1,022	1,749	1,019	816.48	.....
East coast Central America to Australasia:							
British.....	1	3,163	3,224	3,721	2,257	3,795.60	4,701
East coast of Central America to Far East:							
Japanese.....	1	4,400	4,358	5,864	4,259	5,280.00	6,705
East coast of South America to west coast Canada:							
British.....	1	5,278	4,678	8,932	5,144	5,847.50	12,072
South American intercoastal: German.....	1	1,622	1,564	1,912	1,127	1,946.40	1,894

ATLANTIC TO PACIFIC.—Continued

Nationality.	No. of ships.	TONNAGE.				Tons.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of South America to to Far East:							
Japanese	1	5,821	4,170	7,267	4,387	\$5,212.50	4,088
Cristobal, C. Z., to west coast of United States:							
Panaman	1	2,603	1,383	2,461	1,384	1,728.75	2,163
West Indies to west coast of United States:							
British	1	3,623	2,790	4,330	2,803	3,487.50	3,000
West Indies to west coast of Central America:							
Colombian	1	1,506	1,199	2,055	1,251	1,498.75	2,627
West Indies to Australasia:							
British	1	4,051	3,195	5,249	3,178	3,993.75	6,800
Africa to west coast of South America:							
Greek	1	3,161	2,244	3,602	2,252	2,275.92	.....
Grand totals, March, 1929	267	1,269,820	962,148	1,586,095	968,099	1,095,635.11	841,941
Grand totals, March, 1928	289	1,315,708	1,014,987	1,644,988	1,017,251	1,129,332.95	743,747
Grand totals, March, 1927	270	1,283,218	1,005,773	1,632,344	1,007,192	1,097,072.89	791,570

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States	80	422,902	328,101	528,018	326,792	\$410,032.35	629,097
West coast of South America to east coast United States:							
British	11	47,617	37,405	64,626	38,965	45,756.25	77,937
Chilean	1	4,672	3,433	7,310	3,976	4,291.25	4,746
Danish	2	7,951	4,751	7,912	4,839	5,938.75	13,750
Danzig	1	7,888	5,410	9,006	5,111	6,762.50	13,200
German	1	1,167	998	1,428	813	1,247.50	478
Italian	1	4,849	4,250	6,749	4,261	5,312.50	7,997
Japanese	2	8,851	7,639	11,276	7,608	9,548.75	15,747
Norwegian	2	9,949	9,312	13,624	9,353	11,394.05	19,803
Peruvian	1	1,529	1,483	2,155	1,169	1,834.80	2,020
Swedish	3	10,430	8,793	32,276	9,816	10,991.25	43,967
United States	14	61,281	49,730	85,211	49,204	61,956.95	136,330
Totals	39	166,184	133,294	241,573	135,115	166,034.55	335,975
West coast Canada to Europe:							
British	22	111,899	82,135	129,409	80,351	102,668.75	164,875
Dutch	4	24,931	19,510	31,773	19,239	24,387.50	36,678
French	2	9,895	7,388	12,287	7,385	9,235.00	14,478
German	4	22,771	15,123	25,144	15,324	18,903.75	30,743
Italian	1	6,041	5,092	7,057	4,455	6,365.00	9,000
Japanese	3	13,598	13,124	17,541	12,800	16,059.50	22,842
Norwegian	1	5,637	4,509	7,116	4,493	5,636.25	8,875
Swedish	2	9,905	7,357	11,899	9,049	9,196.25	18,303
Totals	39	204,677	154,238	242,226	153,146	192,452.00	305,794
West coast of South America to Europe:							
British	5	42,159	32,228	54,948	33,922	40,285.00	34,865
Danzig	1	5,927	5,207	8,744	5,026	6,508.75	11,254
Dutch	3	17,219	11,909	19,639	11,446	14,886.25	27,016
French	1	4,166	3,315	5,407	3,309	4,143.75	6,695
German	4	20,631	15,248	24,197	14,748	19,060.00	23,208
Greek	4	15,728	10,153	16,226	10,165	12,691.25	29,861
Italian	2	13,858	9,707	17,561	10,531	11,904.80	11,283
Norwegian	3	12,949	10,042	16,251	10,032	12,552.50	22,815
Swedish	2	7,759	6,171	10,110	6,486	7,713.75	15,309
Yugoslav	2	9,423	7,118	11,289	7,201	8,897.50	17,900
Totals	27	149,819	111,098	184,372	112,866	138,643.55	205,206
West coast of United States to Europe:							
British	7	31,667	25,972	42,037	25,617	32,465.00	50,288
French	1	5,301	4,211	6,672	4,164	5,263.75	8,120
German	2	11,408	8,024	13,727	7,992	10,030.00	15,872
Norwegian	4	18,962	15,364	25,733	15,282	19,205.00	35,672
Panaman	1	6,450	5,650	8,947	5,651	7,062.50	12,772
Swedish	5	26,457	19,501	32,618	24,201	24,376.25	42,917
United States	1	5,811	5,765	7,590	5,764	7,123.20	9,693
Totals	21	106,056	84,487	137,324	88,671	105,525.70	175,334

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Australasia to Europe:							
British.....	14	109,347	81,917	129,200	80,877	\$102,396.25	94,692
West coast of South America to Cristobal, C. Z.							
Colombian.....	5	881	856	1,285	858	1,045.70	1,313
Dutch.....	1	742	294	780	323	367.50	459
German.....	4	3,148	2,361	4,217	2,393	2,951.25	2,434
Peruvian.....	1	2,405	989	3,305	1,514	1,236.25	2,018
Totals.....	11	7,176	4,500	9,587	5,088	5,600.70	6,224
Philippine Islands to east coast United States:							
Japanese.....	3	15,663	12,186	19,724	11,940	15,232.50	16,156
United States.....	4	22,239	19,116	27,396	18,995	23,895.00	35,127
Totals.....	7	37,932	31,302	47,120	30,935	39,127.50	51,283
West coast of Central America to Cristobal, C. Z.:							
British.....	3	2,063	1,900	3,436	1,906	2,375.00	3,054
Colombian.....	1	663	617	1,103	627	477.36	.....
German.....	1	855	722	1,306	717	902.50	201
Totals.....	5	3,581	3,239	5,845	3,250	3,754.86	3,255
West coast of United States to Cristobal, C. Z.:							
Panamanian.....	1	2,603	1,383	3,644	2,564	1,728.75	2,673
United States.....	2	3,767	3,199	5,353	3,199	3,998.75	2,181
Totals.....	3	6,370	4,582	8,997	5,793	5,727.50	4,854
West coast of Canada to east coast United States:							
United States.....	3	15,756	12,331	19,635	12,333	15,413.75	22,915
West coast of United States to east coast of Central America:							
United States.....	3	6,748	6,155	9,798	5,989	7,693.75	3,184
West coast of Central America to Europe:							
German.....	3	7,583	4,980	9,039	5,040	6,139.34	2,421
West coast of South America to east coast Canada:							
British.....	2	12,690	10,746	18,669	11,125	13,432.50	25,875
West coast of South America to West Indies:							
British.....	2	8,237	7,120	11,676	7,034	5,930.64	.....
Australasia to east coast of Canada:							
British.....	2	10,009	7,713	12,636	7,765	9,641.25	5,043
West coast of United States to West Indies:							
British.....	1	2,207	1,239	2,338	1,249	1,548.75	3,379
Hawaiian Islands to east coast United States:							
United States.....	1	1,730	1,528	2,647	1,542	1,910.00	3,125
Australasia to east coast of United States:							
British.....	1	3,664	2,891	4,566	2,894	3,613.75	7,191
Far East to east coast United States:							
Japanese.....	1	4,769	3,511	5,652	3,451	4,388.75	3,206
Far East to West Indies:							
Norwegian.....	1	4,236	2,453	4,300	2,455	3,066.25	7,450
Canadian intercoastal:							
British.....	1	4,121	3,278	5,752	3,551	4,097.50	6,000
Central American intercoastal:							
Norwegian.....	1	725	691	1,266	717	863.75	389
South American intercoastal:							
German.....	1	1,622	1,594	1,912	1,127	1,195.50	.....
Grand totals, March, 1929	269	1,298,141	1,002,898	1,644,148	1,008,805	1,248,230.44	1,901,827
Grand totals, March, 1928	253	1,125,369	875,286	1,420,460	875,940	1,094,037.62	1,684,915
Grand totals, March, 1927	226	1,130,781	893,654	1,448,585	899,352	1,120,840.40	1,741,955

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Canal Traffic During the First Fifteen Days of April.

During the first 15 days of April, 285 commercial vessels and 27 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,189,457.10, and on the launches \$288.39, or a total tolls collection of \$1,189,745.49.

The daily average of transits of commercial vessels was 19.00 and the average tolls collection \$79.297.14. The average amount of tolls paid by each of the commercial transits was \$4,173.53, as compared with \$4,407.06 for the first 15 days of March. The total commercial transits for the first 15 days of April numbered 14 more than the number passing through during the first 15 days of March, although the tolls collected were slightly less than the amount collected in the first half of March.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 9½ months of the current fiscal year, with the daily averages of transits and tolls:

	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	509	\$2,109,083.19	16.41	\$68,034.94
August.....	526	2,199,069.31	16.97	70,937.72
September.....	487	2,111,230.56	16.23	70,374.35
October.....	557	2,274,945.30	17.97	73,385.33
November.....	527	2,225,937.48	17.57	74,197.91
December.....	579	2,443,029.39	18.67	78,807.39
January.....	603	2,502,815.12	19.45	80,735.97
February.....	522	2,211,961.20	18.64	78,998.62
March.....	536	2,343,865.55	17.29	75,608.57
April (first 15 days).....	285	1,189,457.10	19.00	79,297.14
Totals, first 9½ months of fiscal year 1929.....	5,131	21,611,394.20	17.75	74,779.91
Totals, first 9½ months of fiscal year 1928.....	5,201	21,705,385.64	17.93	74,846.15
Totals, first 9½ months of fiscal year 1927.....	4,323	19,177,482.15	14.95	66,358.07

As compared with the first 9½ months of the fiscal year 1928, the corresponding period this year has had 70 fewer transits and \$93,991.44 less tolls.

Removal of Colon Radio Station.

The work of removing the Colon Radio Station from Colon Beach, in the section known as "New Cristobal," to another location was begun in February, 1929, in order that the land may be utilized for building sites in the program of construction of quarters started by The Panama Canal about two years ago. The new radio station will be located north of Fort Davis. The towers will be 200 feet high instead of 300 feet, the height of the Colon towers. The Communication Superintendent for the 15th Naval District advises that, beginning April 9, and continuing until the new site is completed,

the Colon Radio Station is using temporary receiving antennae with remote control to a transmitter in the Darien Station which emits a CW wave.

In another part of this issue appears a "Notice to Mariners," in which it is stated that in the future night lights will not be displayed on the towers at the Colon Radio Station, due to dismantling of the towers.

"Ship's Medicine Chest and First Aid at Sea."

Under the above title the Public Health Service of the United States has issued a 200-page library size book designed to "teach officers and crews of American merchant vessels how to preserve their life and to meet intelligently the accidents of disease and injury." Chapters deal with the structure and functions of the human body, hygiene and sanitation on shipboard, the ship's medicine chest and equipment, medical first aid and symptomatic treatment, specific diseases and their treatment, surgical conditions and their treatment; and the last two chapters comprise an emergency reference section designed for speedy reference in time of emergency only, and a section dealing with radio messages requesting medical advice. The book is illustrated and indexed.

The Surgeon General, United States Public Health Service, Washington, D. C., requested THE PANAMA CANAL RECORD to convey the information that a copy of this book "will be sent to a master of any documented American merchant vessel making request for it by post card or letter."

North Pacific Coast Line to Include Jamaica.

The North Pacific Coast Line (a joint service of the Holland-American Line and the Royal Mail Steam Packet Company), operating in trade between Europe and the west coast of North America, is now including Kingston, Jamaica, as a port of call by alternate vessels in the westbound voyages of the "A" route service. The steamship *Nebraska*, transiting the Canal on March 22, 1929, was the first vessel of the company to make the call at Kingston.

Vessels on this route of the North Pacific Line pass through the Canal fortnightly carrying general and refrigerated cargo, and with accommodations for a limited number of passengers.

"A" route vessels, eastbound, go direct from Cristobal to Liverpool, London, and Rotterdam. "B" route vessels are every three weeks and call at Caracas, Puerto Colombia, and Cartagena before transiting the Canal. Eastbound, these vessels proceed direct to Hamburg, Bremen, Rotterdam, and Antwerp.

Notice to Mariners.

Night Lights Not to Be Displayed on Towers at Colon Radio Station.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 11, 1929.

No. 529.

The 15th Naval District has notified the Governor, Panama Canal, as follows:

Hereafter night lights will not be displayed on towers at Colon Radio Station due to the dismantling of these towers.

H. BURGESS,
Governor.

New Motor Ship Launched for Fred Olsen Line.

The Fred Olsen Line, operators in the trade between Europe and the west coast of North America, via the Panama Canal, have announced the launching of a new motor ship which is to be placed in service in April, 1929. This vessel, named the *Abraham Lincoln*, is 439 feet long by 60 feet beam and 33 feet deep and rated at 11,000 tons deadweight capacity. It is very similar to the *Knute Nelson*, but with some improvements, and like the *Knute Nelson* has about 75,000 cubic feet of storage space. Accommodations are provided for a limited number of first-class passengers.

The company has also under construction another motor ship of the same dimensions, delivery of which is expected later in the year.

Transit of "Empress of Australia."

The British steamer *Empress of Australia*, owned and operated by the Canadian Pacific Steamships, Limited, arrived at Balboa on the morning of April 7, 1929, with a party of 347 tourists. She transited the Canal on April 8th, and sailed the same day for Habana, en route to New York. This vessel is finishing the annual around-the-world cruise conducted by this company, having sailed eastbound from New York last December.

The *Empress of Australia* is 590 feet long, 75 feet beam, and has a registered gross tonnage of 21,861. This is the second around-the-world voyage to be made by this vessel.

Boston Firm Buys Vessels.

The Shipping Board has announced the sale of the steamships *West Cherow* and *Westland* to the Shepard & Morse Lumber Company, of Boston, Mass., and that the vessels will be made ready for sea and put in the intercoastal service together with the steamship *Westbrook* which the owners purchased recently from the Shipping Board.

The *West Cherow* and the *Westland* are steel cargo vessels of 8,582 and 8,800 deadweight tons, respectively, with oil-burning boilers.

"Scadta" Air Service to Begin This Week.

The Sociedad Colombo-Alemana de Transportes Aereos ("Scadta") has announced the inauguration of a regular air transport service between Colombia and the Canal Zone, following the granting of permission by the United States State Department for the planes of the company to land in the Canal Zone. April 17 has been set as the date for the initial flight in this service.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending April 6, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons</i>	<i>Tons.</i>
El Salvador.....	W. R. Grace & Co.....	March 31	April 1	644 .....	.....
Venezuela.....	Panama Mail S. S. Co.....	April 2	April 2	22	375
Cauca.....	National Navigation Co.....	April 2	April 2 .....	.....	5
Isis.....	Hamburg-American Line.....	April 2	April 3	451 .....	.....
Corinto.....	Panama Mail S. S. Co.....	April 4	April 4	2 .....	.....
Kuma Maru.....	Nippon Yusen Kaisha.....	April 5	April 6	321 .....	.....

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, April 13, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Indiana	6	18.20	7	6.05	7	14.08	7	15.25	French	French Line	418.0	56.0	22.0	Havre, France	Vancouver, B. C.	General	3,545	7,157	4,936
California	7	6.00	7	7.10	7	14.58	8	00.18	American	Panama-Pacific Line	574.4	80.3	26.4	New York, N. Y.	San Francisco, Cal.	General	4,160	24,506	17,565
La Perla	6	20.27	7	7.30	7	16.40	7	18.00	American	United Fruit Co.	325.2	48.1	20.2	Port Limon, C. R.	San Francisco, Cal.	Bananas, etc.	859	4,033	2,261
Palm Branch	7	4.20	7	7.20	7	16.45	7	18.00	British	F. & W. Ritson	360.0	45.2	19.0	Newcastle-on-Tyne	Valparaiso, Chile	General	2,662	4,195	3,088
Florence	7	1.15	7	8.35	7	18.31	7	20.10	American	Luckenbach Line	401.0	52.0	22.0	Houston, Texas	Tacoma, Wash.	General	5,935	6,002	4,621
Steel Navigator	7	3.35	7	8.30	7	19.25	8	2.01	American	Isthmian S. S. Lines.	424.2	56.2	25.6	Philadelphia, Pa.	Java, D. E. I.	Steel, general	8,102	7,611	5,454
Hegra	7	6.55	7	9.50	7	20.23	8	2.01	American	Norton, Lilly & Co.	440.0	56.0	28.6	Baltimore, Md.	Seattle, Wash.	Steel	9,915	8,353	6,113
Barat	4	19.15	7	10.15	7	19.25	7	21.05	Dutch	Royal Neth. S. S. Co.	210.0	33.0	12.0	Cristobal, C. Z.	Guayaquil, Ecuador	General	97	1,183	7,742
Alaskan	7	8.20	7	11.10	7	21.17	7	22.08	American	Amer-Hawaiian Line	415.0	54.0	20.6	New York, N. Y.	Portland, Ore.	General	3,503	7,380	5,339
Almelo	6	5.35	7	12.08	7	22.18	7	23.17	Dutch	Royal Neth. S. S. Co.	447.0	62.0	21.0	Hamburg, Germany	Corral, Chile	General	3,501	9,655	6,838
Takaoka Maru	7	13.15	7	13.45	7	23.07	8	00.12	Japanese	Nippon Yusen Kaisha	445.0	58.0	23.2	Baltimore, Md.	Kobe, Japan	Cotton, general	6,843	7,989	5,856
Bretagne	7	17.55	7	18.05	8	1.42	8	2.45	Danish	Isbrandtsen Moller	326.2	50.1	21.8	New York, N. Y.	Manila, P. I.	General	5,250	3,820	2,967
Pat Doherty	7	18.00	7	18.40	8	2.38	8	3.42	American	Richfield Oil Co.	430.0	59.0	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,978	5,840	1
Manana	7	8.13	8	6.05	8	19.58	8	21.40	American	Captain Shamp	397.9	50.3	20.2	Cristobal, C. Z.	Gatun, C. Z.	Ballast	2,516	5,958	4,164
Saint Andre	7	8.13	8	6.20	8	20.10	8	21.40	French	French Line	180.0	35.6		Havre, France	Valparaiso, Chile	General, etc.			
Mallard	7	22.25	8	7.20	8	21.05	9	2.00	American	U. S. Navy	510.2	68.0	19.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Victrolite	8	6.47	8	8.10	8	22.07	9	2.05	British	Imperial Oil Co., Ltd.	401.0	54.3	14.0	Halifax, N. S.	Talara, Peru	Ballast	11,575	7,648	
East Lynn	8	6.40	8	9.00	8	23.08	9	23.55	British	Sir W. R. Smith & Sons	400.0	52.4	20.0	Manchester, Eng.	Vancouver, B. C.	General	3,500	6,784	5,107
Trewyn	8	6.40	8	9.00	8	23.08	9	00.58	British	N. Z. Shipping Co.	251.0	43.5	16.0	Manzanillo, Cuba.	Brisbane, Australia	General	400	2,873	1,765
Thie Lykes	8	7.15	8	9.00	8	22.15	9	23.55	American	Ste son, Torres & Ibanez	420.0	54.0	17.0	Gothenburg, Sweden	Buenaventura, Col.	Cattle	1,099	7,105	5,193
Ekman	8	8.00	8	9.35	8	23.56	9	11.07	Swedish	Transatlantic S. S. Co.	410.0	54.0	20.0	Wilmington, Del.	Brisbane, Australia	General	4,364	6,484	4,675
West Montop	8	8.25	8	10.45	9	00.49	9	2.00	American	U. S. S. Co.	410.0	54.0	26.0	Brooklyn, N. Y.	Seattle, Wash.	General	586		
Cambrai	8	6.15	8	16.55	9	1.33	9	18.15	American	U. S. Army	436.0	58.0	26.0	Brooklyn, N. Y.	Honolulu, T. H.	General	586		
Meissner	8	13.48	9	6.10	9	17.55	9	19.07	British	Royal Mail S. P. Co.	440.0	56.3	27.3	Rotterdam, Holland	Vancouver, B. C.	General	3,762	7,487	4,641
S-14	9	10.00	9	10.00	9	17.58			American	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	General			
S-16	9	10.15	9	11.15	9	17.58			American	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	General			
Greylock	9	9.30	9	11.15	9	19.43	10	00.30	American	Isthmian S. S. Lines	430.7	54.3	28.6	Baltimore, Md.	Vancouver, B. C.	Steel, general	9,898	7,946	5,698
Steel Inventor	9	12.05	9	12.25	9	20.40	9	22.30	American	Isthmian S. S. Lines	424.0	56.0	24.6	Mobile, Ala.	Vancouver, B. C.	General	8,112	7,611	4,550
Nora King	9	2.40	9	14.46	9	22.28	10	00.27	American	N. O. & A. S. S. Co.	324.0	46.0	19.4	New Orleans, La.	Tacahuano, Chile	Gas, general	2,619	3,978	2,553
Yosia Linda	9	17.12	9	17.30	10	1.19	10	2.30	American	Standard Transp. Co.	435.0	56.2	18.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,424	3,077	
Tamara	9	22.55	10	6.30	10	13.22	11	7.30	British	Shaw, Savill & Albion	500.0	63.0	26.0	London, England	Wellington, N. Z.	General	6,300	13,592	9,383
Turakina	10	5.50	10	6.30	10	14.21	10	21.06	British	N. Z. Shipping Co.	460.5	62.6	24.0	Liverpool, England	Adelaide, Australia	General	6,270	10,618	7,306
Columbian	10	6.10	10	7.30	10	15.03	10	16.05	American	Amer-Hawaiian Line	404.0	53.0	19.0	Boston, Mass.	Seattle, Wash.	General	3,337	6,760	4,450
S-11	10	8.15	10	17.32					American	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	General			
S-12	10	8.15	10	17.32					American	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	General			
S-15	10	8.15	10	17.32					American	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	General			

* Tanker.

* Motor ship.

* Sailboat.

* Mine sweeper.

* Transport.

* Submarine.

* Towing pontoons.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Vaba ¹	7 14 15		7 14 55		7 23 15		7 23 15		American	T. P. Gallagher & Co.	390 0	54 2	24 6	Manila, P. I.	New Orleans, La.	Coconut oil	6,495	6,205	4,284
San Jose	7 15 15		7 21 35		8 8 47		7 23 15		American	United Fruit Co.	330 0	44 6	17 0	San Francisco, Cal.	Port Limon, C. R.	General	495 ¹	3,675	2,359
Hop ¹	7 19 42		8 5 24		8 13 35		8 18 25		French	J. R. Powell	447 7	52 6	23 0	Balboa, C. Z.	Gatun Lake, C. Z.	General	3,309	16	11
Louisa ¹										Messageries Maritimes				Noumea, N. Calid	Dunkirk, France.				
Empress of Australia	7 6 50		8 6 13		8 14 45		8 19 05		British	Can. Pac. S. S. Co., Ltd.	590 0	72 2	27 6	San Francisco, Cal.	New York, N. Y.	Passengers		22,680	14,476
Brazil Maru	8 3 15		8 6 53		8 15 15		8 16 20		Japanese	Kokusa Kisen Kaisha.	385 0	51 0	26 0	Vancouver, B. C.	Antwerp, Belgium	Wheat	7,514	5,915	4,423
Oglala			8 8 23		8 16 55		9 13 00		American	U. S. Navy	375 0	52 2	18 3	Balboa, C. Z.	Cristobal, C. Z.				
Maury			8 8 25		8 16 29		9 13 00		American	U. S. Navy	314 0	30 0		Balboa, C. Z.	Cristobal, C. Z.				
Mahan			8 8 55		8 16 20		9 13 00		American	U. S. Navy	314 0	30 0		Balboa, C. Z.	Cristobal, C. Z.				
Thomas P. Beal	8 4 30		8 8 49		8 18 20		9 00 35		American	Ashtonia S. Lines	304 1	55 1	27 0	Vancouver, B. C.	Ayrtonmouth, Eng.	(²⁰)	7,764	7,047	5,100
Quail			8 9 10		8 18 30		9 00 35		American	U. S. Navy	180 0	35 6		Balboa, C. Z.	Cristobal, C. Z.				
Persphone ¹	8 5 00		8 10 00		8 19 00		9 16 15		Danzig	Baltic-Am. Pet. & Im. Co.	468 8	62 2	27 0	Los Angeles, Calif.	London, England	Gasoline	11,219	9,336	6,338
Atlantic s.	8 6 25		8 11 06		8 21 05		9 15 00		Greek	Kulukundis & Co.	410 7	54 1	23 6	Iquique, Chile.	Azores ²¹	Nitrates	8,151	6,221	4,482
Santa Elisa	8 10 55		8 12 36		8 21 05		8 23 07		American	Grace Line	360 3	51 7	25 0	Talcahuano, Chile	New York, N. Y.	(²¹)	3,739	5,357	4,325
Canadian																			
Commander.	8 8 20		8 13 06		8 21 45		8 21 00		British	Can. Nat. Steamships	400 0	52 4	18 8	Brisbane, Australia	Montreal, Canada.	(²²)	3,546	5,714	4,195
Highland																			
Benvenue	8 12 37		8 13 58		8 22 25		8 22 25		British	H. & W. Nelson, Ltd.	398 0	52 5	25 0	Tacoma, Wash	London, England	Apples, copper	3,737	6,275	4,549
Heather	8 13 30		8 14 28		8 23 30		9 3 20		Panaman	Canadian Transp. Co.	429 0	53 9	25 8	Vancouver, B. C.	Inningham, Eng.	Railway ties	7,650	6,529	4,239
Mary Ann ²³									Panaman	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.	(²⁴)			
No. 31059 ¹⁷									Panaman	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.	(²⁴)			
No. 31063 ¹⁷									Panaman	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.	(²⁴)			
No. 31064 ¹⁷									Panaman	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.	(²⁴)			
No. 31072 ¹⁷									Panaman	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.	(²⁴)			
No. 31073 ¹⁷									Panaman	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.	(²⁴)			
Aua Luisa ²⁵									Panaman	Luis Durati				Balboa, C. Z.	Gatun Lake, C. Z.				
Laguna ¹⁶	8 12 00		9 00 30		9 8 40		9 8 40		British	Pacific Steam Nav. Co.	420 5	54 2	26 0	Talcahuano, Chile	Glasgow, Scotland	General	7,743	7,139	4,640
Willwello	8 17 15		9 1 05		9 9 40		9 9 40		American	Williams S. S. Line	409 8	54 2	25 0	Everett, Wash	Boston, Mass	Lumber	7,340	6,821	4,957
Ramon de Larrinaga	8 18 30		9 2 14		9 10 55		9 13 15		British	Larrinaga & Co.	450 0	53 0	26 0	Vancouver, B. C.	Hamburg, Germany	Lumber, grain.	8,635	7,712	5,600
Leda ¹⁶	8 16 00		9 2 43		9 11 35		9 13 35		Danzig	Standard Shipping Co.	489 0	58 0	27 9	Talara, Peru	Halifax, N. S.	Crude oil	11,500	9,347	6,003
Orleans	8 20 00		9 3 52		9 12 15		9 12 15		American	Quaker Line	395 5	55 0	26 8	Seattle, Wash	Philadelphia, Pa.	Lumber	7,983	7,330	5,293
Trevellard	8 23 00		9 4 50		9 13 45		9 15 20		British	Hain S. S. Co.	370 2	51 6	23 5	Vancouver, B. C.	Rotterdam, Holland	Lumber, wheat.	6,840	5,356	4,204
Leise Maersk.	9 2 30		9 5 47		9 14 30		9 15 25		Danish	Isbrandtsen Moller Co.	302 2	44 2	22 3	Iloilo, P. I.	East coast U. S.	Sugar	4,250	3,212	2,206
Yamachi ¹⁶	8 18 55		9 7 10		9 15 45		9 15 45		American	Roosevelt S. S. Co., S. B.	302 0	54 0	27 0	Iloilo, P. I.	New York, N. Y.	(²⁵)	8,500	6,906	5,042
Caldas ¹⁶	9 4 00		9 7 26		9 19 30		9 19 30		Colombian	National Navigation Co.	116 0	21 0	9 0	Buenaventura, Col.	Cristobal, C. Z.	General	171	211	124
Urbe	9 5 30		9 7 40		9 17 05		9 17 05		Panaman	Colombian Mar. Co.	237 0	32 0	12 8	Buenaventura, Col.	Cristobal, C. Z.	(²⁶)	483	1,154	663
El Panquaco ¹⁸			9 7 44		9 16 45		9 16 45		Panaman	Panama Government.	116 0	21 0	9 0	Buenaventura, Col.	Cristobal, C. Z.				

²¹ Copper, nitrates, and general.²² Coffee, hides, and gold.²³ Grain, lumber, and general.²⁴ For orders.²⁵ Sugar and desiccated coconut.²⁶ Towed by Mary Ann.¹⁶ Motor ship.¹⁷ Barge.¹⁸ Launch.¹⁹ Towing barges.²⁰ Tallow, wool, and skins.²¹ Tanker.

Denver ²⁷	9	8	28	9	18	45	10	14	00	American	U. S. Navy	292.0	44.0	Balboa, C. Z.	Cristobal, C. Z.	Gasoline	9,502	7,709	5,562
Sunbeam	9	5	50	9	8	50	9	19	05	American	Sun Oil Co.	429.3	53.2	San Francisco, Cal.	Philadelphia, Pa.	Philadelphia, Pa.	1,115	2,703	1,776
Buenaventura	9	8	15	9	9	25	9	18	35	American	Panama R. S. S. Line	251.0	49.0	Guayaquil, Ecuador	New York, N. Y.	General	6,862	6,829	4,627
Nevadan No. 1	9	10	25	9	11	14	9	19	45	American	Amer.-Hawaiian Line	460.0	57.8	Portland, Oreg.	Boston, Mass.	General	7,785	6,899	6,363
Horace	9	10	50	9	11	22	9	21	20	American	Lukenbach Line	445.0	58.0	Portland, Oreg.	Boston, Mass.	General	1,649	1,820	1,134
Saint Joseph	9	14	50	9	15	43	9	21	25	Norwegian	J. Lund & Co.	257.0	39.7	Punta Arenas, C. R.	London, England	Coffee			
Betty Joe ²⁵	8	18	00	9	7	19	9			Panamanian	United Fruit Co.	45.0	7.0	Punta Arenas, C. R.	Gatun Lake, C. Z.				
Salvador No. 1 ²⁷	8	18	00	9	7	19	9			Panamanian	United Fruit Co.			Punta Arenas, C. R.	Gatun Lake, C. Z.				
Salvador No. 8 ²⁷	8	18	00	9	7	19	9			Panamanian	United Fruit Co.			Punta Arenas, C. R.	Gatun Lake, C. Z.				
Puntarenas ²⁵	8	18	00	9	7	19	9			Panamanian	United Fruit Co.			Punta Arenas, C. R.	Gatun Lake, C. Z.				
Elkhorn	10	00	45	10	2	20	10	11	18	American	Tampa Inter-oceanic Co.	402.6	54.8	Manila, P. I.	Baltimore, Md.	Sugar	8,200	6,941	5,210
Pacific Grove ²⁶	9	23	00	10	3	43	10	12	30	British	Furness-Paetche Line	450.4	60.8	Vancouver, B. C.	London, England	General	8,585	10,080	7,226
Suoi ²⁶	9	15	20	10	5	44	10	14	10	American	Sun Oil Co.	480.5	66.0	Los Angeles, Calif.	Marcus Hook, Pa.	General	13,083	9,610	6,396
West Keats	10	5	00	10	7	12	10	15	20	American	States S. S. Co.	410.5	54.3	Olympia, Wash.	Philadelphia, Pa.	Lumber	4,742	6,572	4,900
Winnington	10	6	00	10	8	00	10	17	10	British	Haldin & Co.	420.1	56.5	Vancouver, B. C.	Falmouth, England	Wheat	9,966	6,967	4,903
Court	10	15	45	11	3	10	11	13	05	American	Calmar S. S. Co.	410.9	54.3	Honolulu, Wash.	Philadelphia, Pa.	Lumber	6,770	6,507	4,908
Texas	10	23	30	11	4	46	11	15	15	British	R. Chapman & Son	412.6	55.0	Vancouver, B. C.	Philadelphia, Pa.	Wheat	9,424	6,823	4,797
Mabriton	10	26	30	11	5	25	11	14	20	American	Union Sulphur Co.	356.0	51.6	Westport, Oreg.	Prairieville, N. Y.	Lumber	5,300	5,349	2,950
Herman Frash	10	26	30	11	5	25	11	14	20	American	Union Sulphur Co.	356.0	51.6	Westport, Oreg.	Prairieville, N. Y.	Lumber	5,300	5,349	2,950
Havel ²⁶	11	00	11	6	44	11	16	00	11	German	North German Lloyd	474.1	61.7	Vancouver, B. C.	Hamburg, Germany	Lumber, general	8,970	9,305	6,790
Broad Arrow	11	4	45	11	7	26	11	16	45	American	Standard Oil Co.	467.6	62.7	Los Angeles, Calif.	New York, N. Y.	Gasoline	11,113	9,700	6,842
George W.	10	19	00	11	8	33	11	18	15	American	Huasteca Petroleum Co.	416.8	56.1	Los Angeles, Calif.	Baltimore, Md.	Gasoline	9,540	6,743	4,759
Barnes	11	6	55	11	8	39	11	17	40	German	Hamburg-American Line	227.2	34.4	Guayaquil, Ecuador	Cristobal, C. Z.	General	1,040	1,572	1,011
Cerigo	11	6	10	11	9	12	11	19	45	Japanese	Nippon Yusen Kaisha	400.0	54.5	Manila, P. I.	New York, N. Y.	General	4,856	5,970	4,178
Calentia Maru	11	6	30	11	10	15	11	20	30	American	Roosevelt S. S. Co., S. B.	401.7	54.8	Manila, P. I.	New York, N. Y.	Sugar	8,000	6,933	5,187
Stanley	11	6	30	11	10	15	11	20	30	American	Roosevelt S. S. Co., S. B.	401.7	54.8	Manila, P. I.	New York, N. Y.	Sugar	8,000	6,933	5,187
Suturneo	11	11	55	11	13	30	11	22	35	1.55	Transmarine Lines	324.0	46.2	Chantal, Chile	New York, N. Y.	Copper, nitrates	4,916	3,984	2,628
Planter	11	17	30	11	18	45	12	9	05	British	T. & J. Harrison	420.0	55.2	Vancouver, B. C.	Liverpool, England	General	7,844	6,558	4,621
Lieut. C. M.	11	17	30	11	18	45	12	9	05	British	T. & J. Harrison	420.0	55.2	Vancouver, B. C.	Liverpool, England	General	7,844	6,558	4,621
McCauley ²⁵	12	2	20	12	3	15	12	13	22	American	U. S. Army	473.5	65.5	Balboa, C. Z.	Pedro Miguel, C. Z.	Nitrates, general	12,995	11,368	7,741
Amsterdam	12	3	05	12	4	29	12	15	44	Dutch	Royal Neth. S. S. Co.	511.0	61.2	Corral, Chile	Hamburg, Germany	Frozen, general	5,788		
Horata	11	1	45	12	5	19	12	15	00	British	N. Z. Shipping Co.	525.3	62.8	Auckland, N. Z.	London, England	General	6,695	13,127	9,067
Oroya	11	1	45	12	5	19	12	15	00	British	N. Z. Shipping Co.	525.3	62.8	Auckland, N. Z.	Liverpool, England	General	6,695	13,127	9,067
Januata	12	4	15	12	6	00	12	16	35	British	Pacific Steam Nav. Co.	220.0	34.0	Talcahuano, Chile	Cristobal, C. Z.	General	558	1,187	622
All America ²⁶	12	4	15	12	6	00	12	16	35	American	Pacific Steam Nav. Co.	220.0	34.0	Talcahuano, Chile	Cristobal, C. Z.	General	558	1,187	622
Margarethe	12	4	15	12	6	00	12	16	35	American	All America Cables	278.0	37.0	Champerico, Guat.	Cristobal, C. Z.	General	558	1,187	622
Cordis	12	7	10	12	9	18	12	18	00	German	Colombian Mar. Co.	266.8	42.1	Buenaventura, Col.	New York, N. Y.	Nitrates	380	2,263	1,022
Nordpol ²⁶	12	11	45	12	12	08	12	19	55	Danish	Dupont de Nemours	380.8	53.9	Quique, Chile	Charleston, S. C.	Nitrates	8,800	6,252	4,519
Dagrun	12	14	40	12	13	15	12	21	00	Norwegian	J. P. Pedersen & Son	381.9	54.0	Manila, P. I.	New York, N. Y.	General	7,800		
Larry Dohony	12	14	40	12	13	15	12	21	00	American	Riehfield Oil Co.	430.0	59.2	Los Angeles, Calif.	New York, N. Y.	Gasoline	9,500	7,454	5,198
Centaurus	12	15	45	13	4	46	13	12	30	American	N. Y. & S. Amer. Line	409.8	51.2	San Antonio, Chile	Norfolk, Va.	Nitrates	7,740	6,851	4,795
K. R. Kingsbury	12	15	45	13	4	46	13	12	30	American	N. Y. & S. Amer. Line	409.8	51.2	San Antonio, Chile	Norfolk, Va.	Nitrates	7,740	6,851	4,795
C. A. Larsen	12	16	10	13	5	28	13	13	35	American	Standard Oil Co. of Cal.	440.0	58.2	Los Angeles, Calif.	New York, N. Y.	Gasoline	10,000	9,033	5,938
Gilda ²⁶	12	17	30	13	6	37	13	15	00	Norwegian	Rasmussen & Konow	540.8	66.6	Wellington, N. Z.	New York, N. Y.	Whale oil	12,000	15,017	10,329
Peltore	13	4	40	13	8	47	13	18	05	American	Bjorn Bjornstad & Co.	369.5	51.6	Hilo, P. I.	New York, N. Y.	Sugar, lumber	5,950	5,101	3,735
Tillie Lykes	13	6	00	13	8	51	13	17	10	American	Ore S. S. Corp.	449.1	57.2	Grande, Chile	Baltimore, Md.	Iron ore	11,122	7,808	5,139
New Jersey	13	5	35	13	9	03	13	18	50	American	Lykes Bros. S. S. Co.	251.0	43.6	Buenaventura, Col.	Houston, Texas	Ballast	2,813	1,765	
	13	5	35	13	9	03	13	18	50	American	The Texas Co.	416.8	56.1	Los Angeles, Calif.	Antwerp, Belgium	Gasoline	7,620	7,130	5,249

²⁷ Cruiser.²⁸ Grain, lumber, and general.²⁹ Towed by Betty Joe.³⁰ Coffee, hides, and wood.³¹ Coffee, and general.³² Tagua, balsam, and general.³³ Grain, lumber, and general.³⁴ Towed by Betty Joe.³⁵ Coffee, and general.³⁶ South for dry-docking.

Cargo Through Canal During March, 1929.

On pages 538 and 539 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in March, 1929. This cargo, segregated according to direction, as compared with March, 1928, and the differences, is shown in the following tabulation:

	March 1929.	March 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	841,941	743,747	98,194
Pacific to Atlantic.....	1,901,827	1,684,915	216,912
Totals.....	2,743,768	2,428,662	315,106

As will be noted above, cargo tonnage from the Atlantic to the Pacific increased 98,194 tons and that from the Pacific to Atlantic showed a gain of 216,912 tons, making an increase in both directions over March, 1928, of 315,106 tons. Heavy shipments of mineral oils contributed largely to the increase in the Pacific to Atlantic cargo movement.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin—Sixty-seven and six-tenths per cent of the cargo moving from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 19.2 per cent in Europe. Cargo originating in the United States was 70,975 tons, or 14.2 per cent greater than the amount coming from that area in March, 1928, although the proportion of the whole in both months was approximately the same. Cargo from Europe decreased in the amount of 38,123 tons, or 19.0 per cent, under that originating in that region in March, 1928. The proportion of the whole routed from Europe in March, 1929, was also lower than the amount passing through during March last year.

Destination—Forty per cent of the Pacific-bound cargo was destined to the United States; 22.4 per cent to Asia; 15.9 per cent to Australasia; and 14.6 per cent to South America. Cargo to the United States showed an increase of 12,441 tons, or 3.7 per cent; that to Asia an increase of 53,309 tons, or 39.2 per cent; that to Australasia an increase of 10,584 tons, or 8.6 per cent; and that to South America an increase of 14,333 tons, or 13.1 per cent, over March, 1928. The proportion of the total cargo going to the United States and Australasia was somewhat lower in March, 1929, than in the corresponding month in 1928, while that of Asia was slightly higher. The proportion of the whole cargo going to South America was the same in March of both years.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin—Of the cargo moving in this direction, 46.8 per cent originated on the west coast of the United States; 30.2 per cent in South America; 13.1 per cent in Canada; 5.6 per cent in Australasia; and 3.2 per cent in Asia. Cargo to the United States, South America, and Australasia, showed increases of 203,752 tons, or 29.7 per cent; 65,663 tons, or 13.0 per cent; and 16,230 tons, or 17.9 per cent, respectively, over the amounts coming from these regions in March, 1928. Cargo

from the United States also showed a larger proportion of the total in March, 1929, while the proportion of the totals from South America and Australasia was approximately the same as in March of last year. Cargo from Canada and Asia decreased relatively as well as in actual tonnage in the amounts of 38,390 tons, or 13.3 per cent, and 22,854 tons, or 24.1 per cent, respectively.

Destination—Segregated according to destination, 55.5 per cent of the cargo in this direction went to ports of the United States and 41.0 per cent to Europe. To the United States this is a relative as well as an actual increase of 149,363 tons, or 16.4 per cent, over March, 1928, and to Europe an actual increase of 79,478 tons, or 11.4 per cent. The proportion of the whole of that destined to Europe was approximately the same as that routed in that area in March, 1928.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify over 88 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 12 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for March, 1929, or March, 1928, are listed in the following tabulation, showing differences:

Commodity.	March 1929.	March 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia	12,103	9,291	+2,812
Automobiles	26,012	14,164	+11,848
Cement	18,103	23,127	-5,024
Coal and coke	7,312	33,410	-26,098
Cotton	27,243	9,581	+17,662
Flour	23,845	2,237	+21,608
Manufactured goods:			
Iron and steel	195,726	173,738	+21,988
Machinery	18,880	20,172	-1,292
Railroad material	23,565	19,234	+4,331
Textiles	11,815	10,195	+1,620
Tinplate	24,258	20,636	+3,622
Miscellaneous	19,370	7,110	+12,260
Metals, various	13,102	3,307	+9,795
Oils, mineral	89,506	54,399	+35,107
Paper	16,851	16,519	+332
Phosphates	28,214	23,078	+5,136
Slag	1,731	13,545	-11,814
Sugar	14,140	4,515	+9,625
Sulphur	14,756	36,829	-22,073

The above 19 commodity groups comprise 69 per cent of the cargo from the Atlantic to the Pacific during March, 1929. Fourteen of the items showed increases while 5 registered decreases. The heaviest increases were iron and steel and mineral oils, while coal and coke, sulphur and slag showed the heaviest losses.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 98 per cent of all cargo moving from the Pacific to the Atlantic during the month of March, 1929. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month a year ago are listed below, showing differences:

Commodity.	March 1929.	March 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Asphalt	13,962	11,647	+2,315
Barley	25,022	12,715	+12,307
Beans	10,155	27,163	-17,008
Canned goods (fish, fruit, vegetables, etc.)	78,075	69,544	+8,531
Coffee	20,784	23,248	-2,464
Cold storage (food products) ¹	42,281	35,581	+6,700
Copra	8,961	11,665	-2,704
Cotton	11,838	8,803	+3,035
Fruit, dried	23,580	16,800	+6,780
Fruit, fresh	28,747	9,988	+18,759
Lumber	224,594	270,068	-45,474
Metals, various	55,171	43,431	+11,740
Nitrates	257,832	276,837	-19,005
Oats	6,200	11,109	-4,909
Oils, mineral	484,493	256,592	+227,901
Ores (principally iron)	171,834	139,554	+32,280
Rice	10,852	879	+9,973
Sugar	59,657	83,302	-23,645
Wheat	224,405	253,970	-29,565
Wool	24,173	26,042	-1,869

¹ Does not include fresh fruit.

The above 20 commodity groups comprise almost 94 per cent of the cargo from the Pacific to the Atlantic during March, 1929. Eleven of the items showed increases and 9 decreases. The heaviest increase was in mineral oils.

(Continued on page 538.)

United States Intercoastal Traffic by Commodities for March, 1929.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for March, 1929, and the totals for March, 1928 and 1927. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. The figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Aeroplanes	100	.....	100
Agricultural implements	650	50	700
Alfalfa meal .....	.....	325	325
Asbestos	218	.....	218
Asphalt	164	126	290
Automobiles	2,553	68	2,621
Automobile accessories	609	.....	609
Barley .....	.....	160	160
Beans .....	.....	5,720	5,720
Borax .....	.....	1,358	1,358
Bran .....	.....	180	180
Bricks	480	.....	480
Burlap	146	.....	146
Calcium carbide	95	.....	95
Camphor .....	.....	218	218
Canned goods:			
Fish	301	9,383	9,684
Fruit	1,061	32,268	33,329
Meat	95	1,187	1,282
Milk .....	.....	575	575
Soup	1,896	.....	1,896
Vegetables	590	7,852	8,442
Miscellaneous	5,070	5,197	10,267
Carbon black	183	112	295
Celite filtercel .....	.....	943	943
Cement	1,273	146	1,419
Charcoal	87	50	137
Chemicals	3,478	1,091	4,569

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
China and fire clay	72		72
Coal	3,463		3,463
Cocoa	242		242
Cocanuts		55	55
Coffee	317	30	347
Cold Storage:			
Lard	935		935
Meat	69		69
Other	224		224
Confectionery	388		388
Copra		350	350
Cork	68		68
Cotton	475	4,148	4,623
Drugs	739	127	866
Earthenware	245	23	268
Eggs, dried		30	30
Explosives	160	120	280
Fertilizer	496	69	565
Flour	139	5,856	5,995
Fruit, dried		13,035	13,035
Fuller's earth	500		500
Furniture	423		423
General	41,623	16,648	58,271
Glass and glassware	2,182	12	2,194
Glue		15	15
Granite	20		20
Hair		50	50
Hardwoods	479	501	980
Hay		111	111
Hemp	132	811	943
Honey		26	26
Hops		33	33
Ink	159		159
Jute	95		95
Kapok		17	17
Linoleum	1,269	112	1,381
Liquors	65		65
Lumber	3,253	164,265	167,518
Malt	194		194
Manufactured goods:			
Iron and steel	111,517	460	111,977
Machinery	6,245	415	6,660
Railroad material	7,865		7,865
Tinplate	12,953		12,953
Textiles	3,706	127	3,833
Miscellaneous	14,037	2,582	16,619
Marble	181		181
Matches	68		68
Metals:			
Antimony		391	391
Copper		4,198	4,248
Iron	3,166		3,166
Lead	25	29	54
Scrap	296	146	442
Zinc		85	85
Other	9	78	87
Milk, powdered		194	194
Molasses	191		191
Nitrates	100		100
Nuts	43	275	318
Oats	15		15
Oils:			
Cottonseed	153		153
Crude	20	26,187	26,207
Gas oil, fuel oil		32,002	32,002
Gasoline, benzine, naphtha	100	220,046	220,146
Kerosene		34,128	34,128
Linseed	68		68
Lubricating and greases	7,347	258	7,605
Olive	38		38
Vegetable	95	3	98
Wood	26	37	63
Other	136	15	151
Orcs:			
Copper		936	936
Lead	2,600		2,600
Magnesite		2,271	2,271
Manganesec	22	200	222
Zinc		450	450
Other	100	240	340
Paint	447	211	658
Paper	5,272	2,199	7,471
Paper pulp	34	4,298	4,332
Peanuts	49	976	1,025
Peas		123	123

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Phosphates	1,804	720	2,524
Porcelain	344	525	869
Quicksilver		3	3
Rags	55	428	483
Rice	842	70	912
Rope	217	12	229
Rosin	554		554
Rubber:			
Manufactured	1,620	91	1,711
Scrap		65	65
Salt	214	134	348
Seeds:			
Hemp		143	143
Other	55	5	60
Shells	638		638
Silk		233	233
Skins and hides	73	2,123	2,196
Slate	38		38
Soap	3,336	84	3,420
Soda	226		226
Soda ash	279		279
Soda, caustic	765		765
Starch	137		137
Sugar	313	5,859	6,172
Sulphur	11,044		11,044
Syrup	2,289		2,289
Talc		171	171
Tallow	65	229	294
Tar	460		460
Tea	12	27	39
Tobacco	1,781	355	2,136
Turpentine	52		52
Vegetables	259	11	270
Waste	15	114	129
Wax	83	24	107
Wheat	114	707	821
Wine	105	80	185
Wool	90	1,433	1,523
Zinc Oxide	16		16
Totals, March, 1929	282,344	620,659	903,003
Totals, March, 1928	260,212	479,572	739,784
Totals, March, 1927	281,436	652,065	933,501

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Three Weeks Ending April 13, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged.	Laded.
				<i>Tons.</i>	<i>Tons.</i>
City of Panama	Panama Mail S. S. Co.		March 24		2,162
Floreana	Colombian Transp. Co.		March 24		438
Brielle	Royal Neth. S. S. Co.		March 24		198
Wanks	Stand. Fruit S. S. Co.		March 24		?
Notre Dame de Fourviere	French Line		March 24		427
Saramacca	United Fruit Co.		March 24		29
Santa Tecla	N. O. & S. A. S. S. Co.		March 24		100
Coppename	United Fruit Co.	March 24	March 25	52	106
Sachsen	Hamburg-American Line	March 24	March 25	(¹)	265
Heredia	United Fruit Co.		March 25		80
Santa Maria	Grace Line	March 25	March 25	149	497
Lobos	Pacific Steam Nav. Co.	March 25	March 26	45½	298
Crijnsen	Royal Neth. S. S. Co.	March 25	March 26	155	216
Orazio	Italian Line	March 25	March 26	432	69
Perene	Peruvian Line	March 25	March 27	4	255
Camden	United Fruit Co.	March 26	March 27	9,174	(²)
Grootendijk	Holland-American Line	March 26	March 28	(¹)	261
Carl Legien	Hamburg-American Line	March 26	March 29	105	578
Salvador	Pacific Steam Nav. Co.	March 27		1,025	
Ariguani	Elders & Fyffes, Ltd.	March 27	March 27	4	81
Wayfarer	T. & J. Harrison	March 27	March 27	549	(²)
Visurgis	Panama Mail S. S. Co.		March 27		2,192
Metapan	United Fruit Co.	March 27	March 28	823	504
Esparta	United Fruit Co.	March 27	March 28	1,522	117½
Mayari	United Fruit Co.	March 27	March 29	2,330	(²)
Pacific Pioneer	Furness, Withy & Co.	March 27	March 29	11	325
Ancon	Panama R. R. S. S. Line	March 27	March 31	4,740	916

* No cargo discharged.

* No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Arkansas	French Line	March 28	March 28	221	18
Lagarto	Pacific Steam Nav. Co.	March 28	March 28	22	54
Calamares	United Fruit Co.	March 28	March 29	307	383
Ebro	Pacific Steam Nav. Co.	March 28	March 29	12	7
Crijnsen	Royal Neth. S. S. Co.	March 28	March 30	7 ¹ / ₂	398
Orbita	Pacific Steam Nav. Co.	March 29	March 29	2	(²)
Coppename	United Fruit Co.	March 29	March 29	125	300 ¹ / ₂
Suriname	United Fruit Co.	March 29	March 29	916	183
Cal	North German Lloyd	March 29	March 30		722 ³ / ₄
Cid	Pacific Steam Nav. Co.	March 29	March 30	(¹)	55
Atlantida	Stand. Fruit S. S. Co.	March 29	March 30	399	442
Cauca	National Navigation Co.	March 29		247	
Virgilio	Italian Line	March 29	March 31	134	1,451
William M	R. Feuillebois	March 30	March 30	(¹)	25 ¹ / ₂
Heinrich Arp	Colombian Mar. Co.	March 30	March 30	232	(²)
Martha	H. C. Stevenson		March 30		811
Esparta	United Fruit Co.	March 30	March 31	¹ / ₂	13
Wanks	Stand. Fruit S. S. Co.	March 30	March 31	85	7
Cartago	United Fruit Co.	March 31		226	
Venezuela	Panama Mail S. S. Co.	March 31		587	
Acajutla	Pacific Steam Nav. Co.		March 31		1,126
Cartago	United Fruit Co.		April 1		270
Essequibo	Pacific Steam Nav. Co.	April 1	April 1	33	(²) *
Alvarado	Pacific Steam Nav. Co.	April 1	April 2	69	204
Los Angeles	Hamburg-American Line	April 1	April 2	(¹)	323
Isis	Hamburg-American Line	April 1	April 2	62	379
El Salvador	Panama Mail S. S. Co.	April 1	April 2	551	328
Cauca	National Navigation Co.		April 2		197
Venezuela	Panama Mail S. S. Co.		April 2		403
Perou	French Line	April 1	April 3	209	597
Linda S.	R. Feuillebois	April 2	April 2	(¹)	24
Knutte Nelson	Norway-Pacific Line	April 2	April 3	1	180
Swiftwind	C. D. Mallory & Co.	April 2	April 3	11,734	(¹)
La Perla	United Fruit Co.	April 2	April 4	1,021	226
Wiegand	Roland Line	April 2	April 4	37	149
Marques de Comillas	Spanish Line	April 2	April 6	184	293
Manizales	North German Lloyd	April 2	April 6	769	653
Cellina	Nav. Libera-Tristina	April 3	April 3	156	(²) *
Orita	Pacific Steam Nav. Co.	April 3	April 4	153	229 ¹ / ₂
Dinteldijk	Holland-American Line	April 3	April 4	(¹)	92
Iriona	United Fruit Co.	April 3	April 4	858	3
Canada	Johnson Line	April 3	April 3	(¹)	195
Mayan	Gulf-Caribbean Line	April 3	April 3	153	(²)
Sixaola	United Fruit Co.	April 3	April 4	726	326
Texas	French Line	April 4	April 4	108	17
Corinto	Panama Mail S. S. Co.	April 4		1,638	
Camden	United Fruit Co.	April 4	April 6	9,046	(²)
Pastores	United Fruit Co.	April 4	April 5	1,577	308
Baralt	Royal Neth. S. S. Co.	April 4		500	
Salvador	Pacific Steam Nav. Co.		April 5		1,071
Guayaquil	Panama R. R. S. S. Line	April 4	April 6	824	4
Suriname	United Fruit Co.	April 5	April 5	120	408
Borga	Fred Olsen & Co.	April 5	April 5	(¹)	210
Trigonia	Anglo-Saxon Pet. Co.	April 5		8,552	
Amapala	Stand. Fruit S. S. Co.	April 5	April 6	302	587
J. A. Moffett	Standard Shipping Co.	April 6		16,500	
La Perla	United Fruit Co.	April 6		1	
Parismina	United Fruit Co.	April 6		277	
Curaca	Grace Line	April 6		48	
Kuma Maru	Nippon Yusen Kaisha	April 6	April 6	121	(²)
Wanks	Stand. Fruit S. S. Co.	April 6		160	
Indiana	French Line	April 6		15	
Almelo	Royal Neth. S. S. Co.	April 6		359	
Barneveld	Royal Neth. S. S. Co.	April 6	April 6	170	2
Mayari	United Fruit Co.	April 6	April 6	78	1,555
Novian	Leyland S. S. Line		April 5		137
Baralt	Royal Neth. S. S. Co.		April 7		97
La Perla	United Fruit Co.		April 7		21
Indiana	French Line		April 7		57
Peursim	Royal Neth. S. S. Co.		April 7		325
Almelo	Royal Neth. S. S. Co.		April 7		401
Rugia	Hamburg-American Line		April 7		1,012
Saint Andre	French Line	April 7	April 8	310	197
Parismina	United Fruit Co.		April 8		175 ¹ / ₂
Mantaro	Peruvian Line	April 7		1,998	
Santa Elisa	Grace Line	April 8	April 8	19	134
Lougar	French Line	April 8	April 8	(¹)	(²)
Iriona	United Fruit Co.	April 8	April 8	175	(²)
Meissonier	Royal Mail Steam Packet Co.	April 8	April 9	24	30
Wanks	Standard Fruit S. S. Co.		April 9		6
Ulua	United Fruit Co.	April 8	April 10	540	239
San Jose	United Fruit Co.	April 8	April 10	574	292

* No cargo discharged.

* No cargo laded.

* One package.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Lubeck	Hamburg-American Line	April 9	April 9	266	(²)
Nosa King	N. O. & S. A. S. S. Co.	April 9	April 9	52	537
Uribe	Colombian Mar. Co.	April 9		483	
Buenaventura	Panama R. R. S. S. Line	April 9	April 10	562	574
Maravi	United Fruit Co.	April 9	April 11	871	25
Caldas	National Navigation Co.	April 9	April 12	189	228
Stuyvesant	Royal Neth. S. S. Co.	April 10	April 10	1	156
Cristobal	Panama R. R. S. S. Line	April 10		3,498	
Pacific Trader	Furness, Withy & Co.	April 10	April 11	(¹)	539
Santa Cecelia	Grace Line	April 10	April 11	2	90
Zacapa	United Fruit Co.	April 10	April 11	492	415
Havel	North German Lloyd	April 11	April 11	(¹)	131
Witell	North German Lloyd	April 11	April 12	124	270
Teutonia	Hamburg-American Line	April 11	April 12	251	156
Coppename	United Fruit Co.	April 11	April 12	928	86
Calcutta Maru	Nippon Yusen Kaisha	April 11	April 13	1,152	196
Noorderdijk	Holland-American Line	April 11	April 13	664	48
Gundersen	United Fruit Co.	April 12	April 12	62	382
Groya	Pacific Steam Nav. Co.	April 12	April 12	9	(²)
Jamaica	Pacific Steam Nav. Co.	April 12		858	
Margarethe Cords	Colombian Mar. Co.	April 12	April 12	100	(²)
Magellan	Pacific Steam Nav. Co.	April 12	April 13	29	113½
Stuyvesant	Royal Neth. S. S. Co.	April 12	April 13	1	279
Atlantida	Standard Fruit S. S. Co.	April 12	April 13	458	671
Linda S.	R. Feuillebois	April 13	April 13	(¹)	42½
Finn	Colombian Mar. Co.	April 13	April 13	50	(²)
Lisa	Hamburg-American Line	April 13		236	
Wanks	Standard Fruit S. S. Co.	April 13		187	
Heredia	United Fruit Co.	April 13		809	
Corinto	Panama Mail S. S. Line		April 13		1,808
Cerigo	Hamburg-American Line	April 11	April 13	1,152	196

¹ No cargo discharged.² No cargo laded.

Panama Canal Records.

A statement of various records made by traffic through the Panama Canal at different times was published in THE PANAMA CANAL RECORD of November 14, 1928. Since that time new records have been established with respect to several items, viz., commercial traffic for one month, largest day's commercial traffic in one direction, and lowest pro rata cost of tolls per ton of cargo. A revised statement is accordingly given below.

In statement published November 14, 1928, the vessels *Lebore* and *Marore*, drawing 35 feet 6 inches each and transiting July 23, 1925, and April 18, 1927, respectively, were shown as the commercial vessels of the greatest draft to have transited the Canal to date. This was an error, the *Chilore*, transiting March 25, 1928, having had a salt water draft of 36 feet.

In the tabulations directly following data are shown separately for merchant or commercial vessels and for naval vessels because they are different types of craft:

MERCHANT OR COMMERCIAL VESSELS.

Feature.	Record.	Vessel.	Date of transit.
Length	678.2 feet	Empress of Scotland	April 2, 1926.
Beam	83.2 feet	Malolo	November 2, 1927.
Draft	36 feet	Chilore	March 25, 1928.
Tonnage:			
Registered gross	27,132 tons	Belgenland	December 12, 1924.
Registered net	15,352 tons	Belgenland	December 12, 1924.
Panama Canal net	13,999 tons	Empress of Scotland	April 2, 1926.
United States net	13,769 tons	Empress of Scotland	April 2, 1926.
Tolls	\$17,211.25	Empress of Scotland	April 2, 1926.
Cargo	22,000 tons crude oil	William Rockefeller	October 27, 1922.

NOTE.—The *Belgenland* has made 4 transits since December 12, 1924, and the *Empress of Scotland* has made 1 transit since April 2, 1926.

NAVAL VESSELS.

Feature.	Record.	Vessel.	Date of transit.
Length.....	888 feet.....	U. S. S. <i>Saratoga</i>	February 5, 1928.
Beam.....	107.9 feet.....	U. S. S. <i>Saratoga</i>	February 5, 1928.
Draft.....	33 feet 1 inch.....	U. S. S. <i>Colorado</i>	March 19, 1926.
Tonnage.....	44,799 tons displacement.	H. M. S. <i>Hood</i>	July 23 and 24, 1924.
Tolls.....	\$22,399.50.....	H. M. S. <i>Hood</i>	July 23 and 24, 1924.

NOTE.—The U. S. S. *Lexington*, a sister ship of the U. S. S. *Saratoga*, transited on March 25, 1928.

In the following data the term "commercial traffic" includes all craft subject to payment of tolls except small vessels under 20 net tons, Panama Canal measurement. It does not include vessels in the public service of the Governments of the United States, Panama, and Colombia, and ships which transit the Canal solely for the purpose of having repairs made at the Balboa shops and dry dock, as such vessels are exempt from payment of tolls.

Largest year's commercial traffic:

Number of transits, 6,456, fiscal year 1928.

Panama Canal net tonnage, 29,458,634, fiscal year 1928.

Tolls, \$26,944,499.77, fiscal year 1928.

Cargo, 29,630,709, fiscal year 1928.

Largest month's commercial traffic:

Number of transits, 603, January, 1929.

Panama Canal net tonnage, 2,771,280 tons, January, 1929.

Tolls, \$2,502,815.12, January, 1929.

Cargo, 2,858,835 tons, January, 1929.

Largest day's commercial traffic:

Number of transits, 33, October 1, 1927.

Panama Canal net tonnage, 152,610 tons, November 15, 1927.

Tolls, \$137,053.98, April 10, 1928.

Cargo, 163,202 tons, January 14, 1924.

Largest day's commercial traffic in one direction:

Number of transits, 22, Atlantic to Pacific, December 8, 1928.

Panama Canal net tonnage, 103,531 tons, Atlantic to Pacific, December 8, 1928.

Tolls, \$86,224.78, Atlantic to Pacific, December 8, 1928.

Cargo, 133,757 tons, Pacific to Atlantic, May 2, 1924.

Largest number of transits in any one day:

Thirty-five Government and 22 commercial vessels, a total of 57 vessels, January 17, 1924.

Smallest day's commercial traffic occurred on November 18, 1924, on which the number of transits was 2; Panama Canal net tonnage, 2,870 tons; tolls, \$2,865; and cargo, 2,809 tons.

The lowest pro rata cost of tolls per ton of cargo carried through the Canal on a commercial vessel is \$0.2146 per ton, which occurred with the transit of the Swedish motor ship *Amerikaland*, on March 11, 1929, carrying a cargo of iron ore from Cruz Grande, Chile, to Baltimore, Md. On this transit the *Amerikaland* carried 21,800 tons of cargo and paid tolls of \$4,678.75.

The fastest transit through the Canal, in 4 hours and 10 minutes, was made by the United States destroyer *Lawrence*, southbound, on December 2, 1917.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors. An illustrated pamphlet explaining in detail the arrangement may be had upon application to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

On general merchandise the rates are as follows:

(a) For handling cargo from ship's side to storage place, the customary inward local charge of \$1 per ton.

(b) For delivery or reforwarding, customary outward local charge of \$1 per ton. (Total of 20 cents per ton more than regular transfer charge.)

(c) For storage, 3 cents per ton per day, except that no charge will be made for the first 35 days.

The Panama Railroad Company stores this cargo in four fireproof warehouses, 160 feet by 850 feet, at Cristobal, and in one of the same dimensions at Balboa.

Cargo stored for orders can be reforwarded from the Isthmus—each carrier to collect its proportion of the through rate instead of the local. This means that should a shipment move from New York to the Canal Zone, it will of course pay regular local rate to Balboa or Colon, as the case may be—but should owner wish to reforward to, say, "Guayaquil," he can do so by paying the oncarrier's proportion of the through rate. Upon evidence that the shipment or any part of it moved beyond the Canal Zone, the initial carrier will refund the difference between the through and local rate.

Cargo intended for warehousing at Cristobal or Balboa should be so indicated on the bill of lading, thus "Cristobal for orders" or "Balboa for orders." When so consigned it is not necessary for shippers to secure consular papers at original point of shipment, nor to have bills of lading consulated. Cargo consigned to Canal Zone for orders may be delivered in the Republic of Panama in which case it is necessary to prepare an invoice on which duties can be paid. When evidence of payment of duty is presented to the Canal Zone customs officers they will issue the necessary release and delivery can be taken in the usual way. For those on the Canal Zone who are allowed to import goods duty free the Panama Canal customs release is all that is necessary. For reshipment from storage to a foreign country the shipper takes out bill of lading, consular invoice and sobordo if necessary and cargo is forwarded as regular outward local.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," are shown in the pamphlet referred to above.

Tolls Charges for Transit of The Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity..... \$1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity..... .72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton..... .50
4. 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
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton.
6. Vessels returning from Gatun Lake to original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, March, 1929.—Continued from page 531.
(Figures represent tons of 2,240 pounds.)

From—	SOUTH AMERICA.					NORTH AMERICA.							ASIA.					AUSTRALASIA.			Grand totals.	Per cent of total cargo.			
	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	West coast of United States.	West coast of Canada.	West coast of Central America.	West coast of North America. ¹	Balboa, C. Z. ²	Hawaii.	Total, North America.	Japan.	China.	Philippines.	Far East. ¹	Total, Asia.	Australia.	New Zealand.			Australasia. ¹	Total, Australasia.	
NORTH AMERICA:																									
UNITED STATES—																									
North Atlantic ports.....	18,304	3,218	768	10,078	5,223	37,591	227,831	743	2,296		42	1,234	232,146	33,160	36,085	16,537	16,624	102,406	33,106	9,940		43,046	415,189	49.3	
South Atlantic ports.....	1,114						2,913						2,636	4,893	363		1,055	6,221				9,157	19,157	1.1	
Gulf ports.....		54	29	629	854	2,680	51,577	4,091					458	56,126	52,811	11,010	3,158	5,188	72,167	5,726		8,000	13,726	144,099	17.2
Totals, U. S.....	19,418	3,272	797	10,707	6,077	40,271	282,344	4,834	2,296		42	1,692	291,208	90,774	47,458	19,695	22,807	180,704	38,832	9,940	8,000	56,772	369,045	67.6	
EUROPE—																									
Cristobal, C. Z. ²	1,002	3,574	1,400	895	701	7,572	3,700	15,985					19,685										27,201	3.2	
East coast of Canada.....								1,381					1,381	1,281				1,281	7,059	5,676		12,735	15,397	1.8	
West Indies.....	16,190			2		16,192	3,735	90					3,825		3,708			3,708		6,890		67,800	30,585	3.6	
East coast of Mexico and Central America.....							1,957						1,957	2,938				2,938	4,701			4,701	9,596	1.3	
Totals, N. America.....	36,610	6,846	2,197	11,604	6,778	64,035	291,736	6,305	18,281		42	1,692	318,056	94,496	51,221	19,695	22,871	188,785	50,592	22,416	8,000	81,008	651,884	77.5	
EUROPE:																									
British Isles.....	7,045	61	264	1,691	5,021	14,082	12,237	6,165	2,417				20,849							52,343		52,343	87,274	10.4	
Belgium.....	3,477	485	458	1,933		6,353	10,182	1,342					11,524									17,877	2.1		
France.....	122			194	48	364	491	1,278	21	136			1,926									2,290	0.3		
Germany.....	3,175	2,319	15	2,332	3,532	11,373	3,044	796		249			4,089									15,462	1.8		
Holland.....	2,491	42	103	421		3,057	2,113	123	1,700		120		4,053									7,110	0.8		
Italy.....	71			92	1,723	1,886	1,764	463	146				2,376									4,256	0.5		
Norway and Sweden.....	29				6,226	6,255	2,699	309	1,732		608		5,339									11,594	1.4		
Spain and Portugal.....	16				61																	77			
Europe.....	836			453	12,198	13,492	1,708	58	922				2,688									16,180	1.9		
Totals, Europe.....	17,202	2,907	840	7,121	28,809	56,939	34,229	10,558	6,938		1,113		52,838							52,343		52,343	162,120	19.2	
East Coast of South America.....	132	2,025				2,157	13,158	12,291					25,449	331				331					27,937	3.3	
Grand Totals.....	54,004	11,778	3,037	18,725	35,587	123,131	339,123	29,154	25,219		1,155	1,692	396,343	95,324	51,226	19,695	22,871	189,116	50,592	22,416	8,000	133,351	841,941	100.0	
Per cent of total cargo:																									
March, 1929.....	6.4	1.4	0.4	2.2	4.2	14.6	40.3	3.5	3.0		0.1	0.2	47.1	11.3	6.1	2.3	2.7	22.4	6.0	8.9	1.0	15.9	100.0		
March, 1928.....	6.5	1.3	0.3	2.4	4.1	14.6	43.9	1.5	2.5	1.0	0.2	1.5	50.6	8.1	4.9	2.3	3.0	18.3	8.1	7.6	0.8	16.5	100.0		
March, 1927.....	1.6	0.6	0.1	1.4	7.3	11.0	43.3	2.9	1.0	1.2		1.5	49.9	10.8	4.4	0.9	5.8	21.9	6.7	8.4	2.1	17.2	100.0		

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

¹ General cargo not routed so as to allow aggregation between definite ports.

² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, March, 1929.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.										Grand totals.	Per cent of total cargo.		
	UNITED STATES.					Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ¹	Total, Europe.	East coast of South America.	Egypt.					
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.															West Indies.			East coast of Central America.	Cristobal, C. Z. ²
SOUTH AMERICA:																								
Chile	185,085	45,637	55,579	286,301	.....	914	.....	153	287,368	18,855	2,116	4	5,605	2,731	1,085	.....	1,145	125,556	157,097	444,465	23.4			
Colombia	746	.....	.....	746	.....	.....	.....	3,993	4,739	11	.....	.....	.....	.....	.....	.....	88	149	4,838	0.2				
Ecuador	7,184	.....	.....	7,184	.....	.....	.....	2,039	9,223	1,065	529	18	.....	68	.....	.....	279	1,959	11,182	0.6				
Peru	39,015	.....	.....	39,015	25,875	.....	.....	2,157	67,047	8,799	690	1,785	522	1,050	.....	9,361	17,627	39,834	106,881	5.7				
West coast South America	390	.....	.....	390	.....	.....	.....	390	2,387	.....	.....	.....	.....	.....	.....	.....	3,141	5,528	5,918	0.3				
Totals, South America	232,420	45,637	55,579	333,636	25,875	914	.....	8,342	308,767	31,117	3,335	4	7,408	3,321	2,135	10,506	146,691	204,517	573,284	30.2				
NORTH AMERICA:																								
West coast of Canada	26,511		1,068	27,579	1,438	1,804		5	30,826	83,049	9,790		3,390	22,152	15,413		10,242	75,204	219,240	400	250,466	13.1		
West coast Central America	86	.....	.....	86	.....	2	30	11,546	11,664	.....	648	47	.....	1,661	.....	.....	3,746	6,102	17,766	0.9				
West Coast United States	586,781	14,751	19,127	620,659		5,349	587	3,063	629,658	147,145	682	44	5,724	51,201	12,315	230	1,537	8,120	31,081	258,089	542	888,289	46.8	
Hawaii	3,163	.....	67	3,230	.....	.....	.....	3,230	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,230	0.2				
Totals, North America	616,541	14,751	20,262	651,554	1,438	7,155	617	14,614	675,378	230,194	10,472	44	9,124	74,001	27,775	230	13,440	8,120	110,031	483,431	942	1,159,751	61.0	
ASIA:																								
China	4,224	.....	.....	4,224	.....	.....	.....	177	4,401	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,401	0.2			
Japan	3,789	.....	.....	3,789	.....	.....	.....	4	3,793	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,793	0.2			
Philippines	43,914	.....	716	43,914	.....	.....	.....	43,913	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43,916	2.3			
Far East	2,312	.....	.....	2,312	.....	7,450	.....	9,762	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,762	0.5			
Totals, Asia	53,519	.....	716	54,235	.....	7,450	.....	181	61,866	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	61,866	3.2			
AUSTRALASIA:																								
Australia	4,645	.....	.....	4,645	170	.....	.....	.....	4,815	11,420	.....	.....	.....	.....	.....	.....	.....	11,420	.....	16,235	0.9			
New Zealand	5,236	.....	.....	5,236	917	.....	.....	167	6,320	65,245	2,899	.....	.....	.....	.....	.....	2,833	70,977	77,297	4.1				
Australasia	2,730	.....	4,441	7,191	.....	.....	.....	.....	7,191	2,940	.....	.....	.....	.....	.....	.....	3,263	6,203	13,394	0.7				
Totals, Australasia	12,631	.....	4,441	17,072	1,087	.....	.....	167	18,326	79,005	2,899	.....	.....	.....	.....	.....	6,096	88,000	106,326	5.6				
Grand totals	915,111	63,388	80,998	1,056,497	28,400	15,519	617	23,304	1,124,337	340,916	16,706	48	16,532	77,322	29,910	230	23,946	818,776	548,942	1,901,827	100.0			
Per cent of total cargo:																								
March, 1929	48.1	3.2	4.2	55.5	1.5	0.8	.....	1.2	59.0	17.9	0.9	.....	0.9	4.1	1.6	.....	1.3	13.9	41.0	.....	100.0			
March, 1928	43.1	6.2	4.5	53.8	0.2	1.0	0.6	2.3	58.1	18.9	0.8	0.4	1.3	5.2	3.0	0.4	0.8	10.7	41.5	0.4	100.0			
March, 1927	49.1	4.2	2.2	55.5	3.0	2.6		4.9	66.0	17.1	0.1	0.1	0.9	1.1	1.3	0.5	0.9	10.3	32.3	1.3	0.4	100.0		

² General cargo not routed so as to allow segregation between definite ports.² Includes both local and transit cargo.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Diesel oil is sold by The Panama Canal at Cristobal at \$1.80 per barrel.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.25 per barrel at Balboa and Cristobal. Diesel oil, Balboa only, \$1.80 per barrel.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers at \$8.00 per ton of 2,240 pounds at Cristobal, and \$11.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, \$8.00 per ton at Balboa. When coal is delivered from lighters in quantities of 50 tons or more, the price is \$9.00 per ton at Cristobal, \$12.00 at Balboa. If less than 50 tons is taken from lighters, prices are \$11.00 per ton at Cristobal and \$14.00 per ton at Balboa with minimum charge for 20 tons and maximum charge not to exceed that for 50 tons at \$9.00 Cristobal and \$12.00 Balboa. For furnishing lump coal for galley use, or run of mine coal, in sacks, \$6.00 additional per ton; but if vessel furnishes sacks \$3.00 additional per ton.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

For trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, when requested, an additional charge of 90 cents per ton will be made for extra handling.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Transit and Harbor Regulations of The Panama Canal," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.

The Hydrographic Office at Cristobal maintain at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometric comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 528.

PORT OF BALBOA.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
April 7.	Dixie ⁴²	Pacific Fruit Co.	Bayano River, R. P.	April 7.	Dixie ⁴²	Pacific Fruit Co.	Panama Bay, R. P.
April 7.	El Colon ⁴³	Hans Elliot.	Darien, R. P.	April 7.	San Luis ⁴³	Chiriqui Land Co.	Pto. Armuelles, R. P.
April 7.	Martha ⁴⁴	Chr. Hanrevig.	Pto. Armuelles, R. P.	April 7.	El Colon ⁴³	Haus Elliot.	Panama Bay, R. P.
April 7.	Lucky Girl ⁴³	G. F. Gustafson.	San Diego, Calif.	April 11.	Des Hermanos ⁴³	A. Valdez.	Panama Bay, R. P.
April 11.	Dos Hermanos ⁴³	A. Valdez.	Bayano River, R. P.				

⁴² And barge, ⁴³ Motor schooner, ⁴⁴ Motor ship.

* Other than ships passing through the Canal.

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OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., April 24, 1929. No. 38.

Proposed New Service for Trade Between West Coast United States and Europe.

A bulletin issued by the Shipping Board under the date of April 11, 1929, states:

The Shipping Board today declared that American ship service from Pacific coast ports of the United States to the United Kingdom and Continental Europe is essential to the foreign trade of the United States, and took steps for the creation of such a service under private American ownership.

In a resolution bearing on this matter, the Board declares that seven motor ships sought by various interested parties for chartering as a basis for the new line are not available. It laid plans, however, for the sale of eight steamers of its fleet to be bought and converted to Diesel propulsion with the aid of the Shipping Board's Construction Loan Fund. In this manner it will be possible to inaugurate the service under private ownership with a fleet of 14-knot motor ships.

The vessels of the speed mentioned would be equipped with ample refrigerator space to meet the needs of the Pacific coast fruit trade and likewise would have accommodations for a limited number of passengers. Vessels of this character are essential to meet the competition of the many foreign lines already operating on this route.

Six of the vessels selected are of the *Abraham Lincoln* type, 12,980 deadweight tons, and the remaining two are of the *Courageous* type, 10,680 deadweight tons (as converted to Diesel propulsion).

New Ships for Grace Line's Colombia-Ecuador Service.

A new direct passenger and cargo service to Colombia (west coast) and Ecuador was inaugurated by the Grace Line on April 20, 1929, with the sailing from New York of the new motor vessel *Santa Inez*, to be followed eight weeks later by the sister ship *Santa Rita*. This will be the first direct service to those points by this line, as the ships now employed call at Caribbean ports of Colombia before passing through the Panama Canal. The new route will shorten the passage from New York to Buenaventura to 8½ days and to Guayaquil to 12 days.

The *Santa Inez* and *Santa Rita* are of 5,100 tons deadweight, 10,000 tons displacement, 370 by 53 feet and have space on each for 80 first-class and 48 intermediate passengers. They will run independently of the fortnightly service to Peru and Chile.

Prince Line Adds Vessels to United States-Far East Service.

It is reported that the Prince Line's service from the east coast of the United States to the Far East, via the Panama Canal, which is now operating on a 26-day sailing basis, is to be increased to a fortnightly service, starting with the sailing of the steamer *Imperial Prince* from New York, on April 20, 1929; and that the steamer *British Prince* and the motor ships *Cingalese Prince* and *Siamese Prince* are to be added to this service to maintain the fortnightly schedule.

CANAL WORK IN MARCH, 1929.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of March, 1929.

BALBOA HEIGHTS, C. Z., April 20, 1929.

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

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of March, 1929:

NUMBER OF TRANSITS.

During the month 536 commercial vessels passed through the Canal. In addition to these, 15 nonseagoing launches measuring under 20 tons, and 96 vessels belonging to the United States Government transited the Canal. There was also a transit of a Panaman Government vessel and 3 transits of vessels solely for repairs, on which no tolls were collected, making a total of 651 transits for the month, or a daily average of 21.

Tolls on the 536 commercial vessels amounted to \$2,343,865.55, and on the launches to \$144.24, a total of \$2,344,009.79, or a daily average on all traffic of \$75,613.22.

Total commercial traffic for the past month was higher by 14 transits and \$131,904.35 in tolls than the traffic for the previous month, and higher by \$120,494.98 than the tolls collected in March, 1928, although the number of vessels passing through last month was 6 fewer than those passing through during the corresponding month last year. Traffic for the first nine months of the current fiscal year has established a new record for cargo tonnage passing through the Canal, but the number of transits, net ship tonnage, and amount of tolls collected, are slightly lower than that for the same period last year.

The total number of craft of all kinds transiting the Canal during the month of March, 1929, as compared with the same month in 1928 and 1927, are shown in the following tabulation:

	March, 1929.	March, 1928.	March, 1927.
Commercial vessels.....	536	542	456
Noncommercial vessels (Army and Navy).....	96	62	115
Launches under 20 tons measurement.....	15	13	19
Panaman Government vessels.....	1	3	.....
Vessel for repairs.....	3	4	.....
Totals.....	651	624	630

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	8	5	13
Pedro Miguel.....	37	32	69
Miraflores.....	39	30	69
Totals.....	84	67	151

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the fiscal year, 1929, to the end of March, 1929, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1927-8	1928-9	1927-8.	1928-9.	1927-8.	1928-9.	1927-8.	1928-9.
July.....	509	509	2,406,955	2,318,395	2,450,468	2,291,955	\$2,215,515.99	\$2,109,083.19
August.....	543	526	2,513,614	2,437,246	2,429,947	2,425,336	2,274,040.55	2,199,069.31
September.....	540	487	2,532,942	2,295,053	2,397,753	2,313,011	2,294,432.34	2,111,230.56
October.....	567	557	2,585,752	2,515,380	2,717,646	2,582,477	2,380,115.97	2,274,945.30
November.....	559	527	2,591,717	2,468,297	2,488,882	2,501,630	2,369,267.99	2,225,937.48
December.....	589	579	2,616,728	2,698,140	2,573,828	2,714,987	2,398,459.75	2,443,029.39
January.....	540	603	2,422,770	2,771,280	2,372,061	2,858,835	2,212,752.50	2,502,815.12
February.....	547	522	2,460,111	2,428,530	2,660,425	2,550,498	2,253,755.37	2,211,961.20
March.....	542	536	2,441,077	2,567,961	2,428,662	2,743,768	2,223,370.57	2,343,865.55
Totals.....	4,936	4,846	22,571,666	22,500,282	22,519,672	22,982,497	20,621,711.03	20,421,937.10

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States Government, including merchant vessels chartered by the Government, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for March, 1929, as compared with the corresponding month in 1928 and 1927, and the monthly averages for the calendar year 1928:

	March, 1929.	March, 1928.	March, 1927.	Average per month for calendar year 1928.
Number of vessels	536	542	496	528
Panama Canal net tonnage	2,567,961	2,441,077	2,413,999	2,411,953
United States net tonnage	1,965,046	1,890,273	1,899,427	1,851,471
Registered gross tonnage	3,230,243	3,065,448	3,080,929	3,029,975
Registered net tonnage	1,976,904	1,893,191	1,906,544	1,855,554
Tolls	\$2,343,865.55	\$2,223,370.57	\$2,217,913.20	\$2,197,996.86
Tons of cargo carried	2,743,768	2,428,662	2,533,525	2,450,132

The average daily number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form; these averages cover commercial transits only:

	Average per day.			Average per day for cal- endar year 1928.
	March, 1929.	March, 1928.	March, 1927.	
Number of transits	17.29	17.48	16.00	17.31
Panama Canal net tonnage	82,837	78,745	77,871	79,080
Tolls	\$75,608.57	\$71,721.63	\$71,545.59	\$72,065.47
Tons of cargo carried	88,508	78,344	81,726	80,332

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during March, 1929, as compared with March, 1928 and 1927, are shown in the following tabulation:

	Average per vessel.		
	March, 1929.	March, 1928.	March, 1927.
Panama Canal net tonnage	4,791	4,503	4,866
United States net tonnage	3,666	3,488	3,829
Registered gross tonnage	6,026	5,655	6,211
Registered net tonnage	3,688	3,493	3,843
Tolls	\$4,372.88	\$4,102.16	\$4,471.60
Tons of cargo (including vessels in ballast)	5,119	4,481	5,107
Tons of cargo (laden vessels only)	5,991	5,583	6,463

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and 72 cents per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per ton nor be less than 75 cents per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined both in accordance with the Panama Canal and the United States rules of measurement.

Due to this limiting proviso the tolls actually collected on laden vessels averaged \$0.946 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.72 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of March, 1929, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
British	\$710,838 11	\$749,555 00	\$38,716 89	
Chilean	8,623 75	9,377 00	753 25	
Colombian	4,639 56	4,165 80		\$473 76
Danish	12,210 00	14,808 00	2,598 00	
Danzig	22,102 05	21,174 00		928 05
Dutch	55,068 75	60,595 00	5,526 25	
French	29,291 25	30,505 00	1,213 75	
German	98,580 84	110,206 40	11,625 56	
Greek	21,280 85	22,886 00	1,605 15	
Italian	39,612 92	42,808 60	3,195 68	
Japanese	85,319 25	80,819 00		4,500 25
Norwegian	122,199 50	121,856 00		313 50
Panaman	14,045 84	14,594 20	548 36	
Peruvian	4,412 30	6,440 00	2,027 70	
Swedish	69,018 23	70,858 40	1,840 17	
United States	1,034,867 17	1,043,935 80	9,068 63	
Yugoslav	11,755 13	11,804 40	49 22	
Totals	2,343,865 55	2,416,428 60	78,788 61	6,215 56
Net increase for all traffic			72,573 05	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade	\$11,214 46
United States foreign trade	1,894 08
United States-Canal Zone trade	231 75
Net increase	9,088 63

† Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in March, 1929, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
British	.90	1.25	1.09
Chilean	.61	1.02	.81
Colombian	1.75	1.49	1.69
Danish	1.63	1.73	1.68
Danzig		1.77	1.77
Dutch	.67	1.49	1.26
French	.24	1.50	1.04
German	.83	1.25	1.08
Greek		1.90	1.90
Italian	.25	1.14	.80
Japanese	1.22	1.35	1.29
Norwegian	1.19	1.81	1.54
Panaman	.83	1.71	1.50
Peruvian	.30	1.03	.75
Swedish	.83	2.21	2.09
United States	.96	1.56	1.30
Yugoslav		1.90	1.90
Average, March, 1929	.93	1.48	1.25
Average, March, 1928	.87	1.50	1.23
Average, March, 1927	1.04	1.54	1.32

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of March, is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden	5	20,279	\$21,643 75	48	270,303	\$274,971.10
Ballast	41	222,744	160,448 73	2	8,237	5,930.64
General cargo ships:						
Laden	189	884,399	811,002.95	216	1,014,174	963,393.60
Ballast	30	141,979	102,238.00	3	5,427	3,935.10
Noncargo-carrying ships:						
Yachts	2	419	301.68			
Totals	267	1,269,820	1,095,635.11	269	1,298,141	1,248,230.44
Method of propulsion:						
Steam	205	963,119	852,088.82	221	1,056,446	1,021,740.29
Motor	62	306,701	243,546.29	48	241,695	226,490.15
Totals	267	1,269,820	1,095,635.11	269	1,298,141	1,248,230.44

Of the 426 steam-driven vessels, 282 were oil burning, 133 coal burning, and 11 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of March, 1929. If tolls had been assessed against these vessels at commercial rates, the amount would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Aircraft tenders				1	12,700	\$6,350.00
Auxiliaries				1	2,969	3,711.25
Battleships				7	186,050	93,025.00
Cruisers	2	16,400	\$3,200.00	7	48,850	24,425.00
Destroyers				23	27,945	13,972.50
Destroyer tenders				2	21,200	10,600.00
Launches	2	20	15.00			
Mine sweepers	1	950	475.00	5	4,750	2,375.00
Patrol vessels (Eagles)				2	1,000	500.00
Repair ships				1	3,714	4,642.50
Store ships				1	3,394	4,242.50
Submarines	9	9,070	4,535.00	20	15,186	7,593.00
Submarine tenders	1	1,496	1,870.00	2	4,187	5,233.75
Tankers	1	5,120	6,144.00	2	10,360	12,432.00
U. S. Army vessels:						
Launches	1	10	7.50			
Mine planters	1	1,208	604.00			
Transports	2	7,816	9,770.00	2	7,816	9,770.00
Totals, U. S. Government	20		26,620.50	76		198,872.50
Panaman Government vessels:						
Transports	1	101	72.72			
Vessels for repairs:						
Tankers	2	5,041	3,780.75	1	1,246	934.50
Grand totals	23		30,473.97	77		199,807.00

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of March, 1929, carried cargo as follows: Atlantic to Pacific, 1,194 tons; Pacific to Atlantic, 279 tons; total, 1,473.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement transiting the Canal during the month of March, 1929. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific	10	76	\$78.24
Pacific to Atlantic	5	58	66.00
Totals	15	134	144.24

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of March, 1929, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving.....tons..	87,895	31,071	118,966
Local cargo shipped.....tons..	9,889	1,304	11,193
Transit cargo arriving.....tons..	2,754,995	2,893,692	5,648,687
Transit cargo clearing.....tons..	2,766,943	2,869,034	5,635,977
Cargo received for transshipment.....tons..	49,830	264	50,094
Cargo transshipped.....tons..	54,838	191	55,029
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	96	32	128
Number of withdrawals.....	58	377	958
Tons received.....	3,703	226	2,929
Tons withdrawn.....	2,966	294	3,260
Packages received.....	3,531	2,662	6,193
Packages withdrawn.....	10,220	4,489	14,709
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	72	4	76
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company.....tons..	25,484	120	25,604
Coal issued miscellaneous:			
Panama Canal departments.....tons..	111	6	117
U. S. Army, including vessels.....tons..	295	32	327
Individuals and companies.....tons..	143		143
Panama Railroad Company.....tons..		20	20
Transferred to Navy.....tons..	178		178
Total sales and issues.....tons..	26,211	178	26,389
Coal on hand March 1, 1929.....tons..	24,371		24,371
Coal on hand April 1, 1929.....tons..	31,098		31,098
Coal received during month.....tons..	32,938		32,938
Coal received from Navy.....tons..		178	178
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments.....bbls..	6,016.27	25,834.11	31,850.38
Panama Railroad Company.....bbls..	391.20		391.20
U. S. Army and Navy.....bbls..	523.80	130.01	653.81
Individuals and companies.....bbls..		439.31	439.31
Total sales and issues.....bbls..	6,931.27	26,403.43	33,334.70
Fuel oil on hand April 1, 1929.....bbls..	30,950.75	26,186.60	57,137.35
Diesel oil sold during March.....bbls..	6,207.72	1,539.64	7,747.36
Diesel oil on hand April 1, 1929.....bbls..	16,734.17	493.25	17,227.42
Miscellaneous transfers.....bbls..	220.35	1,143.98	1,364.33
Gasoline and kerosene pumped for The Panama Canal.....bbls..	2,073.53	3,887.09	5,960.62
Gasoline pumped for individuals and companies.....bbls..	685.53	6,566.08	7,251.61
Oil pumped for individuals and companies.....bbls..	484,526.61	551,555.31	1,036,081.92
Oil pumped for U. S. Shipping Board.....bbls..		11,382.90	11,382.90
Oil pumped for U. S. Navy.....bbls..	50,286.50	74,283.00	124,569.50
Total fuel oil, gasoline, and kerosene handled.....bbls..	550,931.51	676,761.43	1,227,692.94
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	19	2	21
Measured for Panama Canal net tonnage.....	5	2	7
Remeasured for Panama Canal net tonnage.....	17	1	18
Panama Canal net tonnage corrected.....	3	6	9
U. S. equivalent tonnage corrected.....	10	11	21
Services of harbor equipment:			
Tugs, total operating hours.....	490½	488½	978½
Launches, total operating hours.....	1,683½	2,212	3,895½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	15,173.75	14,602.50	29,776.25
Pilotage.....	21,652.00	9,423.00	31,075.00
Seamen.....	12,400.00	12,604.00	25,004.00
Launch service.....	2,369.00	3,405.00	5,774.00
Wharfage.....	19,231.57	5,584.58	24,816.15
Ships measured.....	120.00	50.00	170.00
Miscellaneous.....	1,029.00	902.00	1,931.00
Ships repaired at Panama Canal shops:			
Commercial.....	76	11	87
U. S. Army and Navy.....	7	3	10
Panama Canal equipment.....	6	8	14
Totals.....	89	22	111

	Cristobal. *	Balboa.	Total.
Vessels dry-docked:			
Commercial	7	3	10
U. S. Army and Navy	2	1	3
Panama Canal equipment	1	4	5
Totals	10	8	18
Clearances issued	333	283	616
Bills of health issued	332	369	701

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships Entering.</i>						
All vessels, including those transiting Canal ..	679	4,005,755	2,576,496	570	3,454,728	2,151,086
Vessels entering port but not transiting Canal.	74	387,356	228,116	10	61,171	45,301
Vessels transiting Canal and handling passengers and cargo at terminal ports	123	700,082	438,762	91	545,615	325,581
<i>Ships clearing.</i>						
All vessels, including those transiting Canal ..	681	4,037,533	2,595,942	682	4,162,920	2,859,834
Vessels clearing port but not transiting Canal.	76	402,869	238,595	64	489,135	471,001
Vessels transiting Canal and handling passengers and cargo at terminal ports	126	738,411	449,803	91	546,131	326,087

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports	1,213	1,144	2,357	203	622	825
From Pacific ports	300	228	528	436	234	670
Total disembarking	1,513	1,372	2,885	639	856	1,495
Embarking:						
For Atlantic ports	1,813	959	2,772	188	150	338
For Pacific ports	392	149	541	482	319	801
Total embarking	2,205	1,108	3,313	670	469	1,139
Remaining on board:						
From Atlantic to Pacific ports	1,620	2,686	4,306	1,809	2,213	4,022
From Pacific to Atlantic ports	1,978	1,719	3,697	2,090	1,797	3,887
From Atlantic to Atlantic ports	2,811	56	2,867			
From Pacific to Pacific ports				33	350	383
Total remaining on board	6,409	4,461	10,870	3,932	4,360	8,292
Total arriving	7,922	5,833	13,755	4,571	5,216	9,787
Total departing	8,614	5,569	14,183	4,602	4,829	9,431

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific	267	49	18.3
Pacific to Atlantic	269	61	22.6
Totals	536	110	20.5

In addition to the aforesaid, 63 passenger-carrying vessels called at the port of Cristobal and 3 at Balboa without transiting the Canal, making a total of 176 passenger-carrying vessels calling at Canal ports during the month.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of March, 1929:

	Ice.	Groceries.	Cold Storage.	Laundry.	Miscellaneous.	Totals.
Sales at Cristobal to:						
Commercial vessels	\$3,234.63	\$15,906.56	\$38,533.33	\$219.92	\$8,001.87	\$65,896.31
Government vessels	378.02	1,641.70	7,646.54	40.62	2,876.26	12,583.14
P. R. R. vessels	2.25	170.22	2,460.87	602.08	593.83	3,829.25
Total sales, March 1929	3,614.90	17,718.48	48,640.74	862.62	11,471.96	82,308.70
Total sales, March 1928	2,513.68	11,962.23	45,446.42	1,263.79	9,228.11	70,414.23
Total sales, March 1927	3,922.28	20,402.84	49,211.95	1,311.41	14,321.11	89,174.59
Sales at Balboa to:						
Commercial vessels	959.98	8,186.36	13,217.33	620.92	3,003.69	25,988.28
Government vessels	2,799.65	13,217.39	43,035.34	489.99	6,880.90	66,423.27
Total sales, March 1929	3,759.63	21,403.75	56,252.67	1,110.91	9,884.59	92,411.55
Total sales, March 1928	2,013.69	16,620.51	50,207.09	1,341.08	5,505.43	75,687.80
Total sales, March 1927	1,933.76	12,378.64	31,950.52	671.15	4,296.69	51,230.76

The aggregate sales to Government vessels during the month was \$79,006.41; to Panama Railroad vessels, \$3,829.25; and to other commercial vessels, \$91,884.59, making the total sales to all vessels, \$174,720.25.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of March, 1929, as compared with the corresponding month in 1928 and 1927:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. ¹			March 1929.	March 1928.	March 1927.
	North.	South.	Total.	North.	South.	Total.			
Gatun	257	243	500	33	6	39	539	535	524
Pedro Miguel	241	236	477	32	21	53	530	567	542
Miraflores	237	232	469	30	13	43	512	557	535
	Number of vessels put through locks.								
Gatun	271	267	538	94	39	133	671	646	661
Pedro Miguel	268	268	536	119	58	177	713	701	638
Miraflores	268	268	536	121	57	178	714	691	648

¹ Includes tolls-paying launches under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels	98	93	93
Panama Canal equipment	13	69	69
Launches under 20 tons	18	11	12
Panaman Government vessels	1	1	1
Vessels for repairs	3	3	3

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in March, 1929, as compared with the preceding month and the corresponding month in 1928:

	Gatun.	Pedro Miguel.	Miraflores.
Lockages	Cubic feet. 1,209,910,000	Cubic feet. 1,465,520,000	Cubic feet. 1,468,240,000
Maintenance			28,000,000
Leakage	30,000,000	30,500,000	20,000,000
Totals, March, 1929	1,239,910,000	1,496,020,000	1,516,240,000
Totals, February, 1929	1,574,820,000	1,389,390,000	1,486,900,000
Totals, March, 1928	1,725,210,000	1,566,650,000	1,627,010,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of March, 1929, are shown in comparative form in the following tabulation:

	March.		March—Years of record.		
	1929.	1928.	Maximum.	Minimum.	Mean.
Discharge of Chagres at Alhajuela	<i>C. f. s.</i> 559	<i>C. f. s.</i> 1,050	<i>C. f. s.</i> 1,625	<i>C. f. s.</i> 382	<i>C. f. s.</i> 735
Maximum momentary discharge for the month	3,653	2,382	19,400		
Gatun Lake watershed, total yield	1,281	1,421	1,792	493	1,114
Gatun Lake watershed, net yield	293	518	823	402	124
Draft on Gatun Lake for lockages and power	¹ 1,757	2,620	2,740	² 1,148	³ 1,957

¹ March 31, 1910.
Miraflores plant.

² Does not include March, 1914.

³ Approximately one-half of power load furnished by

The total yield of the Gatun Lake watershed for March was 15 per cent above the 16-year March average, or 1,281 c. f. s., compared with an average of 1,114 c. f. s. Maximum and minimum total yields of record for March are 1,792 c. f. s. in 1915 and 493 c. f. s. in 1926, respectively. The lake varied from elevation 85.09 feet on the 1st and 8th to 84.15 feet on the 31st, averaged 84.71 feet, and ended at elevation 84.17 feet. Miraflores Lake varied from elevation 53.25 feet on the 4th to 54.44 feet on the 11th and 21st, averaged 53.92 feet, and ended at elevation 54.05 feet.

SEISMOLOGY.

Seismic disturbances were recorded during the month on the 6th, 9th, 11th, 19th and 20th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 2,489,400 kilowatt hours, and the computed water consumption was 2,030,131,185 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 2,908,800 kilowatt hours, with a fuel oil consumption of 5,611.11 barrels. In line with the policy of conserving Gatun Lake water, load was carried by this station daily during the month with the exception of the last three days. In addition to regular operation, considerable maintenance work was performed on the Diesel engines.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were completed on 24 vessels during the month. There were 305 work orders issued during the month, as compared with 295 for the previous month.

MECHANICAL DIVISION.

During the month miscellaneous repairs were made on 89 vessels at Cristobal and 22 at Balboa. Ten vessels were dry-docked at Cristobal and 8 at Balboa. The U. S. S. *Swan* was docked, cleaned, and painted, and general overhaul of machinery and renewal of wood deck on forecastle, gun platform, and after main deck carried forward during the month. The S. S. *Oregonstar* was at Balboa shops for major repairs to main engine, and the S. S. *San Casto* was docked for annual overhaul to deck and engine-room machinery.

The installation of foundations for columns for the new machine shop at Cristobal was started during the month.

MUNICIPAL ENGINEERING DIVISION.

Work was carried forward on several improvement projects in the cities of Colon and Panama, and in the Canal Zone. On the Madden Road, 9,500 yards were cleared, and 16,500 cubic yards of material were moved in connection with the grading. At the site of Madden Dam the operation of diamond drills was continued throughout the month.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 793,791,500 gallons.

DREDGING DIVISION.

West Lirio slide showed some movement during the month of March and 59,500 cubic yards of slide material were excavated from that area. Cucaracha, South Cucaracha, East and West Culebra slides showed no movement during the month. There were no other slides and no delays to shipping during the month.

The total excavation during March was 786,800 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gaillard Cut—			
Project No. 2.....	2,450	28,600	31,050
Lirio slide.....	14,900	44,600	59,500
Cut maintenance.....		500	500
Canal prism, Pacific entrance:			
Project No. 1.....		27,900	27,900
Maintenance.....	614,900	7,700	622,600
Balboa inner harbor:			
Project No. 1.....		40,750	40,750
Maintenance.....	4,500		4,500
Totals.....	636,750	150,050	786,800

The new 24" Diesel-electric dredge *Las Cruces* worked the entire month of March in the Pacific entrance, excavating a total of 430,000 cubic yards, which was pumped through a pipe line averaging 5,260 feet in length, the maximum length being 6,990 feet. This was the first full month's operation of this new dredge.

The ferry crossing at the north end of Pedro Miguel locks operated 31 days during the month. Five hundred and forty-two trips were made, and 155 Panama Canal, 226 U. S. Army, and 5,514 other vehicles, a total of 5,895, were ferried across the Canal.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on March 31, 1929, totaled 21,659, composed of 7,573 Americans, 2,733 of whom were men, 2,268 women, and 2,572 children; 242 Europeans, 99 of whom were men, 37 women, and 106 children; and 13,844 West Indians, 4,160 of whom were men, 2,586 women, and 7,098 children. The total number of persons in quarters on March 31, 1928, was 21,440.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of March 20, 1929, with a comparison of the working force for the preceding month and for March, 1928:

	As of March 29, 1929.			Total employees.	
	Gold.	Silver.	Total.	February, 1929.	March, 1928.
Operation and Maintenance:					
Office.....	44	60	104	106	79
Electrical.....	153	196	349	350	348
Municipal Engineering.....	126	1,874	2,000	1,847	870
Lock Operation.....	279	1,134	1,413	1,419	889
Dredging.....	191	974	1,165	1,166	1,046
Mechanical.....	427	805	1,232	1,224	1,270
Marine.....	211	645	856	960	891
Fortifications.....	29	459	488	454	380
Totals.....	1,460	6,147	7,607	7,526	5,773
Supply Department:					
Quartermaster.....	198	1,927	2,125	2,135	1,951
Subsistence.....	8	118	126	128	121
Commissary.....	219	1,285	1,504	1,543	1,324
Cattle Industry.....	5	158	163	165	279
Hotel Washington.....	8	110	118	124	119
Transportation.....	68	221	289	287	289
Totals.....	506	3,819	4,325	4,382	4,083
Accounting Department.....	194	7	201	201	207
Health Department.....	267	809	1,076	1,081	1,179
Executive Department.....	516	297	813	813	788
Totals.....	977	1,113	2,090	2,095	2,174
Panama Railroad Company:					
Superintendent.....	48	264	312	334	303
Transportation.....	65	131	196	199	183
Receiving and Forwarding Agency.....	98	1,738	1,836	2,544	1,585
Coaling Stations.....	48	336	384	352	397
Totals.....	259	2,469	2,728	3,429	2,468
Grand totals, March, 1929.....	3,202	13,548	16,750		
Grand totals, February, 1929.....	3,206	14,226		17,432	
Grand totals, March, 1928.....	3,005	11,493			14,498

Additions to the gold force on the Isthmus in March were as follows: Employed in the United States, 5; reemployed in the United States, 2; employed on the Isthmus, 15; reemployed on the Isthmus, 14; total 36. Separations from the gold force totaled 36, as follows: Resigned, 9; discharged, 24; retired, 1; died, 2. At the end of the month there were on file 208 applications from residents on the Isthmus for employment.

VITAL STATISTICS.

A total of 162 deaths occurred during the month of March, 1929, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 15.01 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 27; tuberculosis (various organs), 17; diarrhea and enteritis, 17; cancer (various organs), 11; and organic diseases of the heart, 11. There were 10 deaths from syphilis, 9 from apoplexy, 7 from acute and chronic nephritis, 1 from measles and 1 from dysentery. There were 26 deaths among nonresidents. These are not included in the above statistics.

There were 305 live births, and 15 stillbirths, reported during the month. Including still births, this is equivalent to an annual birth rate of 29.65 per 1,000 population. Deaths among children under 1 year of age numbered 37, giving an infant mortality rate based on the number of live births reported, of 121.31.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during March was 108, of whom 36 were employees (9 white and 27 colored), 12 were members of employee's families (3 white and 9 colored), 14 were Canal Zone agriculturists, 23 were other civilian nonemployees, and 23 were Army and Navy personnel. Of the 48 employees and members of employees' families, 42 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There were no deaths from malaria among residents.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions and received on the Isthmus during the month totaled \$349,832.19, of which \$336,034.95 was for the Department of Operation and Maintenance and \$13,797.24 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap and obsolete and second-hand material amounted to \$55,238.97.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of February, 1929, as compared with February, 1928, and the figures for the first eight months of the current fiscal year as compared with the same period in the fiscal year 1928.

It is impossible to submit the figures for the month of March at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	February, 1929.	February, 1928.	To end of February.	
			This year.	Last year.
Tolls	\$2,212,156.08	\$2,251,741.17	\$18,076,488.31	\$18,396,993.60
Other receipts	319,427.53	294,401.87	2,639,843.89	2,352,302.90
Total transit revenues	2,531,583.61	2,546,143.04	20,716,332.20	20,749,296.50
Total transit expenses	1,082,417.78	1,026,708.33	8,514,379.88	8,010,584.05
Net transit revenues	1,449,165.83	1,519,434.71	12,201,952.32	12,738,712.45
Three per cent capital charge	616,523.36	612,660.82	4,927,806.06	4,890,536.75
Transit surplus	832,642.47	906,773.89	7,274,146.26	7,848,175.70
Business revenues	1,542,945.79	1,361,796.81	11,220,929.10	10,228,166.59
Business expenses	1,421,301.17	1,273,883.51	10,526,481.03	9,613,453.21
Net business revenues	121,644.62	87,913.30	694,448.07	614,713.38
Three per cent capital charge	61,164.61	61,705.83	512,648.70	512,697.72
Business surplus	60,480.01	26,207.47	181,799.37	102,015.66
Combined revenues	4,074,529.40	3,907,939.85	31,937,261.30	30,977,463.09
Combined expenses	2,503,718.95	2,300,591.84	19,040,860.91	17,624,037.26
Net revenues	1,570,810.45	1,607,348.01	12,896,400.39	13,353,425.83
Three per cent capital charge	677,687.97	674,366.65	5,440,454.76	5,403,234.47
Combined surplus	893,122.48	932,981.36	7,455,945.63	7,950,191.36

Respectfully,

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, April 20, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Matakana.....	13	21 05	14	6 17	14	16 10	14	17 20	British	Shaw, Savill & Albion..	477	5	63	0	Dunedin, N. Z.	General	4,713	11,216	7,884
Olito ²	11	23 00	14	6 20	14	16 08	17	10 00	American.	Geo. D. Fisk	58.5	10	8	3	Balboa, C. Z.	Ballast	18	12	
Crown City ³	13	23 00	14	7 20	14	17 49	15	00 50	American.	Roosevelt S. S. Co., S. B.	410	0	54	0	Fremantle, Aust'ia	General	5,040	6,736	4,881
S-17 ⁴	8-17		14	7 05	14	17 43			American.	U. S. Navy	231	0	21	10	Balboa, C. Z.				
David.....	13	23 45	14	9 00	14	19 30	14	19 55	American.	Tide-water Oil Co.	430	0	59	0	Los Angeles, Calif.	Ballast		7,929	5,325
McKelvey ¹	14	3 05	14	9 50	14	18 41	14	21 10	American.	Sun Oil Co.	429	0	59	0	Los Angeles, Calif.	Ballast		7,568	5,283
Atlantic Sun ¹	14	6 15	14	10 55	14	20 18	14	21 50	American.	Amer.-Hawaiian Line	415	0	57	0	San Francisco, Cal.	General	3,712	7,072	4,944
Maliko.....	7	16 15	14	12 15	14	21 15	15	00 02	Peruvian	Peruvian Line	367	3	46	0	Callao, Peru	General	110	4,838	2,959
Manaro.....	7	16 15	14	12 15	14	21 15	15	00 02	Peruvian	Transmarine Lines	324	0	46	0	Mobile, Ala.	Iron, general	3,510	3,984	2,612
Sunewco.....	14	7 20	14	12 10	14	21 27	14	22 55	American.	Com'th & Dom. Line	400	0	52	0	Adelaide, Australia	General	2,430	5,732	3,962
Ardenhall.....	14	8 35	14	14 05	14	22 12	15	00 02	British.	Oriental Navigation Co.	409	0	54	2	Tacoma, Wash.	General	2,559	6,755	4,887
Oran.....	14	16 10	14	16 35	14	23 30	15	00 50	American.										
Capt. C. S. Crowl ⁵			14		14	12 31			American.	U. S. Army					Gatun, C. Z.	(¹)			
Limon ⁵			14		14	8 43			American.	J. J. Peckert					Gatun, C. Z.	(¹)			
Vencidor ⁵			14		14	8 43			American.	S. C. Denuly					Gatun, C. Z.				
Guatemala.....	14	3 00	15	6 15	15	13 03	16	1 28	American.	Panama Mail S. S. Co.	360	0	51	0	San Francisco, Cal.	General	2,484	5,776	4,081
Manila Maru.....	14	17 15	15	7 10	15	13 08	16	1 28	Japanese.	Osaka Shosen Kaisha	475	0	61	0	Japan	General	5,022	10,075	7,292
Lisa.....	13	7 10	15	8 08	15	16 56	15	16 35	German.	Hamburg-American Line	384	4	51	9	Champerico, Guatemala	General	900	5,155	3,500
San Jose.....	13	2 50	15	8 17	15	16 46	15	17 55	American.	United Fruit Co.	330	4	44	5	San Francisco, Cal.	Bananas, coffee.	754	3,075	2,359
Buenos Aires ³	15	00 10	15	8 45	15	18 38	15	23 50	Swedish.	Johnson Line	440	0	56	0	Honolulu, T. H.	General	7,120	7,591	5,661
Watertown ³	15	5 55	15	9 55	15	19 32	15	20 45	American.	Cities Service Trans. Co.	416	9	56	2	Providence, R. I.	Ballast	6,717	4,778	
Lycia ³	15	6 15	15	10 30	15	21 07	15	22 15	British.	Canadian Transp. Co.	300	0	44	0	Los Angeles, Calif.	Sugar, general.	4,109	3,333	2,207
Denver ⁶	15	6 30	15	10 25	15	19 32			American.	U. S. Navy	292	0	44	0	Vancouver, B. C.				
Mundeta.....	15	8 00	15	11 35	15	21 16	15	22 15	American.	Munson S. S. Line	370	0	53	2	Buenos Aires, Arg.	General	5,892	5,668	4,297
Republic ¹	15	13 07	15	13 20	15	22 08	16	00 34	American.	Tide-water Oil Co.	391	8	51	3	Baltimore, Md.	General	5,551	3,881	
Urbe.....	9	17 05	15	17 15	16	1 15	16	2 37	Colombian.	Colombian Mar. Co.	227	4	31	0	Buenaventura, Col.	Ballast	550	1,154	663
Gen. Wm. Graham ⁷			15	8 45	15	18 32			American.	U. S. Army	156	0	32	0	Balboa, C. Z.	(¹¹)			
Setota ²	15	15 50	15	17 45	16	13 50			American.	U. S. Navy	149	3	30	0	Balboa, C. Z.				
Eclipse.....	15	23 15	16	6 30	16	16 45	16	18 05	American.	Tampa Intercean Co.	440	0	56	0	Kobe, Japan	General	8,720	8,293	6,078
Oak Branch.....	15	23 50	16	8 45	16	17 32	16	20 00	British.	F. & W. Ritson	385	0	49	0	Corral, Chile	General	3,274	5,209	4,035
Henry D. Whiton.....	16	00 50	16	9 50	16	18 28	16	20 00	American.	Texas-Gulf Sulphur Co.	356	0	51	6	Beddingham, Wash.	Sulphur, coke	3,993	5,367	2,925
Atlantic.....	16	5 45	16	11 20	16	20 15	17	1 00	American.	Isthmian S. S. Lines	410	5	54	3	Tacoma, Wash.	Steel, general.	7,804	6,567	4,917
Canadian.....																			
Cruiser.....	16	4 30	16	13 00	16	20 58	16	22 15	British.	Can. Nat. Steamships	430	0	55	0	Brisbane, Australia	General	3,374	7,680	5,518
Eastern Knight.....	16	12 30	16	14 00	16	21 50	16	23 26	American.	Quaker Line	415	0	56	0	Portland, Oreg.	General	3,387	7,643	5,657
Tanker.....																			

Towing pontoons.

Towing barges.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Towing iron, etc.

Handicap ³	16	13.43	16	15.50	16	22.52	17	2.54	Norwegian	Brusaard Line	415.0	54.7	25.4	Antwerp, Belgium	Vancouver, B. C.	8,388	7,296	5,445
Silverhazel	16	14.55	16	16.50	17	00.02	17	2.08	British	Silver Line Ltd.	425.0	58.0	23.0	New York, N. Y.	Yokohama, Japan	6,100	8,218	6,037
Marsodak	16	18.20	16	18.10	17	1.41	17	7.15	American	Charles Nelson & Co.	324.0	46.0	22.6	Baltimore, Md.	Seattle, Wash.	3,730	3,984	2,028
Mexican	16	18.45	16	19.30	17	2.50	17	4.15	American	Amer.-Hawaiian Line	472.3	57.2	20.0	Boston, Mass.	Tacoma, Wash.	4,165	9,258	6,944
Walter Arrow	17	6.43	17	7.00	17	18.45	17	20.00	American	Standard Oil Co.	468.0	62.6	19.0	Providence, R. I.	Los Angeles, Calif.	9,841	6,946	
Lukenbach	17	3.00	17	7.50	17	20.05	17	21.04	American	Lukenbach Line	446.5	56.1	23.6	Boston, Mass.	Seattle, Wash.	4,630	8,785	6,567
El Panphico	17	9.20	17	9.50	17	18.42	17	22.21	Panamanian	Panamanian Government	125.0	23.0	6	Colon, R. P.	Panama, R. P.	288	101	
Kellerwald	14	5.50	17	9.56	17	21.01	17	22.21	German	Hamburg-American Line	399.4	54.0	23.6	Hamburg, Germany	Valparaiso, Chile	3,560	6,545	4,483
Larabank	17	12.35	17	12.38	17	21.45	17	23.15	American	Dimon S. Corp.	410.5	53.9	22.4	New York, N. Y.	Tacoma, Wash.	6,204	6,624	4,883
Ungala	17	12.37	17	12.56	17	22.48	18	3.20	British	Bank Line, Ltd.	420.0	53.9	22.4	Tampa, Fla.	Shanghai, China	7,171	7,063	4,893
Nitro	17	10.07	17	14.00	17	23.30	18	2.06	British	Wessel, Duval & Co.	406.0	52.2	19.0	New York, N. Y.	Talcahuano, Chile	1,889	5,593	4,069
China Maru	17	10.07	17	15.45	18	00.29	18	1.04	Italian	Soc. An. Comm. Italo.	406.0	48.8	15.8	Genoa, Italy	Valparaiso, Chile	7,15	5,742	4,180
Santa Maria	18	3.25	17	17.35	18	1.30	18	5.36	Japan	Kawasaki Kisen Kaisha	385.0	51.0	26.0	Baltimore, Md.	Yokohama, Japan	5,799	5,924	3,995
Woodfield	18	3.00	18	10.45	18	16.02	19	00.40	American	Grace Line	466.0	64.0	23.0	New York, N. Y.	Talcahuano, Chile	3,169	10,626	6,080
Java Arrow	18	10.30	18	10.45	18	18.45	18	19.50	British	Canadian Transp. Co.	400.0	53.0	20.0	Cardenas, Cuba	San Francisco, Cal.	5,018	5,798	4,118
Lehore	18	15.18	18	15.25	18	23.11	19	00.40	American	Standard Oil Co.	468.6	62.6	20.0	New York, N. Y.	Los Angeles, Calif.	10,084	7,388	
Hessu	18	8.37	18	17.00	19	2.07	19	3.21	German	Ore S. S. Corp.	550.0	72.0	24.8	New York, N. Y.	Cruz Grande, Chile	14,325	4,635	
Stemmetad	18	17.25	18	19.25	19	3.00	19	4.15	German	Hamburg-American Line	468.0	58.0	24.3	Hamburg, Germany	Seattle, Wash.	5,265	9,568	6,680
Enen	18	7.00	18	7.00	18	16.05	18	15.27	Norwegian	A. F. Klavness & Co.	375.0	53.6	26.0	Port Tampa, Fla.	Shanghai, China	6,652	6,256	4,663
Jamaica	18	16.35	19	6.13	19	17.23	19	18.40	British	W. S. Borden	449.5	12.0		Cristobal, C. Z.	Balboa, C. Z.	19	19	14
William H. Doherty	12	16.35	19	6.13	19	17.23	19	18.40	British	Pacific Steam Nav. Co.	220.0	34.0	14.0	Cristobal, C. Z.	Champerico, Guat.	809	1,187	622
Virginia	18	21.45	19	6.13	19	14.26	19	15.25	American	Huasteca Petroleum Co.	435.0	56.2	21.0	New Orleans, La.	Los Angeles, Calif.	7,406	5,111	
Baarn	19	5.45	19	6.55	19	15.28	20	00.51	American	Panama-Pacific Line	586.4	80.3	26.6	New York, N. Y.	San Francisco, Cal.	3,214	25,254	18,170
President Polk	17	14.45	19	8.30	19	17.27	19	18.40	Dutch	Royal Neth. S. S. Co.	400.0	58.0	27.0	Hamburg, Germany	Corral, Chile	5,625	7,819	6,101
Bienvenido	19	6.00	19	10.20	19	18.14	19	22.28	American	Dollar Line	502.1	62.2	25.10	New York, N. Y.	San Francisco, Cal.	5,383	12,660	9,254
Ludwigshafen	19	13.00	19	13.20	19	20.00	19	22.10	British	P. N. & J. N. Carranza	210.3	32.0	13.0	Guanta, Venez.	Buenaventura, Col.	103	1,345	806
Sumugento	18	23.10	19	14.38	19	21.18	19	22.28	German	North German Lloyd	393.5	54.3	23.0	Bremen, Germany	Vancouver, B. C.	4,321	6,600	4,622
Wilkeno	19	3.7	19	17.55	20	1.10	20	2.39	American	Transmarine Lines	324.0	46.2	20.4	Newark, N. J.	San Francisco, Cal.	2,000	3,984	2,028
Linon	19	20.50	20	6.10	20	14.50	20	16.05	American	Williams S. S. Line	415.0	55.7	27.5	Cristobal, C. Z.	Tacoma, Wash.	9,380	7,750	5,805
Belgium Maru	19	22.40	20	6.55	20	14.50	20	16.05	American	United Fruit Co.	330.6	44.0	19.6	Cristobal, C. Z.	San Francisco, Cal.	188	3,680	2,234
Anthous	19	3.35	20	8.00	20	16.22	20	17.00	Japanese	Anglo-Chilean Nitro Co.	385.0	51.0	13.0	Charleston, S. C.	Arica, Chile	6,219	4,611	
Lancaster	19	3.35	20	8.00	20	16.22	20	17.00	French	Messageries Maritimes	413.0	56.9	22.3	Dunkirk, France	Noumea, New Cal.	2,469	7,643	5,364
Spinauger	20	11.40	20	10.40	20	18.40	21	00.55	American	Argonaut S. S. Co.	434.0	57.7	26.0	Baltimore, Md.	Tacoma, Wash.	9,237	7,935	5,841
Stella	20	11.40	20	11.55	20	19.10	21	02.05	Norwegian	Westfal, Larsen & Co.	440.0	57.0	19.3	Falmouth, England	Los Angeles, Calif.	7,610	5,268	
Harry	15	19.45	20	13.00	20	22.54	21	00.19	Norwegian	Panama Mail S. S. Co.	191.0	33.0	15.3	Cristobal, C. Z.	Puntarenas, C. R.	1,246	985	606
Lukenbach	18	19.35	20	13.30	20	21.34	20	23.10	German	Roland Line	216.5	33.0	14.2	Cristobal, C. Z.	Guayaquil, Ecuador	411	1,105	698
Cissy	20	13.20	20	14.10	20	21.33	20	22.55	American	Lukenbach Line	448.9	62.0	25.0	Houston, Texas	Seattle, Wash.	6,100	9,262	6,853
Conono	20	10.25	20	14.35	20	22.51	21	00.19	Norwegian	Isbrandtsen Moller & Co.	289.5	44.2	19.8	New York, N. Y.	Yokohama, Japan	1,800	2,937	2,080
El Cajon	20	20	20	20	20	16.05			American	W. H. Babbitt				Cristobal, C. Z.	Gatun, C. Z.	4	1	1
		20				16.05			American	W. H. Babbitt				Cristobal, C. Z.	Gatun, C. Z.	4	1	1

14 Towing El Cajon.

13 Phosphates, wax, and cotton.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Portland	13	14.50	14	00.17	14	8.40	14	10.18	German	Hamburg-American Line	462.2	61.2	25.6	Vancouver, B. C.	Hamburg, Germany	8,124	9,139	6,666
Watford	13	22.30	11	2.17	14	12.05	14	13.59	British	Watts, Watts & Co.	405.8	54.2	25.2	Teopilla, Chile	Wilmingon, N. C.	8,150		
Svealand	13	14.55	14	5.34	14	14.50	14	15.50	Swedish	Axel Brostrom & Son	560.1	72.2	34.0	Cruz Grande, Chile	Baltimore, Md.	21,654	15,425	4,421
Sunelisco	14	6.30	14	8.25	14	10.05	14	16.05	American	Transmarine Lines	324.0	46.2	24.0	Vancouver, B. C.	New York, N. Y.	3,831	3,984	2,612

1 Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.	Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Tons.	Net.
Cavalla	14	7 10	14	8 38	14	16 15	15	1 10	German.	North German Lloyd.	260.5	37.1	17.0	Champerico, Guat.	Hamburg, Germany	General.	1,511	1,714
Alaska	14	9 45	14	10 20	14	18 20	15	23 10	French.	French Line.	425.0	54.8	25.6	Vancouver, B. C.	Le Havre, France.	(*)	6,281	6,990
Tashmoo	14	11 45	14	12 38	14	21 00	14	21 00	American.	Charles Nelson & Co.	324.0	46.2	22.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	4,300	3,984
Cauca	14	12 45	14	13 20	14	21 00			Colombian.	National Navigation Co.	107.2	22.9	11.0	Buenaventura, Col.	Cristobal, C. Z.	(18)	289	238
Canadian	14	14 25	14	14 53	14	22 50	15	3 00	British.	Can. Nat. Steamships	406.0	52.3	18.6	Auckland, N. Z.	Montreal, Canada	General.	3,983	5,054
Conqueror	14	16 50	14	22 23	15	10 25	11	11 55	British.	Charlton S. S. Co.	384.0	52.2	23.0	Portland, Oreg.	Lisbon, Portugal.	Wheat	7,165	5,127
Homeside	14	22 30	15	10 26	15	10 35	15	10 35	Greek.	Margaronis Bros.	361.0	46.2	25.0	Tocopilla, Chile	Azores	Nitrates	6,000	4,367
Andreas K.	15	4 50	15	7 07	15	14 40	15	22 37	Chilean.	Chilean Line.	422.8	56.2	26.8	Valparaiso, Chile	New York, N. Y.	General	4,954	7,764
Aconcagua	15	4 50	15	7 07	15	14 40	15	22 37	Chilean.	Chilean Line.	422.8	56.2	26.8	Valparaiso, Chile	New York, N. Y.	General	4,954	7,764
Señora	15	6 55	15	6 55	15	15 40	15	17 45	American.	U. S. Navy	135.0	30.0	0	Balboa, C. Z.	Cristobal, C. Z.	(20)	9,499	8,085
Herbjorn	14	23 00	15	7 41	15	15 40	15	15 45	Norwegian.	Anglo-Saxon Pet. Co.	441.1	52.4	25.5	Los Angeles, Calif.	Land's End, Eng.	Gasoline	9,499	8,085
Susclano	15	8 30	15	9 36	15	18 10	15	18 10	American.	Transmarine Lines.	324.0	46.2	23.2	Aberdeen, Wash.	New York, N. Y.	Lumber	4,270	3,984
Stella	15	10 00	15	10 57	15	19 45			Norwegian.	Panama Mail S. S. Co.	195.1	32.9	13.7	Acajutla, Salvador.	Cristobal, C. Z.	Coffee	934	985
Edwin	15	12 45	15	13 50	15	22 40	16	1 15	American.	Arrow Line	410.0	54.2	25.0	Portland, Oreg.	New York, N. Y.	Lumber	7,687	6,603
Christensen.	15	17 30	15	20 23	16	9 40	16	11 15	British.	Sheaf Steam Ship. Co.	420.0	54.1	24.1	Vancouver, B. C.	Denmark	Wheat	7,884	6,555
Willabee	15	20 15	15	22 15	16	10 20	16	10 20	American.	Williams S. S. Line	468.5	58.5	27.0	Seattle, Wash.	New York, N. Y.	Copper, lumber.	9,200	8,460
Padilla	15	20 30	15	22 40	16	11 20	17	23 05	Colombian.	Colombian S. S. Co.	247.2	43.5	9.0	Puntarenas, C. R.	Cristobal, C. Z.	Ballast	733	3,206
Limon	15	20 45	15	23 35	16	10 50			American.	United Fruit Co.	330.6	44.5	17.7	San Francisco, Cal.	Port Union, C. R.	Coffee, general	4,500	3,984
Susquehanna	15	23 15	16	00 40	16	12 10	16	12 10	American.	Transmarine Lines.	324.0	44.5	23.0	Longview, Wash.	New York, N. Y.	Lumber	7,549	5,786
Yosemite	16	1 00	16	1 50	16	12 18	16	12 18	British.	Andrew Weir & Co.	400.0	52.4	25.8	Antofagasta, Chile.	Pensacola, Fla.	Nitrates	7,221	5,756
Cape Verde	16	3 35	16	4 24	16	13 45	16	14 30	British.	Lytle Shipping Co., Ltd.	405.3	53.5	25.7	Vancouver, B. C.	London, England	Wheat, lumber	7,221	5,756
Birk	16	4 40	16	5 37	16	15 00	16	17 25	Norwegian.	Anglo-Chilean Nitrate Co.	359.8	52.1	23.6	Tocopilla, Chile	Pensacola, Fla.	Nitrates	7,000	4,751
F. J. Luckenbach	16	5 30	16	6 28	16	15 45	16	15 45	American.	Luckenbach Line	446.0	56.1	29.0	Portland, Oreg.	Boston, Mass.	Lumber, general.	7,643	8,508
Benlavers	15	20 24	16	7 12	16	17 25	16	18 35	British.	W. Thompson & Co.	378.0	46.1	23.0	Vancouver, B. C.	Antwerp, Belgium	Wheat, lumber	5,074	4,246
Nuolja	16	6 00	16	8 12	16	18 15	16	18 15	Swedish.	Grangesberg Oxelsund	418.8	55.1	25.0	Vancouver, B. C.	Rotterdam, Holland	Frozen, lumber	9,736	7,265
Cornwall	16	6 15	16	9 09	16	19 50	17	16 50	British.	Federal Steam Nav. Co.	514.6	63.1	29.2	N. Plymouth, N. Z.	Liverpool, England	Wheat, general.	6,055	12,217
San Lamberto	16	9 05	16	10 15	16	20 30	16	20 30	British.	Anglo-Mexican Pet. Co.	395.3	55.2	21.0	Iniquique, Chile	Curacao, D. W. I.	Ballast	6,741	4,345
Gaasterdijk	16	9 05	16	10 15	16	20 30	16	20 30	British.	Anglo-Mexican Pet. Co.	395.3	55.2	21.0	Iniquique, Chile	Curacao, D. W. I.	Ballast	6,741	4,345
Schwarzsee	16	13 50	16	15 31	16	22 15	17	14 51	Dutch.	Holland-American Line.	450.0	58.2	28.6	Vancouver, B. C.	Antwerp, Belgium	General	8,826	9,038
Rushpool	17	2 35	17	3 35	17	11 35	17	13 35	German.	W. Schuchmann	359.0	47.9	24.5	Corral, Chile	Antwerp, Belgium	Wheat	8,986	4,654
Kina	17	2 55	17	4 17	17	12 40	17	13 40	Danish.	Sir R. Ropner & Co.	420.1	54.1	23.2	Vancouver, B. C.	United Kingdom	Wheat	8,132	6,172
Katvina	8	7 00	17	5 24	17	14 40	17	14 40	British.	Knut Knutsen	373.9	51.8	26.0	Corral, Chile	Europe	General	7,480	6,090
Mongolia	16	12 50	17	6 13	17	14 20	17	14 50	American.	John Black & Co.	435.6	57.7	26.0	Vancouver, B. C.	London, England	Wheat	7,769	7,858
Chilore	16	23 00	17	6 24	17	14 40	17	14 50	American.	Panama-Pacific Line	600.0	65.3	29.0	San Francisco, Cal.	New York, N. Y.	General	5,200	17,041
Ivo Racc	17	3 30	17	7 35	17	16 55	17	16 55	American.	Ore S. S. Corp.	549.6	72.2	34.3	Cruz Grande, Chile	Baltimore, Md.	Iron ore	20,000	4,538
Honduras	17	3 30	17	8 28	17	19 30	17	21 35	Yugoslav	Yugoslav Lloyd	350.4	49.1	23.0	Liquique, Chile	Spain	Nitrates	6,050	4,470
Motor ship.	15	5 07	17	8 49	17	18 25	18	13 20	French.	French Line	404.9	51.7	25.7	Talcahuano, Chile	Le Havre, France.	General	7,023	6,020

* Copper, nitrates, and corn.

* Towing barge.

* For orders.

* Coffee, hides, and general.

* Wheat, copper, and general.

* Tug.

* Motor ship.

George Wash- ington ¹⁵	17	1.45	17	9.26	17	18.05	17	23.58	Norwegian.	Fred Olsen & Co.	425.5	55.3	28.5	Vancouver, B. C.	Oslo, Norway	Wheat, general	8.494	7.505	5.627
Solana ¹⁶	17	4.37	17	10.20	17	21.00	17	21.00	American	Associated Oil Co.	419.5	56.5	25.7	Los Angeles, Calif	New York, N. Y.	Gasoline	8.847	7.060	5.025
Pomona ¹⁷	17	5.45	17	11.12	17	21.20	17	21.20	American	Pomona S. S. Co.	440.0	56.0	29.0	Everett, Wash.	Providence, R. I.	Lumber	9.000	8.324	6.036
Pipiriki ¹⁸	17	9.00	17	11.58	17	22.35	18	4.00	British	Federal Steam Nav. Co.	472.5	59.3	24.0	Port Pirie, N. Z.	Bristol Chan.	(*)	8.927	8.710	6.216
Port Free- maule ¹⁹	17	4.40	17	13.57	17	22.30	17	22.30	British	Com'th & Dom. Line.	477.0	63.4	26.3	New Zealand	Hamburg, Germany	(*)	6.374	10.652	7.704
Munbeaver ²⁰	17	14.00	17	15.33	18	8.50	18	8.50	American	Munson S. S. Lines	384.8	51.2	25.2	Tacoma, Wash.	Baltimore, Md.	Lumber, general.	6.200	5.571	4.033
Swan ²¹	17	3.00	18	3.51	18	9.05	18	9.05	American	C. R. Ford	251.0	43.6	22.0	Balboa, C. Z.	Cristobal, C. Z.	Raw sugar	3.255	2.823	1.940
Santa Isabel ²²	17	19.35	18	4.32	18	11.43	18	18.45	American	Isthmian S. S. Lines	413.0	53.4	24.2	Hilo, T. H.	Philadelphia, Pa.	Gasoline	7.435	5.976	4.609
Santa Ugon ²³	17	10.26	18	5.43	18	12.50	19	11.15	British	Anglo-Mexican Pot. Co.	380.0	48.7	23.0	San Francisco, Cal.	Lizards, England ²⁴	General	1.174	6.015	4.281
Cochabamba ²⁴	17	17.10	18	6.24	18	15.35	19	10.15	British	Panama Mail S. S. Co.	485.4	62.3	29.6	Vancouver, B. C.	New York, N. Y.	Grain, general.	9.332	10.802	7.595
Loekabrine ²⁵	17	22.30	18	7.00	18	16.30	18	18.05	British	Royal Mail S. S. Co.	510.2	68.2	30.0	Cabo Blanco, Peru.	Rotterdam, Holland	Cruide oil	16.000	11.575	7.468
Vietotte ²⁶	17	8.35	18	8.08	18	16.30	18	18.05	British	Imperial Oil, Ltd.	408.3	55.3	26.0	San Francisco, Cal.	Montreal, Canada	Gasoline.	8.617	6.474	4.321
Markland ²⁷	17	8.35	18	8.08	18	16.45	18	16.45	Norwegian.	O. & A. Irgens	468.3	62.7	27.4	Los Angeles, Calif	Land's End, Eng	Gasoline.	11.130	10.084	7.426
India Arrow ²⁸	18	9.20	18	9.58	18	17.40	19	1.20	American	Standard Shipping Co.	468.3	62.7	27.4	San Francisco, Calif	Baltimore, Md.	Gasoline	11.130	10.084	7.426
Cal. ²⁹	18	10.00	18	11.25	18	19.35	20	13.30	German	Roland Line	216.5	32.9	16.0	Guayaquil, Ecuador	Cristobal, C. Z.	(*)	869	1.105	698
Commercial	18	12.50	18	13.34	18	21.05	18	23.25	American	Moore & McCormick	380.4	53.1	23.4	Iquique, Chile.	New Orleans, La	Nitrates	7.450	5.659	5.360
Spirit ³⁰	18	23.15	19	2.31	19	10.45	19	13.15	American	Chile S. S. Co.	411.6	54.1	24.8	Antofagasta, Chile.	Norfolk, Va.	Nitrates	7.994	6.609	4.973
Chileop ³¹	19	2.30	19	3.17	19	11.55	19	11.55	American	Standard Transp. Co.	439.5	58.0	28.6	Los Angeles, Calif	Providence, R. I.	(*)	10.240	8.913	6.210
Astral ³²	19	8.00	19	9.07	19	18.50	19	18.50	American	Standard Shipping Co.	462.4	60.2	27.0	Los Angeles, Calif	New York, N. Y.	Gasoline.	10.540	8.461	6.104
Gen. Wm. M. Graham ³³	19	8.42	19	18.45	19	20.05	19	20.05	American	U. S. Army	160.2	32.0		Balboa, C. Z.	Cristobal, C. Z.	General	6.114	7.049	4.941
Kentuckian ³⁴	19	9.26	19	10.12	19	20.05	19	20.05	American	Amer-Hawaiian Line	414.5	53.7	26.3	Seattle, Wash	Boston, Mass	Balhist	780		504
Martha ³⁵	7	8.00	19	12.15	19	21.09	19	21.09	Norwegian.	H. Stevenson	183.0	30.1	10.9	Pto.Arnuelles, R. P.	Cristobal, C. Z.	Iron Ore	21,800	15,500	4,496
Amerikaland ³⁶	19	13.10	19	15.40	20	15.55	20	15.55	Swedish	Ore S. S. Corp	561.0	72.2	33.6	Cruz Grande, Chile	Baltimore, Md	Lumber, general.	8.331	7.982	5.881
Willodo ³⁷	19	19.20	20	00.13	20	9.08	20	9.08	American	Williams S. S. Line	434.0	57.7	27.0	Gray's Harb, Wash.	Baltimore, Md	(*)	8.179	7.340	5.360
Sagadahoc ³⁸	19	21.01	20	3.11	20	10.45	20	10.45	American	Argonaut S. S. Co.	420.5	54.2	26.2	Seattle, Wash	Baltimore, Md	(*)	8.179	7.340	5.360
Nordbo ³⁹	20	3.20	20	5.56	20	14.00	20	13.05	Norwegian.	Isbrandtsen Moller Co.	380.0	53.9	25.2	Manila, P. I.	New York, N. Y.	Sugar, coconut.	7,750	6,190	4,568
Britte ⁴⁰	20	11.10	20	11.48	20	19.18	21	10.15	Swedish	Colombian Mar. Co.	255.6	39.6	13.9	Buenaventura, Col.	New York, N. Y.	(*)	867	1,714	1,078
Edgar F. Luckenbach ⁴¹	20	11.20	20	12.02	20	19.45	20	19.45	American	Luckenbach Line	425.0	57.3	31.0	Portland, Oreg	Mobile, Ala	Lumber, general.	8.171	8.508	6.648
Eleanor ⁴²	20	11.40	20	13.09	20	21.40	20	21.40	American	Christenson S. S. Co.	410.5	54.3	24.0	Portland, Oreg	Baltimore, Md	Lumber	7,376	6,572	4,788
Christenson ⁴³	20	11.40	20	13.09	20	21.40	20	21.40	American	Christenson S. S. Co.	410.5	54.3	24.0	Portland, Oreg	Baltimore, Md	Lumber	7,376	6,572	4,788
Mary Ann ⁴⁴	19	10.47	20	8.55	20				Panaman	United Fruit Co				Balboa, C. Z.	Gatun Lake, C. Z.	(*)			
No. 31055 ⁴⁵	19	10.47	20	8.55	20				Panaman	United Fruit Co				Balboa, C. Z.	Gatun Lake, C. Z.	(*)			
No. 31068 ⁴⁶	19	10.47	20	8.55	20				Panaman	United Fruit Co				Balboa, C. Z.	Gatun Lake, C. Z.	(*)			
No. 31072 ⁴⁷	19	10.47	20	8.55	20				Panaman	United Fruit Co				Balboa, C. Z.	Gatun Lake, C. Z.	(*)			
No. 31075 ⁴⁸	19	10.47	20	8.55	20				Panaman	United Fruit Co				Balboa, C. Z.	Gatun Lake, C. Z.	(*)			

(*) Kerosene distillate.

(*) Cacao, coffee, and ivory nuts.

(*) Refrigerated and general.

(*) Concentrates and wool.

(*) Barge.

(*) Launch.

(*) Tanker.

(*) Coffee, hides, and specie.

(*) Towed by Mary Ann.

(*) Towing barges.

(*) All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

(*) Lumber, ore, and pulp.

PORT OF CRISTOBAL.

* ARRIVALS.

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
April 14	Ulúa	United Fruit Co.	Port Limon, C. R.	April 14	Vision ³²	F. E. Pernet	Habana, Cuba
April 14	Macabi	United Fruit Co.	New York, N. Y.	April 14	Ulúa	United Fruit Co.	New York via Habana
April 15	Macabi	United Fruit Co.	New York via Habana.	April 14	Wanks	Standard Fruit S. S. Co.	San Blas, R. P.
April 15	Macabi	United Fruit Co.	Buenaventura, Colombia.	April 14	Cystolal	Panama R. R. S. S. Line	New York via Haiti.
April 15	Macabi	United Fruit Co.	Havre via wayports.	April 15	Haradia	United Fruit Co.	New Orleans via wayports.
April 15	Macabi	United Fruit Co.	Liverpool via wayports.	April 15	Macabi	United Fruit Co.	Puerto Colombia.
April 15	Macabi	United Fruit Co.	Tela via wayports.	April 16	No. 9664 ³²	Pan-American Airways	Tela via wayports.
April 16	Macabi	United Fruit Co.	San Jose, Costa Rica.	April 16	Laila	Gulf-Caribbean S. S. Line	Curacao via wayports.
April 16	Macabi	United Fruit Co.	Houston, Texas.	April 17	William M. ³⁴	G. I. Bryan	Bluefields, Nicaragua.
April 17	Macabi	United Fruit Co.	Hamburg via wayports.	April 17	Toledo	United Fruit Co.	Port Limon, C. R.
April 17	Macabi	United Fruit Co.	New Orleans, La.	April 17	Antillan	Leyland Line	Moro (Santiago).
April 17	Macabi	United Fruit Co.	New York via Kingston.	April 17	Anachucuna ³⁵	United Fruit Co.	Colon, R. P.
April 17	Macabi	United Fruit Co.	Barranquilla, Colombia.	April 17	Inapaquina ³⁵	United Fruit Co.	Colon, R. P.
April 17	Macabi	United Fruit Co.	Barranquilla, Colombia.	April 18	Annetta I. ³⁵	United Fruit Co.	Colon, R. P.
April 17	Macabi	United Fruit Co.	Colon, R. P.	April 18	Suriname	United Fruit Co.	Puerto Colombia.
April 17	Macabi	United Fruit Co.	Colon, R. P.	April 18	Cundinamarca	Seadta Airplane Co.	Barranquilla, Colombia.
April 18	Macabi	United Fruit Co.	Colon, R. P.	April 18	No. 33 ³²	Pan-American Airways	Manacay via wayports.
April 18	Macabi	United Fruit Co.	Colon, R. P.	April 18	No. 9775 ³²	Pan-American Airways	Tela via wayports.
April 18	Macabi	United Fruit Co.	Colon, R. P.	April 18	No. 9685 ³²	United Fruit Co.	New York via wayports.
April 18	Macabi	United Fruit Co.	Port Limon, Costa Rica.	April 18	Santa Marta	Hamburg-American Line	Port Limon, Costa Rica.
April 19	Macabi	United Fruit Co.	Colon, R. P.	April 18	Orinoco	French Line	Havre via wayports.
April 19	Macabi	United Fruit Co.	New Orleans via Habana.	April 18	Pellerin de la Touche	United Fruit Co.	Colon, R. P.
April 19	Macabi	United Fruit Co.	San Blas, R. P.	April 19	Inapaquina ³⁵	Leyland Line	Liverpool via wayports.
April 19	Macabi	United Fruit Co.	Pto. Colombia via Bocas.	April 19	Dorelian	A. L. Surgeon	Bluefields, Nicaragua.
April 20	Macabi	United Fruit Co.	Port Limon, Costa Rica.	April 20	Linda S. ³⁶	United Fruit Co.	New Orleans, La.
April 20	Macabi	United Fruit Co.	Puerto Colombia.	April 20	Copename	Pan-American Airways	Tela via wayports.
April 20	Macabi	United Fruit Co.	Colon, R. P.	April 20	No. 9664 ³²	Seadta Airplane Co.	Colombian ports.
April 20	Macabi	United Fruit Co.	New Orleans via Habana.	April 20	Amapala	Standard Fruit S. S. Co.	New Orleans via wayports.
April 20	Macabi	United Fruit Co.		April 20	Orinoco	Hamburg-American Line	Hamburg via wayports.
April 20	Macabi	United Fruit Co.		April 20	Macabi	United Fruit Co.	New York via Kingston.

³² Air-mail carrier.³³ Yacht.³⁴ Schooner.³⁵ Motor boat.³⁶ Motor schooner.

PORT OF BALBOA.

April 18	Queen of Scots ³⁷	A. J. Drexel	Puntarenas, Costa Rica.	April 19	El Colon ³⁸	Hans Elliot	Panama Bay, R. P.
April 19	El Colon ³⁸	Hans Elliot	Darien, R. P.	April 19	Dos Hermanos ³⁸	A. Valdez	Panama Bay, R. P.
April 19	Dos Hermanos ³⁸	A. Valdez	Bayano River, R. P.				

³⁷ Yacht.³⁸ Motor schooner.

* Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

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Volume XXII.

Balboa Heights, C. Z., May 1, 1929.

No. 39.

Traffic Through the Panama Canal in April, 1929.

During the month of April, 1929, 540 commercial vessels and 41 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,281,087.27, and on the launches, \$463.44, or a total tolls collection of \$2,281,550.71.

The daily average number of commercial transits for the month was 18.00, and the average tolls collection \$76,036.24, as compared with 17.29 transits and \$75,608.57 in tolls for the previous month. The average amount of tolls paid by each of the commercial transits was \$4,224.24, as compared with \$4,372.88 for the month of March, 1929.

In the following tabulation, the number of commercial transits and the amount of tolls collected are shown for the first 10 months of the current fiscal year, with the daily averages of transits and tolls, together with the totals for the first 10 months of the fiscal years 1928 and 1927:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	509	\$2,109,083.19	16.41	\$68,034.94
August.....	526	2,199,069.31	16.97	70,937.72
September.....	487	2,111,230.56	16.23	70,374.35
October.....	557	2,274,945.30	17.97	73,385.33
November.....	527	2,225,937.48	17.57	74,197.91
December.....	579	2,443,029.39	18.67	78,807.39
January.....	603	2,502,815.12	19.45	80,735.97
February.....	522	2,211,961.20	18.64	78,998.62
March.....	536	2,343,865.55	17.29	75,608.57
April.....	540	2,281,087.27	18.00	76,036.24
Totals, first 10 months of fiscal year 1929.....	5,386	22,703,024.37	17.72	74,681.00
Totals, first 10 months of fiscal year 1928.....	5,467	22,809,318.85	17.92	74,784.65
Totals, first 10 months of fiscal year 1927.....	4,549	20,192,381.41	14.93	68,422.31

As compared with the first 10 months of the fiscal year 1928, the corresponding period this year has had 81 fewer transits and \$106,-294.48 less tolls.

Trans-Isthmian Air Service Begun on May 1st.

The Pan-American Airways, Inc., has announced the inauguration of a passenger and express air service across the Isthmus, beginning May 1, 1929. A new 6-passenger, cabin-type, Fairchild model 71 airplane is scheduled to leave its passenger station at the west end of France Field, Cristobal, every day at 7.30 a. m., 11.30 a. m., and 4.30 p. m., for the Pacific side, and to leave Albroom Field, Balboa, for the Atlantic side half an hour later, daily at 8 a. m., 12 noon, and 5 p. m.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, April 27, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Salt draft.	Nature.			Tons.	Gross.	Net.	
Pennsylvanian.	21	5 35	21	6 38	21	13 46	21	14 45	American	Amer-Hawaiian Line.	407 7	53 7	21 0	Boston, Mass.	Portland, Oreg.	General.	3,618	7,107	5,041
Sutherland.	21	4 00	21	7 35	21	15 02	21	16 15	American	Charles Nelson & Co.	380 0	53 2	20 0	Baltimore, Md.	Seattle, Wash.	Coal, steel.	4,243	5,654	4,123
Hartside.	21	6 00	21	8 25	21	17 18	21	19 13	British	J. J. Moore	367 0	50 6	21 2	Norfolk, Va.	Sta. Rosalia, Mex.	Coal.	4,914	4,277	2,988
Point Fernin.	21	16 50	21	17 30	22	00 12	22	1 46	American	Tid-Pacfic Line.	334 0	46 2	20 5	New Orleans, La.	San Francisco, Cal.	General.	3,402	3,984	2,617
Paul Shoup.	21	17 05	21	17 40	22	1 19	22	2 28	American	Tidewater Oil Co.	424 4	58 2	18 0	New York, N. Y.	San Francisco, Cal.	Ballast.	7,383	5,182	
Firenze.	20	17 45	22	6 20	22	13 47	22	15 10	American	Ore S. S. Corp.	449 1	57 2	23 2	Norfolk, Va.	Cruz Grande, Chile	Ballast.	7,847	5,185	
El Lobo.	22	5 45	22	8 55	22	18 09			British	Atlantic Refining Co.	385 2	51 0	20 0	Philadelphia, Pa.	La Libertad, Ecuar.	Ballast.	4,851	3,326	
Commercial Traveller.	22	11 50	22	12 05	22	19 29	22	21 35	American	Moore & McCormack	380 0	53 2	18 6	Chester, Pa.	Valparaiso, Chile.	(¹)	3,667	5,657	4,133
Ruapahu.	21	10 30	22	14 50	22	23 42	23	00 48	British	N. Z. Shipping Co.	457 0	58 0	30 10	London, England	Lyttelton, N. Z.	General.	7,878	9,079	6,798
Moerdijk.	21	8 15	22	14 50	22	23 42	23	00 48	British	Holland-American Line.	487 0	61 0	22 6	Rotterdam, Holland	Portland, Oreg.	Bananas, general.	4,625	9,165	7,056
Cleveland.	22	16 15	23	6 05	23	13 46	23	15 15	American	U. S. Navy.	292 0	44 0	17 4	Cristobal, C. Z.	Balboa, C. Z.	General.	2,780	2,823	1,730
Santa Eulalia.	22	2 30	23	6 15	23	13 51	23	15 15	American	American-Cuban Line.	251 0	44 0	23 0	Baltimore, Md.	Hilo, T. H.	General.	7,184	5,583	4,073
Tai Yang.	22	20 45	23	7 10	23	15 50	23	16 15	Norway	Barber S. S. Line.	461 0	60 0	25 9	New York, N. Y.	Tabaco, P. I.	General.	5,926	4,189	
Nyanza.	23	8 28	23	9 05	23	16 50	23	17 15	British	Wessel, Duval & Co.	403 0	52 0	15 6	Danzig	Iquique, Chile.	Ballast.	11,555	6,753	
Tonolay.	23	12 43	23	14 50	23	21 55	24	1 32	Yugoslav	Baburizza & Co.	403 0	52 0	15 6	Danzig	Iquique, Chile.	Ballast.	7,770	8,015	5,716
Anna Maersk.	23	00 45	23	16 15	24	00 26	24	1 32	British	A. P. Moller	390 0	53 0	17 0	Falmouth, England	Los Angeles, Calif.	Ballast.	7,621	7,056	4,964
Montrolite.	23	18 10	23	18 25	24	3 48	24	5 20	Japanese	Imperial Oil Co., Ltd.	510 0	68 2	21 0	New York, N. Y.	Talara, Peru	Ballast.	6,170	7,407	5,660
Felix Tausig.	23	19 30	23	20 00	24	4 47	24	5 50	American	Nippon Yusen Kaisha.	445 0	58 0	26 0	Baltimore, Md.	Kobe, Japan	General.	6,043	8,691	6,637
Arenosa.	23	23	23	23	23	18 25	23	18 25	American	Norton, Lilly & Co.	395 0	55 0	26 6	Baltimore, Md.	Vancouver, B. C.	General.	6,046	8,015	5,716
No. 31080.	23	23	23	23	23	18 25	23	18 25	American	United Fruit Co.	396 0	50 8	24 2	Cristobal, C. Z.	Gatun, C. Z.	(⁶)	8	8	8
No. 31081.	23	23	23	23	23	18 25	23	18 25	American	United Fruit Co.	423 0	55 0	24 10	Cristobal, C. Z.	Gatun, C. Z.	General.	4,798	5,948	4,225
No. 31082.	23	9 35	24	6 05	24	14 52	24	16 26	French	United Fruit Co.	396 0	50 8	24 2	Cristobal, C. Z.	Gatun, C. Z.	General.	6,170	7,407	5,660
Hudson.	23	20 50	24	7 15	24	15 45	25	2 59	Danish	French Line	423 0	55 0	24 10	Havre, France.	Talehuano, Chile	Coke, general.	6,043	8,691	6,637
Peru.	24	6 40	24	8 55	24	18 30	24	20 00	British	East Asiatic Co.	447 5	57 8	25 0	Aalborg, Denmark.	Vancouver, B. C.	General.	6,046	8,015	5,716
City of Windsor.	24	7 28	24	10 05	24	19 28	24	20 45	British	Ellerman & Bucknall.	407 0	52 0	19 9	New York, N. Y.	Fremantle, Aust'lia	General.	4,650	6,693	4,915
El Cervo.	24	8 05	24	11 25	24	20 15	24	21 30	American	Anglo-Ecuadorian S. S. Co.	409 0	54 0		Philadelphia, Pa.	La Libertad, Ecuar.	Ballast.	3,981	7,156	5,094
Charles Christenson.	24	10 05	24	12 55	24	21 08	24	22 15	American	Arrow Line	407 7	53 7	19 0	Boston, Mass.	Seattle, Wash.	General.	4,657	9,027	6,539
Dakota.	24	10 35	24	14 35	24	22 02	24	23 10	American	Amer.-Hawaiian Line.	471 0	59 2	23 0	Boston, Mass.	Seattle, Wash.	General.	8,530	6,741	4,345
Paul Luckenbach.	24	16 30	24	17 15	25	1 22	25	2 48	British.	Lukenbach Line	395 6	55 0	21 4	Curacao, D. W. I.	Antofagasta, Chile.	Fuel oil.	4,520	5,131	3,664
San Lamberto.	24	10 45	25	6 20	25	16 19	25	17 10	American	Anglo-Mexican Pet. Co.	89 0	22 0		Cristobal, C. Z.	Balboa, C. Z.	General.	4,520	5,131	3,664
Gen. G. W. Getty.	24	10 45	25	6 20	25	16 19	25	17 10	British.	U. S. Army	385 0	52 0	24 0	New York, N. Y.	Ankland, N. Z.	General.	4,520	5,131	3,664
Wirral.	24	10 45	25	6 20	25	16 19	25	17 10	British.	Federal Steamship Co.	385 0	52 0	24 0	New York, N. Y.	Ankland, N. Z.	General.	4,520	5,131	3,664

• Tug.
• Steel, automobiles, and general.
• Towing barges.

* Towing barges.

* Steel, automobiles, and general.

* Tug.

* Barge.

* Lanchet.

* Motor ship.

* Cruiser.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Cleveland ¹⁶	22	7.00	22	7.20	22	16.15	23	6.05	American	U. S. Navy.	292.0	44.0		Balboa, C. Z.	Cristobal, C. Z.	Crude oil.	16,000 11,573	7,006
Vancouver ¹⁷	22	9.00	22	11.00	22	19.25	23	20.40	British	Imperial Oil Co., Ltd.	510.2	68.2	30.0	Talara, Peru	Montreal, Canada	Lumber	6,802 7,470	5,529
Robin Adair	22	12.22	22	13.18	22	21.00	22	21.00	American	Seas Shipping Co.	55.2	24.6		Vancouver, B. C.	Baltimore, Md.	General	9,972 7,396	5,588
Asia ¹⁷	22	13.30	22	14.12	22	22.50	22	22.50	Danish	East Asiatic Co.	425.3	55.2	29.3	Vancouver, B. C.	Copenhagen, Den.		7,781 6,030	4,916
Pacific	22	19.30	22	20.13	23	9.12	23	9.12	American	Dimon S. S. Corp.	409.7	54.2	25.1	Olympia, Wash.	Baltimore, Md.	Lumber	8,562 9,032	6,638
Hemlock	23	4.30	23	6.25	23	14.05	23	14.05	American	Amer-Hawaiian Line	471.1	59.1	26.8	Portland, Oreg.	Boston, Mass.	General		
Nebraskan																		
Gen. G. W.																		
Getty ¹⁸	23	6.44	23	14.15	24	7.30			American	U. S. Army	98.0	22.0		Balboa, C. Z.	Cristobal, C. Z.			
Robert	23	8.35	23	9.11	23	16.10	23	16.10	American	Lukenbach Line	445.0	58.0	25.0	Portland, Oreg.	Boston, Mass.	Lumber, general.	7,908 8,695	6,375
Pacific																		
Reliance ¹⁷	23	9.50	23	10.43	23	18.00	23	18.00	British	Furness-Pacific Line	435.9	60.2	28.0	Vancouver, B. C.	Glasgow, Scotland	General	8,554 9,643	6,967
Zealandia ¹⁷	23	7.15	23	14.48	23	21.45	23	21.45	British	Shaw, Savill & Albion.	482.6	64.2	26.0	Pt. Chalmers, N. Z.	London, England	Frozen, general.	9,032 11,817	8,367
Winton ¹⁷	23	11.10	23	17.50	24	9.00	24	9.00	British	Avenue Ship Co.	375.2	53.5	26.0	Nehue, New Calif.	New York, N. Y.		7,530 6,295	5,663
Point Arena.	23	20.40	23	21.35	24	10.40	24	10.40	American	Gulf-Pacific Line.	324.0	46.2	23.0	San Francisco, Cal.	New Orleans, La.		4,039 3,984	2,612
Santa Cruz.	23	20.40	23	22.30	24	10.45	24	11.25	American	Gracie Line.	384.0	50.2	23.0	Chanaul, Chile.	New York, N. Y.		4,722 5,534	3,808
Myrtle.	23	20.40	24	00.52	24	12.05	24	12.05	American	States S. S. Co.	410.5	54.2	26.3	Portland, Oreg.	Philadelphia, Pa.	Lumber	7,261 6,753	4,895
Elder Branch	24	3.30	24	4.25	24	13.15	24	13.15	British	F. & W. Rigdon	380.3	49.7	24.9	Coronel, Chile.	Liverpool, England		5,993 4,952	3,592
Sylvanfield ¹⁷	22	8.20	24	6.35	24	17.03	24	17.03	British	Hunting & Son, N. Y.	395.0	56.5	26.4	Los Angeles, Calif.	Le Havre, France.	Ballast	7,524 5,900	3,993
Frontrac	22	8.20	24	6.35	24	17.03	24	17.03	Norway	Tankers Corp.	440.9	58.4	17.5	Los Angeles, Calif.	Port Arthur, Texas		7,768 5,460	5,460
Bienvendo	24	00.30	24	6.34	24	18.25	24	22.35	British	P. N. & J. N. Carranza.	210.3	32.1	12.0	Buenaventura, Col.	Trinidad, B. W. I.	Ballast	1,345 806	
Oreoma.	24	6.00	24	7.47	24	16.00	25	00.35	British	Pacific Steam Nav. Co.	511.6	62.0	27.6	Buenaventura, Chile	Liverpool, England	Copper, cereals.	5,969 12,417	8,303
Supporteo	24	6.00	24	8.45	24	18.45	24	18.45	American	Transmarine Lines.	324.0	46.2	24.6	Aberdeen, Wash.	Newark, N. J.	Lumber	4,100 3,984	2,612
Areadia ¹⁹ .	23	11.00	24	8.56	24	18.10	25	8.05	American	Margaret S. Hardwick.	174.2	27.6	10.6	Sea.	Cristobal, C. Z.		591 263	
Panquico ²⁰ .	22	15.00	24	9.38	24	19.45	24	19.45	Panama	Panama Government.	125.0	23.6	14.0	Panama Bay, R. P.	Cristobal, C. Z.		440 1,633	1,041
Durazzo	24	9.25	24	10.12	24	20.30	29	10.15	German	Hamburg-American Line	227.0	34.4	12.5	Guayaquil, Ecuador	Cristobal, C. Z.		5,890 6,719	4,979
Modavia ¹⁷ .	24	12.10	24	13.15	24	21.25	25	1.00	British	Donaldson Bros.	385.0	53.7	26.3	Victoria, B. C.	Glasgow, Scotland	Nitrates	8,150 6,199	4,412
Vestalia.	24	13.00	24	14.14	24	21.55	24	21.55	British	DuPont de Nemours.	423.4	56.0	25.0	Iquique, Chile.	Savannah, Ga.			
City of San																		
Francisco ¹⁷	23	18.46	24	21.05	25	9.10			Panama	Panama Mail S. S. Co.	296.8	45.9	17.0	San Francisco, Cal.	Cristobal, C. Z.		1,258 3,848	2,606
Stanby ¹⁷ .	24	16.35	24	21.39	25	9.15	25	9.15	Danish	W. L. Cornyn & Co.	350.2	50.8	24.0	Victoria, B. C.	New York, N. Y.	Lumber	5,888 4,917	3,516
Invelia.	24	17.10	25	00.25	25	10.40	25	10.40	British	DuPont de Nemours	400.1	52.2	25.6	Iquique, Chile.	Wilmington, N. C.	Nitrates	7,750 5,665	3,986
Istria.	25	3.30	25	4.45	25	13.25	25	15.20	Italian	Naf. Liera-Fristina	400.0	54.1	24.6	Portland, Oreg.	Belfast, Ireland	Lumber, grain.	7,780 5,514	3,963
Francis E.																		
Powell ¹⁷ .	24	16.25	25	5.21	25	14.15	25	14.15	American	Atlantic Refining Co.	431.0	59.2	26.4	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline, benzine	9,504 7,680	5,101
Mary Ellen																		
O'Neil ¹⁷ .	24	23.20	25	6.21	25	15.45	25	15.45	American	The Texas Co.	509.7	70.3	31.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	16,372 12,514	8,427

¹ Tanker. ¹⁶ Cruiser. ¹⁷ Motor ship. ¹⁸ Tug. ¹⁹ Motor yacht. ²⁰ Revenue cutter. ²¹ Chrome ore and copra. ²² Explosives and general. ²³ Coffee, hides, and general. ²⁴ Gasoline and kerosene. ²⁵ Grain, fruit, and general. ²⁶ Cocoa and ivory nuts. ²⁷ Grain, fruit, and general. ²⁸ Chrome ore and copra. ²⁹ Explosives and general. ³⁰ Coffee, hides, and general.

Scheldstad	22	6 45	25	7 31	25	17 30	25	20 00	Belgian	Scheldstrom S. S. Corp.	380 0	50 0	23 6	Vancouver, B. C.	Portugal.	Wheat	6 270	5 281	3 773
Aachen	25	1 30	25	8 25	17 50	26 21	45	German	Nord German Lloyd	431 1	56 4	25 4	Talcahuano, Chile	Hamburg, Germany	General	7 982	7 136	4 956	
Texas Maru	25	4 15	25	9 36	25	18 30	25	Japanese	Kokusi Kisen Kaisha.	425 0	53 6	27 6	Manila, P. I.	Baltimore, Md	Sugar	9 059	6 899	5 139	
Panama	25	7 40	25	10 29	25	19 21	25	American	Amor-Hawaiian Line.	407 7	53 7	26 0	Los Angeles, Calif	Charleston, S. C.	General	5 821	7 098	5 065	
Loriga	25	6 15	25	12 00	25	21 30	26	British	Pacific Steam Nav. Co.	406 5	54 2	26 6	Talcahuano, Chile	Hull, England	General	7 419	7 331	5 091	
Beralt	25	11 00	25	12 04	25	21 20	27	Dutch	Royal Neth. S. S. Co.	202 9	53 1	12 0	Guayaquil, Ecuador	Cristobal, C. Z.	General	430	1 183	742	
Herman Falk	25	12 25	25	13 09	25	22 10	25	American	Oil Transport Co.	431 0	59 2	25 5	San Francisco, Cal.	New York, N. Y.	Gasoline	11 381	7 862	5 049	
Dochet	25	17 45	26	1 19	26	10 05	26	American	Redwood Line	386 8	52 2	24 0	San Francisco, Cal.	Mobile, Ala	Lumber, general	5 853	5 705	4 167	
San Salvador	25	16 45	26	5 43	26	13 10	26	British	Anglo-Mexican Pet Co.	407 4	52 2	26 5	Los Angeles, Calif	United Kingdom	Gasoline	7 369	6 157	4 137	
Acajutla	26	2 30	26	6 54	26	14 30	29	British	Pacific Steam Nav. Co.	215 7	53 5	14 0	Champerico, Guat.	Cristobal, C. Z.	(39)	600	1 273	706	
Caldas	25	22 00	26	8 19	26	16 40	26	Colombian	National Navigation Co.	116 0	21 1	19 0	Buenaventura, Col.	Cristobal, C. Z.	General	255 1	211	124	
Rhaine	25	12 55	26	13 11	26	20 25	26	British	N. Z. Shipping Co.	430 6	50 3	25 0	Wellington, N. Z.	London, England	Frozen, general	5 176	11 438	8 417	
Fort Armstrong	26	14 50	26	15 35	26	23 07	27	American	Nippon Nelsn & Co.	324 0	46 2	24 0	Seattle, Wash.	Charleston, S. C.	General, lumber	4 592	3 984	2 028	
Koko Maru	26	21 00	27	00 10	27	9 25	27	Japanese	Nippon Yusen Kaisha.	435 0	53 0	25 6	Manila, P. I.	New York, N. Y.	General	5 319	7 025	5 055	
Canadian																			
Saigneur	26	23 30	27	1 31	27	10 55	27	British	Can. Nat. Steamships	400 6	52 3	24 0	Vancouver, B. C.	Montreal, Canada	Lumber, general	6 380	5 893	4 482	
Bethore	27	4 15	27	6 20	27	16 25	27	American	U. S. S. Corp	550 3	72 2	35 0	Cruz Grande, Chile	New York, N. Y.	Iron ore	20 768	15 476	4 354	
Mallard	S-14 29		27	7 05	27	17 45		American	U. S. Navy	187 0	38 0	13 8	Balboa, C. Z.	Cristobal, C. Z.	(33)				
S-15 29		27	7 57	27	17 45			American	U. S. Navy	231 0	20 0		Balboa, C. Z.	Cristobal, C. Z.					
S-11 29		27	7 57	27	17 45			American	U. S. Navy	231 0	20 0		Balboa, C. Z.	Cristobal, C. Z.					
S-12 29		27	8 29	27	17 45			American	U. S. Navy	231 0	20 0		Balboa, C. Z.	Cristobal, C. Z.					
Margaret																			
Johnson	27	3 00	27	9 45	27	19 00	28	Swedish	Johns in Line	405 0	54 0	25 8	Seattle, Wash.	Stockholm, Sweden	Grain, general	5 575	7 048	5 337	
Novasli	27	10 45	27	11 25	27	20 05	27	Norwegian	Moore & McCormack	342 2	48 0	20 6	Tatall, Chile	Charleston, S. C.	Nitrates	5 040	3 920	2 798	
Sr. Thorse	27	10 00	27	11 50	27	20 00	29	Norwegian	United Fruit Co.	293 1	44 2	16 0	Pt. Arnuelltes, R. P.	Colon, R. P.	Ballast	2 629	1 716		
Munizales	27	11 00	27	11 57	27	20 30	29	German	Roland Line	216 0	32 0	11 4	Guayaquil, Ecuador	Cristobal, C. Z.	General	784	1 132		
Levyli	27	9 00	27	12 00	27	20 40		Peru	Peruvian Line	374 7	46 3	21 0	Callao, Peru	Cristobal, C. Z.	Feniquors	1 987	4 486	2 406	

31 Towing pontoons.

32 Coffee, hides, and general.

33 Submarine.

34 Tanker.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
April 21	Toles	United Fruit Co	Port Limon, Costa Rica.	April 21	Annetta I. 32	A. Tagarapulos.	Colon, R. P.
April 21	Oreman	Leyland S. S. Line	Liverpool via wayp rts.	April 21	Wauks	Stand. Fruit S. S. Co.	San Blas, R. P.
April 21	Annetta I. 32	A. Tagarapulos	Colon, R. P.	April 21	Tolca	United Fruit Co	New York via Habana
April 22	Suriname	United Fruit Co	Pto. Colombia	April 22	Anacuena 32	United Fruit Co	Colon, R. P.
April 22	Calamares	United Fruit Co	New York via Habana.	April 22	Carriago	United Fruit Co	New Orleans via wayports.
April 22	No. 9664 31	Pan-American Airways	Tela via wayports.	April 22	Suriname	Leyland S. S. Line	Port Limon via Bocas.
April 22	Anacuena 32	United Fruit Co	Colon, R. P.	April 22	Oreman	Pan-American Airways	Pto. Colombia.
April 24	Aenev	Royal Neth. S. S. Co.	Amsterdam via wayports.	April 23	No. 9685 33	Calamares	Tela via wayports.
April 24	Novasli	Panama R. S. S. Line	New York via Haiti.	April 24	Calamares	United Fruit Co	Port Limon, Costa Rica.
April 24	Metapan	United Fruit Co	New York via Kingston.	April 24	Novasli	Royal Neth. S. S. Co.	Port Limon, Costa Rica.
April 24	Cundinamarca	United Fruit Co	Barranquilla via wayports.	April 24	Inapauquina 32	United Fruit Co	Colon, R. P.
April 24	Gundescen	United Fruit Co	New Orleans, La	April 25	Cundinamarca	Seadta Airplane Co	Barranquilla and Cartagena.
April 24							

(Continued on page 556, column 2.)

* Other than ships passing through the Canal.

35 Schooner.

36 Air-mail carrier.

37 Motor boat.

Vessels Change Hands.

THE PANAMA CANAL RECORD is in receipt of advice that the Arrow Line, operators in the United States intercoastal trade, have acquired three vessels which they are to place in the coast-to-coast service. The vessels are the steamers *Marian Otis Chandler* (ex *West Haven*), *Helen Whittier* (ex *West Lianga*), and the *General M. H. Sherman* (ex *Mursa*), all former Shipping Board vessels, and are of 5,781, 5,673 and 6,085 gross tons, respectively. It is reported that these vessels are to replace the *Peter Kerr*, *Eastern Knight*, and the *Jefferson Myers*, which will be placed in the service of the Quaker Line, also operating in the United States intercoastal freight service.

Dredging Division Begins Filling at Albrook Field.

The actual placing of the hydraulic fill for Albrook Field at Balboa was started last week by the Dredging Division of The Panama Canal, the new Diesel-electric dredge *Las Cruces* being used for the work. The plans call for approximately 1,200,000 cubic yards of fill to be placed within the confines of the dikes which were recently constructed to retain the material within the limits of the field.

Making the fill is the first major step in a project of enlarging the field and erecting modern hangars, shops, barracks, and quarters.

New Vessels for Sudden and Christenson.

The Shipping Board has announced the sale of the steamers *West Bridge* and *West Wauneke* to Sudden & Christenson of San Francisco, operators in the United States intercoastal trade. The vessels are steel cargo steamers of 8,594 and 8,635 deadweight tons, respectively, equipped with oil-burning boilers, and designed to steam at 10 $\frac{1}{4}$ knots. After reconditioning, the ships are to be used to supplement their new owner's intercoastal fleet.

Correction.

In the issue of THE PANAMA CANAL RECORD of April 17, 1929, in an item under the heading of "North Pacific Coast Line to include Jamaica," it was erroneously stated that the "B" route vessels of this line call at Caracas on their westbound voyages. This should have been Curacao instead of Caracas.

Supplement No. 15.—Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 25, 1929.

Regulation 3.1, contained in Supplement No. 9 of May 7, 1928, to the "Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters," is hereby amended to read as follows:

Regulation 3.1. *Load and Trim:* All vessels must be properly trimmed before entering. If a vessel arrives at the Canal not properly trimmed, and it is impossible to remedy this condition the vessel will be taken through, but the Canal will not be responsible for the safe transit of such vessel, or if vessel is overloaded to such an extent as to affect its maneuvering qualities. In the case of vessels arriving with a list of over three degrees, and less than ten degrees, the Master of such vessel will be required to sign a certificate stating that The Panama Canal will be relieved of all responsibility for any damage that may be done to ship or Panama Canal structures, due to such condition. This release will be signed in the presence of the Pilot and delivered to him for further delivery to the Port Captain. A vessel with a list of ten degrees or over will not, under any circumstances, be permitted to transit. Also, vessels should be on an even keel or with a slight drag. The cases of vessels down by the head, where such trim can not be corrected, must be referred to the Port Captain concerned with the Pilot's recommendation and, if necessary, a release similar to the one mentioned above must be obtained signed by the Master before the ship is taken through.

H. BURGESS,
Governor.

Notices to Mariners.

Ranchos Point, Tortuga Island.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 30, 1929.

No. 531.

The following is quoted from Notice to Mariners, Washington, D. C., April 13, 1929:

Venezuela, north coast, Tortuga Island, Ranchos Point, Light established. Information has been received through the Department of State that an unwatched flashing white light every 9 seconds, flash 3 seconds, eclipse 6 seconds, has been established on Ranchos Point, northern side of Tortuga Islands.

The light is exhibited 59 feet (18 meters) above high water and is visible 13 miles.

Approx. position 10° 58' 20" N., 65° 18' 10" W.

H. BURGESS,
Governor.

Navassa Island Light.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 30, 1929.

No. 532.

The following is quoted from Notice to Mariners, Washington, D. C., April 13, 1929:

West Indies, Caribbean Sea, Navassa Island Light, Characteristic to be changed. About May 20, 1929, the characteristic of Navassa Island Light will be changed to show flashing white every 15 seconds, flash 2.5 seconds duration, with short intermediate flashes every 2 seconds.

Beginning about May 1, while the change is being effected, 2 white lights of less intensity will be exhibited, 1 from the north side and 1 from the south side of the parapet at the base of the lantern, in lieu of the present light. These will show flashing white every 5 seconds, flash 0.5 second, eclipse 4.5 seconds. Each light will flash independently.

Approx. position 18° 24' 10" N., 75° 00' 50" W.

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending April 27, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Mantaro.....	Peruvian S. S. Line.....		April 14.....		110½
Cristobal.....	Panama R. R. S. S. Line.....		April 14.....		2,747
Wanks.....	Standard Fruit S. S. Co.....		April 14.....		78
Cavalla.....	North German Lloyd.....	April 14.....	April 14.....	129	35
Ulua.....	United Fruit Co.....	April 14.....	April 14.....	15	43
Alaska.....	French Line.....	April 14.....	April 15.....	325	313
Manila Maru.....	Osaka Shosen Kaisha.....	April 14.....	April 15.....	55	(²)
Macabi.....	United Fruit Co.....	April 14.....	April 15.....	823	8
Guatemala.....	Panama Mail S. S. Co.....	April 14.....	April 15.....	654	148
Kellerwald.....	Hamburg-American Line.....	April 14.....	April 17.....	924	466
Cauca.....	National Navigation Co.....	April 14.....		289	
Uribe.....	Estrada G. Hermanos.....		April 15.....		609
Lisa.....	Hamburg-American Line.....		April 15.....		276
Heredia.....	United Fruit Co.....		April 15.....		107
Acmeagua.....	Chilean Line.....	April 15.....	April 15.....	3	202
Tolca.....	United Fruit Co.....	April 15.....	April 17.....	289	222
Antillian.....	Leyland S. S. Line.....	April 15.....	April 17.....	77	(²)
Pelerin de la Touche.....	French Line.....	April 15.....	April 18.....	296	704
Stella.....	Panama Mail S. S. Co.....	April 15.....	April 20.....	950	1,250
Laila.....	Gulf-Caribbean S. S. Line.....	April 16.....	April 16.....	261	(²)
Gaasterdijk.....	Holland-American Line.....	April 16.....	April 17.....	(²)	435
Limon.....	United Fruit Co.....	April 16.....	April 20.....	913	694
Nitro.....	Societa Anonima Commerciale.....	April 17.....	April 17.....	107	(²)
William M.....	R. Feuillebois.....	April 17.....	April 17.....	(¹)	34½
Honduras.....	United Fruit Co.....	April 17.....	April 18.....	556	(²)
George Washington.....	Norway-Pacific Line.....	April 17.....	April 17.....	(¹)	156
Orinoco.....	Hamburg-American Line.....	April 17.....	April 18.....	153	20
Santa Marta.....	United Fruit Co.....	April 17.....	April 18.....	681	458
Suriname.....	United Fruit Co.....	April 17.....	April 18.....	797	(²)
Baarn.....	Royal Neth. S. S. Co.....	April 17.....	April 19.....	630	365
Colombia.....	Panama Mail S. S. Co.....	April 18.....	April 19.....	685	183
Hessen.....	Hamburg-American Line.....	April 18.....	April 19.....	(¹)	336
Call.....	North German Lloyd.....	April 18.....	April 20.....	898	411
Ludwigshafen.....	North German Lloyd.....	April 18.....	April 19.....	(²)	87
Jamaica.....	Pacific Steam Nav. Co.....		April 19.....		803
Dorelian.....	Leyland S. S. Line.....	April 18.....	April 19.....	(¹)	240
Lochkatrine.....	Royal Mail S. S. Line.....	April 18.....	April 19.....	(¹)	199
Anapala.....	Standard Fruit S. S. Co.....	April 19.....	April 20.....	446	817
Cartago.....	United Fruit Co.....	April 20.....		456	

¹ No cargo discharged.

² No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Coppenname	United Fruit Co.	April 20	April 20	35	91
Wanks	Standard Fruit S. S. Co.	April 20		170	
Orineco	Hamburg-American Line	April 20	April 20	18	1,512
Linda S.	R. Feuillebois	April 20	April 20	(*)	50
Macabi	United Fruit Co.	April 20	April 20	120	1,181
Britte	Colombian Maritime Co.	April 20		302	
Toloo	United Fruit Co.	April 21	April 21	29	1
Moerdijk	Holland-American Line.	April 21	April 22	32	244
Oranian	Leyland S. S. Line	April 21	April 22	729	18
Suriname	United Fruit Co.	April 22	April 22	2	112
Santa Barbara	Grace Line.	April 22	April 22	31	4
Cartago	United Fruit Co.		April 22		85
Wanks	Stand. Fruit S. S. Co.		April 22		5
Iserlohn	Hamburg-American Line	April 22	April 23	546	555
Calamares	United Fruit Co.	April 22	April 24	1,283	413
San Mateo	United Fruit Co.	April 22	April 27	1,444	3
Peru	Danish East Asiatic Co.	April 23	April 24	130	(*)
Hudson	French Line	April 23	April 24	201	247
Venezuela	Royal Neth. S. S. Line	April 24	April 24	110	22
Santa Cruz	Grace Line.	April 24	April 24	6½	42
Gunderson	United Fruit Co.	April 24	April 25	555	57
Pacific President	Furness, Withy & Co.	April 24	April 25	28	372
Oreoma	Pacific Steam Nav. Co.	April 24	April 25	2	(*)
Durazzo	Hamburg-American Line	April 24		440	
Ancon	Panama R. R. S. S. Line	April 24		6,416	
Arana	Pacific Steam Nav. Co.	April 24	April 25	215	150
Martha	H. C. Stevenson		April 25		717
Metapan	United Fruit Co.	April 24	April 25	564	379
Loriga	Pacific Steam Nav. Co.	April 25	April 26	19	188
Essequibo	Pacific Steam Nav. Co.	April 25	April 26	90	(*)
Aachen	North German Lloyd	April 25	April 26	46	275
City of San Francisco	Panama Mail S. S. Co.	April 25		1,258	
Axel Johnson	Johnson Line.	April 25	April 26	297	124
Baralt	Royal Neth. S. S. Line	April 25	April 27	440	132
Atlas	Standard Transp. Co.	April 25	April 27	10,658	(*)
Negada	Hamburg-American Line	April 25	April 27	156	741
Parismina	United Fruit Co.	April 26		668	
Suriname	United Fruit Co.	April 26	April 26	(*)	9
William M.	R. Feuillebois	April 26	April 26	(*)	26
Caldas	National Navigation Co.	April 26		256	
Cauca	National Navigation Co.		April 26		79
Colombo	Italian Line.	April 26	April 27	460	
Acajutla	Pacific Steam Nav. Co.	April 26		600	
Atlantida	Stand. Fruit S. S. Co.	April 26	April 27	310	514
Venezuela	Royal Neth. S. S. Line	April 26	April 27	(*)	786
Nosa Chief	N. O. & S. A. S. S. Co.	April 27		141	
Margaret Johnson	Johnson Line.	April 27	April 27	(*)	310
Ucayli	Peruvian Line.	April 27		1,987	
Kako Maru	Nippon Yusen Kaisha	April 27	April 27	166	(*)
Manizales	North German Lloyd	April 27		784½	
Wanks	Stand. Fruit S. S. Co.	April 27		160	
Cavina	Elders & Fyffes, Ltd.	April 27	April 27	1½	(*)

* No cargo discharged.

* No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Three Weeks Ending April 27, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
California	Panama-Pacific Line	April 7	April 7		187
Cambrai	U. S. Government	April 8	April 9	98	23
Santa Cecilia	Grace Line.	April 11	April 11		7
Caldas	National Navigation Co.	April 12	April 12		34
Guatemala	Panama Mail S. S. Co.	April 15	April 15	25	80
Colombia	Panama Mail S. S. Co.	April 17	April 18	120	
Santa Maria	Grace Line.	April 18	April 18	1	38
Virginia	Panama-Pacific Line	April 19	April 19	1	72
Somme	U. S. Government	April 20	April 21	1,193	115
San Mateo	United Fruit Co.	April 21	April 21	1	
Frontenac	Halle & Peterson	April 22	April 24	11,072	
City of San Francisco	Panama Mail S. S. Co.	April 23	April 24	1	
Peru	East Asiatic Co.	April 24	April 25	301	
Caldas	National Navigation Co.	April 25	April 26	5	
S. A. Perkins	Jas. Griffiths & Son	April 25		5,225	
Axel Johnson	Johnson Co.	April 26	April 26	18	
Chateau Thierry	U. S. Government	April 26		114	
Acajutla	Pacific Steam Navigation Co.	April 26	April 26	5	
Cauca	National Navigation Co.	April 26	April 26		12

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors. An illustrated pamphlet explaining in detail the arrangement may be had upon application to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

On general merchandise the rates are as follows:

(a) For handling cargo from ship's side to storage place, the customary inward local charge of \$1 per ton.

(b) For delivery or reforwarding, customary outward local charge of \$1 per ton. (Total of 20 cents per ton more than regular transfer charge.)

(c) For storage, 3 cents per ton per day, except that no charge will be made for the first 35 days.

The Panama Railroad Company stores this cargo in four fireproof warehouses, 160 feet by 850 feet, at Cristobal, and in one of the same dimensions at Balboa.

Cargo stored for orders can be reforwarded from the Isthmus—each carrier to collect its proportion of the through rate instead of the local. This means that should a shipment move from New York to the Canal Zone, it will of course pay regular local rate to Balboa or Colon, as the case may be—but should owner wish to reforward to, say, "Guayaquil," he can do so by paying the oncarrier's proportion of the through rate. Upon evidence that the shipment or any part of it moved beyond the Canal Zone, the initial carrier will refund the difference between the through and local rate.

Cargo intended for warehousing at Cristobal or Balboa should be so indicated on the bill of lading, thus "Cristobal for orders" or "Balboa for orders." When so consigned it is not necessary for shippers to secure consular papers at original point of shipment, nor to have bills of lading consulsated. Cargo consigned to Canal Zone for orders may be delivered in the Republic of Panama in which case it is necessary to prepare an invoice on which duties can be paid. When evidence of payment of duty is presented to the Canal Zone customs officers they will issue the necessary release and delivery can be taken in the usual way. For those on the Canal Zone who are allowed to import goods duty free the Panama Canal customs release is all that is necessary. For reshipment from storage to a foreign country the shipper takes out bill of lading, consular invoice and sobordo if necessary and cargo is forwarded as regular outward local.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," are shown in the pamphlet referred to above.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2.....	\$8.00	\$11.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
3. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
4. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds.....	11.00	14.00

THE PANAMA CANAL RECORD

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Volume XXII.

Balboa Heights, C. Z., May 8, 1929.

No. 40.

Tanker Traffic Through the Panama Canal in April, 1929.

During the month of April, 1929, 82 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 444,357, on which tolls of \$391,053.29 were collected. Cargo amounted to 420,659 tons. In point of net tonnage, tanker traffic showed an increase of 12 per cent over the same traffic for the corresponding month a year ago, while cargo tonnage decreased 4.7 per cent under the cargo tonnage of April, 1928.

Tank ships comprised 15.2 per cent of the total commercial transits through the Canal during the month; made up 17.8 per cent of the total Panama Canal net tonnage; were the source of 17.1 per cent of the tolls collected; and carried 15.4 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of April, 1929, segregated by direction of transit and nationality of vessels, are shown in the following tabulations, with comparative totals, for the two preceding months and for April, 1928:

Nationality.	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo
<i>Atlantic to Pacific.</i>				
British	10	58,685	\$43,821.05	8,530
Danish	1	4,097	2,949.84	
Danzig	1	5,927	4,267.44	
Dutch	1	5,065	3,646.80	
French	1	3,135	3,390.00	6,000
Norwegian	1	5,268	3,792.96	
Panaman	1	6,650	4,788.00	
United States	22	122,183	89,494.53	8,346
Yugoslav	1	4,189	3,016.08	
Totals, April, 1929	39	215,199	159,166.70	22,876
Totals, March, 1929	46	243,023	182,092.48	39,581
Totals, February, 1929	46	246,217	183,264.62	36,345
Totals, April, 1928	32	169,331	126,159.64	17,510
<i>Pacific to Atlantic.</i>				
British	12	55,243	55,825.64	92,036
Danzig	3	18,329	19,542.50	34,019
Norwegian	5	26,086	25,924.95	38,700
United States	23	129,500	130,593.50	233,028
Totals, April, 1929	43	229,158	231,886.59	397,783
Totals, March, 1929	50	278,540	280,901.74	492,078
Totals, February, 1929	36	202,210	205,146.05	358,704
Totals, April, 1928	41	226,692	232,087.50	423,772

* Includes 6,495 tons coconut oil.

Of the total tanker traffic shown above, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months, and for April, 1928:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons. of cargo.
<i>To Los Angeles.</i>				
April, 1929	22	121,872	\$87,747.84	
March, 1929	33	181,815	130,979.85	
February, 1929	31	170,099	124,280.17	8,397
April, 1928	24	132,100	96,474.73	2,896
<i>From Los Angeles.</i>				
April, 1929	27	149,491	150,532.45	258,776
March, 1929	35	192,325	193,401.10	344,756
February, 1929	26	143,336	143,518.55	257,589
April, 1928	29	155,911	158,758.75	295,382

* Cargo discharged at Balboa, Canal Zone.

Isthmian Airways, Inc., Inaugurates Service.

The trans-Isthmian service of the Isthmian Airways, Inc., was inaugurated on May 5, 1929, when the company's eight-place Hamilton all-metal seaplane left its hangar at Folk's River, Cristobal, for Balboa. The present schedule calls for 3 round trips daily, leaving Cristobal at 7.00 a. m., 10.30 a. m., and 4.00 p. m., and from their hangar at pier 18, Balboa, at 8.00 a. m., 1.30 p. m., and 5.00 p. m., which schedule is to be maintained until it is ascertained what hours can best please and serve the public. Fares in this service are \$10 for a one-way trip and \$15 for a round trip, children under 3 paying half fare. Each passenger is permitted to carry free 30 pounds of baggage, everything in excess of which is charged for at the rate of 15 cents per pound.

The trans-Isthmian service of this company is said to be only the first major step in the development of plans for a network of lines connecting Panama and Colon with the interior towns of Panama. It is expected that other planes of the same type will shortly be added to the service.

Traffic by Nationality for April, 1929.

The following tabulation shows the commercial traffic through the Canal during the month of April, 1929, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for April, 1928 and 1927:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	1	6,211	4,522	7,130	4,013	\$4,471.92	
British	68	341,816	260,517	428,313	265,986	302,771.07	232,581
Colombian	5	5,785	4,491	9,686	5,044	5,594.95	3,465
Danish	3	12,724	10,508	15,818	10,560	11,891.09	11,420
Danzig	1	5,927	5,207	8,744	5,026	4,267.44	
Dutch	7	33,156	22,421	37,160	22,365	25,998.05	16,947
French	5	21,824	16,656	27,554	16,544	20,820.00	19,577
German	14	49,669	35,004	58,423	35,321	43,755.00	46,786
Italian	3	17,654	14,375	23,963	13,653	17,968.75	3,978
Japanese	9	46,319	39,574	58,795	38,890	46,930.67	53,095
Mexican	1					613.50	
Norwegian	16	55,647	39,121	64,001	38,520	45,357.31	59,217
Panaman.	3	11,567	9,679	15,353	9,734	8,328.24	
Peruvian	1	2,959	1,515	4,617	2,427	1,893.75	110
Swedish	5	18,305	11,627	19,108	13,284	14,533.75	14,297
United States	115	553,353	426,604	692,555	424,547	485,689.33	395,877
Yugoslav	2	7,594	5,491	8,942	5,484	5,806.08	5,100
Totals, April, 1929	259	1,190,510	907,312	1,479,562	911,498	1,046,690.90	862,450
Totals, April, 1928	271	1,194,004	912,709	1,500,455	916,718	1,031,935.91	742,388
Totals, April, 1927	226	1,109,275	864,865	1,417,042	862,833	960,971.53	697,329

* Includes cruiser of 5,220 tons displacement.

* Cruiser of 1,227 tons displacement.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	1	3,773	3,104	4,875	3,701	\$3,880.00	6,270
British	76	392,028	291,536	491,676	301,224	361,450.64	502,840
Chilean	2	7,768	6,066	10,874	6,233	7,582.50	9,666
Colombian	6	2,887	2,508	4,210	2,570	2,569.57	1,200
Danish	9	36,531	27,502	43,224	27,751	34,377.50	62,429
Danzig	3	18,329	15,634	26,632	15,069	19,542.50	34,019
Dutch	7	35,020	22,695	39,094	22,995	28,368.75	47,743
French	5	23,514	19,229	30,715	19,230	24,036.25	31,448
German	14	39,447	28,881	47,679	28,586	36,054.40	53,290
Greek	3	11,930	8,416	13,847	8,533	10,520.00	21,201
Italian	5	29,817	22,473	37,376	23,047	28,091.25	30,375
Japanese	7	32,861	29,738	42,808	29,056	36,677.70	50,040
Norwegian	19	72,539	55,849	92,720	55,768	67,452.10	112,536
Panaman	2	7,503	5,398	8,847	5,451	6,747.50	10,133
Peruvian	2	5,364	2,504	7,922	3,941	3,130.00	3,989
Spanish	1					1,691.50	
Swedish	7	27,529	20,194	51,591	24,032	25,242.50	67,748
United States	110	543,159	424,611	684,400	422,778	529,535.46	797,991
Yugoslav	2	7,667	5,957	9,313	5,915	7,446.25	14,300
Totals, April, 1929	281	1,297,666	992,295	1,647,803	1,005,880	1,234,396.37	1,857,218
Totals, April, 1928	260	1,190,487	926,312	1,511,839	929,258	1,155,671.91	1,731,496
Totals, April, 1927	238	1,115,225	885,495	1,435,496	885,153	1,104,235.39	1,732,478

¹ Government training ship of 3,383 tons displacement.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	2	9,984	7,625	12,005	7,714	88,351.92	6,270
British	144	733,844	552,053	919,989	567,210	664,221.71	735,421
Chilean	2	7,768	6,066	10,874	6,233	7,582.50	9,666
Colombian	11	8,672	6,999	13,296	7,614	8,164.52	4,665
Danish	12	49,255	38,010	59,042	38,311	46,268.59	73,849
Danzig	4	24,256	20,841	35,376	20,095	23,809.94	34,019
Dutch	14	68,176	45,116	76,254	45,360	54,366.80	64,690
French	10	45,338	35,885	58,269	35,774	44,856.25	51,025
German	28	89,116	63,885	106,102	63,907	79,809.40	100,076
Greek	3	11,930	8,416	13,847	8,533	10,520.00	21,201
Italian	8	47,471	36,848	61,339	36,700	46,060.00	34,353
Japanese	16	79,180	69,312	101,603	67,946	83,608.37	103,135
Mexican	2					613.50	
Norwegian	35	128,186	94,970	156,721	92,488	112,809.41	171,753
Panaman	5	19,070	15,077	24,200	15,135	15,075.74	10,133
Peruvian	3	8,323	4,019	12,539	6,368	5,023.75	4,099
Spanish	1					1,691.50	
Swedish	12	45,834	31,821	70,699	37,416	39,776.25	82,045
United States	225	1,096,512	851,215	1,376,955	847,325	1,015,224.79	1,193,868
Yugoslav	4	15,261	11,448	18,255	11,399	13,252.33	19,400
Totals, April, 1929	540	2,488,176	1,899,607	3,127,365	1,917,378	2,281,087.27	2,719,668
Totals, April, 1928	531	2,384,491	1,839,021	3,012,294	1,845,976	2,187,607.82	2,473,884
Totals, April, 1927	464	2,224,500	1,750,360	2,852,638	1,747,986	2,065,206.92	2,429,807

¹ Includes cruiser of 5,220 tons displacement.

² Cruiser of 1,227 tons displacement.

³ Training ship of 3,383 tons displacement.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending May 4, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Inez	Grace Line	April 27	April 27		8
Boskoop	Royal Neth. S. S. Co.	April 29	April 30	102	
Bokuyo Maru	Nippon Yusen Kaisha	April 29	April 29	12	
El Salvador	Panama Mail S. S. Co.	May 1	May 2	59	18
Ecuador	Panama Mail S. S. Co.	May 1	May 1	216	16
La Paz	Pacific Steam Nav. Co.	May 2	May 3		
Anyo Maru	Nippon Yusen Kaisha	May 2	May 2	118	
Santa Elisa	Grace Line	May 2	May 2	1	
Bohemian Club	Atlantic Refining Co.	May 2	May 3	1,277	

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, May 4, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.			Gross.	Net.		
Langley ²	27	6.20	28	6.00	28	14.16	29	19.16	American.	U. S. Navy.	520.0	65.0	25.10	Pensacola, Fla.	San Diego, Calif.	Aeroplanes.	99	6,006	11,911
Romera	28	6.10	28	7.15	28	15.20	28	22.55	British.	N. O. & S. Shipping Co.	485.0	62.3	27.0	London, England.	Wellington, N. Z.	General.		1,946	3,256
Nosa Chief	27	14.45	28	7.40	28	16.15	28	17.24	American.	N. O. & S. S. Co.	300.0	45.0	19.10	New Orleans, La.	Tachuanio, Chile.	General.		3,573	6,779
Kansan	28	2.55	28	8.45	28	16.14	28	17.24	American.	Amer-Hawaiian Line.	404.6	54.0	21.0	New York, N. Y.	Portland, Oreg.	General.		1,753	
Colombo ³	26	21.25	28	12.45	28	20.27	28	21.32	Italian.	Italian Line.	518.0	63.8	26.8	Genoa, Italy.	Valparaiso, Chile.	General.		7,354	6,565
Alaska	28	12.53	28	13.20	28	21.23	28	23.33	Norway.	Scand.-No. Pacific Co.	405.0	54.0	24.7	Antwerp, Belgium.	Buenaventura, Col.	General.		7,434	5,098
Mojave	28	13.05	28	13.35	28	23.05	29	00.18	American.	General Petroleum Co.	435.0	56.2	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast.		8,270	7,023
Baron Mackay	28	13.25	28	16.35	28	23.45	29	2.25	British.	H. Hogarth & Sons.	430.4	56.3	26.7	Galveston, Tex.	Auckland, N. Z.	Sulphur.		9,001	5,927
Callopo ²	28	19.45	28	20.00	29	3.05	29	11.30	Danzig.	Baltic-Amer. Pet. Co.	470.2	63.2	21.0	Rotterdam, Holland.	Talara, Peru.	Ballast.			
Imperial	28	21.45	29	6.25	29	13.25	29	14.40	British.	Prince Line, Ltd.	450.5	58.0	25.0	New York, N. Y.	Yokohama, Japan.	General.		6,198	8,594
Parthenia	28	10.25	29	7.40	29	14.38	29	15.45	British.	Donaldson Bros., Ltd.	399.5	52.0	19.5	Glasgow-England.	Vancouver, B. C.	General, bananas.		1,215	5,831
Wilpholo	29	4.30	29	8.40	29	18.32	29	19.34	American.	William S. S. Line.	386.8	52.2	23.2	Baltimore, Md.	Seattle, Wash.	General, coal.		7,266	5,680
Durazzo	24	20.20	29	10.15	29	18.37	29	19.45	German.	Hamburg-American Line.	227.5	34.0	15.8	Cristobal, C. Z.	Guayaquil, Ecuador.	General.		954	1,693
Acajula	26	14.30	29	10.10	29	19.45	29	21.05	British.	Pacific Steam Nav. Co.	216.7	33.6	17.0	Cristobal, C. Z.	Champerico, Guat.	General.		1,131	1,273
Port Auckland	29	5.30	29	11.26	29	19.52	29	21.05	British.	Com'lth & Dom. Line.	481.0	62.0	29.9	Antwerp, Belgium.	Dunedin, N. Z.	General.		6,915	10,862
Orduna	28	21.00	29	12.35	29	21.03	29	22.00	British.	Pacific Steam Nav. Co.	550.0	67.0	30.8	Liverpool, England.	Valparaiso, Chile.	General.		5,917	17,146
Iradu	29	2.00	29	13.45	29	21.54	29	23.15	Yugoslav.	Yugoslav Lloyd.	360.0	50.0	21.4	Split, Serb-Cr-Slov.	Chile.	Cement.		5,100	4,493
Le Long	29	8.15	29	14.30	29	22.54	5-1	12.45	French.	French Government.	403.6	50.6	23.0	Toulon, France.	Callao, Peru.	Fuel oil.		6,000	5,379
Manizales	27	20.30	29	14.45	29	23.02	30	00.32	German.	North German Lloyd.	210.0	33.0	13.0	Cristobal, C. Z.	Guayaquil, Ecuador.	General.		319	1,132
Kent	29	17.00	29	17.15	29	00.50	30	4.15	British.	N. Z. Shipping Co.	400.6	62.8	28.0	Liverpool, England.	Auckland, N. Z.	General.		9,595	10,609
Canadian	29	14.50	29	18.45	30	2.35	30	4.00	British.	Can. Nat. Steamships.	400.0	52.0	21.5	Halifax, N. S.	Adelaide, Australia.	General.		3,400	5,891
Leader	29	18.55	29	20.50	30	4.34	30	5.55	British.	Gow Harrison & Co.	410.3	54.5	17.0	North Shields, Eng.	Los Angeles, Calif.	Ballast.		6,058	
Virgilia	29	7.00	30	6.05	30	15.43	30	17.10	German.	North German Lloyd.	435.0	57.0	23.5	Hamburg-Germany.	Valparaiso, Chile.	General.		1,670	5,748
Grandon	29	18.10	30	7.30	30	17.05	30	18.30	British.	Thos. Dupplo & Sons.	400.0	52.0	19.0	New York, N. Y.	Tachuanio, Chile.	General.		8,990	6,295
Queen Mand.	29	21.45	30	9.05	30	17.53	30	21.36	Swedish.	Anglo-Saxon Pet. Co.	482.0	62.0	20.0	Hull, England.	San Francisco, Cal.	Ballast.			
Castor ³	30	4.45	30	9.50	30	18.55	30	20.25	American.	Isthmian S. S. Lines.	424.8	53.0	27.0	Baltimore, Md.	Tacoma, Wash.	General, steel.		8,994	7,473
Robin	30	5.40	30	11.20	30	19.47	30	21.06	American.	Standard Oil Co.	440.0	58.0	19.0	New York, N. Y.	San Francisco, Cal.	Ballast.		9,033	5,938
K. R. Kingsbury	30	13.15	30	18.05	31	3.01			American.	Johann G. Ohsel.	253.4	43.7	19.0	Norfolk, Va.	Vladivostok, Russia.	General.		500	
Lake El Pueblo.	30	18.25	30	18.55	1	2.13	31	3.25	American.	Amer-Hawaiian Line.	404.6	53.9	22.0	Boston, Mass.	Seattle, Wash.	General.		3,782	6,754
Oregonian	30	13.15	30	18.55	1	2.13	31	3.25	American.	U. S. Navy.	180.0	35.6		Cristobal, C. Z.	Bahoa, C. Z.	General.			
Mallard	5-1	6.10	5-1	6.25	5-1	14.48			French.	French Government.	626.0	63.0	22.0	Guadeloupe, F.W.I.	Callao, Peru.	General.			
Tourville	5-1	6.10	5-1	6.25	5-1	14.48													
Point San	1	3.45	1	7.35	1	17.27	1	18.34	American.	Gulf-Pacific Line.	324.0	46.0	21.0	New Orleans, La.	San Diego, Calif.	General.		3,000	6,773
Pablo	1	5.50	1	8.40	1	17.31			British.	Barber S. S. Line.	418.5	55.6	23.0	New York, N. Y.	Manila, P. I.	Oil, general.		5,377	5,001
Kendal Castle.																			

Cruiser

Mine sweeper.

Motor ship

Aircraft carrier.

Tanker

	1	7 35	1	9 00	1	19 26	1	20 35	American.	Lukenbach Line	448.9	60.2	23.6	Boston, Mass	Seattle, Wash	General	6,600	9,294	6,861
Dorothy																			
Lukenbach..	1	7 20	1	9 15	1	19 14	1	21 55	American	U. S. Army	165.0	32.0	12.6	New York, N. Y.	Honolulu, T. H.	Ballast			
Gen. Frank T.	1	10 00	1	11 10	1	20 36	1	21 55	Danish	P. Brown & Co.	380.0	53.9	14.6	Hamburg, Germany	San Diego, Calif.	General	5,028		
Northrup	1	11 15	1	12 35	1	21 40	1	21 55	American	Transmarine Lines	324.0	46.2	23.8	New York, N. Y.	Seattle, Wash	General			
Sutrasco	1	11 15	1	13 35	1	21 43	1	21 55	American	P. & W. Titson	398.6	53.8	21.0	North Shields, Eng.	Corral, Chile	General	3,091	5,760	3,866
Peal Branch	1	13 25	1	14 55	1	21 53	2	4 27	British	Panama Mail S. S. Co.	360.2	51.6	24.0	New York, N. Y.	San Francisco, Cal.	Coffee, general	2,778	5,710	4,023
El Salvador	4 30	00 15	1	14 35	1	22 45	2	4 27	American	Amer-Australian Line	400.0	52.0	21.0	New York, N. Y.	Adelaide, Australia	General	4,426	5,997	4,307
Ashburton	5 1	16 55	1	17 15	1	20 55	2	4 27	British	Amert-Refining Co.	425.0	57.2	21.6	Philadelphia, Pa.	Los Angeles, Calif	(*)	1,277	7,204	4,739
Bohemian Club	1	6 05	2	6 00	2	13 31	3	9 47	American	Quaker Line	376.0	52.2	19.0	Wilmingon, Del.	Tacoma, Wash.	General	4,133	5,455	3,902
Orinoco	2	1 20	2	7 05	2	20 43	2	21 55	American	Grace Line	360.3	51.7	23.6	New York, N. Y.	Talcahuano, Chile	General	2,040	5,455	3,902
Santa Elisa	2	23 58	2	9 07	2	21 00	2	22 10	American	Westfal Larsen & Co.	380.0	53.6	16.6	Buenos Aires, Arg.	Los Angeles, Calif	General	2,303	6,289	4,722
Brandanger	2	7 20	2	10 15	2	21 43	2	22 40	Norway	French Line	422.2	54.2	21.6	Havre, France	Vancouver, B. C.	General	3,087	8,830	4,932
George	2	6 00	2	11 20	2	22 48	2	23 56	French	Roosevelt S. S. Co., S. B.	410.1	52.5	21.6	New York, N. Y.	Brisbane, Australia	General	2,983	7,400	5,882
Egmont	2	9 55	2	11 25	2	23 39	3	8 12	American	Royal Neth. S. S. Co.	400.0	58.6	23.6	Hamburg, Germany	Corral, Chile	General	4,538	7,834	6,018
Bodegraven	1	13 20	1	13 10	1	30 25	3	1 36	Dutch	Caucasian Oil Co.	390.6	55.2	17.2	London, England	Los Angeles, Calif	General			
Varg	2	11 05	2	14 15	3	1 20	3	7 16	Norway	Ore S. S. Corp	561.0	72.0	21.0	Baltimore, Md	Cruz Grande, Chile	Ballast	5,983	8,856	
Sweland	2	11 57	2	15 30	3	2 10	3	7 42	Swedish	Canadian Transp. Co.	375.0	51.0	23.9	Antilla, Cuba	Shanghai, China.	Sugar	15,425	4,421	
Trevanion	2	12 10	2	16 50	3	3 05	3	4 24	British								7,032	5,216	3,957
Canadian																			
Ranger	2	13 20	2	17 55	3	3 48	3	5 20	British	Can. Nat. Steamships	400.0	52.0	17.0	Halifax, N. S.	Vancouver, B. C.	General	730	5,879	4,121
La Paz	1	18 30	1	20 35	3	6 29	3	22 44	British	Pacific Steam Nav. Co.	406.0	54.0	20.6	Hull, England	Corral, Chile	General	4,691	7,216	4,912
Illingworth	2	15 05	3	6 15	3	13 55	3	15 30	British	R. S. Dalglish & Co.	430.0	59.0	26.3	Palo Alto, Cuba	Shanghai, China.	Sugar	7,700	6,987	4,933
Guardian	2	15 40	3	6 10	3	13 50	3	15 30	American	All American Cables	278.0	36.0	17.5	Cartagena, Col	Gallao, Peru	Cables	240	1,860	950
Springbank	3	2 00	3	7 10	3	15 52	3	19 13	British	Bank Line, Ltd.	420.3	53.9	23.9	Philadelphia, Pa.	Hongkong, China	Case oil, general	6,403	7,100	4,996
Ruth Alexander	3	5 15	3	7 10	3	17 04	4	00 43	American	Dollar Line	455.0	55.0	23.0	New York, N. Y.	San Francisco, Calif	General	3,640	9,287	6,203
Acme	3	6 10	3	8 25	3	18 59	4	00 27	American	Standard Transp. Co.	435.0	56.0	19.0	New York, N. Y.	Los Angeles, Calif	Ballast			
Lochgoil	3	6 15	3	10 10	3	20 05	3	21 25	British	Royal Mail S. P. Co.	485.6	62.3	21.4	Rotterdam, Holland	Vancouver, B. C.	Bananas, general	3,279	10,803	7,606
Pacific Oak	3	2 25	3	13 50	3	21 30	3	22 35	American	Dinon S. S. Corp.	407.0	54.0	21.0	New York, N. Y.	Seattle, Wash	General	3,717	6,484	4,883
Larry Doheny	3	15 15	3	15 25	3	22 25	3	23 35	American	Acewood Pet. Co.	430.0	59.2	19.4	New York, N. Y.	Los Angeles, Calif	General			
Swan	3	6 15	3	17 06	3	3 17	3	17 06	American	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	Ballast	7,497	5,198	
Motor Sailor																			
Henry S.																			
Grove	3	21 30	4	6 05	4	13 48	4	18 50	American	Argonaut S. S. Co.	404.0	54.0	28.0	Baltimore, Md	Tacoma, Wash	Steel, general	8,293	6,755	4,688
Surtico	3	23 58	4	7 25	4	15 06	4	18 15	American	Transmarine Lines	324.0	60.0	17.0	Newark, N. J.	San Francisco, Cal.	General	1,749	3,984	2,628
Mongolia	4	9 10	4	9 55	4	16 33	4	23 56	American	Panama-Pacific Line	600.0	65.3	28.8	New York, N. Y.	San Francisco, Cal.	General	3,302	17,041	11,426
Vestgard	4	2 27	4	10 45	4	19 33	4	21 25	Norwegian	The Texas Co.	386.0	52.9	23.4	Pt. Arthur, Tex.	Fremantle, Aust'lia	Kerosene, case oil	6,661	6,168	4,323
Heinrich Arp	3	22 20	4	12 55	4	20 15	4	21 25	German	Colombian Mar. Co.	237.0	37.0	12.4	New York, N. Y.	Buenaventura, Col.	General	565	1,718	1,167
Wasenwald	3	6 55	4	13 50	4	20 15	6	12 55	German	Hamburg-American Line	399.0	54.0	24.0	Hamburg, Germany	Valparaiso, Chile	General	4,424	6,536	4,516
West Camargo	3	6 30	4	14 47	4	22 26	4	23 56	American	McCormick S. S. Co.	410.0	54.0	22.0	Rosario, Argentina	Los Angeles, Calif	General	5,003	6,624	5,040
Esparita	3	18 00	4	17 45	5	00 09	5	1 12	American	United Fruit Co.	330.0	44.0	17.4	Cristobal, C. Z.	San Francisco, Cal.	Coffee, bananas	925	3,679	2,373
Californian	4	20 48	4	21 00	5	10 44	5	11 40	American	Amer-Hawaiian Line	445.0	59.0	20.0	Boston, Mass	Los Angeles, Calif	General	4,167	8,567	6,020

* Gasoline and kerosene.

* Towling barge.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

	1	7 35	1	9 00	1	19 26	1	20 35	American.	Italian Line	505.9	61.8	24.0	Valparaiso, Chile	Genoa, Italy	General	1,581	12,977	9,373
Orazio	27	16 55	28	1 41	28	9 20	29	16 21	Italian	Italian Line	505.9	61.8	24.0	Valparaiso, Chile	Genoa, Italy	General			
Steele	28	1 15	28	5 30	28	15 45	28	15 45	American	Ore S. S. Corp	550.3	72.2	34.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	20,000	15,551	4,297
Illinois	28	14 35	28	15 45	29	9 10	30	7 55	French	French Line	400.3	51.6	26.0	Iquique, Chile	Le Havre, France.	Sugar, nit rates	7,767	6,336	4,301

* Motor ship.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.	Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.					
	Day.	Hour.	Day.	Hour.	Day.	Hour.									Nature.	Tons.		Gross.	Net.			
Guardian ¹²	28	18	30	29	1	15	29	9	45	29	12	10	American	All America Cables	278	4	36	0	15	0	Cable	Cartagena, Col.
Bennyahoe	28	15	50	29	2	47	29	10	58	29	14	03	British	W. Thompson & Co.	401	0	52	1	26	0	Lumber, wheat	Liverpool, England
Glasgow Maru	28	20	30	29	3	49	29	12	23	29	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	27	0	Nitrates	Charleston, S. C.
Cubore ¹⁰	28	17	30	29	4	55	29	13	50	29	13	50	American	Cahner S. S. Corp.	450	0	57	2	29	0	Lumber	Philadelphia, Pa.
Queen of Scots ¹²																						
Euro	29	7	10	29	8	33	29	15	25	29	22	15	British	A. J. Drexel, Jr.	175	7	28	4	12	0	General	Gatun Lake, C. Z.
Fela ¹⁰	29	10	25	29	11	24	29	19	10	30	09	45	Italian	Pacific Steam Nav. Co.	450	3	57	8	25	6	General	New York, N. Y.
China	29	10	25	29	12	03	29	19	30	29	09	45	American	New Liberia-Frishtina	436	6	54	5	27	0	General	Venice, Italy
Aladdin	29	13	10	29	13	56	29	21	45	29	21	45	American	Planet Line	403	0	52	3	24	2	Lumber	New York, N. Y.
Almagro	29	20	30	29	22	58	30	9	10	30	16	20	British	Standard Transp. Co.	433	6	56	2	27	0	Gasoline	New York, N. Y.
Boskoop	29	22	50	30	1	58	30	10	24	30	15	40	Dutch	Pacific Steam Nav. Co.	303	4	50	3	14	3	General	New York, N. Y.
Leichmar ¹⁰	29	15	45	30	3	18	30	11	25	30	21	35	British	Royal Neth. S. S. Co.	400	6	58	3	26	0	General	Antwerp, Belgium
W. L. Steed	29	20	30	30	5	09	30	12	35	30	12	35	American	Key Mail S. P. Co.	485	6	56	1	27	0	General	Rotterdam, Holland
California	29	12	05	30	6	18	30	14	20	30	14	55	American	Huacaca Petroleum Co.	416	8	50	3	27	0	Gasoline	Baltimore, Md.
Chelsea	29	22	30	30	7	09	30	16	40	30	22	25	British	Panama-Pacific Line	574	4	58	8	23	6	General	New York, N. Y.
Saramacca	30	5	30	30	7	51	30	15	45	30	11	05	American	Canadian Transp. Co.	330	1	52	8	23	6	Lumber	Montreal, Canada
Thiorn	30	0	40	30	8	21	30	17	05	30	17	05	Norwegian	United Fruit Co.	336	2	53	0	18	0	General	New Orleans, La.
Fun ¹⁰	30	1	30	30	8	50	30	17	45	30	20	45	Swedish	O. G. & J. H. Olsen	420	2	52	9	20	0	Nitrates	New Orleans, La.
Ohioan	30	7	10	30	9	14	30	18	30	30	18	30	American	Colombian Mar. Co.	273	7	41	0	14	5	General	New York, N. Y.
Clan Malcolm	30	7	10	30	9	14	30	18	30	30	18	30	American	Amer-Hawaiian Line	407	7	53	7	25	2	General	Boston, Mass.
Lewis Luckenbach	30	9	15	30	10	20	30	19	35	30	22	55	British	Cayzer Irvine & Co.	405	0	53	3	24	6	Copra	United Kingdom
Sucarsco	30	11	55	30	12	36	30	20	30	30	21	50	American	Lukenbach Line	496	0	68	2	30	6	Lumber, general	Boston, Mass.
New Britain	5-1	00	30	5-1	2	52	1	10	0	1	10	10	American	Transmarine Lines	324	0	46	2	23	5	Lumber	Newark, N. J.
Gedahurst ¹	1	3	20	1	5	07	1	13	10	1	13	10	American	Black Diamond S. S. Co.	385	8	52	2	23	1	Lumber	New York, N. Y.
Critze Service	1	5	54	1	7	12	1	15	10	1	16	40	American	T. P. Gallagher	390	0	54	2	26	0	Coconut oil	New York, N. Y.
Empire ¹	1	5	54	1	7	12	1	15	10	1	16	40	American	Critze Service Corp.	404	7	60	2	27	0	Gasoline	New York, N. Y.
Mallard	1	7	13	1	13	15	1	15	15	1	16	40	American	U. S. Navy	187	0	32	0			General	Cristobal, C. Z.
Hanover	1	2	15	1	9	31	1	17	15	1	17	15	American	Henry Thompson	435	0	57	6	26	1	General	New Orleans, La.
Canada	1	9	30	1	10	15	1	20	15	1	21	55	British	Tampa Intercolon	400	0	52	0	27	6	Wheat	Limerick, Ireland
Mataro	1	9	52	1	10	51	1	20	51	1	21	55	British	Shaw, Savill & Albion	63	6	63	2	27	0	General	London, England
Euador	1	8	00	1	14	52	1	21	40	3	1	50	American	Panama Mail S. S. Co.	380	6	48	7	21	0	General	New York, N. Y.
Canadian																						
Scottish	1	17	00	1	22	05	2	8	55	2	8	55	British	Can. Nat. Steamships	400	0	52	2	17	2	General	Melbourne, Aust'lia
Paraguay	1	19	55	1	23	51	2	10	35	2	14	30	German	Hamburg-American Line	385	7	62	7	22	8	Nitrates	Valparaiso, Chile
Herminius	1	20	50	2	1	08	2	12	09	2	17	00	British	Shaw, Savill & Albion	477	6	53	1	23	5	General	Pt. Chalmers, N. Z.
Salvador	2	00	50	2	2	25	2	10	25	2	10	25	British	Pacific Steam Nav. Co.	215	0	33	5	15	3	General	Champerico, Guat
Tanker.																						
																						</

Jedmoor ²⁰	1	19.50	2	4.01	2	13.00	British	Moore Line, Ltd.	375.0	52.6	26.0	Vancouver, B. C.	Greece.	Wheat.	7,480	6,050	4,615
Willifaro	2	6.00	2	7.31	2	15.00	American	Williams S. S. Line.	386.8	52.2	25.3	Seattle, Wash.	Baltimore, Md.	Lumber	6,466	5,484	4,070
Chetopa	2	3.00	2	7.49	3	2.45	American	Charles Nelson & Co.	324.0	46.2	24.9	San Francisco, Cal.	Baltimore, Md.	Lumber, general	2,570	3,984	2,628
El Cervo	2	7.15	2	8.39	2	20.10	British	C. T. Bowring	407.4	52.2	25.6	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil	7,947	6,046	4,326
S-16 ²⁰	2	8.40	2	16.15	2	16.15	American	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
Montrolite ¹⁰	2	9.45	2	10.28	2	18.50	British	Imperial Oil, Ltd.	510.9	62.8	30.0	Talara, Peru	Montreal, Canada	Crude oil	15,300	11,505	7,302
L. A. Christen-																	
Isen ¹⁰	2	11.40	2	11.45	2	20.00	Norway	Fern Line	382.7	53.4	25.9	Bangkok, Siam	Habana, Cuba	Rice	7,084	6,118	4,215
Hadnot	2	11.40	2	12.23	2	21.25	American	Giles Service Corp.	416.9	56.2	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	8,823	6,706	4,639
Skegnes	2	13.10	2	14.01	2	22.48	British	W. R. Smith & Sons	401.6	54.3	25.0	Vancouver, B. C.	Manchester, Eng.	General	7,550	6,621	4,916
Saale ¹⁰	2	14.10	2	14.56	2	23.20	German	North German Lloyd	471.9	61.4	27.3	Vancouver, B. C.	Hamburg, Germany	General, grain	8,800	9,335	6,844
Middlesx	2	14.15	2	15.10	2	23.45	British	Federal Steam Nav. Co.	460.0	62.8	23.0	Wellington, N. Z.	Rotterdam, Holland	Frozen, general	5,811	10,663	7,727
Pacific Pine	2	14.25	3	4.47	3	13.53	American	Dimon S. S. Corp.	410.5	54.3	25.0	Tacoma, Wash.	New York, N. Y.	Lumber	7,500	6,583	4,808
S-17 ²⁰	3	6.14	3	12.10	3	12.10	American	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
Mineskan	3	4.30	3	6.55	3	14.25	American	Amer-Hawaiian Line	407.7	53.7	25.0	Seattle, Wash.	Boston, Mass	General	5,551	7,150	5,024
Canadian																	
Victor	3	9.35	3	10.22	3	19.25	British	Can. Nat. Steamships	400.0	52.4	17.0	Sydney, Australia	Montreal, Canada	General	3,854	5,956	4,172
Pagarta	3	9.55	3	10.40	3	18.00	American	United Fruit Co.	330.6	44.6	17.9	San Francisco, Cal.	Cristobal, C. Z.	Coffee, general	815	3,679	2,373
Benjamin																	
Franklin ¹⁰	3	13.50	3	14.22	3	22.00	Norwegian	Fred Olsen & Co.	452.0	59.5	27.4	Vancouver, B. C.	Osgo, Norway	Nitrates	(+)		
Van	3	18.10	3	22.22	4	8.55	Belgian	Cia. Inter. de Comm. & de Arment	460.4	58.2	28.0	Liquine, Chile	Azores		8,023	9,082	6,140
Robin Gray.	3	21.45	4	00.09	4	11.10	American	Seas Shipping Co.	424.8	55.2	26.0	Englewood, B. C.	New York, N. Y.	Lumber	7,286	7,472	5,542
St. Michel ²¹	3	12.10	4	00.28	4	10.10	American	U. S. Army	448.0	58.0	24.0	San Francisco, Cal.	New York, N. Y.	Army supplies	178		
Julia Lucken-																	
bach	4	00.05	4	3.20	4	11.40	American	Luckenbach Line	436.6	57.2	25.6	Portland, Oreg.	Mobile, Ala.	Lumber, general	5,858	8,543	6,402
Pat Doherty	4	1.30	4	5.37	4	13.30	American	Richfield Oil Co.	430.2	59.2	27.6	Los Angeles, Calif.	New York, N. Y.	Gasoline	9,124		
Bridge ²²	3	21.50	4	6.17	4	14.30	American	U. S. Navy	423.0	55.2	17.6	Corinto, Nicaragua	Hampton Rds., Va.	Naval stores	318		
Albert Vogler	4	5.00	4	7.18	4	15.36	German	Hamburg-American Line	409.8	53.8	22.6	Valparaiso, Chile	Hamburg, Germany	(+)	6,553	7,173	5,514
Orient	4	7.10	4	8.03	4	16.40	American	Oriental Navigation Co.	376.4	52.3	24.6	Buenaventura, Wash.	Wilmington, Del.	Lumber	5,455	3,879	
Uribe	4	7.35	4	8.43	4	16.55	Colombian	Colombia Mar. Co.	227.4	31.7	14.1	Aberdeen, Col.	Cristobal, C. Z.	(+)	720	1,154	663
Sun ¹⁰	4	11.00	4	12.00	4	19.35	American	Sun Oil Co.	440.6	66.0	29.0	Los Angeles, Calif.	Chesler, Pa.	Gasoline in bulk	13,701	9,621	6,476
Taketony Maru	4	11.00	4	13.17	5	1.10	Japanese	Nippon Yusen Kaisha	445.0	58.0	25.0	Manila, P. I.	New York, N. Y.	General	7,964	7,972	5,687
Empire Arrow	4	11.15	4	14.17	4	22.35	American	Standard Transport Co.	468.3	62.7	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	14,104	9,841	6,946

²³ Coffee, gold, and cylinders.²⁴ Nitrates, copper, and general.²⁵ Wheat, lumber, and general.²⁶ Submarine.²⁷ U. S. Army transport.²⁸ Supply ship.²⁹ Motor boat.³⁰ Air-mail carrier.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

ARRIVALS.				DEPARTURES.			
Date.	Vessel.	From—	Date.	Vessel.	Line.	For—	
April 28	Calamares	United Fruit Co	April 28	Wanka	Stand. Fruit & S. S. Co.	San Blas, R. P.	
April 28	Cuba	French Line	April 28	Calamares	United Fruit Co	New York via Habana.	
April 28	Magallanes	Spanish Line	April 28	Inapaquina ²⁷	United Fruit Co	Colon, R. P.	
April 28	No. 9775 ²⁶	Pan-American Airways	April 28	Anachucma ²⁷	United Fruit Co	Colon, R. P.	
April 28	Inapaquina ²⁷	United Fruit Co	April 28	Anachucma ²⁷	A Tazagopolis	Colon, R. P.	
April 28	Pastores	United Fruit Co	April 29	Parasmina	United Fruit Co	New Orleans via way/ta.	
April 29	Pastores	United Fruit Co	April 29	Ancón	Panama R. R. S. S. Line	New York via Haiti.	

²⁷ Motor boat.²⁸ Air-mail carrier.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.				* DEPARTURES.			
* ARRIVALS.				Date.	Vessel.	Line.	For —
Date.	Vessel.	Line.	From —				
April 30	Linda S. ²⁸	A. L. Surgeon	Colon, R. P.	April 30	Cuba	French Line	Havre via waypoints.
April 30	Jesús del Gran Poder ²⁹	Spanish Government	Paita, Peru	April 30	Linda S. ²⁸	A. L. Surgeon	Bluefields, Nicaragua.
May 1	Custodian	T. & J. Harrison	Liverpool, England.	May 1	Pastores	United Fruit Co.	Port Limon, Costa Rica.
May 1	Coppename	United Fruit Co.	New Orleans, La.	May 2	Coppename	United Fruit Co.	Port Limon, Costa Rica.
May 1	Manaquí	United Fruit Co.	New York.	May 2	Magallanes	Spanish Steamship Line	Barcelona via waypoints.
May 1	Talismán	W. Wilhelmssen	Buenos Aires, Argentina.	May 2	Cusodlan	T. & J. Harrison	Puerto Sagua, Cuba.
May 1	Cundinamarca	Scandia Airplane Co.	Barranquilla, Colombia.	May 1	Talismán	W. Wilhelmssen	New York, N. Y.
May 1	Impey ²⁸	Colon, Import and Export Co.	Colon, R. P.	May 2	No. 9685 ³⁰	Pan-American Airways	Teda via waypoints.
May 2	Anachucuna ³¹	United Fruit Co.	Colon, R. P.	May 2	Anachucuna ³¹	United Fruit Co.	Colon, R. P.
May 2	Annetta I ³¹	A. Tagaropoulos	Colon, R. P.	May 3	Annetta I ³¹	A. Tagaropoulos	Colon, R. P.
May 2	Antillan	Leyland Line	Tanamo, Cuba.	May 3	Anachucuna ³¹	United Fruit Co.	Colon, R. P.
May 2	Sixola	United Fruit Co.	New York via Kingston.	May 3	Swiftwind	Eastern Shell Oil Co.	Curacao, D. W. I.
May 2	Swiftwind	Eastern Shell Oil Co.	Curacao, D. W. I.	May 3	Sixola	United Fruit Co.	New York via waypoints.
May 2	No. 9664 ³²	Pan-American Airways	Managua, Nicaragua.	May 3	Antillan	Leyland Line	Liverpool via waypoints.
May 3	Anapala	Stand. Fruit S. S. Co.	New Orleans via Habana.	May 3	Cundinamarca	Scandia Airplane Co.	Barranquilla, Colombia.
May 3	Wanks	Stand. Fruit S. S. Co.	San Blas, R. P.	May 4	Manaquí	United Fruit Co.	Puerto Colombia.
May 3	Anachucuna ³¹	United Fruit Co.	Colon, R. P.	May 4	Anapala	Stand. Fruit S. S. Co.	New Orleans via waypoints.
May 4	Heredia	United Fruit Co.	New Orleans via Habana.				
May 4	Saramacca	United Fruit Co.	Port Limon via waypoints.				
May 4	Basfidas ³²	Colombian Government	Barranquilla, Colombia.				
				31 Motor schooner.			
				32 Motor schooner.			
				33 Air-mail carrier.			
				PORT OF BALBOA.			
				34 Motor boat.			
				35 Tug.			
April 29	Bokoya Maru	Nippon Yusen Kaisha.	Hongkong, China.	April 29	Bokoya Maru	Nippon Yusen Kaisha	Valparaiso, Chile.
April 30	Epoca ³²	Grace Line	Buenaventura, Colombia.	May 1	Sambu ³⁴	Hans Elliot.	Panama Bay, R. P.
May 1	Sambu ³⁴	Hans Elliot	El Real, R. P.	May 1	Dos Hermanos ³⁴	A. Valdez	Panama Bay, R. P.
May 1	Dos Hermanos ³⁴	Bayano River, R. P.	Bayano River, R. P.	May 1	Dixie ³⁵	Pacific Fruit Co.	Panama Bay, R. P.
May 1	Dixie ³⁵	Bayano River, R. P.	Bayano River, R. P.	May 1	El Colon ³¹	Hans Elliot	Panama Bay, R. P.
May 1	El Colon ³¹	El Real, R. P.	El Real, R. P.	May 2	Anyo Maru	Nippon Yusen Kaisha	Hongkong, China.
May 2	Anyo Maru	Valparaiso, Chile.	Valparaiso, Chile.	May 2	S. A. Perkins	James Griffiths & Son	Buenaventura, Colombia.
May 2	Nippon Yusen Kaisha	Puerto Armuelles, R. P.	Puerto Armuelles, R. P.	May 2	San Luis ³⁴	Chiriquí Land Co.	Puerto Armuelles, R. P.
May 2	Chiriquí Land Co.	Colombian Government.	Buenaventura, Colombia.				
May 2	Carahobo	Colombian Government.	Buenaventura, Colombia.				
				31 Motor schooner.			
				32 Motor schooner and barge.			
				* Other than ships passing through the Canal.			

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
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at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., May 15, 1929. No. 41.

Record Cargo of Coal and Unloading Record.

The steamship *Chilore* arrived at the coaling station at Cristobal from Norfolk, Virginia, on May 5, 1929, with a cargo of 20,069 tons of coal. This establishes a new record for cargo of coal received in one shipment at the plant, exceeding by 14 tons the cargo of 20,055 tons brought to the plant by the same vessel on June 21, 1926.

The shipment of 20,069 tons is believed to be the largest cargo of coal ever shipped. It is not, however, a record for the largest cargo of any kind ever handled through a port of the Canal. The tanker *William Rockefeller*, transiting the Canal on October 27, 1922, carried 22,000 tons of crude oil.

In handling the cargo from the *Chilore* arriving May 5, 1929, the coaling plant established a new record for rapid handling for this ship. The actual discharging time was 22 hours and 45 minutes, compared with the previous best record of 23 hours and 5 minutes for handling 20,038 tons arriving by the *Chilore* on February 29, 1928. The cargo of May 5, 1929, was discharged by 3 unloader towers; the tower-hours amounted to 66 hours and 25 minutes, and the rate of discharge averaged over 302 tons per tower per hour. The aggregate rate of discharge for the 22 hours and 45 minutes of actual discharging time was slightly over 882 tons per hour. This is the fastest rate of discharge yet attained for the *Chilore*, though this rate has been exceeded on other vessels of the Ore Steamship Line carrying smaller cargoes. The fastest rate of discharge yet attained for all vessels was in the discharge of the *Bethore* on January 8th, 1929, when 8,586 tons of coal were unloaded in 8 hours and 50 minutes by 3 unloader towers working 26½ tower-hours, an average of 324 tons per tower-hour. The rated capacity of these towers is 250 tons per hour.

Following are notable records for the unloading of coal at the Cristobal Plant:

Vessel.	Date.	Tons of coal.	Time for unloading		Unloader towers used.	Total tower-hours.	Tons per tower-hour.	Aggregate tons per hour.
			Hrs.	Min.				
<i>Chilore</i>	October 22, 1927.....	20,015	24	40	3	72-5/6	275	811
<i>Marore</i>	January 25, 1928.....	8,730	9	10	3	27½	317	952
<i>Chilore</i>	February 29, 1928.....	20,038	23	05	3	67¾	296	868
<i>Bethore</i>	January 8, 1929.....	8,586	8	50	3	26½	324	972
<i>Chilore</i>	May 5 1929.....	20,069	22	45	3	66-5/12	302	882

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 14, 1929.

No. 536

1. The following notice is quoted from Notice to Mariners, Washington, D. C., May 4, 1929:

Colombia, West Coast, Buenaventura River Entrance, Light Buoy Extinguished. The second officer of the Norwegian steamer *Romulus* reports that on March 3, 1929, the light on Light Buoy No. 2 at the entrance to the Buenaventura River was extinguished.

Approximate position: 3° 46' 10" N., 77° 18' 20" W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, May 11, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.							Nature.	Tons.		Gross.	Net.
City of San Francisco	4-25	9 10	5	6 04	5 14 33	5 17 40	5 17 40	5 17 40	Panaman	Panama Mail S. S. Co.	296.0	46.0	20.7	Cristobal, C. Z.	San Francisco, Cal.	General	3,356	3,848	2,606
	5-4	21 10	5	6 25	5 14 40	5 16 00	5 16 00	5 16 00	American	Beaverson Corporation	400.7	54.2	21.6	Baltimore, Md	Los Angeles, Calif.	General	5,791	6,623	4,668
	4 12 45	5 7 10	5	7 10	5 16 34	5 17 40	5 17 40	5 17 40	Italian	Nav. Libera-Triestina	450.0	50.0	20.10	Trieste, Italy	Vancouver, B. C.	General	1,388	8,805	6,497
	4 23 25	5 9 05	5	9 35	5 19 14	6 1 00	6 1 00	6 1 00	American	Isthmian S. S. Lines	424.8	55.2	27.0	Mobile, Ala.	Vancouver, B. C.	Steel products	9,347	7,473	5,533
	5 8 25	5 9 35	5	9 35	5 20 03	5 23 05	5 23 05	5 23 05	Norwegian	Arth. H. Mathieson	407.8	54.7	17.6	Rotterdam, Holland	Los Angeles, Calif.	Ballast	6,539	4,252	
Britia City	5 8 35	5 10 55	5	10 55	5 19 08	5 20 15	5 20 15	5 20 15	American	Charles Nelson Line	324.0	46.2	18.10	Baltimore, Md.	Seattle, Wash.	General	3,000	3,983	2,631
	4 17 00	5 14 15	5	14 15	5 22 50	6 00 05	6 00 05	6 00 05	Colombian	Colombian Transp. Co.	150.0	27.0	10.4	Cristobal, C. Z.	Buenaventura, Cal.	General	325	410	307
Floresia	5 14 45	5 15 00	5	15 00	5 22 50	6 00 05	6 00 05	6 00 05	British	Anglo-Mexican Pet. Co.	401.9	55.0	18.0	Newcastle, Eng.	Los Angeles, Calif.	Ballast	5,962	3,650	
	5 14 35	5 16 10	5	16 10	5 24 00	7 00 41	7 00 41	7 00 41	American	Roosevelt S. S. Co., S. B.	436.0	56.0	24.3	New York, N. Y.	Hakodate, Japan	Caso oil, general	6,746	8,313	5,901
Delancey	4-27 20 40	5 16 35	6	16 35	6 00 40				Peruvian	Peruvian S. S. Line	374.7	46.0	17.10	Cristobal, C. Z.	Callao, Peru	General	308	4,466	2,405
Sir Osborn	5-5 18 05	5 18 25	6	1 40	6 1 40	6 5 24	6 5 24	6 5 24	Norwegian	Anglo-Saxon Pet. Co.	471.8	64.4	20.0	Rotterdam, Holland	Los Angeles, Calif.	Ballast		9,562	6,604
	5 20 55	6 20 10	6	20 10	6 13 40	6 14 35	6 14 35	6 14 35	American	U. S. Army	468.3	62.7	19.0	Cristobal, C. Z.	Gatun, C. Z.	Ballast		9,802	6,957
	5 20 55	6 20 10	6	20 10	6 13 40	6 14 35	6 14 35	6 14 35	American	Standard Shipping Co.	219.0	20.8		New York, N. Y.	Los Angeles, Calif.	Ballast		9,802	6,957
	5 20 55	6 20 10	6	20 10	6 13 40	6 14 35	6 14 35	6 14 35	American	U. S. Navy	219.0	20.8		Cristobal, C. Z.	Balboa, C. Z.	General			
	5 20 55	6 20 10	6	20 10	6 13 40	6 14 35	6 14 35	6 14 35	American	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	General	1,187	2,873	1,776
Buenaventura.	6 1 50	6 9 35	6	9 35	6 16 20	6 17 35	6 17 35	6 17 35	American	Panama R. R. S. S. Line	231.0	43.0	17.10	New York, N. Y.	Guayaquil, Ecuador	General	3,320	7,820	5,661
	6 1 50	6 9 35	6	9 35	6 16 20	6 17 35	6 17 35	6 17 35	American	North German Lloyd	449.0	58.2	22.6	Bremen, Germany	Vancouver, B. C.	General	2,600	6,476	4,682
West Mingo	6 8 55	6 12 10	6	12 10	6 19 40	6 20 50	6 20 50	6 20 50	American	States S. S. Co.	410.0	54.4	18.9	Whilmington, Del.	Tacoma, Wash	General	7,060	5,025	
Solana	6 12 10	6 12 35	6	12 35	6 20 30	6 22 15	6 22 15	6 22 15	American	Tide-water Oil Co.	419.5	56.5	19.8	Bayonne, N. J.	San Francisco, Cal.	Ballast	4,276	8,219	5,861
Silverash	6 13 40	6 14 05	6	14 05	6 21 23	6 22 15	6 22 15	6 22 15	British	Silver Line, Ltd	425.0	53.3	20.6	New York, N. Y.	Yokohama, Japan.	General	4,276	8,219	5,861
Lena	6 15 17	6 15 40	6	15 40	6 22 30	6 23 43	6 23 43	6 23 43	American	Luckenbach Line	425.0	53.8	23.0	New Orleans, La.	Tacoma, Wash.	General	5,597	7,217	5,295
	6 19 50	6 21 17	7	4 46	7 4 46	7 6 09	7 6 09	7 6 09	American	Amer.-Gulf Orient Line.	439.0	60.0	28.0	New Orleans, La.	Manila, P. I.	(*)	9,308	8,987	6,612
Patrick Henry.	6 19 50	6 21 17	7	4 46	7 4 46	7 6 09	7 6 09	7 6 09	American	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.				
Swan	6 19 50	6 21 17	7	4 46	7 4 46	7 6 09	7 6 09	7 6 09	American	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.				
Mallard	6 19 50	6 21 17	7	4 46	7 4 46	7 6 09	7 6 09	7 6 09	American	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.				
Mary Ann	6 19 50	6 21 17	7	4 46	7 4 46	7 6 09	7 6 09	7 6 09	American	United Fruit Co.	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	(*)			
No. 31083	6 19 50	6 21 17	7	4 46	7 4 46	7 6 09	7 6 09	7 6 09	American	United Fruit Co.	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.		9	9	9
No. 31084	6 19 50	6 21 17	7	4 46	7 4 46	7 6 09	7 6 09	7 6 09	American	United Fruit Co.	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.		11	11	11
Chilore	6 14 45	7 6 20	7	6 20	7 13 33	7 14 40	7 14 40	7 14 40	American	Ore S. S. Corp.	549.0	72.0	21.10	Norfolk, Va.	Cruz Grande, Chile	Ballast	14,538	9,348	
Santa Rosalia	6 14 45	7 6 05	7	6 05	7 13 33	7 16 45	7 16 45	7 16 45	American	Isthmian S. S. Lines	405.0	52.6	25.5	Philadelphia, Pa.	Corral, Chile	Steel, general	7,345	5,900	4,443
Geo. W. Barnes	6 23 15	7 9 00	7	9 00	7 16 17	7 17 30	7 17 30	7 17 30	American	Huasteca Petroleum Co.	416.8	56.1	18.0	Jacksonville, Fla.	Los Angeles, Calif.	Ballast	6,763	4,759	
Texas	7 15 53	7 16 05	8	16 05	7 23 18	7 23 25	7 23 25	7 23 25	American	Amer.-Hawaiian Line	471.0	57.2	21.0	New York, N. Y.	Seattle, Wash.	General	3,552	9,154	6,966
Fairfield City	7 23 30	8 14 35	8	14 35	8 20 25	8 20 40	8 20 40	8 20 40	American	Isthmian S. S. Lines	424.2	56.2	25.0	New York, N. Y.	Manila, P. I.	General	8,140	7,611	5,450
Birmingham	8 2 35	8 7 10	8	7 10	8 15 26	8 21 43	8 21 43	8 21 43	American	Isthmian S. S. Lines	411.6	55.0	26.7	Baltimore, Md	Vancouver, B. C.	Steel, general	8,500	7,304	5,188
Indiana	8 7 55	8 9 15	8	9 15	8 16 13	8 17 45	8 17 45	8 17 45	British	Wessel, Duval & Co.	402.0	52.2	18.0	New York, N. Y.	Talcahuano, Chile.	General	700	5,634	4,172
Tanker.																			

* Towing barge.

* Steel, oil, and general.

* Barge.

* Mine sweeper.

* Submarine.

* Launch.

* Motor schooner.

* Motor ship.

* Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.															
: Tanker.			: Yacht.			: Transport.			: Cocoa, tagua, coffee, and general.						
Vahiea	7 22.15	8 13.00	9 20.15	9 2.05	British	Com'th & Dom. Line.	460.0	57.0	21.4	Liverpool, England	Bluff, N. Z.	7,400	8,460	6,425	
Aconagua	8 11.00	8 15.00	8 22.09	8 2.18	Chilean	South American Line.	422.8	56.2	25.6	New York, N. Y.	Valparaiso, Chile	7,400	8,460	6,425	
San Francisco	7 5.05	8 16.10	8 22.40	8 23.56	German	Hamburg-American Line	432.0	56.2	25.6	Hamburg, Germany	Vancouver, B. C.	7,400	8,460	6,425	
Ensay City	8 15.17	8 16.05	9 00.35	9 1.45	American	U. S. Steel Products Co.	395.5	55.0	25.0	Mobile, Ala.	Shanghai, China	8,144	7,380	5,239	
S. C. T. Dodd	8 15.57	8 17.05	9 00.30	9 1.45	American	Huasteca Petroleum Co.	425.0	57.2	19.6	Baltimore, Md.	Los Angeles, Calif.	7,481	4,975		
Oropesa	8 18.05	9 6.20	9 13.40	9 14.50	British	Pacific Steam Nav. Co.	530.0	66.0	23.6	Liverpool, England	Talcahuano, Chile	3,295 1/2	14,827	10,630	
Katrina	8 22.30	9 7.35	9 14.45	9 18.45	American	Luckenbach Line	446.0	56.1	25.10	Boston, Mass.	Los Angeles, Calif.	5,732	8,508	6,179	
Luckenbach	9 4.05	9 8.25	9 15.33	9 20.00	German	Union Petroleum Co.	412.0	55.0	20.0	Glasgow-England	Los Angeles, Calif.	5,579	4,574		
Adria	9 5.40	9 8.45	9 16.22	9 17.40	American	Standard Oil Co.	500.0	68.2	18.0	New York, N. Y.	Los Angeles, Calif.	11,225	7,913		
Leise Muerak	9 10.25	9 10.40	9 17.38	9 18.45	Danish	Isbrandtsen Moller Co.	302.0	44.2	18.0	New York, N. Y.	Batavia, Java	2,605	3,212	2,206	
Alpha	3 15.45	9 16.12	9 23.05	9 23.30	American	James W. Ferry	90.8	26.0	6.3	New York, N. Y.	Los Angeles, Calif.	1,160	114		
W. H. Libby	9 16.10	9 16.25	10 17.30	10 18.49	American	Tidewater Oil Co.	462.0	60.2	21.0	New York, N. Y.	Los Angeles, Calif.	8,461	6,101		
Emil Kirdorf	8 16.30	9 19.45	10 3.18	10 4.45	German	Hamburg-American Line	409.8	53.9	21.0	Hamburg, Germany	San Antonio, Calif.	5,735	7,141	5,468	
Condor	9 19.25	9 19.55	10 4.21	10 5.25	Chilean	R. W. James & Co.	365.4	53.3	21.6	New York, N. Y.	Valparaiso, Chile	1,140	4,421	3,063	
Somme	9 7.40	9 20.05	10 5.05	10 6.09	American	U. S. Army	448.0	58.0	24.6	New York, N. Y.	San Francisco, Cal.	577			
Motor Sailor	4-26	16.40	10 6.05	10 17.30	10 22.00	American	U. S. Navy	116.0	21.0	8.8	Cristobal, C. Z.	Buenaventura, Col.	201	124	
Caldas	5-10	5.20	10 6.25	10 18.30	10 19.30	Colombian	National Navigation Co.	414.7	55.7	17.0	Cristobal, C. Z.	Seattle, Wash.	4,228	7,717	5,763
Willboro	10 5.40	10 6.55	10 19.15	10 20.49	American	Williams S. S. Line	439.0	58.0	20.0	Baltimore, Md.	Los Angeles, Calif.	8,913	6,210		
Astral	10 7.00	10 8.45	10 20.20	10 21.45	American	Standard Transp. Co.	384.4	51.2	25.0	Providence, R. I.	Los Angeles, Calif.	7,731	6,327	4,433	
Okmar	10 6.35	10 10.00	10 21.40	10 22.30	American	Calmel S. S. Corp.	382.7	53.3	26.0	Baltimore, Md.	Seattle, Wash.	7,812	6,082	4,236	
Skramstad	10 18.35	10 19.00	11 2.40	11 4.18	Norwegian	Fern Line	381.4	53.2	19.0	Tampa, Fla.	Shanghai, China	5,964	5,585	4,157	
Key West	10 19.05	10 19.25	11 5.00	11 6.00	American	Knut Knutsen	467.6	62.7	19.0	Oslo, Norway	Talcahuano, Chile	9,698	6,900		
Sylvan Arrow	8 7.40	11 6.05	11 15.25	11 16.45	British	Standard Oil Co.	435.0	60.1	20.0	New York, N. Y.	Los Angeles, Calif.	1,762	9,641	6,988	
Pacific	10 10.40	11 6.25	11 17.18	12 1.36	American	Furness, Withy & Co.	325.2	48.1	19.5	Glasgow-England.	Vancouver, B. C.	695 1/2	4,033	2,261	
Enterprise	9 16.40	11 7.00	11 16.31	11 17.40	British	United Fruit Co.	445.0	56.0	21.3	Cristobal, C. Z.	San Francisco, Cal.	1,823	8,229	5,982	
La Perla	10 14.50	11 7.10	11 17.11	11 19.04	American	Royal Mail S. P. Co.	324.0	46.2	19.7	Antwerp, Belgium	Vancouver, B. C.	1,533			
Glaunorganshire	5 14.55	11 8.50	11 16.33	11 17.40	German	N. O. & S. A. S. S. Line	227.0	34.0	13.0	New Orleans, La.	Talcahuano, Chile	225	1,016	1,011	
Nosa Queen	11 5.20	11 9.20	11 17.35	11 19.04	British	Hamburg-American Line	391.0	53.0	19.4	Cristobal, C. Z.	Guayaquil, Ecuador	4,944	5,919	4,302	
Congo	10 19.00	11 9.45	11 18.24	11 19.34	British	Anglo-Mexican Pet. Co.	420.0	54.0	22.0	New York, N. Y.	Adelaide, Australia	6,390	4,382		
Temple Mount	11 12.15	11 12.30	11 19.13	12 00.45	French	Desmarais Freres	425.0	56.0	20.0	London, England	Los Angeles, Calif.	7,085	5,050		
San Eduardo	11 12.50	11 14.55	11 22.35	12 00.45	American	Christensen S. Co.	409.6	54.2	20.0	Cette, France	Los Angeles, Calif.	3,550			
Helen Wuttler	11 19.05	11 20.12	12 3.14	12 4.32	American	Texas S. S. Co.	425.8	57.0	21.0	New York, N. Y.	Los Angeles, Calif.	7,484	5,216		
Helen Olmsted	11 18.15	11 20.25	12 11.14	12 12.35	American	Amer-Hawaiian Line	404.0	53.9	20.8	Boston, Mass	Portland, Oreg	3,801	6,766	4,767	
Hawaiian	11 18.15	11 20.25	12 11.14	12 12.35	American	U. S. Navy	385.2	51.0	24.0	Cristobal, C. Z.	Gatun, C. Z.				
Motor Sailor	11 18.15	11 20.25	12 11.14	12 12.35	American	U. S. Navy	385.2	51.0	24.0	Cristobal, C. Z.	Gatun, C. Z.				
Motor Sailor	11 18.15	11 20.25	12 11.14	12 12.35	American	U. S. Navy	385.2	51.0	24.0	Cristobal, C. Z.	Gatun, C. Z.				
Gredlon	4 20.00	5 1.05	5 8.50	5 11.45	British	Bowing & Co.	400.6	52.3	25.6	Iquime, Chile	Charleston, S. C.	7,300	5,687	4,057	
Guayaquil	5 30.30	5 1.57	5 10.00	5 11.45	American	Panama R. R. S. S. Line	251.0	43.6	15.1	Guayaquil, Ecuador	New York, N. Y.	896	2,874	1,944	
Sheaf Mead	5 1.00	5 3.45	5 12.50	5 15.45	British	Canadian Transp. Co.	380.2	53.5	23.6	Vancouver, B. C.	Boston, Mass	6,528	5,750	4,466	
Emdijk	4 3.00	5 6.18	5 15.20	5 20.45	Dutch	N. Pacific Coast Serv	469.7	58.1	24.0	Vancouver, B. C.	Rotterdam, Holland	8,568	6,514	6,066	
El Lobo	5 1.00	5 3.45	5 15.20	5 20.45	British	C. T. Bowring & Co.	469.7	58.1	24.0	La Libertad, Ecuador	Philadelphia, Pa.	6,170	4,851	3,326	
Swan	5 5.00	5 7.45	5 14.55	5 16.15	German	U. S. Navy	187.0	34.4	18.0	Balboa, C. Z.	Cristobal, C. Z.	412	1,572	1,011	
Sergio	5 5.00	5 7.45	5 14.55	5 16.15	German	Hamburg-American Line	227.2	34.4	18.0	Guayaquil, Ecuador	Cristobal, C. Z.	412	1,572	1,011	

13 Cocoa, tagna, coffee, and general.

2 Tug.

1: Transport.

10 Yacht.

“Punk”

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Hanley	5	8	00	5	17	45	5	17	45	American	Hanley S. S. Corp.	410	0	27	0	Newark, N. J.	9,681	8,310	6,005
Coptic ¹⁴	5	4	00	5	21	05	5	21	05	British	Shaw, Savill & Albion.	483	0	26	0	Gladstone, N. Z.	8,000	11,819	8,366
West Cape	5	14	20	5	23	25	5	23	25	American	Munson, McCork'k Line	499	5	24	4	Ponce, P. R.	8,500	6,566	4,960
La Murellaise.	5	16	20	5	23	42	6	3	30	French	French Line	429	5	24	4	Le Havre, France	9,332	8,079	5,580
Kalimba	5	20	30	6	1	20	6	10	20	British	Moore & McCormick	402	0	22	0	Talbot, Chile	7,560	5,602	4,177
Phoenix	5	20	30	6	1	20	6	10	20	British	American Tankers Corp.	400	8	24	9	Savannah, Ga.	9,374	6,336	4,389
Havre Maru	5	7	00	6	2	50	6	15	10	American	Osaka Tankers Co.	407	3	27	9	Mobile, Ala.	3,998	6,539	4,773
Santa Teresa	6	9	25	6	12	16	6	13	40	Japanese	Osaka Shosen Kaisha	360	3	27	0	Philadelphia, Pa.	4,116	5,126	4,086
Fishpool	6	11	40	6	18	55	6	22	25	American	Grace Line	379	0	25	9	New York, N. Y.	5,000	4,732	4,122
Virginian	6	16	05	6	16	44	7	8	40	British	Sir R. Roper & Co.	386	0	22	9	Philadelphia, Pa.	6,890	6,347	4,453
Calmar	6	22	35	7	8	40	7	8	40	American	Calmar S. S. Corp.	491	5	26	0	New York, N. Y.	6,200	10,491	7,601
J. L. Lucken- bach	6	22	35	7	9	55	7	9	55	American	Amer-Hawaiian Line	448	9	25	0	Boston, Mass.	8,000	9,292	6,861
Calliope ¹⁴	6	23	30	7	11	10	7	11	10	American	Luckenbach Line	470	2	29	0	Boston, Mass.	11,300	9,001	5,927
Invincible	7	8	05	7	13	05	7	13	05	Danish	Baltic-Amer. Pet. Co.	440	0	27	0	Rotterdam, Holland	10,204	8,329	6,157
Karachi Maru	7	15	05	7	16	10	7	16	10	American	American Pioneer Line	385	0	28	0	New York, N. Y.	7,400	5,914	4,388
Pacific	7	15	05	7	23	15	8	6	35	Japanese	Kokusa Kisen Kaisha.	435	0	21	5	New York, N. Y.	8,589	9,633	6,968
Export ¹⁴	7	19	30	8	9	10	8	9	10	British	Furness, Withy & Co.	399	4	27	3	Glasgow, Scotland	7,200	6,138	4,334
Pacific Cedar	7	20	10	8	13	55	8	13	55	American	Dimon S. S. Corp.	429	3	24	5	New York, N. Y.	9,400	7,709	5,517
Dean Emery	8	3	45	8	4	06	8	11	30	American	Pan-Amor. Pet. & Tr. Co.	549	0	26	0	Baltimore, Md.	20,000	14,325	4,635
Lehore	8	3	45	8	14	45	8	14	45	American	Ore S. S. Corp.	275	9	39	9	New York, N. Y.	2,495	1,936	1,304
R. D. Leonard	8	22	45	8	7	03	8	15	00	American	Atlantic Refining Co.	440	2	26	0	Philadelphia, Pa.	9,214	7,935	5,065
Phobos ¹⁴	8	6	00	8	8	06	8	15	55	Dutch	Anglo-Saxon Pet. Co.	488	7	38	6	Land's End, Eng.	8,475	7,935	5,065
Sachsen	8	9	10	8	10	03	8	17	45	German	Hamburg-American Line	298	6	23	4	Hamburg, Germany	3,500	2,832	1,803
Santa Tecla	9	00	14	9	1	14	9	9	05	American	N. O. & S. A. S. Co.	404	0	23	4	New Orleans, La.	5,087	6,777	4,761
Agawist	9	3	00	9	2	19	9	9	00	American	Amer-Hawaiian Line	370	1	24	2	Boston, Mass.	7,100	6,253	4,068
Point Bonita	9	4	10	9	4	27	9	12	10	American	DuPont de Nemours	324	0	21	0	New Orleans, La.	3,000	3,984	2,617
Cauca ¹⁴	9	7	50	9	9	54	9	18	25	Colombian	National Navigation Co.	107	2	11	0	Cristobal, C. Z.	281	238	163
Willipito	9	12	00	9	13	45	9	20	25	American	Williams S. S. Line	415	1	25	3	New York, N. Y.	9,000	7,733	5,805
La Perla	9	22	00	10	3	14	10	10	40	American	United Fruit Co.	325	1	28	2	Cristobal, C. Z.	865	4,033	2,261
Westmoreland	10	3	45	10	5	05	10	12	20	British	Federal Steam Nav. Co.	473	0	25	6	Liverpool, England	5,690	10,273	7,456
Atlantic Sun	10	4	00	10	6	06	10	13	40	American	Sun Oil Co.	429	3	26	0	Philadelphia, Pa.	9,258	7,568	5,283
David	10	8	45	10	9	31	10	17	00	American	Tidewater Oil Co.	430	0	26	0	New York, N. Y.	8,744	7,629	5,325
McKevly	10	8	55	10	10	04	10	17	40	American	Penn Line	381	4	25	3	East coast, U. S. A.	7,500	6,291	4,530
Fernmoor	10	9	10	10	13	15	10	18	15	Norwegian	Roland Line	216	5	29	15	Cristobal, C. Z.	780	1,105	698
Dryden	10	11	00	10	11	38	10	19	20	German	Tampa Inter-ocean Co.	434	3	27	26	New Orleans, La.	8,770	7,983	5,893
Martha ¹⁴	10	4	00	10	11	50	10	19	55	Norwegian	Chr. Hansevig	183	2	30	0	Cristobal, C. Z.	780	780	504

¹⁴ Motor ship.¹⁵ Sugar, copra, oil, and pineapples.¹⁶ For orders.¹⁷ Nitrates, ore, and beans.¹⁸ Lumber and canned goods.¹⁹ Coconut oil, sugar, and copra.

Poseidon	10	11	15	10	12	22	10	21	20	10	22	40	German	Hamburg-American Line	450	7	57	2	24	8	Antofagasta, Chile	Hamburg, Germany	Nitrates	8 760	7 684	5 234
Lico Morsk	10	21	45	11	2	34	11	11	00	11	11	00	Danish	A. P. Moller	306	6	43	9	20	9	Manila, P. I.	North of Hatteras	(²⁴)	3 835	3 361	2 562
Erfurt	11	1	50	11	7	46	11	14	55	11	16	10	German	Roland Line	360	6	51	0	13	6	Champerico, Guat.	Bremen, Germany	Ballast	5 088	3 533	
Silver Shell	11	2	15	11	9	01	11	16	55	11	18	15	Dutch	Anglo-Saxon Pet. Co.	187	0	53	0	26	0	Bahia, C. Z.	United Kingdom	Gasoline	7 563	6 213	4 343
Swan	11	8	45	11	8	45	11	16	55	11	18	05	American	U. S. Navy	324	0	46	2	24	2	Aberdeen, Wash.	Cristobal, C. Z.	Lumber	4 800	3 984	2 612
Swaneden	11	14	20	11	10	05	11	18	30	12	1	05	American	Transmarine Lines	380	0	54	2	24	5	Los Angeles, Calif.	Port Newark, N. J.	General	7 000	5 653	4 122
Sacramento	10	10	11	10	57	11	19	10	11	19	10	10	British	Charles Nelson & Co.	426	3	54	1	25	6	Seattle, Wash.	Baltimore, Md.	Frozen, general	4 150	7 506	5 261
Oregonstar	10	10	11	10	57	11	19	10	11	19	10	10	British	Blue Star Line	426	3	54	1	25	6	Seattle, Wash.	Buenos Aires, Arg.	Frozen, general	4 150	7 506	5 261

¹ Tanker.

²⁵ Sugar and deacidated cocoanuts.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 5	Pastores	United Fruit Co.	Port Limon, Costa Rica.	May 5	Inapaquina ²³	United Fruit Co.	Colon, R. P.
May 5	Coppename	United Fruit Co.	Puerto Colombia.	May 5	Saramacca	United Fruit Co.	New Orleans, La.
May 5	Montana	Huasteca Petroleum Co.	Aruba, D. W. I.	May 5	Waukas	Stand. Fruit S. Co.	San Blas, R. P.
May 6	Maravi	United Fruit Co.	New York, N. Y.	May 5	Pastores	United Fruit Co.	New York via Habana.
May 6	Acacia ²¹	U. S. Government	Guantanamo, Cuba.	May 6	Heredia	United Fruit Co.	New Orleans and waypoints.
May 6	Teutonia	Hamburg-American Line	Tampico, Mexico.	May 6	Montana	Huasteca Petroleum Co.	Aruba, D. W. I.
May 6	Ulva	United Fruit Co.	New York via Habana.	May 6	Coppename	United Fruit Co.	Port Limon via Becas.
May 6	No. 9685 ²²	Pan-American Airways	Tela via waypoints.	May 7	Maravi	United Fruit Co.	Puerto Colombia.
May 6	No. 9664 ²²	Pan-American Airways	Tela via waypoints.	May 7	Teutonia	Hamburg-American Line	Europe via waypoints.
May 6	No. 9775 ²²	Pan-American Airways	Guayaquil via waypoints.	May 8	Vao Renselaer	Royal Neth. S. S. Co.	Port Limon, Costa Rica.
May 7	Van Renselaer	Royal Netherlands S. S. Co.	Amsterdam via waypoints.	May 8	Anachucuna ²¹	United Fruit Co.	Colon, R. P.
May 7	Inapaquina ²³	United Fruit Co.	Colon, R. P.	May 8	Inapaquina ²³	United Fruit Co.	Colon, R. P.
May 7	Anachucuna ²³	United Fruit Co.	Colon, R. P.	May 8	Linda S. ²⁴	A. L. Surgeon	Bluefields, Nicaragua.
May 8	Anachucuna ²³	United Fruit Co.	Colon, R. P.	May 8	Anachucuna ²³	United Fruit Co.	Colon, R. P.
May 8	Cristobal	Panama R. R. S. S. Line	New York via Haiti.	May 8	Ulva	United Fruit Co.	Port Limon, Costa Rica.
May 8	Linda S. ²⁴	A. L. Surgeon	Colon, R. P.	May 9	Colombia No. 28 ²²	Seadta Airplane Co.	Barranquilla, Colombia.
May 8	Ninian	Leyland Line	Liverpool via waypoints.	May 9	Zacapa	United Fruit Co.	New York via waypoints.
May 8	Colombia No. 28 ²²	Seadta Airplane Co.	New York via Kingston.	May 9	No. 9685 ²¹	Pan-American Airways	Tela via waypoints.
May 9	Atlantida	United Fruit Co.	Barranquilla, Colombia.	May 9	Ninian	Leyland Line	Liverpool via waypoints.
May 9	Inapaquina ²³	United Fruit Co.	Colon, R. P.	May 10	Inapaquina ²³	United Fruit Co.	Colon, R. P.
May 10	Coppename	United Fruit Co.	New Orleans via Habana.	May 10	Coppename	United Fruit Co.	New Orleans, La.
May 10	Suriname	United Fruit Co.	Bocas, R. P.	May 10	Eugenie D. ²³	R. Feuillebois	Bluefields and San Andre.
May 10	Eugenie D. ²⁵	R. Feuillebois	New Orleans, La.	May 10	Annetta I. ²³	A. Tagarapoulos	Colon, R. P.
May 10	Annetta I. ²³	A. Tagarapoulos	Colon, R. P.	May 10	Anachucuna ²³	United Fruit Co.	Colon, R. P.
May 10	Anachucuna ²³	United Fruit Co.	Colon, R. P.	May 11	Atlantida	United Fruit S. Co.	New Orleans via waypoints.
May 10	Queen of Scots ²⁶	A. J. Drexel	High seas	May 11	Arguani	Elders & Fyffes Line	Bristol via Kingston.
May 11	Waukas	Stand. Fruit S. S. Co.	San Blas, R. P.	May 11	Van Renselaer	Royal Neth. S. S. Co.	Amsterdam via waypoints.
May 11	Van Renselaer	Royal Neth. S. S. Co.	Port Limon, Costa Rica.	May 11	Suriname	United Fruit Co.	Port Limon via Becas.
May 11	Arguani	Elders & Fyffes Line	Avonmouth via waypoints.	May 11	No. 9664 ²²	Pan-American Airways	Tela via waypoints.
May 11	Cartago	United Fruit Co.	New Orleans via Habana.				
May 11	No. 9685 ²²	Pan-American Airways	Tela via waypoints.				

²¹ Lighthouse tender.

²² Air-mail carrier.

²³ Motor boat.

²⁴ Motor schooner.

²⁵ Schooner.

²⁶ Yacht.

* Other than ships passing through the Canal.

(Continued on page 590, column 2.)

Insurance Business in the Canal Zone, Calendar Year 1928.

Eight insurance companies, all with head offices in the United States, transacted business in the Canal Zone in 1928. All companies licensed for 1927, with the exception of one surety company, renewed their licenses for 1928. A summary of the business follows:

MISCELLANEOUS COMPANIES.

	Premiums received in 1928.	Losses paid in 1928.
Accident	\$5,117.24	\$121.43
Automobile liability	1,077.92	57.80
Fidelity	648.74	30.00
Fire	4,026.66	
Health	1,341.75	617.45
Liability other than automobile	7,712.97	3,688.26
Vehicle	1,584.88	151.70
Automobile property damage	219.30	
Surety	2,795.79	
Plate glass	19.74	
Totals	24,544.99	4,666.64

Premium tax paid in Canal Zone \$368.17.

* Represents credit.

LIFE INSURANCE COMPANIES.

	Number.	Amount.
Policies in force, December 31, 1927	911	\$2,699,672.00
Policies issued during 1928	118	402,872.00
Totals	1,029	3,015,544.00
Policies lapsed during 1928	73	242,257.00
Policies in force, December 31, 1928	956	2,772,287.00
Losses and claims unpaid, December 31, 1927		
Losses and claims incurred during 1928	3	6,616.00
Totals	3	6,616.00
Losses and claims settled during 1928	3	6,616.00
Losses and claims unpaid on December 31, 1928		
Premiums collected during 1928		105,973.85
Premium tax paid in Canal Zone		1,603.38

The relatively small amount of fire insurance business written is due to the fact that there are few structures in the Canal Zone outside of those owned by the Government of the United States, and none of such property is covered by fire insurance.

"Nosa" Line Adds Vessels to Service.

The New Orleans & South America Line (NOSA Line), operating in the service between the Gulf ports of the United States and the west coast of South America, has announced that it will add three vessels to its service. The newly acquired ships, which are to be known as the *Nosa King*, *Nosa Queen*, and *Nosa Prince*, were formerly owned by the United States Shipping Board, and were built in the yards of the Mobile Shipbuilding Company in 1920. Each vessel is 320 feet long, 46.0 beam, and of 3,545 gross tons. The ships will be reconditioned and provided with limited passenger accommodations before being placed in the service.

The *Nosa King* has already passed through Canal on the way to South America, on April 9, 1929.

Commercial Traffic Through the Panama Canal in April, 1929 by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of April, 1929, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for April, 1928 and 1927. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal: . . .	79	402,319	305,008	491,302	304,606	\$351,261.34	300,228
United States							
East coast of United States to west coast of South America:							
British	12	51,767	42,147	72,751	44,412	41,779.71	10,289
Chilean	1	4,672	3,433	7,310	3,976	4,291.25	2,332
Japanese	1	4,611	4,223	5,838	4,219	3,819.92	
Norwegian	1	4,730	4,105	6,583	4,119	3,405.60	
Panamanian	1	4,897	4,014	6,386	4,067	3,525.84	
Swedish	2	2,591	2,293	3,283	2,280	2,866.25	847
United States	15	63,879	52,038	90,803	51,520	51,404.55	19,632
Totals	33	137,147	112,253	192,954	114,593	110,593.12	33,100
Europe to west coast of South America:							
Belgian	1	6,211	4,522	7,130	4,013	4,471.92	
British	5	31,762	23,872	39,713	24,835	29,840.00	20,732
Danzig	1	5,927	5,207	8,744	5,026	4,267.44	
Dutch	2	12,939	7,343	12,494	7,552	9,178.75	9,186
French	3	11,524	8,984	14,670	8,654	11,230.00	13,563
German	5	24,291	16,949	27,600	16,991	21,186.25	25,609
Italian	2	11,600	9,344	16,902	9,193	11,680.00	2,468
Norwegian	3	9,639	6,979	11,640	6,934	8,723.75	15,938
Yugoslav	2	7,594	5,491	8,942	5,484	5,806.08	5,100
Totals	24	121,487	88,691	147,835	88,682	106,384.19	92,596
East coast of United States to Far East:							
British	4	22,167	17,523	27,782	17,426	21,903.75	30,838
Japanese	7	34,416	29,427	43,511	28,752	36,205.75	48,073
Norwegian	2	6,743	3,805	6,424	3,788	4,756.25	8,452
United States	6	24,654	19,419	29,985	18,526	22,958.94	26,222
Totals	19	87,980	70,174	107,702	68,492	85,824.69	113,585
Europe to west coast Canada:							
British	7	36,972	26,414	42,253	26,439	30,123.61	8,465
Danish	1	5,660	5,233	6,919	5,223	6,541.25	6,170
Dutch	2	13,668	9,950	15,694	9,932	12,437.50	7,532
French	1	4,936	3,385	5,751	3,555	4,231.25	3,545
German	2	10,966	7,458	12,698	7,685	9,322.50	12,193
Italian	1	6,054	5,031	7,061	4,460	6,288.75	1,510
Norwegian	1	5,445	3,031	5,013	3,028	3,788.75	8,388
Swedish	1	4,860	2,781	4,960	3,665	3,476.25	5,231
Totals	16	88,561	63,283	100,349	63,987	76,209.86	53,034
Europe to Australasia:							
British	9	67,046	48,950	79,688	49,464	61,187.50	62,039
French	1	5,364	4,287	7,133	4,335	5,358.75	2,469
Norwegian	1	2,299	1,881	3,214	1,869	2,351.25	4,009
Swedish	1	5,193	3,147	5,223	3,119	3,933.75	1,099
Totals	12	79,902	58,265	95,258	58,787	72,831.25	69,616
Cristobal to west coast South America:							
Colombian	4	1,113	1,058	1,776	1,068	1,303.70	1,133
Dutch	2	1,484	588	1,560	646	735.00	229
German	5	4,232	2,879	5,398	2,974	3,598.75	2,543
Peruvian	1	2,959	1,515	4,617	2,427	1,893.75	110
Totals	12	9,788	6,040	13,351	7,115	7,531.20	4,015

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Europe to west coast United States:							
British	2	9,011	7,338	12,086	7,191	\$6,487.92	.....
Danish	1	4,097	3,355	5,722	3,406	2,949.84	.....
Dutch	1	5,065	4,540	7,412	4,235	3,646.80	.....
German	1	6,680	4,909	8,116	4,887	6,136.25	5,265
Norwegian	2	11,122	9,168	14,897	9,146	9,641.71	3,980
Panaman	1	6,650	5,650	8,947	5,651	4,788.00	.....
Swedish	1	6,295	5,189	8,945	6,592	4,532.40	.....
United States	2	13,274	10,909	17,831	10,852	11,080.05	8,346
Totals	11	62,194	51,058	83,956	51,960	49,262.97	17,591
East coast United States to Australasia:							
British	7	34,560	25,688	41,080	25,608	32,110.00	33,583
United States	1	4,881	3,374	5,428	3,374	4,217.50	5,040
Totals	8	39,441	29,062	46,508	28,982	36,327.50	38,623
East coast United States to Philippine Islands:							
British	2	12,126	8,210	13,188	8,025	10,262.50	12,664
Danish	1	2,967	1,920	3,177	1,931	2,400.00	5,250
Norwegian	1	7,075	4,009	6,751	4,113	5,011.25	7,184
United States	1	5,906	5,469	6,959	5,438	6,836.25	8,244
Totals	5	28,074	19,608	30,075	19,507	24,510.00	33,342
Cristobal to west coast Central America:							
British	3	2,063	1,900	3,436	1,906	2,353.90	3,022
Norwegian	2	1,110	908	1,587	873	1,135.00	1,946
Totals	5	3,173	2,808	5,023	2,779	3,488.90	4,968
East coast Canada to Australasia:							
British	4	17,912	14,205	21,281	14,227	17,756.25	14,594
Cristobal to west coast United States:							
United States	3	5,924	5,231	8,468	5,080	6,538.75	3,505
South American Intercoastal:							
British	2	5,151	4,181	7,038	4,146	5,226.25	8,633
United States	1	1,765	1,621	2,606	1,612	2,026.25	400
Totals	3	6,916	5,802	9,644	5,758	7,252.50	9,033
Europe to west coast Central America:							
German	1	3,500	2,809	4,611	2,784	3,511.25	1,176
Norwegian	1	1,676	1,403	1,733	968	1,753.75	2,245
Totals	2	5,176	4,212	6,344	3,752	5,265.00	3,421
West Indies to west coast of Canada:							
British	2	2,207	1,239	2,338	1,249	4,158.75	4,109
East coast of Central America to west coast United States:							
United States	2	4,620	4,302	6,988	4,292	5,324.45	1,613
East coast United States to west coast Canada:							
British	1	4,521	3,132	5,080	3,132	3,255.12	.....
United States	1	4,964	3,663	5,856	3,663	4,578.75	7,621
Totals	2	9,485	6,795	10,936	6,795	7,833.87	7,621
Around the world:							
United States	2	17,697	12,500	21,035	12,500	15,625.00	9,483
East coast of United States to west coast of Central America:							
British	1	2,988	2,345	3,786	2,317	2,931.25	4,914
Norwegian	1	1,716	1,490	2,289	1,355	1,862.50	2,997
Totals	2	4,704	3,835	6,075	3,672	4,793.75	7,911
East coast United States to Hawaii:							
United States	2	3,470	3,070	5,294	3,084	3,837.50	5,543

* Includes British Cruiser of 5,200 tons displacement.

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Europe to Hawaii:							
Swedish.....	1	5,661	3,406	5,642	4,320	\$4,257.50	7,120
Canadian Intercoastal:							
British.....	1	4,068	3,306	5,492	3,380	4,132.50	73
East coast Canada to west coast South America:							
British.....	1	7,648	6,391	11,410	6,711	5,506.56	.....
Central American Intercoastal:							
Mexican.....	21	.....	.....	.....	.....	613.50	.....
East coast of South America to west coast Canada:							
Norwegian.....	1	4,092	2,342	3,870	2,327	2,927.50	4,078
East coast South America to Far East:							
Japanese.....	1	7,292	5,924	9,446	5,919	7,405.00	5,022
Cristobal, C.Z., to Balboa, C.Z.:							
Panaman.....	1	20	15	20	16	14.40	.....
West Indies to west coast United States:							
British.....	1	4,118	2,682	4,300	2,881	3,352.50	5,018
West Indies to Australasia:							
British.....	1	3,682	3,610	4,553	2,892	4,418.40	6,608
West Indies to Far East:							
British.....	1	5,867	3,468	5,677	3,510	4,335.00	7,000
Foreign Vessels in Ballast— U. S. Intercoastal:							
British.....	1	9,885	8,727	16,436	9,643	7,117.20	.....
Totals, April, 1929.....	259	1,190,510	907,312	1,479,562	911,498	1,046,690.90	862,450
Totals, April, 1928.....	271	1,194,004	912,709	1,500,455	916,718	1,031,935.91	742,388
Totals, April, 1927.....	226	1,109,275	864,865	1,417,042	862,833	960,971.53	697,329

* Cruiser of 1,227 tons displacement.

PACIFIC TO ATLANTIC.

United States Intercoastal:							
United States.....	72	393,463	300,527	485,087	299,877	\$375,658.70	542,819
West coast Canada to Europe:							
Belgian.....	1	3,773	3,104	4,875	3,701	3,830.00	6,270
British.....	25	127,419	90,929	147,156	91,167	113,661.25	190,518
Danish.....	1	5,588	4,473	7,014	4,470	5,591.25	9,972
Dutch.....	2	13,715	10,959	17,772	10,981	13,698.75	17,317
French.....	2	9,739	7,446	12,132	7,452	9,307.50	13,391
German.....	2	13,456	8,426	14,388	8,606	10,532.50	17,095
Italian.....	1	6,025	5,056	7,098	4,498	6,320.00	9,034
Japanese.....	2	8,857	8,777	11,730	8,526	10,628.40	15,181
Norwegian.....	2	9,333	7,452	11,914	7,448	9,315.00	14,245
Swedish.....	2	10,684	7,554	12,422	9,243	9,442.50	16,937
United States.....	1	5,100	3,732	5,819	3,643	4,665.00	7,764
Totals.....	41	213,689	157,908	252,320	159,735	197,042.15	317,724
West coast South America to east coast of United States:							
British.....	12	51,399	39,920	66,496	41,169	49,900.00	77,517
Chilean.....	2	7,768	6,066	10,874	6,233	7,582.50	9,666
Danish.....	1	4,519	3,595	5,886	3,658	4,493.75	8,800
German.....	2	5,146	4,188	6,155	3,742	5,188.90	6,476
Japanese.....	1	4,665	4,268	5,831	4,227	5,335.00	8,200
Norwegian.....	3	10,688	8,314	13,441	8,284	10,392.50	22,290
Panaman.....	1	4,897	4,014	6,386	4,067	5,017.50	8,875
Swedish.....	3	10,430	8,793	32,276	9,816	10,991.25	44,369
United States.....	15	66,857	54,727	93,314	54,119	67,509.65	146,840
Totals.....	40	166,369	97,885	240,659	98,315	166,410.75	333,033
West coast South America to Europe:							
British.....	6	33,742	27,589	45,199	27,845	34,486.25	38,864
Danish.....	1	4,623	2,989	4,750	3,006	3,736.25	7,480
Danzig.....	1	5,928	5,202	8,744	5,026	6,502.50	11,300
Dutch.....	3	19,821	11,148	19,762	11,368	13,935.00	29,506
French.....	2	8,613	7,426	11,694	7,332	9,282.50	14,787
German.....	3	12,944	10,266	16,464	10,166	12,832.50	21,851
Greek.....	3	11,930	8,416	13,847	8,533	10,520.00	21,201
Italian.....	2	13,336	8,598	17,110	10,206	10,747.50	9,309
United States.....	1	2,628	2,009	3,286	1,998	2,511.25	4,916
Yugoslav.....	2	7,667	5,957	9,313	5,915	7,446.25	14,300
Totals.....	24	121,232	89,600	150,169	91,395	112,000.00	173,514

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast United States to Europe:.....							
British.....	7	28,366	22,948	38,251	23,150	\$28,685.00	47,176
Danish.....	1	5,286	4,207	6,636	4,236	5,258.75	9,491
Danzig.....	1	6,338	5,236	8,956	5,041	6,545.00	11,219
Italian.....	2	10,456	8,819	13,168	8,343	11,023.75	12,032
Norwegian.....	5	24,846	20,305	33,790	20,153	25,381.25	46,710
Swedish.....	1	5,337	2,861	5,210	3,747	3,576.25	5,575
United States.....	2	9,282	7,172	11,554	7,141	8,965.00	13,720
Totals.....	19	89,911	71,548	117,565	71,811	89,435.00	145,923
West coast South America to Cristobal, C. Z.:.....							
Colombian.....	4	1,074	1,007	1,750	1,011	1,258.75	1,200
Dutch.....	2	1,484	588	1,560	646	735.00	920
German.....	5	4,232	2,879	5,398	2,973	3,598.75	3,963
Peruvian.....	2	5,364	2,504	7,922	3,941	3,130.00	3,989
Swedish.....	1	1,078	986	1,683	1,226	1,232.50	867
Totals.....	14	13,232	7,964	13,313	9,797	9,955.00	10,939
Philippines to east coast of United States:.....							
Danish.....	2	6,775	4,450	7,397	4,480	5,562.50	12,000
Japanese.....	4	19,339	16,663	25,247	16,303	20,714.30	26,659
Norwegian.....	2	8,608	4,741	8,111	4,856	5,926.25	13,750
United States.....	5	25,679	22,049	31,384	21,813	27,561.25	40,779
Totals.....	13	60,401	47,933	72,139	47,452	59,764.30	93,188
Australasia to Europe:.....							
British.....	10	77,664	54,496	90,621	56,697	68,120.00	64,235
French.....	1	5,162	4,357	6,889	4,446	5,446.25	3,270
Totals.....	11	82,826	58,853	97,510	61,143	73,566.25	67,505
West coast Central America to West Indies:.....							
British.....	2	1,328	1,252	2,308	1,256	1,565.00	1,462
Colombian.....	2	1,813	1,501	2,460	1,559	1,310.82	.....
Norwegian.....	3	2,826	2,398	3,876	2,228	2,204.65	934
Totals.....	7	5,967	5,151	8,644	5,043	5,080.47	2,396
West coast Canada to East coast United States:.....							
Danish.....	2	8,024	6,452	9,296	6,553	8,065.00	12,253
United States.....	3	10,753	8,304	13,723	8,442	10,380.00	13,826
Totals.....	5	1,877	14,756	23,019	14,995	18,445.00	26,079
West coast United States to east coast Central America:.....							
Danish.....	1	1,716	1,336	2,245	1,348	1,670.00	2,433
United States.....	4	8,995	8,366	13,482	8,211	10,404.45	3,066
Totals.....	5	10,711	9,702	15,727	9,559	12,074.45	5,499
Australasia to east coast of United States:.....							
British.....	1	4,663	2,588	4,388	2,570	3,235.00	7,550
Norwegian.....	1	6,155	4,715	8,224	4,882	5,893.75	8,166
United States.....	2	15,597	13,554	19,125	13,303	16,942.50	19,250
Totals.....	4	26,415	20,857	31,737	20,755	26,071.25	34,966
West coast of South America to east coast Canada:.....							
British.....	3	19,393	16,290	29,929	17,362	20,362.25	40,800
Danzig.....	1	6,063	5,196	8,932	5,002	6,495.00	11,500
Totals.....	4	25,456	21,486	38,861	22,364	26,857.25	52,300
West coast South America to West Indies:.....							
British.....	3	9,043	7,544	12,620	7,516	6,460.64	.....
Canadian Intercoastal: British.....	3	12,139	9,656	16,026	9,986	12,070.00	18,885

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast Central America to Europe:							
German.....	2	3,669	3,122	5,274	3,099	\$3,901.75	3,905
Norwegian.....	1	1,134	1,022	1,749	1,019	1,277.50	1,649
Totals.....	3	4,803	4,144	7,023	4,118	5,179.25	5,554
Australasia to east coast of Canada:							
British.....	2	8,334	6,609	10,941	6,683	8,261.25	7,530
West coast of United States to Cristobal, C. Z.:							
Panaman.....	1	2,606	1,384	2,461	1,384	1,730.00	1,258
United States.....	1	1,549	1,167	1,974	1,161	1,458.75	1,516
Totals.....	2	4,155	2,551	4,435	2,545	3,188.75	2,774
West coast United States to West Indies:							
British.....	1	4,062	3,579	5,880	3,531	4,473.75	8,303
West coast Canada to West Indies:							
Norwegian.....	1	3,489	2,504	4,265	2,501	3,130.00	4,797
West coast Central America to east coast South America:							
United States.....	1	950	923	1,768	981	1,140.00	240
Balboa, C. Z. to east coast of United States:							
United States.....	1	263	243	578	251	189.36	.....
Hawaii to east coast United States:							
United States.....	1	1,740	1,542	2,647	1,542	1,927.50	3,255
Around the world:							
British.....	1	14,476	8,136	21,861	12,292	10,170.00	.....
Foreign Vessels in Ballast— U. S. Interoceanic:							
Norwegian.....	1	5,460	4,398	7,350	4,397	3,931.20	.....
Far East to West Indies:							
Spanish.....	1	.....	.....	.....	.....	1,691.50	.....
Balboa to Cristobal:							
United States.....	1	303	296	659	296	222.00	.....
Totals, April, 1929.....	281	1,297,666	992,295	1,647,803	1,005,880	1,234,396.37	1,857,218
Totals, April, 1928.....	260	1,190,487	926,312	1,511,839	929,258	1,155,671.91	1,731,496
Totals, April, 1927.....	238	1,115,225	885,495	1,435,496	885,153	1,104,235.39	1,732,478

* Training ships of 3,383 tons displacement.

Notice to Mariners.

West Coast Colombia, Buenaventura River.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 6, 1929.

No. 535.

The following is quoted from Notice to Mariners, Washington, D. C., April 27, 1929:

Colombia, West Coast, Buenaventura River, Information concerning Light Buoys. The master of the German steamer *Paraguay* reports as follows concerning light buoys in Buenaventura River:

(a) The light buoy about 1½ miles south from Vigia de San Pablo shows flashing red. Approximate position: 3° 47' N., 77° 16' W.

(b) The light buoy marking the wreck about 2 miles 54° from Soldado Point Light Buoy shows flashing red. Approximate position: 3° 49' 30" N., 77° 10' 00" W.

(c) A light buoy showing a flashing red light has been established to mark a wreck in approximately latitude 3° 50' 39" N., longitude 77° 7' 27" W.

Colombia, West Coast, Buenaventura River, Wreck, Light Buoys Established, Further Information. The master of the German steamer *Paraguay* reports that the wreck of the *Tritonia*, sunk about 1,300 yards, 206° from the pierhead at Buenaventura is marked by two light buoys, each showing a flashing red light. Approximate position: 3° 52' 30" N., 77° 6' 00" W.

H. BURGESS,
Governor.

United States Intercoastal Traffic by Commodities for April, 1929.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for April, 1929, and the totals for April, 1928 and 1927. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Agricultural implements.....	1,514		1,514
Alfalfa meal.....		1,412	1,412
Ammonia.....	140		140
Ammunition.....	62		62
Asbestos.....	582		582
Asphalt.....	123	33	156
Automobiles.....	3,038	169	3,207
Automobile accessories.....	467		467
Bark, cascara.....		7	7
Barley.....		56	56
Beans.....	64	2,979	3,043
Bones and bonemeal.....	116		116
Borax.....	100	1,175	1,275
Bricks.....	186		186
Burlap.....	162	117	279
Calcium carbide.....	145		145
Camphor.....		73	73
Canned goods:			
Fish.....	720	6,125	6,845
Fruit.....	207	18,474	18,681
Meat.....	50	593	643
Milk.....	17	743	760
Soup.....	1,539		1,539
Vegetables.....	667	4,550	5,217
Miscellaneous.....	1,801	2,088	3,889
Carbon black.....	324		324
Celite filtercd.....		946	946
Cement.....	850	155	1,005
Charcoal.....	1,166		1,166
Chemicals.....	1,389	567	1,956
China and fire clay.....	25		25
Coal.....	6,000		6,000
Cocoa.....	105	4	109
Coconuts.....		649	649
Coffee.....	190	140	330
Coke.....	2,013		2,013
Cold storage:			
Butter.....		23	23
Lard.....	300		300
Other.....	95		95
Confectionery.....	598		598
Cork.....	79		79
Cotton.....	115	3,448	3,563
Drugs.....	769		769
Dyes.....	32	21	53
Earthenware.....	146		146
Explosives.....	56	22	78
Fertilizer.....	444		444
Flour.....	130	6,581	6,711
Fruit:			
Dried.....		8,147	8,147
Fresh.....	182	36	218
Fuller's earth.....	467		467
Furniture.....	506		506
General.....	64,951	13,477	78,428
Glass and glassware.....	1,521	325	1,846
Granite.....	39		39
Guano.....	100		100
Hair.....	38	21	59
Hardwoods.....	2,317	643	2,960
Hay.....		85	85
Hemp.....	366	1,536	1,902
Honey.....		109	109
Infusorial earth.....		25	25
Ink.....	33		33

Commodity.	Atlantic to Pacific	Pacific to Atlantic.	Totals.
Jute.....	136	154	290
Lineoleum.....	1,030		1,030
Liquors.....	199		199
Lumber.....	4,457	192,217	196,674
Malt.....	121		121
Manufactured goods:			
Iron and steel.....	125,827	1,149	126,976
Machinery.....	4,006	942	4,948
Railroad material.....	5,273	11	5,284
Tinplate.....	12,688		12,688
Textiles.....	2,953	347	3,300
Miscellaneous.....	6,657	1,067	7,724
Matches.....	162	12	174
Metals:			
Antimony.....		878	878
Copper.....	74	3,746	3,820
Iron.....	3,360	83	3,443
Lead.....		455	455
Scrap.....	527	408	935
Zinc.....		112	112
Milk, powdered.....		446	446
Molasses.....	73		73
Musical instruments.....	30		30
Nuts.....	20		20
Oils:			
Coconut.....		25	25
Cottonseed.....	44		44
Crude.....		10,400	10,400
Gas oil, fuel oil.....		10,160	10,160
Gasoline, benzine, naphtha.....	354	188,213	188,567
Kerosene.....		10,240	10,240
Linseed.....	61		61
Lubricating and greases.....	2,904	27	2,931
Olive.....	25		25
Vegetable.....	931	187	1,118
Wood.....	21		21
Other.....		13	13
Ores:			
Antimony.....		100	100
Copper.....	75	1,395	1,470
Iron.....		29	29
Magnesite.....	50	100	150
Manganese.....	23		23
Tin.....		120	120
Other.....	1,600	30	1,630
Paint and varnish.....	329	284	613
Paper.....	6,239	7,716	13,955
Paper pulp.....	71	2,742	2,813
Peanuts.....	301	474	775
Phosphates.....	61		61
Plaster.....	18		18
Porcelain.....	121	704	825
Rags.....		1,091	1,091
Rice.....	220		220
Rope.....	72	258	330
Rosin.....	402		402
Rubber:			
Manufactured.....	1,440	311	1,751
Raw.....	60		60
Scrap.....		83	83
Salt.....	108		108
Seeds:			
Hemp.....		22	22
Other.....		124	124
Shells.....	1,161	28	1,189
Silk.....		659	659
Skins and hides.....		2,517	2,517
Slate.....	42		42
Soap.....	2,339	232	2,571
Soda.....	492		492
Soda ash.....	768		768
Soda, bicarbonate.....	224		224
Soda, caustic.....	760		760
Starch.....	27		27
Sugar.....	3,520	21,441	24,961
Sulphur.....	5,577		5,577
Syrup.....	220		220
Talc.....		159	159
Tallow.....	27	326	353
Tar.....	116		116
Tea.....	7	44	51
Tobacco.....	1,535	86	1,621
Toys.....		27	27
Turpentine.....	40		40
Vegetables.....		37	37

Commodity.	Atlantic to Pacific	Pacific to Atlantic.	Totals.
Waste.....	12	.....	12
Wax.....	180	151	331
Wheat.....	.....	570	570
Wool.....	25	2,423	2,448
Totals, April, 1929.....	297,271	541,129	838,400
Totals, April, 1928.....	232,777	594,882	827,659
Totals, April, 1927.....	258,973	691,003	949,976

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending May 4, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Colombo.....	Italian Line.....		April 28.....		
Nosa Chief.....	N. O. & S. A. S. S. Co.....		April 28.....		176
Calamares.....	United Fruit Co.....	April 28.....	April 28.....	14	187
Parthenia.....	Donaldson Bros.....	April 28.....	April 29.....	(¹)	266
Orduna.....	Pacific Steam Nav. Co.....	April 28.....	April 29.....	156	84
Orazio.....	Italian Line.....	April 28.....	April 29.....	35	947
Cuba.....	French Line.....	April 28.....	April 30.....	338	752
Magallanes.....	Spanish Line.....	April 28.....	May 2.....	176	478½
Ebro.....	Pacific Steam Nav. Co.....	April 29.....	April 29.....	11	134
Durazzo.....	Hamburg-American Line.....		April 29.....		954
Ancon.....	Panama R. R. S. S. Line.....		April 29.....		2,831
Parismina.....	United Fruit Co.....		April 29.....		440
Acajutla.....	Pacific Steam Nav. Co.....		April 29.....		1,112
Manizales.....	North German Lloyd.....		April 29.....		319
Wanks.....	Stand. Fruit S. S. Co.....		April 29.....		3
Grandon.....	North German Lloyd.....	April 29.....	April 30.....	230	154
Illinois.....	French Line.....	April 29.....	April 30.....	479	6
Lochmonar.....	Royal Mail S. P. Co.....	April 30.....	April 30.....	(¹)	232
Almagro.....	Pacific Steam Nav. Co.....	April 30.....	April 30.....	82	39
Boskoop.....	Royal Neth. S. S. Co.....	April 30.....	April 30.....	120	3
Linda S.....	R. Feuillebois.....	April 30.....	April 30.....	(¹)	31½
Finn.....	Colombian Mar. Co.....	April 30.....	April 30.....	88	(²)
Saramacca.....	United Fruit Co.....	April 30.....	May 1.....	759	126
El Salvador.....	Panama Mail S. S. Co.....	April 30.....	May 1.....	652	339
Pastores.....	United Fruit Co.....	April 30.....	May 1.....	390	526
Talisman.....	W. Wilhelmssen.....	May 1.....	May 1.....	150	(²)
Bohemian Club.....	Atlantic Refining Co.....	May 1.....	May 2.....	794	(²)
Copenname.....	United Fruit Co.....	May 1.....	May 2.....	900	60
Ecuador.....	Panama Mail S. S. Co.....	May 1.....	May 2.....	1,201	477
Bodegraven.....	Royal Neth. S. S. Co.....	May 1.....	May 2.....	385	178
La Paz.....	Pacific Steam Nav. Co.....	May 1.....	May 2.....	436	265
Custodian.....	Leyland Line.....	May 1.....	May 2.....	633	(²)
Manaquí.....	United Fruit Co.....	May 1.....	May 1.....	515	18
Lochgill.....	Pacific Steam Nav. Co.....	May 2.....	May 2.....	30	566
Antillian.....	Leyland Line.....	May 2.....	May 3.....	(¹)	151
Salvador.....	Pacific Steam Nav. Co.....	May 2.....		487	
Georgie.....	French Line.....	May 2.....	May 2.....	35	77
Swiftwind.....	C. D. Maffory & Co.....	May 2.....	May 3.....	11,740	(²)
Sixtoala.....	United Fruit Co.....	May 2.....	May 3.....	643	543
Suale.....	North German Lloyd.....	May 2.....	May 3.....	(¹)	570
Wagenwald.....	Hamburg-American Line.....	May 3.....	May 4.....	72	307
Heinrich Arp.....	Colombian Mar. Co.....	May 3.....	May 4.....	144	(²)
Canadian Victor.....	Can. Nat. Steamships.....	May 3.....	May 3.....	24	(²)
Amapala.....	Stand. Fruit S. S. Co.....	May 3.....	May 4.....	204	585
Esparta.....	United Fruit Co.....	May 3.....		982	
Benjamin Franklin.....	Norway-Pacific Line.....	May 3.....	May 4.....	(¹)	270
Albert Voegler.....	Hamburg-American Line.....	May 4.....	May 4.....	158	(²)
Taketoyo Maru.....	Nippon Yusen Kaisha.....	May 4.....		321	
Uribe.....	Estrada G. Hermanos.....	May 4.....		720	
Wanks.....	Stand. Fruit S. S. Co.....	May 4.....		161	
Leme.....	Nav. Libera-Triestina.....	May 4.....		225	
Saramacca.....	United Fruit Co.....	May 4.....		42	
Heredia.....	United Fruit Co.....	May 4.....		364	
West Camargo.....	McCormick Line.....	May 4.....	May 4.....	150	(²)

¹ No cargo discharged.

² No cargo laded.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 16, 1929.

No. 537.

The following was received by the Hydrographic Office from the Lighthouse Sub-division, The Panama Canal:

MANZANILLO BAY.

The red spar buoy marking the shoal on continuation of Coco Solo Mole has been moved from the position shown on Hydrographic Chart No. 5439 about 100 feet, 251 degrees true, which places it on the north side of a 16-foot spot in 30 feet of water.

(Signed) EDW. F. BRAMIN,
Assistant Superintendent of Lighthouses.

H. BURGESS,
Governor.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2.....	\$8.00	\$11.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
3. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
4. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds.....	11.00	14.00

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 13 years of operation.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Diesel oil is sold by The Panama Canal at Cristobal at \$1.80 per barrel.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.25 per barrel at Balboa and Cristobal. Diesel oil, Balboa only, \$1.80 per barrel.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers at \$8.00 per ton of 2,240 pounds at Cristobal, and \$11.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, \$8.00 per ton at Balboa. When coal is delivered from lighters in quantities of 50 tons or more, the price is \$9.00 per ton at Cristobal, \$12.00 at Balboa. If less than 50 tons is taken from lighters, prices are \$11.00 per ton at Cristobal and \$14.00 per ton at Balboa with minimum charge for 20 tons and maximum charge not to exceed that for 50 tons at \$9.00 Cristobal and \$12.00 Balboa. For furnishing lump coal for galley use, or run of mine coal, in sacks, \$6.00 additional per ton; but if vessel furnishes sacks \$3.00 additional per ton.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

For trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, when requested, an additional charge of 90 cents per ton will be made for extra handling.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Tolls Charges for Transit of The Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity \$1. 20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity .72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton..... .50
4. Army and navy transports, colliers, hospital ships, and supply ships, the vessels to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton..... 1.20
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton.
6. Vessels returning from Gatun Lake to original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage in such cases, as provided in Paragraph 4, Item 3, of the tariff, and for handling lines in accordance with Item 4 of the tariff.

Ships' Chandlery Supplies.

Panama Canal storehouses stock a complete line of ships' chandlery supplies available for sale to shipping at cost prices plus 25 per cent surcharge, which surcharge includes freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 579.

PORT OF BALBOA.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 6.....	Mina Brea	Imperial Oil Co.	Los Angeles, Calif.	May 7.....	Mina Brea	Imperial Oil Co.	Talara, Peru.
May 7.....	Frost ²⁷	West India Oil Co.	Talara, Peru.	May 8.....	Frost ²⁷	West India Oil Co.	Acajutla, Salvador.
May 8.....	Dos Hermanos ²⁸	A. Valdez	Bayano River, R. P.	May 8.....	Dos Hermanos ²⁹	A. Valdez	Panama Bay, R. P.
May 8.....	Dixie ²⁸	Pacific Fruit Co.	Bayano River, R. P.	May 8.....	Dixie ²⁸	Pacific Fruit Co.	Panama Bay, R. P.
May 8.....	Sambu ²⁹	Hans Elliot.	El Real, R. P.	May 8.....	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.
				May 11.....	Epoqa ²⁷	Grace Line.	Talara, Peru.

²⁷ Motor ship. ²⁸ Motor schooner and barge. ²⁹ Motor schooner. * Other than ships passing through the Canal.

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OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., May 22, 1929. No. 42.

Canal Traffic During the First Fifteen Days of May.

During the first 15 days of May, 251 commercial vessels and 5 small launches transited the Canal. Tolls on commercial vessels aggregated \$1,085,946.86, and on the launches \$42.30, or a total tolls collection of \$1,085,989.16

The daily average of transits of commercial vessels was 16.73 and the average tolls collection \$72,396.46, as compared with an average of 19.00 transits and \$79,297.14 in tolls for the first 15 days of April. The average amount of tolls paid by each of the commercial transits was \$4,326.48, as compared with \$4,173.53 for the first 15 days of April. In point of number of transits, commercial traffic for the first 15 days of May was the lightest since the first half period of September, 1928, when 232 ships were passed through, while the tolls collected were the smallest since October, 1928, when \$1,031,136.02 was collected for the first 15 days of that month.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 10½ months of the current fiscal year, with the daily averages of transits and tolls:

	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July	509	\$2,109,083.19	16.41	\$68,034.94
August	526	2,199,069.31	16.97	70,937.72
September	487	2,111,230.56	16.23	70,374.35
October	557	2,274,945.30	17.97	73,385.33
November	527	2,225,937.48	17.57	74,197.91
December	579	2,443,029.39	18.67	78,807.39
January	603	2,502,815.12	19.45	80,735.97
February	522	2,211,961.20	18.64	78,993.62
March	536	2,343,865.55	17.29	75,608.57
April	540	2,281,087.27	18.00	76,036.24
May (first 15 days)	251	1,085,946.86	16.73	72,396.46
Totals, first 10½ months of fiscal year, 1929	5,637	23,788,971.23	17.67	74,573.57
Totals, first 10½ months of fiscal year, 1928	5,715	23,841,227.19	17.86	74,503.83
Totals, first 10½ months of fiscal year, 1927	4,776	21,162,839.45	14.97	66,341.19

As compared with the first 10½ months of the fiscal year 1928, the corresponding period this year has had 78 fewer transits and \$52,255.96 less tolls.

Notice to Mariners.

THE PANAMA CANAL EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 20, 1929.

No. 539.

The following message was received by the Hydrographic Office through the Balboa Radio:

U. S. S. *Cleveland*. Little Corn Island Light not burning at 10.00 p. m. on May 19.

Approximate position: 12° 17' 50" N., 82° 58' 40" W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, May 18, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Martha ¹	10	19.55	12	6.03	12	13.57	13	19.24	Norwegian.	H. C. Stevenson.	183.0	30.1	11.6	Cristobal, C. Z.	Pto. Arminelles, R. P.	General	286	780
Cid	11	1.25	12	6.05	12	13.57	12	15.15	British.	Pacific Steam Nav. Co.	264.8	41.2	16.6	New York, N. Y.	Pimental, Peru	General	927 ¹	2,746
Dagrun	11	20.25	12	6.15	12	12.55	12	14.05	American.	American Trading Co.	321.0	54.0	16.0	New York, N. Y.	Los Angeles, Calif.	Ballast	6,503	4,873
Castletown	11	21.00	12	6.45	12	14.45	12	16.40	American.	Charles Nelson & Co.	321.7	50.0	16.0	Baltimore, Md.	Los Angeles, Calif.	Pipe, general	2,520	2,568
Javanese	12	00.55	12	7.30	12	15.41	12	16.40	British.	Prince Line, Ltd.	441.6	60.6	22.0	New York, N. Y.	Yokohama, Japan	General	4,361	9,240
Princes ²	12	1.47	12	9.35	12	16.45	12	17.45	American.	Sun Oil Co.	429.3	59.2	19.11	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	7,709	5,562
Sunbeam	12	5.47	12	10.35	12	17.36	12	18.38	British.	Shaw, Savill & Albion.	477.7	62.9	27.2	Liverpool, England	Dundee, N. Z.	General	4,964	11,053
Maimon	12	7.20	12	12.05	12	19.03	12	23.32	American.	Isthmian S. S. Lines.	404.0	53.9	23.0	Baltimore, Md.	Seattle, Wash.	Steel, general	8,451	6,755
Charles H.	12	11.15	12	13.05	12	20.20	12	21.40	American.	Dimon S. S. Corp.	409.5	54.2	24.0	New York, N. Y.	Seattle, Wash.	General	5,160	6,537
Cramp	12	12.15	12	13.40	12	21.32	12	23.00	Norwegian.	Canadian Transp. Co.	410.5	54.3	24.0	Palo Alto, Cuba.	Vancouver, B. C.	Sugar	5,954	6,170
Pacific	10	18.15	12	15.30	12	22.32	13	00.24	German.	Roland Line.	216.5	32.9	12.8	Cristobal, C. Z.	Guayaquil, Ecuador	General	360	1,105
Redwood	12	4.05	12	15.40	12	22.25	12	23.38	British.	Can. Nat. Steamships	400.0	52.0	22.3	Louisburg, N. S.	Bluff, N. Z.	General	4,978	6,228
Flint No. 2	12	14.05	12	16.25	12	23.32	13	00.45	British.	Blue Star Line	450.0	58.0	19.0	Barry, England	Vancouver, B. C.	Ballast	6,205	4,284
Cal.	12	18.30	12	18.45	13	2.06	13	3.15	American.	Atl.-Or. Franklin, Ltd.	390.0	54.2	17.0	New Orleans, La.	Los Angeles, Calif.	General	8,080	12,821
Canadian	12	1.20	13	6.05	13	13.52	13	15.30	British.	Shaw, Savill & Albion.	500.3	63.3	29.10	London, England	Auckland, N. Z.	General	9,105	6,004
Transpor-	12	14.30	13	6.10	13	16.50	13	17.53	American.	Blanchard Lumber Co.	437.0	63.0	19.0	Boston, Mass.	Los Angeles, Calif.	Ballast	7,478	5,040
Tacoma Star.	12	23.05	13	7.10	13	17.45	13	19.24	British.	Anglo-Saxon P&N Co.	440.0	57.6	20.6	Hamburg, Germany	Los Angeles, Calif.	Ballast	1,051	1,270
Vata	2	10.25	13	8.05	13	16.46	13	20.15	British.	U. S. Navy.	231.0	21.0		Cristobal, C. Z.	Bahoa, C. Z.	General	6,598	6,783
Cornithie	13	1.05	13	9.45	13	18.53	13	20.15	American.	Pacific Steam Nav. Co.	215.0	33.5	17.3	Cristobal, C. Z.	Champerico, Guat.	General	7,749	10,392
Tenueh Burrows	13	6.00	13	10.40	13	20.34	13	21.31	British.	Standard Transp. Co.	467.6	62.7	20.0	Boston, Mass.	Los Angeles, Calif.	Ballast	7,046	7,327
El (No 1)	13	10.15	13	14.10	13	21.30	13	21.30	American.	Federal Steam Nav. Co.	460.0	63.0	27.6	London, England	N. Plymouth, N. Z.	General	2,046	5,203
Salvador	14	5.00	14	6.25	14	14.34	14	17.20	British.	Roosevelt S. S. Co., S. B.	411.5	58.0	19.0	New York, N. Y.	Freemantle, Aust. Ia	General	5,500	6,215
Standard	14	9.45	14	10.20	14	18.21	15	00.54	Japanese.	W. H. Remick & Co.	400.0	52.0	23.0	Swansea, England	Puntarenas, C. R.	Patent fuel	6,404	4,661
Arrow ¹	13	22.35	14	11.00	14	19.30	15	2.08	Norwegian.	Kawasaki Kisen Kaisha	385.0	51.0	25.0	Savannah, Ga.	Yokohama, Japan	General, etc.	7,355	6,822
Surrey	14	4.40	14	11.10	14	20.18	14	21.15	Japanese.	Scand.-So. Pacific Co.	391.0	54.7	21.0	Oslo, Norway	Corral, Chile	General, cement	7,781	8,158
Galveston	14	6.40	14	12.10	14	21.19	14	22.35	French.	Nippon Yusen Kaisha.	440.0	57.0	27.1	Baltimore, Md.	Kobe, Japan	General	2,727	5,890
Wentworth	14	13.18	14	13.35	14	22.15	14	23.58	American.	Quaker Line.	415.0	50.3	20.4	Havre, France	Talcahuano, Chile	General	3,841	8,300
Norway Maru	14	14.15	14	14.40	14	23.58	15	18.25	British.	Quaker Line.	440.0	56.0	19.0	Norfolk, Va.	Seattle, Wash.	Steel, general	6,543	9,458
John Bakke ²	14	15.10	14	15.30	14	23.14	15	00.31	American.	Federal Steam Nav. Co.	479.0	62.0	24.6	Halifax, N. S.	Sydney, Australia	General	4,299	3,984
Atago Maru ²	14	15.10	14	15.30	14	23.14	15	00.31	American.	Gulf Pacific Line	324.0	46.2	21.0	Tampa, Fla.	Vancouver, B. C.	General	2,400	6,015
Saint Jean	14	4.30	15	6.12	15	13.50	15	23.30	American.	Panama Mail S. S. Co.	380.0	48.0	23.3	New York, N. Y.	San Francisco, Cal.	General	5,200	7,082
Jefferson Myers	14	22.50	15	6.15	15	18.00	15	19.17	American.	McCormick S. S. Co.	401.0	53.0	21.0	New York, N. Y.	Seattle, Wash.	General, steel	9,481	11,617
Parsora	14	22.50	15	6.15	15	18.00	15	19.17	American.	McCormick S. S. Co.	401.0	53.0	21.0	New York, N. Y.	Seattle, Wash.	General, steel	9,481	11,617
Point Montara	14	22.50	15	6.15	15	18.00	15	19.17	American.	McCormick S. S. Co.	401.0	53.0	21.0	New York, N. Y.	Seattle, Wash.	General, steel	9,481	11,617
Colombia	14	22.50	15	6.15	15	18.00	15	19.17	American.	McCormick S. S. Co.	401.0	53.0	21.0	New York, N. Y.	Seattle, Wash.	General, steel	9,481	11,617
Chag R.	14	22.50	15	6.15	15	18.00	15	19.17	American.	McCormick S. S. Co.	401.0	53.0	21.0	New York, N. Y.	Seattle, Wash.	General, steel	9,481	11,617
McCormick	14	22.50	15	6.15	15	18.00	15	19.17	American.	McCormick S. S. Co.	401.0	53.0	21.0	New York, N. Y.	Seattle, Wash.	General, steel	9,481	11,617

¹ Motor ship.

² Tanker.

³ Submarine.

⁴ Ammonia, triplate, and phosphates.

Camdrolite	15	00	58	15	7	35	15	18	53	15	23	22	British	Imperial Oil Co.	710	0	68	2	23	0	Talara, Peru	Ballast	11,556	0,722
Lowther Castle	15	2	19	15	7	35	15	18	53	15	21	00	British	Barber S. S. Line	400	0	51	6	24	0	Shanghai, China	General	4,490	5,800
Yoseric	15	2	19	15	8	35	15	20	30	15	22	05	British	Shanghai Sulphur Co.	400	0	52	0	25	0	Freemantle, Australia	Sulphur	9,000	5,786
Nevalan	16	4	15	15	9	55	15	21	10	15	22	20	American	Amer-Hawaiian Line	460	0	58	0	22	0	Seattle, Wash.	General	3,504	6,829
Edward	15	5	45	15	11	20	15	22	05	15	23	00	American	Luckenbach Line	436	6	57	0	24	0	Seattle, Wash.	General	6,151	8,543
Quebec City	15	16	35	15	17	40	16	2	00	16	3	08	British	Texas Oil Co.	400	5	54	3	25	6	Shanghai, China	Case oil	7,800	7,004
Canadian Commander	15	18	15	18	30	16	2	52	16	4	20	British	Can. Nat. Steamships	400	0	52	0	20	2	Adelaide, Australia	General	3,003	5,914	
Gen. W. M. Graham	14	22	25	16	6	15	16	13	55	15	17	45	American	U. S. Army	156	0	32	0			Balboa, C. Z.	General	2,469	5,816
Balkana	15	7	30	16	6	05	16	13	57	17	1	49	Dutch	Pacific Steam Nav. Co.	400	0	52	0	21	3	Magallanes, Chile	General	4,433	9,505
Alkmar	15	7	30	16	6	05	16	13	57	17	1	49	Dutch	Royal Neeth S. S. Co.	447	0	62	9	20	3	Corral, Chile	General	4,433	9,505
Mary Ellen O'Neil	16	2	25	16	7	40	16	20	25	16	21	50	American	The Texas S. S. Co.	509	7	70	3	20	0	Los Angeles, Calif.	Ballast	12,514	8,422
Georgias	16	2	00	16	8	55	16	21	24	16	22	55	Greek	S. Livanos & Co.	360	0	52	0	22	3	Antofagasta, Chile	Coke and coal	5,400	4,746
Glendole	16	7	15	16	9	05	16	21	33	17	3	52	American	Hammond Lumber Co.	289	0	44	1	17	11	Los Angeles, Calif.	Sugar	3,035	2,940
Santa Barbara	16	3	20	16	9	58	16	19	30	17	1	49	American	Grace Line	460	0	64	0	23	0	Talcahuano, Chile	General	2,872	10,687
Stedore	16	2	45	16	11	12	16	22	20	16	23	36	American	Ore S. S. Corp.	550	3	72	2	22	0	Baltimore, Md.	Ballast	15,551	4,297
Shofawan	16	9	30	16	12	00	17	00	16	17	1	49	American	Redwood Line	386	8	52	2	21	0	San Francisco, Cal.	General	4,792	5,708
City of	16	10	30	16	13	30	16	23	31	17	00	46	British	Ellerman Lines, Ltd.	458	0	58	0	27	2	Shanghai, China	General	7,994	8,875
Mandaly	16	1	10	17	6	35	17	17	33	17	18	30	American	Ore S. S. Corp.	550	0	72	0	20	3	Cruz Grande, Chile	Ballast	15,476	4,354
Bethore	17	5	40	17	7	40	17	14	33	18	00	04	American	Panama-Pacific Line	574	4	80	3	27	0	San Francisco, Cal.	General	4,520	34,506
California	17	5	40	17	7	40	17	14	33	18	00	04	American	Transatlantic S. S. Co.	448	0	57	4	25	0	Melbourne, Aus. Ita.	Lumber, general	6,992	8,279
Parrakoola	16	18	35	17	7	40	17	18	15	17	20	45	American	Pac-Argentine Co., S. B.	400	0	54	2	25	0	Freeport, Tex.	General	6,815	6,504
Emergency Aid	16	19	50	17	8	35	17	19	10	17	23	45	American	Hassteca Petroleum Co.	435	0	56	2	16	0	Los Angeles, Calif.	Ballast	7,405	5
Franklin K. Lane	17	6	00	17	10	05	17	20	14	17	21	30	American		435	0	56	2	16	0	Los Angeles, Calif.	Ballast	7,405	5
President Harrison	17	6	40	17	10	18	17	21	05	18	2	48	American	Dollar Line	502	1	62	2	26	0	San Francisco, Cal.	General	4,825	12,618
Zenon	16	18	05	17	11	10	17	23	30	18	00	27	French	French Line	425	0	55	0	20	8	Vancouver, B. C.	General	3,250	6,982
Manizales	16	18	05	17	11	10	17	23	30	18	00	27	French	French Line	425	0	55	0	20	8	Vancouver, B. C.	General	3,250	6,982
Incalite	17	00	35	17	11	30	17	22	12	17	20	45	British	North German Lloyd	216	0	32	0	11	7	Cristobal, C. Z.	Ballast	1,132	741
Herman Frasch	17	7	50	17	12	50	17	22	20	17	23	40	American	Imperial Oil Co.	350	0	48	5	16	0	Talara, Peru	Ballast	4,447	3,183
Suncisco	17	9	05	17	12	40	17	23	25	18	00	27	American	Texas Gulf Sulphur Co.	356	0	51	6	25	6	Cherbourg, France	General	6,000	5,349
Mississippi	17	9	05	17	12	40	17	23	25	18	00	27	American	Transmarine Line	324	0	46	2	19	3	Ocean Falls, B. C.	Crude sulphur	2,092	3,984
Suturnco	17	14	40	17	13	40	18	00	21	18	1	46	French	French Line	422	0	52	6	20	3	San Francisco, Cal.	General	629	7,156
Drehtrecht	17	6	20	17	15	40	18	2	38	18	2	30	Dutch	Transmarine Line	324	0	46	2	19	3	San Francisco, Cal.	General	1,825	3,984
Nemanya	17	13	45	17	16	25	18	2	35	18	3	54	Ukrainian	Holland-American Line	483	0	62	0	20	7	Vancouver, B. C.	General	6,551	5,748
Vega	16	16	50	18	6	00	18	15	21	19	20	10	American	Ballarizza & Co.	400	3	52	0	24	6	Valparaiso, Chile	Cement	3,043	
San Jose	17	8	40	18	6	13	18	22	30	19	20	10	American	U. S. Navy	390	0	44	0	19	2	Hampton Rds., Va.	Naval stores	3,553	3,675
San Jose	17	8	40	18	6	13	18	22	30	19	20	10	American	U. S. Navy	390	0	44	0	19	2	Hampton Rds., Va.	Naval stores	3,553	3,675
Nitro	17	00	50	18	6	05	18	17	45	19	10	28	American	United Fruit Co.	462	0	60	2	15	0	San Francisco, Cal.	General	3,515	
Levant Arrow	18	3	25	18	7	40	18	17	48	18	28	42	American	Standard Transp. Co.	468	3	62	7	18	6	Shanghai, China	Ballast	7,500	9,841
Anten	17	22	40	18	8	45	18	18	53	18	19	55	Swedish	Transatlantic S. S. Co.	420	0	54	0	24	0	Los Angeles, Calif.	Cement clinkers	7,145	6,604
Corvus	18	10	55	18	11	05	18	19	50	18	22	35	American	Isthmian S. S. Lines	410	5	54	0	24	0	San Francisco, Cal.	Steel, general	7,145	6,604
Margarethe Corbis	18	1	40	18	11	10	18	19	54	18	21	30	German	Colombian Mar. Co.	266	0	42	0	12	8	Buenaventura, Col.	General	572	2,263
Shiedrecht	18	6	45	18	12	15	18	20	32	18	21	46	Dutch	Phr. Van Ommeren	370	0	52	0	17	9	Los Angeles, Calif.	Ballast	4,109	7,079
Iowan	18	14	48	18	15	00	18	21	38	18	22	34	American	Amer-Hawaiian Line	407	7	53	7	21	0	Portland, Ore.	General	5,077	6,583
Rapot	17	15	32	18	15	40	18	23	28	19	00	40	German	North German Lloyd	393	0	54	0	23	11	San Antonio, Chile	General	5,077	6,583
Hilda	18	10	20	18	16	55	19	00	19	19	1	53	Norwegian	Knut Knudsen	470	3	64	3	21	0	Los Angeles, Calif.	Ballast	9,474	6,489
Knudsen	18	17	00	18	18	45	19	3	40	19	4	57	American	Argonaut S. S. Co.	440	0	56	0	28	0	Seattle, Wash.	Steel, general	10,229	8,312
Heffron	18	17	00	18	18	45	19	3	40	19	4	57	American	U. S. Army	440	0	56	0	28	0	Balboa, C. Z.	Steel, general	10,229	8,312

Launch.

Ammunition ship.

Supply ship.

§ II S Army mine planter.

Tank

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.		Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.				Gross.	Net.		
Chickasaw City	11	20	12	2	13	12	10	15	American	Isthmian S. S. Lines...	395.5	55.0	26.9	Everett, Wash.	Newark, N. J.	Lumber	7,262	7,322	5,237	
Manhattan Island	11	23	20	3	40	12	12	15	American	Redwood Line, Inc.	386.6	52.2	23.2	San Francisco, Cal.	Mobile, Ala.	Lumber, general	5,647	5,696	4,125	
W. S. Rheem	12	4	40	5	26	12	14	05	American	Standard Oil Co. of Cal.	500.3	68.2	28.6	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline	14,000	11,224	7,895	
Yankee Arrow	12	4	45	6	20	12	15	10	American	Standard Transp. Co.	408.3	62.7	27.6	San Francisco, Cal.	New York, N. Y.	Gasoline	11,145	9,841	6,946	
Brielle	12	19	00	2	00	12	10	26	Dutch	Royal Neth. S. S. Co.	402.4	58.2	27.8	Valparaiso, Chile	Hamburg, Germany	Nitrates, general	8,794	7,322	4,798	
Watertown	12	21	00	4	02	13	13	25	American	Cities Service Corp.	416.9	56.2	27.6	Los Angeles, Calif.	Providence, R. I.	Gasoline	9,133	6,717	4,778	
Teno	12	23	30	4	06	13	13	25	Chilean	Chilean Line	422.8	56.2	26.6	Talcahuano, Chile	Pensacola, Fla.	General	4,893	7,704	4,672	
Howick Hall	13	3	15	6	05	13	14	30	American	Isthmian S. S. Lines	400.8	51.5	25.6	Cruz Grande, Chile	Baltimore, Md.	Nitrates	7,500	6,095	4,381	
Firmore	13	3	50	7	10	13	15	30	American	Ore S. S. Corp.	449.1	57.2	28.2	Liquique, Chile	Wilmington, N. C.	Iron ore	11,516	7,847	4,185	
Nyanza	13	4	00	7	47	13	15	30	British	Wessel, Duval & Co.	402.7	52.2	24.0	San Francisco, Cal.	Wilmington, N. C.	Nitrates	7,700	5,583	4,073	
Albionstar	13	7	30	8	51	13	16	50	British	Blue Star Line	450.0	58.5	23.8	San Francisco, Cal.	Liverpool, England	Fruit, general	4,744	8,317	5,531	
Lisa	13	8	45	9	39	13	18	45	German	Deutsche Tank Reederei	440.0	52.0	12.0	La Union, Salvador	Tampico, Mexico	Ballast	5,155	3,500		
Canadian	13	10	15	10	55	13	19	05	13	21	399.8	52.0	18.0	Auckland, N. Z.	Montreal, Canada	General	3,070	5,885	4,073	
Winnier	13	11	47	13	20	35	20	35	Panaman	Robert Wilcox	48.0	11.0		Bahia, C. Z.	Cristobal, C. Z.	General	828	1,187	27	
Rolling Stone	13	12	01	13	24	35	21	35	British	Pacific Steam Nav. Co.	390.0	54.0	13.3	Champerio, Guat.	Cristobal, C. Z.	(*)	205		622	
Jamaica	11	7	30	13	15	39	13	22	15	American	U. S. Army	445.1	59.8	26.6	San Francisco, Cal.	New York, N. Y.	Military supplies			
Kerowis	14	3	30	14	5	24	14	12	05	American	Luckenbach Line	446.0	56.1	28.6	Portland, Oreg.	Reston, Mass	Lumber, general	7,708	8,532	6,236
K. I. Lucken-	13	10	37	14	8	10	14	15	40	American	Panama-Pacific Line	586.4	80.3	28.0	San Francisco, Cal.	New York, N. Y.	(*)	4,298	25,254	18,170
Virginia	14	7	35	14	8	26	14	16	40	American	Amer.-Hawaiian Line	445.1	59.8	26.6	Portland, Oreg.	New York, N. Y.	Lumber, general	8,192	8,567	6,020
Missourian	14	8	30	14	9	30	14	17	50	British	British Oil Shipping Co.	410.0	53.5	26.6	Los Angeles, Calif.	London, England	Gasoline	7,779	6,010	4,094
Olympic	14	11	00	14	12	21	14	19	45	Japanese	Nippon Yusen Kaisha	305.0	52.0	24.8	Manila, P. I.	New York, N. Y.	General	9,419	8,012	5,749
Maybeshi	14	11	00	14	12	21	14	22	05	Japanese	T. & J. Harrison	305.0	52.0	25.0	Vancouver, B. C.	London, England	General	6,823	5,728	3,855
Maru	14	8	40	14	13	10	14	20	35	American	Rosevelt S. S. Co., S. B.	402.6	54.8	23.0	Adelaide, Australia	Baltimore, Md	General	6,688	6,934	5,102
Wayfarer	14	11	10	14	13	10	14	20	35	American	Panama Mail S. S. Co.	389.0	48.7	23.6	San Francisco, Cal.	New York, N. Y.	(*)	3,067	6,033	4,353
Venezuela	15	4	40	15	5	36	15	13	10	British	Sir R. Roper & Co.	405.1	53.6	24.1	Vancouver, B. C.	Quebec, Canada	Coffee, general	6,583	5,858	4,300
Asbury	15	5	00	15	6	20	15	14	10	American	Petroleum Nav. Co.	391.8	51.3	26.0	San Francisco, Cal.	Baltimore, Md	Lumber	6,583	5,858	4,300
Republic	15	5	04	15	7	33	15	35	20	American	Standard Transp. Co.	435.0	56.2	26.0	San Francisco, Cal.	Baltimore, Md	Gasoline	5,864	5,551	3,881
Yorba Linda	15	5	34	15	7	32	15	35	20	American	Standard Oil Co. of N. Y.	250.0	43.1	23.6	Los Angeles, Calif.	New York, N. Y.	Gasoline	8,559	7,424	5,077
Scoony	15	5	54	15	8	18	15	17	10	American	U. S. Navy	292.0	44.0		Bahia, C. Z.	New York, N. Y.	Gas oil	3,801	2,431	2,062
Cleveland	15	6	02	15	8	18	15	17	10	American	U. S. Navy	292.0	44.0		Bahia, C. Z.	New York, N. Y.	Gas oil	3,801	2,431	2,062
Nebraska	15	6	02	15	9	50	15	18	28	British	Royal Mail S. P. Co.	450.0	58.0	24.0	Vancouver, B. C.	Rotterdam, Holland	Fruit, general	5,790	8,878	6,588
Baralt	15	7	00	15	10	02	15	18	40	Dutch	Royal Neth. S. S. Co.	292.0	33.1	12.6	Guayaquil, Ecuador	Cristobal, C. Z.	General	501	1,183	742
Alvarado	15	7	05	15	10	25	15	19	45	British	Pacific Steam Nav. Co.	303.0	43.0	16.4	Salaverry, Peru	New York, N. Y.	Coffee, general	591	2,844	1,748
Erivken	15	7	15	15	11	47	15	20	10	Norwegian	Walton & Co.	420.0	54.0	27.3	New Westminster	Boston, Mass	Lumber	8,400	6,979	5,136
Orlebo	15	19	40	16	2	48	16	10	20	American	Quaker Line	410.5	54.2	26.6	Portland, Oreg	New York, N. Y.	Lumber	7,000	6,755	4,873
Saved	15	23	30	16	3	50	16	11	35	American	Transmarine Lines	334.0	46.2	23.0	San Francisco, Cal.	Baltimore, Md	Lumber, general	4,500	3,983	2,629
Yacht.									**Mortship.	** With barge No. 82.										
Tanker.									**U. S. Army transport.	** U. S. Army transport.										

* Tanker.

** U. S. Army transport.

** Motorship.

** With barge No. 82.

** Coffee, hides, wood, and copra.

** Canned fruit and general.

** Ore, wool, copra, and general.

	15	15.00	16	4.55	16	12.40	16	12.40	British.	Eagle Oil Transp. Co.	412.0	53.0	22.0	Los Angeles, Calif.	Lizards, England ¹⁹	7.449	5,976	4,068
San Ubald	15	6.30	16	5.32	16	14.05	17	00.45	German.	Hamburg-American Line	374.0	54.0	24.0	Corral, Chile.	Hamburg, Germany	5,283	5,384	3,442
Palatin	15	6.15	16	7.08	16	15.20	17	1.50	German.	Hamburg-American Line	399.0	54.2	25.0	Valparaiso, Chile.	Hamburg, Germany	7,051	6,056	4,362
Pilot	15	6.35	16	7.57	16	16.35	17	16.35	British.	Cayzer, Irvine & Co.	397.0	51.0	27.0	Iquique, Chile.	Norfolk, Va.	7,400	6,065	4,179
Manizates	16	8.30	16	10.18	16	18.05	17	11.30	British.	Rolland Line.	216.0	53.0	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	345	1,132	741
C. O. Still-																		
man	16	9.50	16	10.53	16	20.25	16	22.35	British.	International Pet. Co.	565.0	75.6	33.6	Talara, Peru.	New York, N. Y.	21,000	16,780	9,885
Falsterbo	16	10.35	16	11.45	16	20.40	16	20.40	Swedish.	Axel Brostrom & Son.	349.5	50.6	23.0	Vancouver, B. C.	New York, N. Y.	6,095	4,917	3,528
Paul Shoup	16	10.42	16	12.21	16	21.48	16	21.48	American.	Associated Oil Co.	424.4	58.2	26.0	Los Angeles, Calif.	New York, N. Y.	9,000	7,333	5,182
San Jose	16	22.40	17	00.16	17	8.40	18	6.13	American.	United Fruit Co.	320.0	44.6	19.0	San Francisco, Cal.	Cristobal, C. Z.	726	3,675	2,359
William H.																		
Doheny	16	19.35	17	4.04	17	11.35	17	11.35	American.	Pan-Am. Pet. & Tr. Co.	435.0	56.2	26.0	Los Angeles, Calif.	Baltimore, Md.	9,500	7,406	5,111
Marore	17	5.00	17	7.04	17	20.05	17	20.05	American.	Ore S. S. Corp.	550.3	72.2	33.6	Crus Grande, Chile	Baltimore, Md.	21,654	15,551	4,297
Jane Christen-																		
son	17	4.30	17	7.44	17	17.05	17	17.05	American.	Arrow Line	423.0	54.3	24.0	Tacoma, Wash.	New York, N. Y.	7,649	6,615	4,297
San Lamberto	16	23.30	17	8.06	17	18.15	17	18.15	British.	Anglo-Mexican Pet. Co.	399.0	53.1	20.0	Antofagasta, Chile.	Arica, D. W. I.	6,740	4,345	
Montanan	17	7.45	17	10.16	17	20.55	17	20.55	American.	Amer-Hawaiian Line.	404.6	53.9	25.0	Seattle, Wash.	Boston, Mass.	6,084	7,756	4,775
Trimountain	17	10.20	17	11.10	17	22.10	17	22.10	American.	B. L. Shipping Co.	416.9	56.2	26.6	Los Angeles, Calif.	Curacao, D. W. I.	9,519	6,728	4,734
M. D. 16																		
Denver	17		17		17				American.	J. H. Moon.	292.0	44.0		Balboa, C. Z.	Cristobal, C. Z.			
S-12 17			18	6.27	18	14.35	20	00.05	American.	U. S. Navy.	231.0	31.0		Balboa, C. Z.	Cristobal, C. Z.			
S-20 17			18	6.55	18	14.35			American.	U. S. Navy.	231.0	31.0		Balboa, C. Z.	Cristobal, C. Z.			
Visigis			18	7.13	18	17.05			German.	Panama Mail S. S. Co.	229.7	37.8	12.0	Punta Arenas, C. R.	Cristobal, C. Z.	144	1,406	855
Malard			18	7.30	18	15.50			American.	U. S. Navy.	187.0	35.6		Balboa, C. Z.	Cristobal, C. Z.			
Point Gorda			18	7.08	18	16.30			American.	U. S. Navy.	324.0	46.2	18.0	Portland, Oreg.	New Orleans, La.	3,238	3,984	2,642
Arkansas			18	8.00	18	9.22	18	18.15	French.	Swayne & Hoyt, Inc.	408.5	52.2	26.0	Vancouver, B. C.	Antwerp, Belgium.	8,420	7,678	5,563
J. R. Gordon			18	8.40	18	9.58	18	19.05	French.	Union Sulphur Co.	409.8	54.2	24.3	Everett, Wash.	New York, N. Y.	7,000	6,581	4,784
Anna																		
Maersk	18	10.30	18	11.32	18	20.20	18	20.20	Danish.	A. P. Moller	390.6	53.7	25.9	Los Angeles, Calif.	Coryton, England.	7,480	6,012	4,097
Doris	17	9.45	18		18				Panaman.	United Fruit Co.	37.5			Balboa, C. Z.	Gatun Lake, C. Z.			
No. 31054	17	9.45	18		18				Panaman.	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.			
No. 31067	17	9.45	18		18				Panaman.	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.			
No. 31082	17	9.45	18		18				Panaman.	United Fruit Co.				Balboa, C. Z.	Gatun Lake, C. Z.			

¹ Tanker.

² Launch.

³ Submarine.

⁴ Darge.

⁵ For orders.

⁶ Coffee, hides, and general.

⁷ Towing barges.

⁸ Towled by Doris.

⁹ Motor schooner.

¹⁰ Lighthouse tender.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.										* DEPARTURES.									
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—	Date.	Vessel.	Line.	For—	Date.	Vessel.	Line.	For—	Date.	Vessel.	Line.	For—
May 12.	Ulua.	United Fruit Co.	Port Limon, Costa Rica.	May 12.	Wanks	Stand. Fruit S. S. Co.	San Blas, R. P.	May 12.	Ulua	United Fruit Co.	New York via Habana.	May 12.	Cristobal	Panama R. R. S. S. Line.	New York via Haiti.	May 12.	Impeco	Colon Import & Export Co.	Colon, R. P.
May 13.	Camden.	United Fruit Co.	Puerto Colombia.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.
May 13.	Camden.	United Fruit Co.	Curacao, D. W. I.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.
May 13.	Camden.	United Fruit Co.	Hamburg via waypoints.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.
May 13.	Camden.	United Fruit Co.	New York via Habana.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.
May 13.	Camden.	United Fruit Co.	Palo Alto, Cuba.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.
May 13.	Camden.	United Fruit Co.	Tela via waypoints.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.
May 13.	Camden.	United Fruit Co.	Miami via waypoints.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.
May 13.	Camden.	United Fruit Co.	San Jose, Costa Rica.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.	May 13.	Impeco	Impeco	Colon, R. P.
May 14.	Camden.	United Fruit Co.	Other than ships passing through the Canal.	May 14.	Impeco	Impeco	Colon, R. P.	May 14.	Impeco	Impeco	Colon, R. P.	May 14.	Impeco	Impeco	Colon, R. P.	May 14.	Impeco	Impeco	Colon, R. P.

* Other than ships passing through the Canal.

* Monoplane.

* Air-mail carrier.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 15.....	Magdalena.....	Hamburg-American Line	Hamburg via wayports.	May 14.....	Camden.....	United Fruit Co.....	Curacao, D. W. I.
May 15.....	Santa Maria.....	United Fruit Co.....	New York via Kingston.	May 15.....	Queen of Scots ²⁸	A. J. Drexel.....	Habana, Cuba.
May 15.....	Flandre.....	French Line.....	Havre via wayports.	May 15.....	Tolosa.....	United Fruit Co.....	Port Limon, Costa Rica.
May 15.....	Cundinamarca No. 33 ²⁷	Scadta Airplane Co.....	Barraquilla, Colombia.	May 16.....	Gundinamarca No. 33 ²⁷	Scadta Airplane Co.....	Barraquilla, Colombia.
May 16.....	Macabi.....	United Fruit Co.....	New York via wayports.	May 16.....	No. 9664 ²⁷	Pan-American Airways.....	Tela via wayports.
May 16.....	No. 9685 ²⁷	Pan-American Airways	Tela via wayports.	May 16.....	Santa Maria.....	United Fruit Co.....	New York via wayports.
May 17.....	Annetta I. ²⁸	A. Tagarapulos.....	Colon, R. P.	May 16.....	Flandre.....	French Line.....	Havre via wayports.
May 17.....	Anachucma ²⁸	United Fruit Co.....	Colon, R. P.	May 16.....	Magdalena.....	Hamburg-American Line.....	Port Limon, Costa Rica.
May 17.....	Inapetina ²⁸	United Fruit Co.....	Colon, R. P.	May 17.....	No. 9775 ²⁷	Pan-American Airways.....	Guayaquil via wayports.
May 17.....	Saramacca.....	United Fruit Co.....	New Orleans, La.	May 17.....	Saramacca.....	United Fruit Co.....	New Orleans, La.
May 17.....	Amapala.....	Stand. Fruit S. Co.....	New Orleans via Habana.	May 17.....	Oranian.....	Leyland Line.....	Liverpool via wayports.
May 17.....	Suriname.....	United Fruit Co.....	Port Limon via Bocas.	May 17.....	Macabi.....	United Fruit Co.....	Santa Maria via wayports.
May 18.....	Wanks.....	Stand. Fruit S. Co.....	San Blas, R. P.	May 17.....	Anachucma ²⁸	United Fruit Co.....	Colon, R. P.
May 18.....	Parissima.....	United Fruit Co.....	New Orleans via Habana.	May 17.....	Inapetina ²⁸	United Fruit Co.....	Colon, R. P.
May 18.....	No. 9664 ²⁷	Pan-American Airways.....	Tela via wayports.	May 17.....	Annetta I. ²⁸	A. Tagarapulos.....	Colon, R. P.
				May 18.....	Suriname.....	United Fruit Co.....	New Orleans, La.
				May 18.....	Anapala.....	Stand. Fruit S. S. Co.....	New Orleans via wayports.
				May 18.....	No. 9685 ²⁷	Pan-American Airways.....	Managua via wayports.
				May 17.....	Centro America ³⁰	Guatemalan Government.....	Guatemala.
²⁷ Air-mail carrier.				²⁹ Yacht.			
²⁸ Motor boat.				³⁰ Monoplane.			
PORT OF BALBOA.							
May 13.....	San Luis ³¹	Chiriqui Land Co.....	Pto. Armuelles, R. P.	May 13.....	San Luis ³¹	Chiriqui Land Co.....	Pto. Armuelles, R. P.
May 16.....	Davanger.....	Shell Oil Co.....	Los Angeles, Calif.	May 17.....	El Colon ³²	Hans Elliot.....	Panama Bay, R. P.
May 17.....	El Colon ³¹	Hans Elliot.....	El Real, R. P.	May 17.....	Divie ³²	Pacific Fruit Co.....	Panama Bay, R. P.
May 17.....	Divie ³²	Pacific Fruit Co.....	Bayano River, R. P.	May 17.....	Dos Hermanos ³¹	A. Valdez.....	Panama Bay, R. P.
May 17.....	Dos Hermanos.....	A. Valdez.....	Bayano River, R. P.	May 18.....	Davanger.....	Shell Oil Co.....	San Pedro, Calif.
May 17.....	Sambu ³¹	Hans Elliot.....	El Real, R. P.				
³¹ Motor schooner.				³² Motor schooner and barge.			

Cargo Through Canal During April, 1929.

On pages 600 and 601 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in April, 1929. This cargo, segregated according to direction, as compared with April, 1928, and the differences, is shown in the following tabulation:

	April 1929.	April 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	862,450	742,388	+120,062
Pacific to Atlantic.....	1,857,218	1,731,496	+125,722
Totals	2,719,668	2,473,884	+245,784

As will be noted above cargo tonnage from the Atlantic to the Pacific increased 120,062 tons and that in the opposite direction a gain of 125,722 tons, making an increase in both directions over April, 1928, of 245,784 tons.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-four and six-tenths per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 25.9 per cent in Europe. Cargo originating in the United States was 81,405 tons, or 17.1 per cent, greater than the tonnage from the United States in April, 1928, although the proportion of the whole was approximately the same. Cargo from Europe increased 17,848 tons, or 8.7 per cent, over April, 1928, although, relatively, the amount coming from that area in April, 1928, was slightly higher than the tonnage passing through last month.

Destination.—Forty-two and six-tenths per cent of the Pacific-bound cargo was destined to the United States; 19.7 per cent to Asia; 16.8 per cent to South America; and 14.3 per cent to Australasia. Cargo tonnage to the United States increased 62,184 tons, or 20.3 per cent; that to Asia 23,391 tons, or 15.8 per cent; and that to South America 36,404 tons, or 33.4 per cent. Tonnage to Australasia showed a decrease of 17,770 tons, or 12.5 per cent. The proportion of the total cargo destined to the United States and South America was also slightly higher last month than in April last year, while that to Asia and Australasia was slightly lower.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction 43.4 per cent came from the west coast of the United States; 30.3 per cent from South America; 14.3 per cent from Canada; 5.9 per cent from Australasia; and 5.0 per cent from Asia. Cargo from the United States, South America, Australasia, and Asia, all showed increases over April, 1928, in the amounts of 13,776 tons, or 1.9 per cent; 123,432 tons, or 28.1 per cent; 12,826 tons, or 13.2 per cent; and 45,307 tons, or 95.7 per cent, respectively, although the proportion of the total cargo originating in the United States was slightly lower last month than the tonnage passing through in April, 1928. Cargo tonnage from Canada decreased 70,945 tons, or 21.0 per cent, under April, 1928. The proportion of the total coming from Canada last month was also considerably lower than in April, 1928, due primarily to lessened wheat shipments from that region.

Destination.—Segregated according to destination, 55.9 per cent of the cargo tonnage in this direction went to ports of the United States,

and 37.8 per cent to Europe. Tonnage to the United States showed a slight relative, as well as an actual increase of 89,285 tons, or 9.4 per cent, and that to Europe gained but slightly in actual tonnage (6,908 tons), while the 40.1 per cent of the total cargo passing through destined to Europe in April, 1928, was slightly higher than in April, 1929.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify over 85 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 15 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for April, 1929, or April, 1928, are listed in the following tabulation, showing differences:

Commodity.	April 1929.	April 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	11,200	8,863	+2,337
Automobiles.....	24,631	12,796	+11,835
Cement.....	33,651	32,496	+1,155
Coal and coke.....	17,173	20,971	-3,798
Cotton.....	15,460	9,813	+5,647
Manufactured goods:			
Iron and steel.....	229,029	177,006	+52,023
Machinery.....	16,485	11,889	+4,606
Railroad material.....	23,949	18,679	+5,270
Textiles.....	11,837	9,878	+1,959
Tinplate.....	27,672	13,674	+13,998
Metals.....	16,500	6,547	+9,953
Oils, mineral.....	46,266	61,920	-15,654
Paper.....	20,373	11,730	+8,643
Phosphates.....	22,042	22,977	-935
Slag.....	13,514	31,368	-17,854
Sugar.....	29,354	7,583	+21,771
Sulphur.....	13,877	22,145	-8,268
Tobacco.....	7,290	11,473	-4,183

The above 18 commodity groups comprise 67.3 per cent of the cargo from the Atlantic to the Pacific during April, 1929. Twelve of the items showed increases and 6 decreases. The heaviest increases were in manufactures of iron and steel, sugar, tinplate, and automobiles, while slag and mineral oils showed rather sharp decreases.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 98 per cent of all cargo moving from the Pacific to the Atlantic during the month of April, 1929. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month a year ago are listed below, showing differences:

Commodity.	April 1929.	April 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	14,574	21,521	-6,947
Borax.....	3,580	11,231	-7,651
Canned goods (fish, fruit, vegetables, etc.).....	49,537	44,579	+4,958
Coffee.....	18,360	19,168	-808
Cold storage (food products).....	27,791	36,564	-8,773
Copra.....	15,955	3,000	+12,955
Flour.....	8,906	13,434	-4,528
Fruit, dried.....	14,440	16,438	-1,998
Fruit, fresh.....	25,690	9,470	+16,220
Lumber.....	301,631	302,398	-767
Metals, various.....	51,064	56,019	-4,955
Nitrates.....	236,351	223,430	+12,921
Oats.....	11,506	11,096	+410
Oils, mineral.....	391,426	424,235	-32,809
Ores, principally iron.....	183,903	99,497	+84,406
Sugar.....	111,004	44,633	+66,371
Wheat.....	231,619	272,980	-41,361
Wool.....	20,309	26,223	-5,914

* Does not include fresh fruit.

The foregoing 18 commodity groups comprise 92 per cent of the cargo from the Pacific to the Atlantic during April, 1929. Eleven of the items showed decreases and 7 increases. The heaviest decreases were in mineral oils and wheat, while ores and sugar registered rather large increases.

(Continued on next page.)

Notices to Mariners.

New Light on Margarita Island—Venezuela.

THE PANAMA CANAL EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 20, 1929.

No. 540.

1. The approximate position of this new light is $11^{\circ} 11' N.$, $63^{\circ} 53' W.$, and not $64^{\circ} 53' W.$, as erroneously reported in Notice to Mariners No. 512, dated February 14, 1929.
2. The S. S. *Bayano* passed Margarita Island on the night of May 2, and broadcasted the following wireless to all ships and shore stations:

Ships approaching Margarita Island off coast of Venezuela from northward and westward during hours of darkness are warned lights are unreliable. Nothing seen of Tigre Point Light, nine miles distant, and nothing seen of Cabo de la Isla Light, five miles distant on clear night May 2, between 0200 and 0700 G. M. T. No moon. Shore lights near San Juan Griego Bay plainly visible, distant about five miles.

H. BURGESS,
Governor.

Pacheca Island Light.

THE PANAMA CANAL EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 21, 1929.

No. 541.

The following was received by the Hydrographic Office through the Balboa Radio:

U. S. S. *Submarine No. 11*, May 20. Pacheco Island Light not lighted.
Position: $8^{\circ} 39' 48'' N.$, $79^{\circ} 03' 32'' W.$

(No signature.)

H. BURGESS,
Governor.

THE PANAMA CANAL EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 21, 1929.

No. 542.

The following was received by the Hydrographic Office through the Balboa Radio:

S. S. *Hessron*, May 21. While S. S. *Hessron* bound from Balboa to Los Angeles and in position $7^{\circ} 8' N.$, $81^{\circ} 27' W.$, our standard compass changed from 263° to 250° heading in less than fifteen minutes and came back to normal again in latitude $7^{\circ} 8' N.$, longitude $81^{\circ} 40' W.$ Checked up by gyro and bearings on Jicaron Island. Charged to local attraction.

(Signed) McPHERSON, Master.

H. BURGESS,
Governor.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 13 years of operation.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, April, 1929.—Continued from page 599.
(Figures represent tons of 2,240 pounds.)

FROM—	SOUTH AMERICA.					NORTH AMERICA.					ASIA.					AUSTRALASIA.			Grand totals.	Per cent of total cargo.					
	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	West coast of United States.	West coast of Canada.	West coast of Central America. ¹	Balboa, C. Z. ²	Hawaii.	Total, North America.	Japan.	China.	Philippines.	Far East. ¹	Total, Asia.	Australia.			New Zealand.	Australasia. ¹	Total, Australasia.		
NORTH AMERICA:																									
UNITED STATES—																									
North Atlantic ports.....	10,896	2,659	496	5,223	7,791	27,065	249,672		7,673		52	8,775	266,172	47,201	21,336	22,277	11,207	102,021	18,405	14,712	679	33,796	429,054	49.8	
South Atlantic ports.....	88					895	2,733						2,733	7,327	220			7,547	100			100	11,276	1.3	
Gulf ports.....	1,945	350	240	1,002	235	3,772	44,866		2,997		37	20	47,920	55,066	11,160	2,338	4,608	53,112	3,415	8,270		11,685	116,489	13.5	
Totals, U. S.....	12,929	3,009	736	7,033	8,026	31,733	297,271		10,670		89	8,795	316,825	89,534	32,716	24,615	15,815	162,680	21,920	22,982	679	45,581	556,819	64.6	
Cristobal, C. Z. ²	1,026	3,352	1,115	1,607	1,582	8,682	5,071	51	7,323				12,445										21,127	2.4	
East coast of Canada.....								73					73					10,274	4,320			14,594	1.7		
West Indies.....	154	6,608				6,762	5,018	4,109	130				9,257		7,000			7,000					23,019	2.7	
East coast of Mexico and Central America.....							675						675										675	.1	
Totals, North America.....	14,109	12,969	1,851	8,640	9,608	47,177	308,035	4,233	18,123		89	8,795	339,275	89,534	39,716	24,615	15,815	169,680	32,194	27,302	679	60,175	616,307	71.5	
EUROPE:																									
British Isles.....	5,712		102	2,760	8,547	17,121	12,002	6,048	1,090				19,140										80,871	9.4	
Belgium.....	5,610	3,542	463	414	146	10,175	16,785	2,241	1,702				1,187	21,895									44,610	5.4	
Denmark.....	1,925		354			2,279																	14,570	1.7	
France.....	3,081	35	127	1,344	130	4,717	3,404	100	104				3,608										2,469	1.3	
Germany.....	1,527		71	675	998	2,285	5,506	3,574	629	1,155	137	5,903	11,398										16,904	2.0	
Holland.....	17		11	2	420	184	604	6,403	840	105			7,243										7,847	.9	
Italy.....	310		10		1,311	1,631	1,182	76	105				3,633										2,994	.3	
Norway and Sweden.....	1,227	1,773	63	53	6,034	9,150	2,909	58	2,256				30	5,253				1,099					15,502	1.8	
Spain and Portugal.....	115			95	4																		214	.0	
Europe ¹	256			14	31,346	31,616	6,270		1,035				7,305										38,921	4.5	
Totals, Europe.....	19,780	5,432	1,442	6,432	49,907	83,013	52,509	9,992	7,447		137	7,120	77,205					1,099	59,180	2,409			62,748	222,966	25.9
East coast of South America.....	8,530	596		6,000		15,126	7,019	102	524				7,645	406				406					23,177	2.6	
Grand totals.....	42,419	18,997	3,293	21,092	59,515	145,316	307,563	14,327	26,094		226	15,915	424,125	89,940	39,716	24,615	15,815	170,086	33,293	86,482	3,148	122,923	862,450	100.0	
Per cent of total cargo:																									
April, 1929.....	4.9	2.2	.4	2.4	6.9	16.8	42.6	1.7	3.0		.0	1.9	49.2	10.4	4.6	2.9	1.8	19.7	3.9	10.0	.4	14.3	100.0	.....	
April, 1928.....	5.4	2.1	.5	1.8	4.8	14.6	41.1	1.7	2.1	.3	.8	1.6	46.6	7.6	4.5	1.4	6.3	19.8	5.4	11.8	1.8	19.0	100.0	.....	
April, 1927.....	2.2	1.4		.9	7.5	12.0	46.9	1.3	2.7	1.2	.2	.6	52.9	8.5	4.9	.5	6.1	20.0	5.5	8.3	1.3	15.1	100.0	.....	

¹ General cargo not routed so as to allow aggregation between definite ports.
² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, April, 1929.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.												Grand totals.	Per cent of total cargo.
	UNITED STATES.					NORTH AMERICA.					EUROPE.													
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	West Indies.	E. coast Mexico & Central America.	Cristobal, C. Z.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Russia.	Europe. ¹	Total, Europe.	East coast of South America.		
SOUTH AMERICA:																								
Chile.....	226,266	42,297	21,344	289,907		1,127		892	291,926	23,505	13,787		12,378	2,958	2,453	1,082	1,253	6,064		71,032	134,512		426,438 22.9	
Colombia.....	1,554			1,554				3,453	5,007													1	5,008 3	
Ecuador.....	15,455			15,455				4,136	19,591	85	28		143	70	202	293		18		329	1,168		20,759 1.1	
Peru.....	4,892			4,892				2,637	59,229	7,720			5	33	11,300	32		1		930	20,021		79,250 4.3	
West coast of South America.....	26,694			26,694		216		7	26,917	2,810										824	3,634		30,551 1.7	
Totals, S. Amer.	274,861	42,297	21,344	338,502	52,300	1,343		10,525	402,670	34,120	13,815		12,526	3,061	3,955	1,407	1,253	6,083		73,115	159,335	1	562,006 30.3	
NORTH AMERICA:																								
West coast, Canada.	20,175		1,084	21,259	18,885	5,195			45,339	75,330	8,669	19,627	9,446	15,148	18,320	3,755	9,850	107		59,271	219,523	1,349	266,211 14.3	
W. coast, Con. Amer.	25			25					7,033	1,649	57		758	2,123	1,215	50	1,279			1,729	8,860	240	16,133 9	
West coast, U. S.	496,718	2,533	41,858	541,129		11,922	3,623	3,685	569,359	116,193	18,977	1,354	18,770	27,356	16,905	2,304	2,782	7,246		34,097	245,983	82	806,424 43.4	
Hawaii.....	3,255			3,255					3,255														3,255 2	
Totals, N. America.	520,173	2,533	42,942	565,668	18,885	17,117	3,654	10,662	615,980	193,171	27,703	20,981	28,974	44,627	36,440	6,109	13,911	7,353		95,097	474,366	1,671	1,092,023 58.8	
ASIA:																								
China.....	2,763			2,763				73	2,836														2,836 1	
Japan.....	3,112			3,112					3,112														3,112 2	
Philippines.....	83,778		2,270	86,048					86,048														86,048 4.6	
Far East.....	1,192			1,192					1,192														1,192 1	
Totals, Asia.....	90,845		2,270	93,115				73	93,188														93,188 5.0	
AUSTRALASIA:																								
Australia.....	9,306			9,306	360				9,666	6,652			3,011								9,663		19,329 1.0	
New Zealand.....	3,793			3,793	191				3,984	51,138											51,138		55,122 3.0	
Australasia.....	24,396		4,450	28,846					28,846	34			3,270							3,400	6,704		35,550 1.9	
Totals, Australasia.	37,495		4,450	41,945	551				42,496	57,824			6,281								67,505		110,001 5.9	
Grand totals.....	923,374	44,850	71,006	1,039,230	71,736	18,460	3,654	21,260	1,154,340	285,115	41,518	20,981	47,781	47,688	50,395	7,516	15,164	13,436		171,612	701,206	1,672	1,857,218 100.0	
Per cent of total cargo:																								
April, 1929.....	49.7	2.4	3.8	55.9	3.9	1.0	.2	1.1	62.1	15.4	2.2	1.1	2.6	2.6	2.7	.4	.8	.7		9.2	37.8	.1	100.0	
April, 1928.....	46.8	4.9	3.2	54.9	.9	1.1	1.5	1.3	59.3	20.3	2.2	1.0	1.8	4.4	2.9	1.1	1.0	.3		5.1	40.1	.2	100.0	
April, 1927.....	54.2	3.4	3.4	60.8	7.0	2.2	.6	3.7	74.3	9.0	.8	.2	.3	2.0	.4	.1	.2	.2		9.9	22.9	1.3	100.0	

¹ General cargo not routed so as to allow segregation between definite ports.² Includes both local and transit cargo.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending May 11, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Esparta	United Fruit Co.		May 5		369
Wanks	Stand. Fruit S. S. Co.		May 5		6
Leme	Nav. Libera-Triestina		May 5		3
Saramacca	United Fruit Co.		May 5		9
Florcana	Colombian Transp. Co.		May 5		400
City of San Francisco	Panama Mail S. S. Co.		May 5		3,300
Ucayali	Peruvian Line		May 5		308
Pastores	United Fruit Co.	May 5	May 5	30	286
Coppename	United Fruit Co.	May 5	May 6	55	24
Guayaquil	Panama R. R. S. S. Line	May 5	May 6	93	957
Buenaventura	Panama R. R. S. S. Line	May 5	May 6	1,085	60
Montana	Huasteca Petroleum Co.	May 5	May 6	10,015	(¹)
Cerigo	Hamburg-American Line	May 5	May 11	520	232
Santa Teresa	Grace Line	May 6	May 6	54	(¹)
Havre Maru	Osaka Shosen Kaisha	May 6	May 7	447	
Ulua	United Fruit Co.	May 6	May 8	332	107
Maravi	United Fruit Co.	May 6	May 6	876	222
Witram	North German Lloyd	May 6	May 6	(¹)	112
Heredia	United Fruit Co.		May 6		94
Teutonia	Hamburg-American Line	May 6	May 7	15	837
La Marseillaise	French Line	May 6	May 7	425	51
Van Rennselaer	Royal Neth. S. S. Co.	May 7	May 8	120	18
San Francisco	Hamburg-American Line	May 7	May 8	(¹)	417
Zacapa	United Fruit Co.	May 8	May 9	350	337
Cristobal	Panama R. R. S. S. Line	May 8	May 8	3,578	
Aconcagua	Chilean Line	May 8	May 8	(¹)	9
Linda S.	R. Feuillebois	May 8	May 8	(¹)	36 ¹ / ₂
Emil Kirdorf	Hamburg-American Line	May 8	May 9	46 ¹ / ₂	17
Sachsen	Hamburg-American Line	May 8	May 9	(¹)	506
Oropesa	Pacific Steam Nav. Co.	May 8	May 9	66	74
Ninian	Leyland Line	May 8	May 9	728	(²)
Glad Enterprise	Furness, Withy & Co.	May 8	May 11	20	386
Glamorganshire	Pacific Steam Nav. Co.	May 9	May 11	740	307
Cauca	National Navigation Co.	May 9		281	
Coppename	United Fruit Co.	May 10	May 10	30 ¹ / ₂	149
Caldas	National Navigation Co.		May 10		200
Nosa Queen	Nosa Line	May 10	May 11	68	306
Suriname	United Fruit Co.	May 10	May 11	810	46
La Perla	United Fruit Co.	May 10	May 11	1,153	627
Atlantida	Stand. Fruit S. S. Co.	May 10	May 11	409	536
Cal	North German Lloyd	May 10		797	
Van Rennselaer	Royal Neth. S. S. Co.	May 11	May 11	14	452
Cid	Pacific Steam Nav. Co.	May 11		214	
Ariguani	Elders & Fyffes, Ltd.	May 11	May 11	3	(²)
Wanks	Stand. Fruit S. S. Co.	May 11	May 11	183	1
Cartago	United Fruit Co.	May 11		455	
Eemdiijk	Holland-American Line	May 5	May 5	8	112

¹ No cargo discharged.² No cargo laded.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2	\$8.00	\$11.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic		8.00
3. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds	9.00	12.00
4. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds	11.00	14.00

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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The Panama Canal, Washington, D. C.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII.

Balboa Heights, C. Z., May 29, 1929.

No. 43.

Tender for Dredge "Las Cruces" to be Built in Canal Shops.

A tender for the new Diesel-electric dredge *Las Cruces* is to be built in the shops of the Mechanical Division of The Panama Canal. This tender will be all steel, 60 feet long by 16 feet beam, with molded depth of 8 feet, and will have a draft of approximately 5 feet 6 inches. The design of the hull is complete and fabrication of the material is in progress in the shops. The keel is to be laid about June 15, 1929, and it is hoped to have the boat in commission by August 1, 1929.

The tender will be powered with a 4-cylinder 10 by 12½-inch Diesel engine, developing 120 horsepower, operating at 360 revolutions per minute. A pedestal located in the pilot house will permit the operator of the tender to control completely the starting and stopping, as well as the speed of the engine. By this means the operator will have full direct control of the vessel, making unnecessary the use of gongs, bells, and other signals operating between pilot house and engine room. The vessel will be lighted from a generator directly connected to the engine. Constructed with an oil capacity of 13 tons, the tender will be capable of operating at full speed for fourteen 24-hour days without refueling.

The tender will be used to perform miscellaneous light towing duties, such as handling floating pipe line, water and oil barges, carrying crews at change of watches, handling material, etc., and miscellaneous light towing for the dredging fleet which may be stationed in the locality of the *Las Cruces*.

A description of the *Las Cruces*, which was placed in commission last February, appeared in THE PANAMA CANAL RECORD, issue of January 16, 1929.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

CANAL WORK IN APRIL, 1929.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of April, 1929.

BALBOA HEIGHTS, C. Z., May 20, 1929.

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

SIR: I have the honor to submit the following report covering the operations of The Panama Canal during the month of April, 1929.

NUMBER OF TRANSITS.

During the month 540 commercial vessels passed through the Canal. In addition to these, 41 nonseagoing launches measuring under 20 tons, and 40 vessels belonging to the United States Government transited the Canal. There were also 3 transits of a Panaman Government vessel and 3 transits of vessels solely for repairs, on which no tolls were collected, making a total of 627 transits for the month, or a daily average of 20.9.

Tolls on the 540 commercial vessels amounted to \$2,281,087.27, and on the launches to \$463.44, a total of \$2,281,550.71, or a daily average on all traffic of \$76,051.69.

Total commercial traffic for the past month was higher by 4 transits than that for the previous month although the amount of tolls collected was slightly less than the amount collected in March, 1929 (\$2,343,865.55). Traffic for the first ten months of the current fiscal year is slightly lower than that for the same period last year with respect to the number of transits and tolls collected, while the net tonnage of vessels, Panama Canal measurement, and tons of cargo carried are slightly higher.

The total numbers of craft of all kinds transiting the Canal during the month of April, 1929, as compared with the same month in 1928 and 1927, are shown in the following tabulation:

	April 1929.	April 1928.	April 1927.
Commercial vessels.....	540	531	464
Launches (under 20 tons measurement).....	41	16	15
Noncommercial vessels:			
United States Government.....	40	58	70
Panaman Government.....	3	.....	3
Vessels transiting for repairs.....	3	3	.....
Totals.....	627	608	552

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Totals.
Gatun.....	5	6	11
Pedro Miguel.....	22	28	50
Miraflores.....	24	31	55
Totals.....	51	65	116

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the fiscal year 1929, to the end of April, 1929, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1927-8	1928-9	1927-8.	1928-9.	1927-8.	1928-9.	1927-8.	1928-9.
July.....	599	509	2,406,955	2,318,395	2,450,468	2,291,955	\$2,215,515.99	\$2,109,083.19
August.....	543	526	2,513,614	2,437,246	2,429,947	2,425,336	2,274,040.55	2,199,069.31
September.....	540	487	2,532,942	2,295,653	2,397,753	2,313,011	2,294,432.34	2,111,250.56
October.....	567	557	2,585,752	2,515,380	2,717,646	2,582,477	2,389,115.97	2,274,945.30
November.....	559	527	2,591,717	2,468,297	2,488,882	2,501,630	2,369,267.99	2,225,937.48
December.....	589	579	2,616,728	2,698,140	2,573,828	2,714,987	2,398,459.75	2,443,029.39
January.....	540	603	2,422,770	2,771,280	2,372,061	2,858,835	2,212,752.50	2,502,815.12
February.....	547	522	2,460,111	2,428,530	2,660,425	2,550,498	2,253,755.37	2,211,961.20
March.....	542	536	2,441,077	2,567,961	2,428,662	2,743,768	2,223,370.57	2,343,865.55
April.....	531	540	2,384,491	2,488,176	2,473,884	2,719,668	2,187,607.82	2,281,087.27
Totals.....	5,467	5,386	24,956,157	24,988,458	24,993,556	25,702,165	22,809,318.85	22,703,024.37

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panaman, and Colombian Governments, including merchant vessels chartered by these Governments, and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for April, 1929, as compared with the corresponding month in 1928 and 1927, and the monthly averages for the calendar year 1928:

	April 1929.	April 1928.	April 1927.	Average per month for calendar year 1928.
Number of vessels.....	540	531	464	528
Panama Canal net tonnage.....	2,488,176	2,384,491	2,224,500	2,411,953
United States net tonnage.....	1,899,607	1,839,021	1,750,360	1,851,471
Registered gross tonnage.....	3,127,365	3,012,294	2,852,638	3,029,975
Registered net tonnage.....	1,917,378	1,845,976	1,747,986	1,855,554
Tolls.....	\$2,281,087.27	\$2,187,607.82	\$2,065,206.92	\$2,197,996.86
Tons of cargo carried.....	2,719,668	2,473,884	2,429,807	2,450,132

The average daily number of transits, tonnage, tolls, and cargo, is shown in the following statement, in comparative form, commercial transits only:

	Average per day.			Average per day for cal- endar year 1928.
	April, 1929.	April, 1928.	April, 1927.	
Number of transits.....	18.00	17.70	15.46	17.31
Panama Canal net tonnage.....	82,939	79,483	74,150	79,080
Tolls.....	\$76,036.24	\$72,914.55	\$68,840.23	\$72,065.47
Tons of cargo carried.....	90,655	82,463	89,993	89,332

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during April, 1929, as compared with April, 1928 and 1927, are shown in the following tabulation:

	Average per vessel.		
	April 1929.	April 1928.	April 1927.
Panama Canal net tonnage.....	4,608	4,940	4,794
United States net tonnage.....	3,518	3,463	3,772
Registered gross tonnage.....	5,791	5,673	6,147
Registered net tonnage.....	3,551	3,476	3,767
Tolls.....	\$4,224.24	\$4,119.60	\$4,450.88
Tons of cargo (including vessels in ballast).....	5,036	4,696	5,236
Tons of cargo (laden vessels only).....	5,786	5,597	6,480

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provisions that tolls shall not exceed \$1.25 per ton nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected on laden vessels averaged \$0.942 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.72 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of April, 1929, the following tabulation shows a comparison of tolls actually collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1.00 laden and \$0.60 ballast. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$8,351.92	\$7,499.60		\$852.32
British.....	664,221.71	698,317.60	34,095.89	
Chilean.....	7,582.50	7,768.00	185.50	
Colombian.....	8,164.52	7,946.80		217.72
Danish.....	46,268.59	47,616.20	1,347.61	
Danzig.....	23,809.94	21,885.20		1,924.74
Dutch.....	54,366.80	66,150.00	11,783.20	
French.....	44,856.25	45,338.00	481.75	
German.....	79,809.40	89,116.00	9,306.60	
Greek.....	10,520.00	11,930.00	1,410.00	
Italian.....	46,060.00	47,471.00	1,411.00	
Japanese.....	83,608.37	77,335.60		6,272.77
Mexican.....	613.50	613.50		
Norwegian.....	112,809.41	121,114.80	8,305.39	
Panaman.....	15,075.74	14,443.20		632.54
Peruvian.....	5,023.75	8,323.00	3,299.25	
Spanish.....	1,691.50	1,691.50		
Swedish.....	39,776.25	45,834.00	6,057.75	
United States.....	1,015,224.79	1,035,892.00	20,667.21	
Yugoslav.....	13,252.33	13,585.40	333.07	
Totals.....	2,281,087.27	2,369,871.40	98,684.22	9,900.09
Net increase for all traffic.....			88,784.13	

The increase on vessels of the United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$27,443.11
United States foreign trade.....	556.06
United States-Canal Zone trade.....	6,219.84
Net increase.....	20,667.21

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in April, 1929, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Belgian.....		1.66	1.66
British.....	.91	1.31	1.15
Chilean.....		1.25	1.25
Colombian.....	.60	1.12	.68
Danish.....	1.32	1.71	1.63
Danzig.....		1.86	1.86
Dutch.....	.60	1.36	1.03
French.....	.90	1.38	1.13
German.....	.94	1.35	1.12
Greek.....		1.78	1.78
Italian.....	.23	1.02	.72
Japanese.....	1.27	1.52	1.38
Norwegian.....	1.30	1.73	1.55
Panamanian.....		1.35	1.35
Peruvian.....	.04	.74	.49
Swedish.....	.78	2.46	1.79
United States.....	.98	1.48	1.26
Yugoslav.....	1.50	1.87	1.75
Averages, April, 1929.....	.95	1.45	1.25
Averages, April, 1928.....	.89	1.45	1.23
Averages, April, 1927.....	.98	1.56	1.33

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of April, 1929, is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden	3	12,214	\$13,017.50	40	215,461	\$222,023.75
Ballast	36	202,985	146,149.20	3	13,697	9,861.84
General cargo ships:						
Laden	199	891,114	823,572.45	228	1,046,862	985,527.90
Ballast	18	84,177	60,713.85	6	6,604	4,710.02
Noncargo-carrying ships:						
Naval vessels	2		3,223.50	1		1,691.50
Passenger vessels				1	14,476	10,170.00
Yachts	1	20	14.40	2	566	411.36
Totals	259	1,190,510	1,046,690.90	281	1,297,666	1,234,396.37
Method of propulsion:						
Steam	216	981,255	881,993.80	219	998,547	957,626.63
Motor	42	209,235	164,682.70	61	299,119	275,078.24
Motor schooner	1	20	14.40	1		1,691.50
Totals	259	1,190,510	1,046,690.90	281	1,297,666	1,234,396.37

Of the 435 steam-driven vessels, 298 were oil burning, 135 coal burning, and 2 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of April, 1929. If tolls had been assessed against these vessels at commercial rates, the amount would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Aircraft carriers	1	12,700	\$6,350.00			
Cruisers	2	6,400	3,200.00	2	6,400	\$3,200.00
Mine layers				3	6,182	3,091.00
Mine sweepers	2	1,900	950.00	2	1,900	950.00
Storeships	1	3,394	4,242.50			
Submarines	6	5,168	2,584.00	4	3,482	1,741.00
Survey ships	1	2,600	1,300.00			
Tugs	2	2,000	1,000.00	2	2,000	1,000.00
U. S. Army vessels:						
Launches	1	20	15.00	1	20	15.00
Mine planters	2	2,416	1,208.00	1	1,208	604.00
Transports	2	7,816	9,770.00	1	3,908	4,885.00
Tugs	2	92	69.00	2	92	69.00
Totals, U. S. Government	22		30,688.50	18		15,555.00
Panaman Government vessels:						
Transports	1	101	72.72	2	202	145.44
Vessels for repairs:						
Cable ships	1	831	1,038.75	1	831	1,038.75
Tankers				1	3,975	2,981.25
Grand totals	24		31,799.97	22		19,720.44

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of April, 1929, carried cargo as follows: Atlantic to Pacific, 1,712 tons; Pacific to Atlantic, 322 tons; total, 2,034 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement transiting the Canal during the month of April, 1929. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Atlantic to Pacific	21	201	\$198.09	
Pacific to Atlantic	20	244	265.35	103
Totals	41	445	463.44	103

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of April, 1929, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	106,565	17,693	124,258
Local cargo shipped..... tons..	9,718	714	10,432
Transit cargo arriving..... tons..	2,705,659	2,728,420	5,434,079
Transit cargo clearing..... tons..	2,711,643	2,750,578	5,462,221
Cargo received for transshipment..... tons..	44,827	419	45,246
Cargo transshipped..... tons..	42,089	391	42,480
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	96	20	116
Number of withdrawals.....	558	149	707
Tons received.....	2,748	170	2,918
Tons withdrawn.....	3,207	203	3,410
Packages received.....	7,410	2,198	9,608
Packages withdrawn.....	8,601	2,049	10,650
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Co.....	90		90
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	27,492		27,492
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	122	9	131
U. S. Army, including vessels..... tons..	90		90
Individuals and companies..... tons..	236	155	391
Transferred to Navy..... tons..	164		164
Total sales and issues..... tons..	28,104	164	28,268
Coal on hand April 1, 1929..... tons..	31,098		31,098
Coal on hand May 1, 1929..... tons..	52,562		52,562
Coal received during month..... tons..	49,568		49,568
Coal received from Navy..... tons..		164	164
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls..	4,651.47	20,246.83	24,898.30
Panama Railroad Company..... bbls..	588.69		588.69
U. S. Army and Navy..... bbls..		100.89	100.89
Individuals and companies..... bbls..		101.19	101.19
Total sales and issues..... bbls..	5,240.16	20,448.91	25,689.07
Fuel oil on hand May 1, 1929..... bbls..	25,710.59	8,280.69	33,991.28
Diesel oil received during April..... bbls..		164.52	164.52
Diesel oil sold during April..... bbls..	70.47	164.52	234.99
Diesel oil on hand May 1, 1929..... bbls..	16,663.64	493.25	17,156.89
Miscellaneous transfers..... bbls..	720.16	13,581.59	14,301.75
Gasoline and kerosene pumped for The Panama Canal..... bbls..	2,094.50	4,694.85	6,789.35
Gasoline pumped for individuals and companies..... bbls..	702.24	6,186.12	6,888.36
Oil pumped for individuals and companies..... bbls..	659,067.58	263,813.56	922,881.14
Oil pumped for U. S. Shipping Board..... bbls..		3,445.00	3,445.00
Oil pumped for U. S. Navy..... bbls..	2,483.00	1,034.00	3,517.00
Total fuel oil, gasoline and kerosene handled..... bbls..	670,378.11	313,248.55	983,626.66
Admeasurement of vessels:			
U. S. Equivalent certificates issued.....	39	6	45
Measured for Panama Canal net tonnage.....	15		15
Remeasured for Panama Canal net tonnage.....	27	4	31
Panama Canal net tonnage corrected.....	5	6	11
U. S. equivalent tonnage corrected.....	10	8	18
Services of harbor equipment:			
Tugs, total operating hours.....	492½	313½	706
Launches, total operating hours.....	1,539	1,910½	3,449½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$15,395.00	\$9,783.75	\$25,178.75
Pilotage.....	21,636.00	7,650.00	28,686.00
Seamen.....	11,898.00	12,888.00	24,786.00
Launch service.....	2,032.00	3,059.00	5,091.00
Wharfage.....	17,720.39	4,392.23	22,112.62
Ships measured.....	170.00	5.00	175.00
Miscellaneous.....	965.60	912.50	1,878.10
Ships repaired at Panama Canal shops:			
Commercial.....	71	11	82
U. S. Army and Navy.....	8	2	10
Panama Canal equipment.....	5	14	19
Totals.....	84	27	111

‡ 44.52 barrels handled by the Panama Canal.

* 114.99 barrels handled by the Panama Canal.

	Cristobal.	Balboa.	Total.
Vessels dry-docked:			
Commercial.....	6	4	10
U. S. Army and Navy.....	3		3
Panama Canal equipment.....		2	2
Totals.....	9	6	15
Clearances issued.....	342	251	593
Bills of health issued.....	339	258	597

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships Entering.</i>						
All vessels, including those transiting Canal.	630	3,528,763	2,165,532	564	3,188,867	1,970,437
Vessels entering port but not transiting Canal	72	364,630	213,077	6	14,516	9,742
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	128	753,868	460,516	103	596,972	360,487
<i>Ships Clearing.</i>						
All vessels, including those transiting Canal.	633	3,541,431	2,175,614	568	3,218,150	1,991,950
Vessels clearing port but not transiting Canal	71	352,311	206,723	3	8,634	6,178
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	126	746,943	456,962	103	598,614	360,176

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,772	1,254	3,026	99	155	254
From Pacific ports.....	296	166	462	390	357	747
Total disembarking.....	2,068	1,420	3,488	489	512	1,001
Embarking:						
For Atlantic ports.....	1,567	1,117	2,684	137	288	425
For Pacific ports.....	264	244	508	373	301	674
Total embarking.....	1,831	1,361	3,192	510	589	1,099
Remaining on board:						
From Atlantic to Pacific ports.....	1,281	2,378	3,659	1,436	2,467	3,903
From Pacific to Atlantic ports.....	2,155	2,428	4,583	2,314	2,306	4,620
From Atlantic to Atlantic ports.....	1,174	280	1,454			
From Pacific to Pacific ports.....				8	255	263
Total remaining on board.....	4,610	5,086	9,696	3,758	5,028	8,786
Total arriving.....	6,678	6,506	13,184	4,247	5,540	9,787
Total departing.....	6,441	6,447	12,888	4,268	5,617	9,885

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	259	58	22.4
Pacific to Atlantic.....	281	76	27.0
Totals.....	540	134	24.8

In addition to the aforesaid, 55 passenger-carrying vessels called at the port of Cristobal and 1 at Balboa without transiting the Canal, making a total of 190 passenger-carrying vessels calling at Canal ports during the month.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of April, 1929:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Totals.
Sales at Cristobal to:						
Commercial vessels.....	\$3,346.53	\$15,578.16	\$36,028.40	\$359.93	\$7,781.18	\$63,094.20
Government vessels.....	134.02	1,312.82	10,300.26	156.31	1,336.77	13,240.18
P. R. R. vessels.....	2.70	81.64	1,834.87	521.06	364.37	2,804.64
Total sales, April, 1929.....	3,483.25	16,972.62	48,163.53	1,037.30	9,482.32	79,139.02
Total sales, April, 1928.....	2,558.75	15,551.34	49,186.92	942.52	8,384.41	76,623.94
Total sales, April, 1927.....	2,876.18	15,091.60	44,043.03	1,020.00	8,652.71	71,683.52
Sales at Balboa to:						
Commercial vessels.....	867.35	10,311.50	16,163.87	615.44	3,382.12	31,340.28
Government vessels.....	507.20	3,032.09	23,186.61	186.39	1,826.13	28,738.42
P. R. R. vessels.....			23.24			23.24
Total sales, April, 1929.....	1,374.55	13,343.59	39,350.48	825.07	5,208.25	60,101.94
Total sales, April, 1928.....	1,816.45	13,085.57	31,787.25	1,657.99	5,129.84	53,477.10
Total sales, April, 1927.....	1,136.76	13,453.28	38,213.24	659.17	4,186.97	57,649.42

The aggregate sales to Government vessels during the month was \$41,978.60; to Panama Railroad vessels, \$2,828.06; and to other commercial vessels, \$94,434.48, making the total sales to all vessels \$139,240.96.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of April, 1929, as compared with the corresponding month in 1928 and 1927:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. ¹			April 1929.	April 1928.	April 1927.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	269	237	506	3	5	8	514	508	469
Pedro Miguel.....	256	230	486	7	14	21	507	540	488
Miraflores.....	257	230	487	8	15	23	510	532	478
	Number of vessels put through locks.								
Gatun.....	280	260	540	45	57	102	642	613	582
Pedro Miguel.....	282	259	541	68	72	140	681	648	606
Miraflores.....	282	259	541	70	75	145	686	647	606

¹Includes toll-paying launches under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	52	47	47
Panama Canal equipment.....	11	50	55
Launches under 20 tons.....	33	37	37
Panaman Government vessels.....	3	3	3
Vessels for repairs.....	3	3	3

The total consumption of water for lockages and loss in leakage was as follows in April, 1929, as compared with the preceding month and the corresponding month in 1928:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,079,080,000	1,333,090,000	1,390,370,000
Leakage.....	30,000,000		20,000,000
Totals, April, 1929.....	1,109,080,000	1,333,090,000	1,410,370,000
Totals, March, 1929.....	1,239,910,000	1,496,020,000	1,516,240,000
Totals, April, 1928.....	1,643,700,000	1,525,510,000	1,665,180,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of April, 1929, are shown in comparative form in the following tabulation:

	April.		April—Years of record.		
	1929.	1928.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	743	785	3,140	281	987
Maximum momentary discharge for the month.....	2,038	3,537	29,200	.....	.....
Gatun Lake watershed, total yield.....	1,116	1,007	6,263	305	1,879
Gatun Lake watershed, net yield.....	238	109	5,400	—706	1,007
Draft on Gatun Lake for lockages and power.....	2,464	2,648	2,648	21,019	21,951

¹ April 3, 1915.

² April, 1914, not included.

The total yield of the Gatun Lake watershed was 41 per cent below the 16-year April average, or 1,116 c. f. s., compared with an average of 1,879 c. f. s. Maximum and minimum total yields of record for April are 6,263 c. f. s. in 1915 and 305 c. f. s. in 1926, respectively. The lake varied from elevation 84.19 feet on the 1st to 82.85 feet on the 30th, averaged 83.50 feet, and ended at elevation 82.87 feet. Miraflores Lake varied from elevation 54.28 feet on the 3d to 53.25 feet on the 27th, averaged 53.89 feet, and ended at elevation 53.60 feet.

SEISMOLOGY.

Seismic disturbances were recorded during the month on the 23d and 30th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,325,100 kilowatt hours, and the computed water consumption was 3,972,626,137 cubic feet. A 4-minute interruption to power service occurred on the 29th due to loss of excitation caused by accidental tripping out of exciter circuit breaker. This station carried full load throughout the month. The Miraflores Diesel-electric station had a gross generator output of 2,908,000 kilowatt hours, with a fuel oil consumption of 60.79 barrels. Overhaul of Diesel engines was conducted throughout the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were completed on 37 vessels during the month. There were 374 work orders issued during the month, as compared with 305 for the previous month.

MECHANICAL DIVISION.

During the month miscellaneous repairs were made on 84 vessels at Cristobal and 27 at Balboa. Nine vessels were dry-docked at Cristobal and 6 at Balboa. General overhaul on the U. S. S. *Swan* was completed during the month. The transfer of machinery from old hull of Panama Railroad pile driver *No. 2* to new hull was completed late in April. The Mexican cruiser *Nicolas Bravo* was docked for cleaning, painting, and rebricking of furnaces. Work was completed during the month.

MUNICIPAL ENGINEERING DIVISION.

Work was carried forward on several improvement projects in the cities of Colon and Panama, and in the Canal Zone. On the Madden Road, 9,500 linear feet were cleared, 25,165 cubic yards of material were moved in connection with the grading, and 350 feet of retaining wall were constructed. At the site of the Madden Dam the operation of diamond drills was continued throughout the month.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 730,609,750 gallons.

DREDGING DIVISION.

West Lirio slide showed movement during the entire month of April. Two dipper dredges worked on this slide during the month, excavating 144,650 yards of material. Cucaracha, South Cucaracha, East and West Culebra slides showed no movement during the month. There were no other slides and no delays to shipping during the month.

The total excavation during April was 642,390 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gaillard Cut—			
Project No. 2.....	700	12,100	12,800
Lirio Slide.....	28,950	115,700	144,650
Canal prism, Pacific entrance—			
Project No. 1 (extension).....	92,000		92,000
Maintenance.....	188,700		188,700
Balboa inner harbor—			
Project No. 1.....		72,700	72,700
Maintenance.....	40,200	5,600	45,800
Plant excavation:			
Albrook Field.....	85,200		85,200
Dredging sand at Chame.....	540		540
Totals.....	436,290	206,100	642,390

Four thousand four hundred linear feet of dike were completed and 8,500 cubic yards of material were pumped into the filling project at Albrook Field.

The ferry crossing at the north end of Pedro Miguel locks operated 30 days during the month. Four hundred and ninety-eight trips were made, and 269 Panama Canal, 166 U. S. Army, and 4,958 other vehicles, a total of 5,393, were ferried across the Canal.

AIRPLANE SERVICES.

Following the issuance of Executive Order No. 4971, dated September 28, 1928, authorizing the Secretary of State to receive and pass upon applications for the privilege of operating commercial aircraft between the Canal Zone and foreign countries; of Executive Order No. 5047, dated February 18, 1929, establishing regulations to control aerial navigation in the Canal Zone; and of regulations to govern air navigation in the Canal Zone, promulgated by the Secretary of State under date of February 26, 1929, two major air services with terminals in the Canal Zone were begun in April, 1929.

Effective April 2, 1929, the Pan-American Airways, Inc., inaugurated a tri-weekly air-mail service between Cristobal and Miami, Florida. This service was originally begun in February and was continued on a fortnightly basis until the establishment of the tri-weekly service last month. This company is carrying only mail at present but it is understood that passenger accommodations will be provided within a short time.

A weekly transport service was established on April 17, 1929, from the Canal Zone to cities in the Republic of Colombia by the Sociedad Colombo-Alemana de Transportes Aëros (*Scadta*).

Service of Foreign Air-Mail Route No. 9, with dispatches from Cristobal to Esmeraldas and Guayaquil in Ecuador, and to Talara, Trujillo, Lima, and Mollendo in Peru, is scheduled to be established this month.

Postal receipts for the first ten months of the current fiscal year are more than 26 per cent greater than the receipts for the first ten months last year and greater than the receipts for the whole of the past fiscal year. The sale of air-mail stamps accounts for a considerable portion of this increase.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on April 30, 1929, totaled 21,836, composed of 7,550 Americans, 2,747 of whom were men, 2,237 women, and 2,566 children; 242 Europeans, 100 of whom were men, 37 women, and 105 children; and 14,044 West Indians, 4,200 of whom were men, 2,606 women, and 7,238 children. The total number of persons in quarters on April 30, 1928, was 21,362.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of April 17, 1929, with a comparison of the working force for the preceding month and for April, 1928:

	As of April 17, 1929.			Total employees.	
	Gold.	Silver.	Total.	March 1929.	April 1928.
Operation and Maintenance:					
Office.....	44	66	110	104	79
Electrical.....	151	172	323	349	354
Municipal Engineering.....	118	1,750	1,968	2,000	824
Lock Operation.....	296	1,093	1,389	1,413	898
Dredging.....	192	995	1,187	1,165	1,064
Mechanical.....	416	819	1,235	1,232	1,270
Marine.....	211	755	966	856	823
Fortifications.....	30	442	472	488	421
Totals.....	1,458	6,092	7,550	7,607	5,733
Supply Department:					
Quartermaster.....	201	1,833	2,034	2,125	1,904
Subsistence.....	8	109	117	126	120
Commissary.....	220	1,279	1,499	1,504	1,328
Cattle Industry.....	5	157	162	163	225
Hotel Washington.....	8	111	119	118	110
Transportation.....	72	225	297	289	263
Totals.....	514	3,714	4,228	4,325	3,950
Accounting Department.....	196	6	202	201	204
Health Department.....	268	826	1,094	1,076	1,233
Executive Department.....	518	297	815	813	794
Totals.....	982	1,120	2,111	2,090	2,231
Panama Railroad Company:					
Superintendent.....	47	297	344	312	299
Transportation.....	63	127	190	196	180
Receiving and Forwarding Agency.....	100	1,526	1,626	1,836	1,906
Coaling Stations.....	48	371	419	384	406
Totals.....	258	2,321	2,579	2,728	2,791
Grand totals, April, 1929.....	3,212	13,256	16,468		
Grand totals, March, 1929.....	3,202	13,548		16,750	
Grand totals, April, 1928.....	3,015	11,690			14,705

Additions to the gold force on the Isthmus in April were as follows: Employed in the United States, 12; reemployed in the United States, 6; employed on the Isthmus, 26; reemployed on the Isthmus, 14; total, 58. Separations from the gold force totaled 45, as follows: Resigned, 27; discharged, 15; retired 1; died, 2. At the end of the month there were on file 220 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 146 deaths occurred during the month of April, 1929, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 13.53 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 25; tuberculosis (various organs), 24; organic diseases of the heart, 18; nephritis (acute and chronic), 11; and apoplexy, 8. There were 7 deaths from diarrhea and enteritis, 4 from cancer, and 1 each from measles, diphtheria and amebic dysentery. There were 18 deaths among nonresidents. These are not included in the above statistics.

There were 277 live births, and 18 stillbirths, reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 27.33 per 1,000 population. Deaths among children under 1 year of age numbered 26, giving an infant mortality rate based on the number of live births reported, of 93.86.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during April was 111, of whom 28 were employees (3 white and 25 colored), 14 were members of employee's families (1 white and 13 colored), 11 were Canal Zone agriculturists, 15 were other civilian nonemployees, and 43 were Army and Navy personnel. Of the 42 employees and members of employee's families, 38 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There was one death from malaria among residents, the child of a Canal Zone settler.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions and received on the Isthmus during the month totaled \$1,591,643.97 of which \$1,578,200.37 was for the

Department of Operation and Maintenance and \$13,443.60 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap and obsolete and second-hand material amounted to \$47,036.38.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of March, 1929, as compared with March, 1928, and the figures for the first nine months of the current fiscal year as compared with the same period in the fiscal year 1928.

It is impossible to submit the figures for the month of April at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	March 1929.	March 1928.	To end of March.	
			This year.	Last year.
Tolls.....	\$2,344,009.79	\$2,223,457.42	\$20,420,498.10	\$20,620,451.02
Other receipts.....	322,693.24	310,455.98	2,962,537.13	2,662,758.88
Total transit revenues.....	2,666,703.03	2,533,913.40	23,383,035.23	23,283,209.90
Total transit expenses.....	1,282,843.26	1,056,202.26	9,797,232.14	9,066,786.31
Net transit revenues.....	1,383,859.77	1,477,711.14	13,585,812.09	14,216,423.59
Three per cent capital charge.....	614,858.61	612,993.55	5,542,664.67	5,503,530.30
Transit surplus.....	769,001.16	864,717.59	8,043,147.42	8,712,893.29
Business revenues.....	1,556,098.68	2,098,491.48	12,879,863.57	12,420,707.28
Business expenses.....	1,452,110.54	2,032,766.76	12,070,439.92	11,720,665.05
Net business revenues.....	103,988.14	65,724.72	809,423.65	700,042.23
Three per cent capital charge.....	61,550.27	61,208.19	587,462.15	587,592.69
Business surplus.....	42,437.87	4,516.53	221,961.50	112,449.54
Combined revenues.....	4,222,801.71	4,632,404.88	36,262,898.80	35,703,917.18
Combined expenses.....	2,734,953.80	3,088,969.02	21,867,663.06	20,787,451.36
Net revenues.....	1,487,847.91	1,543,435.86	14,395,235.74	14,916,465.82
Three per cent capital charge.....	676,408.88	674,201.74	6,130,126.82	6,091,122.99
Combined surplus.....	811,439.03	869,234.12	8,265,108.92	8,825,342.83

Respectfully,

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending May 25, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal.....	Panama R. R. S. S. Line.....		May 12.....		873
Cali.....	North German Lloyd.....		May 12.....		339
Cid.....	Pacific Steam Nav. Co.....		May 12.....		159
Martha.....	H. C. Stevenson.....		May 12.....		286
Ulva.....	United Fruit Co.....	May 12.....	May 12.....	29½	121
Cartago.....	United Fruit Co.....		May 13.....		262
Salvador.....	Pacific Steam Nav. Co.....		May 13.....		1,050½
Brielle.....	Royal Neth. S. S. Co.....	May 13.....	May 13.....	11	1
Maravi.....	United Fruit Co.....	May 13.....	May 13.....	(+)	861
Teno.....	Chilean S. S. Line.....	May 13.....	May 13.....	15	(+)
Jamaica.....	Pacific Steam Nav. Co.....	May 13.....		828	
Galicia.....	Hamburg-American Line.....	May 13.....	May 14.....	159	51
Camden.....	United Fruit Co.....	May 13.....	May 14.....	9,469	(+)
Tolosa.....	United Fruit Co.....	May 13.....	May 15.....	397	46
Oranian.....	Leyland S. S. Line.....	May 13.....	May 17.....	(+)	213
Mayebashi Maru.....	Nippon Yusen Kaisha.....	May 14.....	May 14.....	101	(+)
Saint Jean.....	French Line.....	May 14.....	May 14.....	53½	49
Colombia.....	Panama Mail S. S. Co.....	May 14.....	May 15.....	514	167
Ballena.....	Pacific Steam Nav. Co.....	May 14.....	May 16.....	(+)	187½
Baralt.....	Royal Neth. S. S. Co.....	May 15.....		500	
Venezuela.....	Panama Mail S. S. Co.....	May 15.....	May 16.....	1,100	516
Santa Marta.....	United Fruit Co.....	May 15.....	May 16.....	784	234

+ No cargo discharged.

+ No cargo laded.

Name of vessel.	Line or charterer	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Flandre.....	French Line.....	May 15.....	May 16.....	280	519
Magdalena.....	Hamburg-American Line.....	May 15.....	May 16.....	226	(²)
Alkmaar.....	Royal Neth. S. S. Co.....	May 15.....	May 16.....	246	168
Alvarado.....	Pacific Steam Nav. Co.....	May 15.....	May 16.....	374	311
Nebraska.....	Pacific Steam Nav. Co.....	May 15.....	May 16.....	(¹)	409
Mississippi.....	French Line.....	May 16.....	May 16.....	260	21
Zenon.....	French Line.....	May 16.....	May 17.....	65	(²)
Manizales.....	North German Lloyd.....	May 16.....	May 17.....	558	(²)
Pilot.....	Hamburg-American Line.....	May 16.....	May 17.....	130	90
Palatia.....	Hamburg American Line.....	May 16.....	May 17.....	58	122
Macabi.....	United Fruit Co.....	May 16.....	May 17.....	630	47
Saramacca.....	United Fruit Co.....	May 17.....	May 17.....	919	350
Suriname.....	United Fruit Co.....	May 17.....	May 17.....	175	146
San Jose.....	United Fruit Co.....	May 17.....	May 18.....	1,015	467
Drechtijk.....	Holland-American Line.....	May 17.....	May 18.....	35	195
Rapot.....	North German Lloyd.....	May 17.....	May 18.....	322	468
Amapala.....	Stand. Fruit S. S. Co.....	May 17.....	May 18.....	411	583
Parismina.....	United Fruit Co.....	May 18.....	May 18.....	559	
Minden.....	North German Lloyd.....	May 18.....	May 18.....	631	
Visurgis.....	North German Lloyd.....	May 18.....	May 18.....	144	
Margarethe Cords.....	Colombian Mar. Co.....	May 18.....	May 18.....	54	(²)
Arkansas.....	French Line.....	May 18.....	May 18.....	147	
Wanks.....	Stand. Fruit S. S. Co.....	May 18.....	May 18.....	196	
Abraham Lincoln.....	Norway-Pacific Line.....	May 18.....	May 18.....	281	
Gracia.....	Donaldson S. S. Line.....		May 19.....		315
Baralt.....	Royal Neth. S. S. Co.....		May 19.....		228
Arkansas.....	French Line.....		May 19.....		237
Wanks.....	Stand. Fruit S. S. Co.....		May 19.....		3½
Abraham Lincoln.....	Norway-Pacific Line.....		May 19.....		222
Magdalena.....	Hamburg-American Line.....	May 19.....	May 19.....	(¹)	705
Tolosa.....	United Fruit Co.....	May 19.....	May 19.....	(¹)	230
Atlantian.....	Leyland S. S. Line.....	May 19.....	May 20.....	630	(²)
Murla.....	North German Lloyd.....	May 19.....	May 20.....	104	242
Parismina.....	United Fruit Co.....		May 20.....		79½
Minden.....	North German Lloyd.....		May 20.....		577
Santa Maria.....	Grace Line.....	May 20.....	May 20.....	6	(²)
Schwaben.....	North German Lloyd.....	May 20.....	May 20.....	(¹)	135
Wauna.....	Stand. Fruit S. S. Co.....	May 20.....	May 21.....	592	½
Montevideo Maru.....	Osaka Shosen Kaisha.....	May 20.....	May 21.....	98	(²)
Heinrich Arp.....	Colombian Mar. Co.....	May 20.....	May 21.....	288	(²)
Swiftsure.....	C. D. Mallory & Co.....	May 20.....	May 22.....	11,873	(²)
Kinderdijk.....	Holland-American Line.....	May 20.....	May 23.....	432	275
Calamares.....	United Fruit Co.....	May 20.....	May 22.....	823	85
Santa Cruz.....	Grace Line.....	May 21.....	May 21.....	(¹)	144
Saramacca.....	United Fruit Co.....	May 21.....	May 21.....	11	37
William M.....	R. Feuillebois.....	May 21.....	May 21.....	(¹)	19
Jamaica.....	Pacific Steam Nav. Co.....		May 21.....		813
Lobos.....	Pacific Steam Nav. Co.....	May 21.....	May 22.....	52	187
Mayan.....	Caribbean S. S. Co.....	May 21.....	May 22.....	323	(¹)
Acajutla.....	Pacific Steam Nav. Co.....	May 22.....	May 22.....	863	
Canadian Highlander.....	Can. Nat. Steamships.....	May 22.....	May 22.....	38	(²)
London Importer.....	Furness, Withy & Co.....	May 22.....	May 23.....	(¹)	276
Knate Nelson.....	Norway-Pacific Line.....	May 22.....	May 22.....	(¹)	238½
Orbita.....	Pacific Steam Nav. Co.....	May 22.....	May 23.....	59	275
Metapan.....	United Fruit Co.....	May 22.....	May 23.....	310	122
Virgilio.....	Italian Line.....	May 22.....	May 24.....	486	(²)
Limon.....	United Fruit Co.....	May 22.....	May 24.....	976	325
St. Theresa.....	United Fruit Co.....	May 22.....	May 24.....	1,037	
Ancon.....	Panama R. R. S. S. Line.....	May 22.....	May 23.....	4,163	
Linda S.....	R. Feuillebois.....	May 23.....	May 23.....	(¹)	36
Visurgis.....	North German Lloyd.....		May 23.....		1,295
Ebro.....	Pacific Steam Nav. Co.....	May 23.....	May 24.....	50½	1
Manizales.....	North German Lloyd.....	May 23.....	May 25.....	180	370
Saramacca.....	United Fruit Co.....	May 24.....	May 25.....	260	395
Coppename.....	United Fruit Co.....	May 24.....	May 25.....	687	62
Atlantida.....	Stand. Fruit S. S. Co.....	May 24.....	May 25.....	111	830
Adolf von Baeyer.....	Hamburg-American Line.....	May 24.....	May 25.....	21	
Buenos Aires.....	Spanish Line.....	May 24.....	May 25.....	191	
Macabi.....	United Fruit Co.....	May 24.....	May 25.....	11	878
Heredia.....	United Fruit Co.....	May 25.....	May 25.....	634	
Durazzo.....	Hamburg-American Line.....	May 25.....	May 25.....	283	
Wanks.....	Standard Fruit S. S. Co.....	May 25.....	May 25.....	177	
Carare.....	Elders & Fyffes.....	May 25.....	May 25.....	5	(²)
Uribe.....	Estrada G. Hermanos.....		May 25.....		470

* No cargo discharged.

* No cargo laded.

* Four packages.

* Three cases.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS. *Week ending at midnight, May 25, 1920.*

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Gracia	18	9 05	19	6 12	19	15 51	19	17 40	British	Donaldson Line.	415 0	54 3	22 6	Glasgow-England.	Vancouver, B. C.	General, bananas	1 440	6,809	4,882
Fernbank ²	18	6 25	19	7 20	19	18 02	19	19 06	Norwegian.	Fearnley & Eger.	382 7	53 4	24 0	Houston, Texas.	Shanghai, China.	()	6,999	1,112	4,205
Baychino	19	8 40	19	8 55	19	18 11	20	1 26	British	Hudson Bay Co.	223 0	33 0	15 6	Adrian, Ont.	Vancouver, B. C.	Ballast	1,362	883	
Barak	15	18 40	19	12 10	19	19 41	19	21 08	Dutch.	Royal Neth. S. S. Co.	292 0	33 0	12 10	Cristobal, C. Z.	Guayaquil, Ecuador	General	229	1,183	742
Creslo Jefe ¹	19	1 06	19	12 40	19	19 15			Venezuelan.	Creslo Petroleum Co.	325 0	35 0	10 0	Las Piedras, Venez.	Balboa, C. Z.	Ballast			
Sunol ²	19	14 25	19	14 35	19	21 33	19	22 40	American	Sun Oil Co.	480 6	66 0	20 0	Chesler, Pa.	Los Angeles, Calif	Ballast	9,610	6,396	
Tushino ²	19	14 10	19	14 45	19	22 08	19	23 56	American	Charles Nelson & Co.	324 6	46 2	19 0	Charleston, S. C.	Los Angeles, Calif	General	2,800	9,628	
W. L. Steed ¹	19	11 25	19	15 26	19	23 04	20	00 15	American	American Oil Co.	416 8	56 1	22 5	Baltimore, Md	Los Angeles, Calif	Ballast	6,751	4,795	
Abraham	18	23 30	19	20 15	20	2 06	21	22 10	Norway	Fred Olsen & Co.	436 0	56 0	18 00	Oslo, Norway	Vancouver, B. C.	Bananas, general	2,041	8,005	5,453
Lincula ²	19	20 30	20	6 10	20	13 45	20	19 40	Norwegian.	Ferr Line	376 5	53 8	25 8	Pt. Arthur, Tex.	Sydney, Australia.	Kerosene	7,359	6,264	4,681
Fernalea ²	19	21 50	20	6 12	20	15 51	20	21 43	American	Isthmian S. S. Lines	100 7	54 2	23 2	Baltimore, Md	Vancouver, B. C.	Steel, general.	7,867	6,616	4,614
Isjwich	19	23 55	20	7 20	20	16 27	20	22 43	Swedish	Ore S. S. Corp.	561 0	72 0	22 0	Baltimore, Md	Cruz Grande, Chile	Ballast	15,560	4,496	
Amerkalund ²	20	6 10	20	7 30	20	17 28	20	18 35	British	Canadian Transp. Co.	339 0	55 0	16 11	Baltimore, Md	Vancouver, B. C.	Ballast	5,926	4,262	
Orleans	20	6 12	20	8 35	20	18 18	20	19 40	American	Quaker Line	395 0	55 0	22 5	Wilmington, Del.	Seattle, Wash	General	4,318	7,330	5,233
Calcutta Maru.	20	7 40	20	8 45	20	19 12	20	20 34	Japanese.	Nippon Yusen Kaisha.	400 0	54 5	22 0	Baltimore, Md	Kobe, Japan	General	5,130	5,790	4,178
Schwaben	20	6 25	20	11 55	20	20 02	20	21 26	German	North German Lloyd.	491 5	63 8	23 10	Hamburg, Germany	Vancouver, B. C.	(s)	5,123	10,002	6,743
Minden	17	23 40	20	13 10	20	20 50	20	22 43	German	North German Lloyd.	359 10	50 10	22 6	Bremen, Germany	Champerico, Guat.	General	3,183	4,823	3,272
Gudrun Maersk	20	8 50	20	14 35	20	22 34	21	00 04	Danish	Isbrandtsen Moller & Co.	361 7	51 4	21 8	Chester, Pa.	Yokohama, Japan.	General	3,825	4,901	3,477
Edgar F.	20	18 40	20	19 05	21	2 16	21	3 21	American.	Lukenbach Line	425 0	57 3	20 0	New Orleans, La.	Seattle, Wash	General	3,905	8,568	6,618
Lukenbach.	20	8 05	20	20 20	21	4 16	21	5 25	British	Can. Nat. Steamships	177 0	21 0	9 4	Halifax, N. S.	Prince Rupert, B. C.	Ballast.		391	214
Aktion	20	14 40	21	6 00	21	19 04	21	20 38	Japanese.	Osaka Shosen Kaisha.	430 0	56 0	22 6	Buenos Aires, Arg.	Kobe, Japan	(s)	3,670	7,875	5,821
Montevideo	13	21 00	21	7 15	21	19 09	21	20 38	British	Pacific Steam Nav. Co.	229 0	34 0	13 11	Cristobal, C. Z.	Champerico, Guat.	General	814	1,187	622
Jamaica	20	17 40	21	7 25	21	23 04	22	30 51	British.	F. & W. Ritson.	418 0	57 0	18 1	Liverpool, England	Valparaiso, Chile	General	2,000	5,208	3,578
Hazel Branch	20	21 25	21	8 35	21	21 48	22	1 12	Norwegian.	Fred Olsen & Co.	425 0	55 0	26 7	Oslo, Norway	Vancouver, B. C.	General	8,886	7,593	5,637
Theodore	20	3 15	21	9 20	21	22 25	21	23 57	American.	Quaker Line	386 8	52 2	22 6	New York, N. Y.	Tacoma, Wash	General	5,200	5,719	4,023
Roosevelt ²	21	7 15	21	10 45	21	23 15	22	09 51	British.	Balcraft S. S. Co.	376 0	50 0	25 8	Galveston, Tex.	Madhoune, Australia	Subbur	6,075	5,028	3,600
Georgian	21	5 45	21	12 40	22	03 24	22	1 52	American.	Grace Line	384 0	50 2	20 3	New York, N. Y.	Valparaiso, Chile	General	2,967	5,534	3,868
Batavia	21	10 10	21	14 00	22	00 59	22	2 04	Yug-slav.	Baburizza & Co.	397 8	57 0	23 0	Birth, England	Autofagasta, Chile.	Coal, general.	6,960	6,207	4,836
Zrinski	21	18 05	21	18 15	22	1 44	22	3 04	British.	Anglo-Tend. Oilfields.	409 0	57 0	19 0	Philadelphia, Pa.	La Libertad, Peru.	Ballast	6,046	4,326	
El Cervo ¹	21	13 15	22	7 05	22	15 42	22	17 05	American.	Arrow Oil Co.	464 0	60 0	17 6	Caracas, D. W. I.	Los Angeles, Calif	Ballast	8,473	6,070	
Swiftsure	21	20 45	22	7 15	22	16 52	22	18 36	Norwegian.	Isthmian Moller & Co.	330 0	40 0	20 10	Tampico, Mexico	La Paz, Mexico	Gas, kerosene	3,500	3,517	2,268
Vindengen	21	2 58	22	7 35	22	16 56	22	21 26	American.	Isthmian S. S. Lines	251 0	43 4	23 6	Baltimore, Md	Honolulu, T. H.	General, tinplate	3,006	2,823	1,740
Santa Isabel	22	6 55	22	10 00	22	17 50	22	18 56	American.	Amer-Hawaiian Line.	414 5	53 7	20 2	Boston, Mass.	Seattle, Wash.	General	2,870	7,049	4,941
Kentuckian	22																		
Andrea F.	22																		
Lukenbach.	22	7 15	22	10 33	22	19 45	22	20 50	American.	Lukenbach Line	498 0	68 0	23 0	Boston, Mass.	Seattle, Wash.	General, steel	6,124	11,487	8,762

² Tanker.³ Motor ship.⁴ South for dry-docking.⁵ Phosphates and cotton.⁶ Iron, oil, and general.⁷ Meat, oil, and general.

	22	9	30	22	12	25	22	20	46		American	U. S. Navy	292	0	44	0	18	4	Cristobal, C. Z.	Balboa, C. Z.	Ballast	14
Galveston 7	22	17	38	23	6	00	23	13	27	23	Dutch	J. S. Perino	409	4	58	4	20	0	Rotterdam, Holland	Vancouver, B. C.	General, bananas	3,309
Clemens 8	22	17	38	23	6	00	23	13	27	23	British	Holland-American Line	275	0	41	0	13	0	Immingham, Eng.	Valparaiso, Chile	Ballast	2,312
Kindred 9	22	17	38	23	6	00	23	13	27	23	Chilean	Cia Min. y Ind. de Chile	335	0	46	0	21	0	New Orleans, La.	Seattle, Wash.	General	3,984
Don Benjamin	22	17	38	23	6	00	23	13	27	23	American	Gulf-Pacific Line	429	0	37	8	15	0	Cristobal, C. Z.	Punta Arenas, C. R.	General	2,200
Donella	22	17	38	23	6	00	23	13	27	23	German	North German Lloyd	429	0	58	0	20	0	Baytown, Tex.	Los Angeles, Calif.	Fuel oil	10,750
Point Sur	22	17	38	23	6	00	23	13	27	23	American	Standard Shipping Co.	429	0	67	3	29	11	Liverpool, England	Talcahuano, Chile	General	4,531
Vicars	22	17	38	23	6	00	23	13	27	23	British	Pacific Steam Nav. Co.	480	6	66	0	21	3	Quebec, Pa.	Los Angeles, Calif.	Ballast	9,620
D. C. Scofield	22	17	38	23	6	00	23	13	27	23	American	Sun Oil Co.	480	6	66	0	21	3	Quebec, Pa.	Los Angeles, Calif.	Ballast	9,620
Obita	22	17	38	23	6	00	23	13	27	23	American	Standard Transp. Co.	480	6	66	0	21	3	Quebec, Pa.	Los Angeles, Calif.	Ballast	9,620
Sun 1	22	17	38	23	6	00	23	13	27	23	American	Standard Transp. Co.	480	6	66	0	21	3	Quebec, Pa.	Los Angeles, Calif.	Ballast	9,620
Empire Arrow	22	17	38	23	6	00	23	13	27	23	American	Standard Transp. Co.	480	6	66	0	21	3	Quebec, Pa.	Los Angeles, Calif.	Ballast	9,620
London	22	17	38	23	6	00	23	13	27	23	British	Furness, Withy & Co.	450	4	58	0	18	10	Glasgow-England	Vancouver, B. C.	General, bananas	1,540
West Niles	22	17	38	23	6	00	23	13	27	23	British	McCormick S. S. Co.	410	5	54	3	24	0	Rosario, Argentine	Vancouver, B. C.	General	2,757
Fernandez	22	17	38	23	6	00	23	13	27	23	Norwegian	Fern Line	382	7	53	4	24	0	Boe Grande, Fla.	Yokohama, Japan	Phosphates	2,757
Kuma Maru	22	17	38	23	6	00	23	13	27	23	Japanese	Nippon Yusen Kaisha	405	0	53	0	26	0	Baltimore, Md.	Kobe, Japan	General	7,210
Grieco 2	22	17	38	23	6	00	23	13	27	23	American	Stand. Fruit S. S. Co.	484	0	61	8	20	10	Cristobal, C. Z.	Gatun, C. Z.	(9)	7,008
Virgilio 2	22	17	38	23	6	00	23	13	27	23	Italian	Italian Line	484	0	61	8	20	10	Genoa, Italy	Valparaiso, Chile	General	1,245
Ebro	22	17	38	23	6	00	23	13	27	23	British	Pacific Steam Nav. Co.	450	0	57	0	25	6	Genoa, Italy	Talcahuano, Chile	General	2,781
Francis E.	22	17	38	23	6	00	23	13	27	23	British	Pacific Steam Nav. Co.	450	0	57	0	25	6	Genoa, Italy	Talcahuano, Chile	General	2,781
Powell 1	24	9	25	24	10	15	24	10	15	24	American	Atlantic Refining Co.	431	0	59	2	20	0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	7,860
San Manuel	24	10	20	24	10	30	24	10	30	24	British	Anglo-Mexican Pet. Co.	421	0	52	3	25	1	Minatitlan, Mex.	Valparaiso, Chile	(10)	7,652
Mahout	24	13	15	24	13	30	24	13	30	24	British	Com. Rth & Dom. Line	470	0	62	0	26	0	New York, N. Y.	Sydney, Australia	General	8,334
Hampton	24	15	15	24	15	25	24	15	25	24	American	Rielfield Oil Co.	430	0	59	0	17	0	Baltimore, Md.	Los Angeles, Calif.	Ballast	8,093
Roads 1	24	17	20	24	17	30	24	17	30	24	American	Isthmian S. S. Lines	399	7	56	2	26	6	Mobile, Ala.	Vancouver, B. C.	Iron, steel	8,412
Eurana	24	18	15	24	18	30	24	18	30	24	American	Standard Transp. Co.	435	0	56	0	19	0	Portland, Me.	Los Angeles, Calif.	Ballast	7,381
Alcoguinn 1	24	18	15	24	18	30	24	18	30	24	American	U. S. Navy	292	0	44	0	0	0	Nicaragua	Balboa, C. Z.	General	7,602
Denver 7	23	8	45	25	6	15	25	13	50	25	American	North German Lloyd	216	0	33	0	13	3	Cristobal, C. Z.	Guayaquil, Ecuador	General	500
Manizales	23	11	15	25	6	00	25	13	54	25	German	Isthmian S. S. Lines	424	2	56	2	26	0	Baltimore, Md.	Shanghai, China	General	8,122
Tuscaloosa City	24	19	20	25	7	50	25	15	56	25	American	Redwood Line	386	8	52	2	12	8	Mobile, Ala.	San Francisco, Cal.	General	3,500
Duchet	25	3	25	25	8	25	25	15	56	25	American	Colombian Mar. Co.	297	4	32	0	12	8	Cristobal, C. Z.	Buenaventura, Col.	General	460
Uribe	25	3	25	25	8	25	25	15	56	25	American	Oil Transport Co.	431	0	59	0	20	0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,862
Herman Falk 1	25	3	25	25	8	25	25	15	56	25	American	Calmar S. S. Corp.	410	0	54	0	24	3	Baltimore, Md.	Seattle, Wash.	Steel, general	7,479
Texmar 1	25	7	08	25	10	38	25	18	44	25	American	U. S. Navy	455	0	56	0	22	6	Cristobal, C. Z.	Los Angeles, Calif.	General	2,235
Cayama 1	25	17	12	25	12	35	19	26	25	20	American	Charles Nelson & Co.	344	0	46	2	17	0	Norfolk, Va.	San Francisco, Cal.	(11)	6,084
Fort Armstrong	25	18	25	25	19	30	26	3	39	26	American	Ozaka Shosen Kaisha	400	0	54	0	21	0	Houston, Tex.	Dairen, China	(11)	6,806
Hamburg Maru	25	18	25	25	19	30	26	3	39	26	Japanese	Ozaka Shosen Kaisha	400	0	54	0	21	0	Houston, Tex.	Dairen, China	(11)	6,806

** General, cotton, and sugar.

** Kerosene and gasoline.

* Towing barge.

* Launch.

* Cruiser.

* Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Manchester	Civilian	18	20	50	19	1	43	19	10	37	19	14	50	British	Moore & McCormack	385	0	52	0	24	0	Iquique, Chile	Charleston, S. C.	Nitrates	7,410	
	Ethelwolf	18	21	15	19	3	00	19	11	47	19	13	25	British	Harroving S. S. Co.	354	8	50	1	29	3	Portland, Ore.	Valencia, Spain	Wheat	6,500	
	Santore	19	3	15	19	4	20	19	13	00	19	13	25	American	Ore S. S. Corp.	449	1	57	2	23	0	Cruz Grande, Chile	New York, N. Y.	Iron ore	11,614	
	Murla	19	10	15	19	11	28	19	10	45	19	13	25	German	North German Lloyd	419	2	58	1	24	6	Talcahuano, Chile	Hamburg, Germany	General	8,012	
	Pacific	19	11	15	19	12	02	19	19	45	19	19	45	American	Argonaut S. S. Co.	399	7	56	2	25	0	Everett, Wash.	Roseton, Mass.	Lumber	7,879	
	Los Angeles 2	10	11	55	19	12	51	19	20	00	19	23	10	German	Hamburg-American Line	432	3	59	1	26	4	Vancouver, B. C.	Hamburg, Germany	General	7,628	
	Santa Cecilia	19	22	35	20	60	43	20	12	20	20	12	20	American	Nantilus S. S. Co.	404	6	53	9	26	4	San Francisco, Cal.	Baltimore, Md.	Lumber, general	6,500	
	Absaroka	19	23	39	20	2	24	20	13	45	20	13	45	American	McCormick S. S. Co.	409	6	54	1	24	6	Portland, Ore.	Baltimore, Md.	Lumber, general	7,727	

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Lio ¹²	19	23	30	20	3	35	20	American	Standard Transp. Co.	431	0	59	2	Gasoline	9,520	7,846
Santa Maria ¹²	19	12	15	20	4	10	20	American	Grace Line.	466	0	64	0	New York, N. Y.	5,701	6,080
Calveston ¹²	20	5	00	20	5	55	22	American	U. S. Navy	292	0	41	0	Cristobal, C. Z.	1,267	1,718
Heinrich Arp.	20	5	00	20	6	50	15	German	Colonial Mar. Co.	237	1	37	5	New York, N. Y.	9,462	7,016
Spinanger ¹²	20	7	35	20	8	20	16	Norwegian	Westfal, Larsen & Co.	141	6	57	4	Land's End, Eng.	4,904	11,070
Raranga	20	9	45	20	10	40	20	British	Shaw, Savill & Albion.	378	0	63	2	Glasgow, Scotland	6,350	5,583
Willmota	21	00	01	21	1	05	21	American	Williams S. S. Line	390	0	54	2	New York, N. Y.	8,178	6,359
Rio Dianzante	21	00	50	21	2	19	21	British	Thomson S. S. Co.	400	0	56	2	Hampton Roads ¹⁷	9,400	7,151
Lobos ¹²	19	11	45	21	3	34	21	British	Pacific Steam Nav. Co.	415	0	54	2	Hull, England	8,080	6,074
Taiwan	21	4	00	21	6	31	21	German	Kaufmann A. G.	412	3	55	5	London, England	8,300	6,051
King Robert	21	6	15	21	7	35	21	British	Dodd-Thomson & Co.	400	0	53	0	Avonmouth, Eng.	7,480	6,039
Westmoor ¹²	21	6	30	21	8	17	21	British	W. Runciman & Co.	375	0	52	5	United Kingdom	6,166	7,380
Alaskan	21	6	40	21	9	26	21	American	Amer-Hawaiian Line	415	0	53	7	Boston, Mass	6,311	5,892
Canadian	21	8	57	21	10	32	21	British	Can. Nat. Steamships	400	3	52	3	Montreal, Canada	21,850	15,425
Miller	21	10	27	21	11	20	21	Swedish	Axel Brostrom & Son	561	1	72	2	New York, N. Y.	20,893	12,735
Svealand ¹²	21	6	00	21	12	09	21	German	Hamburg-American Line	590	5	72	3	New York, N. Y.	8,209	9,294
Resolute	21	6	00	21	12	09	21	German	Hamburg-American Line	590	5	72	3	Passengers	5,120	9,486
Lillian	21	10	40	21	13	15	21	American	N. Z. Shipping Co.	484	5	62	7	Lumber, general.	8,484	8,016
Tasmania	21	10	40	21	13	15	21	American	U. S. Army	484	5	62	7	General	8,418	9,630
V-5 ¹⁴	21	15	30	22	1	08	22	Norwegian	Fred Olsen & Co.	455	1	56	2	General	6,525	6,224
Kaute Nelson	21	15	30	22	1	08	22	Norwegian	Fred Olsen & Co.	455	1	56	2	General	7,400	5,919
Pacific	21	16	50	22	2	30	22	British	Furness Withly & Co.	385	3	60	2	Sugar in bags	8,250	6,219
Pioneer ¹²	21	20	01	22	3	02	22	American	Calmar S. S. Corp.	385	0	51	0	Nitrates	7,723	6,784
Penmar	22	1	00	22	4	07	22	American	Kokusei Kisen Kaisha.	385	0	51	0	General	8,631	7,073
Ryufuku Maru	22	3	45	22	4	55	22	Japanese	Kokusei Kisen Kaisha.	385	0	51	0	Coffee, general.	3,600	3,984
Belgium Maru	22	4	35	22	5	10	22	Japanese	Kokusei Kisen Kaisha.	385	0	51	0	Lumber	1,542	6,192
East Lynn ¹²	22	4	35	22	5	10	22	British	Sir W. R. Smith & Sons	215	7	34	3	Lumber	7,871	6,624
Acaulta	22	6	00	22	7	11	22	British	Pacific Steam Nav. Co.	215	7	34	3	Wheat, general.	9,014	7,790
Suniteo	22	6	15	22	7	26	22	American	Transmarine Lines	324	0	46	2	For orders.	18	Farm products and frozen.
Canadian	22	10	45	22	11	24	22	British	Can. Nat. Steamships	400	0	52	4	For orders.	18	Farm products and frozen.
Highlander	22	16	00	22	16	48	23	British	Dimon S. S. Corp.	410	5	54	0	For orders.	18	Farm products and frozen.
Pacific Spruce	22	17	55	22	20	40	23	American	Ben Line, Ltd.	401	0	54	1	For orders.	18	Farm products and frozen.
Bennedict	22	18	45	22	20	45	23	American	Arrow Line	402	6	53	0	For orders.	18	Farm products and frozen.
Gen. M. H.	22	19	45	22	21	04	23	American	Swayne & Hoyt, Inc.	324	0	46	2	For orders.	18	Farm products and frozen.
Pont Reyes	22	5	45	23	7	04	23	American	Roland Line	216	5	32	9	For orders.	18	Farm products and frozen.
Manizales	23	7	25	23	8	12	23	Italian	Nav. Libera-Tristina	436	6	53	7	For orders.	18	Farm products and frozen.
Cefina ¹²	23	7	25	23	8	12	23	Italian	Nav. Libera-Tristina	436	6	53	7	For orders.	18	Farm products and frozen.

¹² Tanker.¹³ Cruiser.¹⁴ Launch.¹⁵ Copper, nitrates, and general.¹⁶ Coffee, hides, and specie.¹⁷ For orders.¹⁸ Farm products and frozen.

Limón	23	9.45	23	10.27	23	18.10	24	17.20	American	United Fruit Co	330.6	44.5	20.0	San Francisco, Cal.	Cristobal, C. Z.	Coffee, general	829	3,081	2,234
Mina Brea	22	6.20	23	11.41	23	19.50	23	19.50	British	Imperial Oil Co.	360.3	49.2	25.0	Talara, Peru	Idalfax, N. S.	Crude oil	4,750	4,478	2,703
Steel Mariner	23	15.00	23	15.33	23	22.50	24	22.50	American	Isthmian S. S. Lines	421.2	53.0	25.0	Vancouver, B. C.	Baltimore, Md.		7,800	7,011	5,450
Chateau	23	13.22	24	00.24	24	8.45	24	8.45	American	U. S. Army	418.0	58.0	25.0	San Francisco, Cal.	New York, N. Y.	Army supplies	221		
Abdon	23	15.45	24	1.19	24	10.00	24	10.00	American	Redwood Line, Inc.	336.8	52.2	22.2	San Francisco, Cal.	New Orleans, La.		5,500	5,732	4,131
Florence	23	21.55	24	2.05	24	10.07	24	10.07	American	Luckenbach Line	401.8	52.2	24.0	Portland, Ore.	Mobile, Ala.	General	7,307	6,002	4,621
K. R. Kingsbury	23	19.15	24	4.06	24	11.25	24	11.25	American	Standard Oil Co. of Cal.	440.0	58.2	23.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	11,000	9,033	5,938
Almirante	23	11.55	24	6.43	24	15.20			Chilean	Chilean Navy	625.0	92.5	28.0	Iquique, Chile	Plymouth, England	Crude oil	16,000	11,556	6,772
Latorre	23	23.00	24	7.53	24	16.05	24	16.05	British	Imperial Oil Co.	510.8	68.0	30.0	Talara, Peru	Montreal, Canada		220		
Cayamala	23	7.50	24	8.42	24	17.12	25	12.15	American	U. S. Navy	475.0	58.0	28.0	Los Angeles, Calif.	Cristobal, C. Z.	Gasoline	7,500	6,989	4,380
Virgilia	24	8.45	24	10.13	24	19.25	24	14.45	British	Gow, Harrison & Co.	410.3	54.5	23.6	Los Angeles, Calif.	Bayo, France	Rascings	22,913	16,321	
Francia	24	6.00	24	11.58	24	20.35	24	21.10	British	Guard Line	601.3	73.7	27.0	San Francisco, Cal.	New York, N. Y.	Nitrates	6,766	5,788	4,027
Isis	23	22.50	24	13.07	24	22.10	24	22.40	German	Hamburg-American Line	376.2	51.8	35.1	Iquique, Chile	Savannah, Ga.	Iron ore	6,350	4,788	3,347
Nyung	24	11.30	24	13.44	24	22.40	24	22.40	Norwegian	Scand.-So. Pacific Co.	359.0	51.5	35.6	Cruz Grande, Chile	Baltimore, Md.	Sugar	3,310	2,823	1,740
Santa Verónica	24	17.30	24	15.58	25	20.40	25	20.40	American	Amer.-Cuban S. S. Line	251.0	43.5	21.0	Hilo, T. H.	New York, N. Y.	General	5,768	6,760	4,459
Columbian	24	15.23	24	16.05	25	8.40	25	8.40	British	Amer.-Hawaiian Line	414.6	54.0	28.0	Seattle, Wash.	Boston, Mass.	Nitrates	7,730	5,593	4,069
Uganda	24	19.10	25	1.09	25	9.50	25	9.50	British	Wessel, Duval & Co.	402.5	52.2	24.5	Antofagasta, Chile	Wilmington, N. C.				
California	24	23.50	25	4.21	25	12.10	25	14.25	American	Standard Oil Co. of Cal.	513.5	68.2	29.6	Los Angeles, Calif.	London, England	Gasoline	15,900	11,719	8,619
Standard	24	16.45	25	6.04	25	14.20	25	15.25	Yugoslav	Yugoslav Lloyd	403.6	52.5	25.0	Pisagua, Chile	Azores	Nitrates	8,349	5,923	4,189
Tonislav	25	6.35	25	14.45					American	U. S. Navy	221.0	40.0	12.4	Bahoa, C. Z.	Cristobal, C. Z.	Sack goods	283	1,633	1,141
Sacramento	25	7.55	25	7.17	25	14.50			German	Hamburg-American Line	227.5	34.4	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	Nitrates, general	5,176	4,927	3,597
Durazzo	25	7.55	25	8.54	25	17.25	25	18.30	British	F. & W. Pitts n.	300.5	51.0	22.0	Corral, Chile	London, England	Ballast	8,472	6,759	4,540
Lautaro	25	9.30	25	13.06	25	21.15	25	21.15	British	Pacific Steam Nav. Co.	309.0	52.2	23.0	Magallanes, Chile	Liverpool, England	Lumber	8,166	6,573	4,916
Creole	25	19.43	25	19.56	26	8.45	26	8.45	Venezuelan	Crude Petroleum Co.	325.0	55.0	12.4	Bahoa, C. Z.	Maricao, V. C.				
West Katan	25	16.10	25	20.20	26	10.00	26	10.00	American	Pac.-Atlantic S. S. Co.	410.5	54.3	24.3	San Francisco, Cal.	Wilmington, N. C.				

* Tanker.

21 U. S. Army transport.

22 Battleship.

23 Cruiser.

24 South for dry-docking.

25 Lumber, oil, and machinery.

26 Copper, nitrates, and general.

27 Fuel oil and gasoline.

28 Logs, sugar, and general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* ARRIVALS					* DEPARTURES				
Date.	Vessel.	Line.	From—		Date.	Vessel.	Line.	For—	
May 19	Magdalena	Hamburg-American Line	Port Limon, Costa Rica.		May 19	Wanks	Stand. Fruit S. S. Co.	San Blas, R. P.	
May 19	Atlantian	Leyland Line	Liverpool via wayports.		May 19	Tolca	United Fruit Co.	New York via Habana.	
May 19	Inapauina	United Fruit Co.	Port Limon, Costa Rica.		May 19	Magdalena	Hamburg-American Line	Hamburg via wayports.	
May 19	Anacuana	United Fruit Co.	Colon, R. P.		May 19	Anacuana	United Fruit Co.	Colon, R. P.	
May 19	Anacuana	United Fruit Co.	Colon, R. P.		May 19	Inapauina	United Fruit Co.	Colon, R. P.	
May 19	A. Tagarapules	Colon, R. P.	Colon, R. P.		May 19	Annetta I.	A. Tagarapules	Colon, R. P.	
May 20	Wanda	Stand. Fruit S. S. Co.	Puerto Cabezas.		May 20	Parismina	United Fruit Co.	New Orleans via wayports.	
May 20	Calamares	United Fruit Co.	New York via Habana.		May 20	Atlantian	Leyland Line	Pto. Colombia via Limon.	
May 20	No. 9775	Pan-American Airways	Guayaquil via wayports.		May 21	Wanda	Stand. Fruit S. S. Co.	Puerto Cabezas	
May 21	Saramacca	United Fruit Co.	Puerto Colombia.		May 21	Saramacca	United Fruit Co.	Boca del Toro, R. P.	

* Other than ships passing through the Canal.

29 Motor boat.

30 Air-mail carrier.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 21	Mayan	Gulf-Caribbean S. S. Line.	Beaumont via waypoints.	May 21	William M ³¹	G. I. Bryan	Bluefields, Nicaragua.
May 21	William M ³¹	G. I. Bryan	Colon, R. P.	May 22	Calamares	United Fruit Co.	Port Limon, Costa Rica.
May 22	Ancon	Panama R. R. S. S. Line.	New York via Haiti.	May 22	Anachucua ³¹	United Fruit Co.	Colon, R. P.
May 22	Metapan	United Fruit Co.	New York via Kingston.	May 22	Inapachuca ³¹	United Fruit Co.	Colon, R. P.
May 22	Colombia No. 28 ³²	Seadta Airplane Co.	Barranquilla, Colombia.	May 22	Annetta I. ³¹	A. Tagarapulos	Colon, R. P.
May 22	Anachucua ³¹	United Fruit Co.	Colon, R. P.	May 22	Mayan	Gulf-Caribbean S. S. Line.	Cartagena, Colombia.
May 22	Inapachuca ³¹	United Fruit Co.	Colon, R. P.	May 23	No. 9685 ³¹	Pan-American Airways	Managua via David.
May 22	Annetta I. ³¹	A. Tagarapulos	Colon, R. P.	May 23	Metapan	United Fruit Co.	New York via waypoints.
May 23	Linda S. ³¹	A. L. Surgeon	Colon, R. P.	May 23	Linda S. ³¹	A. L. Surgeon	Bluefields, Nicaragua.
May 24	Atlantida	Stand. Fruit S. S. Co.	New Orleans via waypoint	May 23	Colombia No. 28 ³²	Seadta Airplane Co.	Colombia.
May 24	Saramacca	United Fruit Co.	Boeas del Toro, R. P.	May 24	Coppename	United Fruit Co.	Port Limon via Boeas.
May 24	Niman	Leyland Line	Port Limon, Costa Rica.	May 25	No. 9664 ³²	Pan-American Airways	Managua via David.
May 24	Coppename	United Fruit Co.	New Orleans, La.	May 25	Atlantida	Stand. Fruit S. S. Co.	New Orleans via waypoints.
May 24	Macabi	United Fruit Co.	New York via waypoints.	May 25	Carare	Elders & Fyffes Line.	Kingston, Jamaica.
May 24	Buenos Aires.	Spanish Steamship Line.	Barcelona via waypoints.	May 25	Macabi	United Fruit Co.	New York via Kingston.
May 24	Wanki	Stand. Fruit S. S. Co.	San Blas, R. P.	May 25	Saramacca	United Fruit Co.	New Orleans, La.
May 24	No. 9685 ³²	Pan-American Airways.	Managua via waypoints.				
May 25	Carara	Elders & Fyffes Line	Avonmouth via waypoints ^a				
May 25	Heredia	United Fruit Co.	New Orleans via Habana				

³¹ Schooner.³² Air-mail carrier.³³ Motor boat.³⁴ Motor schooner.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 21	Atlas	Standard Transp. Co.	Los Angeles, Calif.	May 22	Atlas	Standard Transp. Co.	Los Angeles, Calif.
May 22	Dos Hermanos ³⁵	A. Valdez	Bayamo River, R. P.	May 22	Dos Hermanos ³⁵	A. Valdez	Panama Bay, R. P.
May 22	Sambu ³⁵	Hans Elliot	El Real, R. P.				

³⁴ Motor schooner.

* Other than ships passing through the Canal.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective May 28, 1929:

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.22
Brass, sheet, average.....	Lb.	.35
Bronze, Tobin, average.....	Lb.	.21
Gasoline, motor grade.....	Gal.	.15
Metal, yellow.....	Lb.	.24
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.17
Oil, Diesel, at Cristobal only, in bulk, no surcharge.....	Bbl. of 42 gals.	1.80
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.08
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.43
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.58
Oil, engine, gas, extra heavy, in drums, Gulftriton No. 2250.....	Gal.	.50
Oil, kerosene, in drums.....	Gal.	.11
Oil, marine engine.....	Gal.	.54
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.13
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, eup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.15
Waste, cotton, white.....	Lb.	.16

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2.....	\$8.00	\$11.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
3. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
4. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds.....	11.00	14.00

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending May 18, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
St. Mihiel.....	U. S. Government.....	May 3.....	May 4.....	1,081	92
Wasgenwald.....	Hamburg-American Line.....	May 4.....	May 6.....	1,042	
Mina Brea.....	Imperial Oil Co.....	May 6.....	May 7.....	5,185	
Santa Teresa.....	W. R. Grace & Co.....	May 6.....	May 6.....	1	
Frost.....	Hans Ericson.....	May 7.....	May 7.....	345	14
Martha.....	Chr. Hannevig.....	May 9.....	May 13.....	39	
Caldas.....	National Navigation Co.....	May 10.....	May 10.....		25
Kenowis.....	U. S. Government.....	May 11.....	May 13.....	714	56
Erfurt.....	Hamburg-American Line.....	May 11.....	May 11.....		1
Jamaica.....	Pacific Steam Nav. Co.....	May 13.....	May 13.....	3	
Venezuela.....	Panama Mail S. S. Co.....	May 14.....	May 15.....	220	
Colombia.....	Panama Mail S. S. Co.....	May 15.....	May 15.....	74	30
Alkmaar.....	Royal Neth. S. S. Co.....	May 16.....	May 16.....	122	
Davanger.....	Westfal, Larsen & Co.....	May 16.....	May 18.....	9,214	
California.....	Panama Pacific Line.....	May 17.....	May 17.....		180
Incalite.....	Imperial Oil Co.....	May 17.....	May 17.....		1

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, White male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat....	Tuesdays, Thursdays, and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m.; Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Section "B:"	
Ward 5, Male, private rooms, American boys.....	Daily, 9.30 to 11 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls.....	(No visitors permitted in nursery.)
Ward 7, White female, private rooms.....	
Ward 8, Obstetrical department, white females (Nursery).....	
Section "C:"	
Ward 9, White foreign, male.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p. m.
Ward 11, Colored, male, surgical.....	
Ward 12, Colored, male, medical, eye and ear.....	
Ward 13, Colored, male, G. U.....	
Ward 14, American, male, G. U.....	
Section "D:"	
Ward 15, American, male, surgical.....	{ Tuesdays, Thursdays, and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m.
Ward 16, American, male, medical, eye and ear.....	{ Sundays and holidays, 9.30 to 11 a. m.; 2.00 to 4.00 p. m.
Ward 17, Colored children.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p. m.
Ward 18, White children.....	Daily, 9.30 to 11 a. m.; 2 to 4 p. m.
Ward 19, Colored, female, medical.....	{ Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p. m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation.....	No visitors permitted except to visit tuberculosis patients, Thursdays, Sundays, and holidays, 1.30 to 3 p. m.

Permission to visit outside of visiting hours will be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., June 5, 1929. No. 44.

Traffic Through the Panama Canal in May, 1929.

During the month of May, 1929, 524 commercial vessels and 18 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,296,546.57, and on the launches, \$179.58, or a total tolls collection of \$2,296,726.15.

The daily average number of commercial transits for the month was 16.90, and the average tolls collection \$74,082.15, as compared with an average of 18.00 transits and \$76,036.24 in tolls for the previous month. The average amount of tolls paid by each of the commercial transits was \$4,382.72, as compared with \$4,224.24 for the month of April, 1929. The daily average number of transits for the past month (16.90) was the lowest since September, 1928.

As compared with the month of April, 1929, commercial traffic for the past month was lower by 16 transits while the tolls collected during the past month were slightly higher than the revenue collected in April. As compared with May, 1928, traffic for the past month was greater by 16 transits and over \$175,000.00 in tolls.

In the following tabulation, the number of commercial transits and the amount of tolls collected are shown for the first 11 months of the current fiscal year, with the daily averages of transits and tolls, together with the totals for the first 11 months of the fiscal years 1928 and 1927:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	509	\$2,109,083.19	16.41	\$68,034.94
August.....	526	2,199,060.31	16.97	70,937.72
September.....	487	2,111,230.56	16.23	70,374.35
October.....	557	2,274,945.30	17.97	73,385.33
November.....	527	2,225,937.48	17.57	74,197.91
December.....	579	2,443,029.39	18.67	78,807.39
January.....	603	2,502,815.12	19.45	80,735.97
February.....	522	2,211,961.20	18.64	78,998.62
March.....	536	2,343,865.55	17.29	75,608.57
April.....	540	2,281,087.27	18.00	76,036.24
May.....	524	2,296,546.57	16.90	74,082.15
Totals, first 11 months of fiscal year, 1929.....	5,910	24,999,570.94	17.64	74,625.58
Totals, first 11 months of fiscal year, 1928.....	5,975	24,928,288.68	17.78	74,191.34
Totals, first 11 months of fiscal year, 1927.....	5,020	22,258,452.14	14.98	66,443.14

As compared with the first 11 months of the fiscal year 1928, the corresponding period this year has had 65 fewer transits, while the tolls collected during the first 11 months of this year are higher by slightly more than \$71,000.00 than the revenue collected from commercial traffic in the first 11 months of the fiscal year 1928.

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, June 1, 1929.

THROUGH THE CANAL — ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Salt Beam, water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.							Nature.	Tons.	Gross.	Net.
Cauca ²	9	18 45	26	6 20	26	18 00	26	National Navigation Co.	107 2	22 0	Cristobal, C. Z.	Buenaventura, Col.	General	136	238	163
El Lobo	25	20 10	26	6 15	26	13 58	26	Atlantic Refining Co.	385 2	51 0	Philadelphia, Pa.	La Libertad, Ica.	Ballast		4,851	3,326
Norwich City	25	20 10	26	6 15	26	13 58	26	Balfour Williamson	370 0	53 0	Port Said, Egypt.	Los Angeles, Calif.	Ballast		6,051	4,514
Nebraska	25	23 15	26	8 40	26	17 04	26	Amer.-Hawaiian Line	471 2	59 6	Boston, Mass.	Portland, Oreg.	General	3,375	9,032	6,658
City of Batavia	27	00 35	26	9 45	26	18 09	26	Amer.-Australian Line	425 0	53 0	New York, N. Y.	Dunedin, N. Z.	General	3,864	6,488	4,680
Scottish																
Castle ¹	26	11 05	26	11 20	26	19 08	27	Anglo-Saxon Pet. Co.	440 8	57 4	Newcastle-on-Tyne	Los Angeles, Calif.	Ballast		7,532	5,182
Harvester	26	12 00	26	12 20	26	19 45	26	The Texas S. S. Co.	416 8	56 1	Jacksonville, Fla.	Los Angeles, Calif.	Ballast		6,977	5,163
Pat Dobony ¹	26	8 35	26	13 15	26	20 37	26	Richfield Oil Co.	430 2	59 2	New York, N. Y.	Los Angeles, Calif.	Ballast		7,978	5,904
Adolf von																
Bayer	24	21 10	26	14 05	26	21 37	26	Hamburg-American Line	409 10	53 11	Hamburg, Germany	San Antonio, Chile.	General	6,123	7,173	5,514
Sidney M.																
Hauptman	26	17 05	26	17 15	26	23 53	27	Minson, McCor'k Line.	401 0	53 2	Baltimore, Md.	Tacoma, Wash.	(*)	5,665	7,082	5,167
Hirundi	26	19 00	27	6 45	27	14 17	27	N. Z. Shipping Co.	470 6	62 2	London, England	Wellington, N. Z.	General	9,204	10,174	7,269
Muncaster																
Castle ²	27	4 30	27	7 40	27	15 35	27	James Chambers & Co.	423 0	56 0	New York, N. Y.	Manila, P. I.	General	3,293	7,596	5,159
Acajutla	22	16 55	27	8 20	27	15 45	27	Pacific Steam Nav. Co.	215 7	34 0	Cristobal, C. Z.	Champerico, Guat.	General	1,134	1,273	706
Limon	27	4 40	27	8 45	27	17 49	27	United Fruit Co.	330 6	44 0	Port Limon, C. R.	San Francisco, Cal.	Bananas, coffee.	688	3,680	2,234
Pacific Hemlock	27	7 35	27	8 55	27	17 37	27	Dimon S. S. Corp.	409 7	54 2	New York, N. Y.	Tacoma, Wash.	General	6,006	6,630	4,916
King City	27	8 50	27	9 35	27	18 34	27	The Texas S. S. Co.	292 0	51 0	Pt. Arthur, Tex.	Taku Bar, China	Case oil	7,905	6,993	5,397
Cleveland ³	23	8 50	27	11 30	27	20 20		U. S. Navy	292 0	44 0	Nicaragua	Balboa, C. Z.	General	6,003	8,682	6,099
British Prince	27	10 05	27	11 40	27	20 15	28	Prince Line, Ltd.	450 0	58 0	Newport News, Va.	Yokohama, Japan	General	2,476	7,097	5,268
City of																
Dalhart ²	27	16 10	27	16 25	27	22 42	28	Roosevelt S. S. Co., S. B.	402 0	51 0	Baltimore, Md.	Adelaide, Australia	General	2,476	7,097	5,268
El Panquico ⁴	28	6 15	28	6 15	28	15 37	29	Panaman Government	125 0	23 0	Colon, R. P.	Panama, R. P.	General		288	101
Lebre	27	9 05	28	6 22	28	14 28	28	Ore S. S. Corp.	549 0	72 0	Norfolk, Va.	Cruz Grande, Chile	Ballast		14,325	4,635
Dean Emery	27	21 40	28	7 20	28	15 44	28	Huasteca Petroleum Co.	429 3	59 3	Baltimore, Md.	Los Angeles, Calif.	Ballast		7,709	5,517
Gro.	28	7 50	28	8 20	28	17 37	28	W. L. Comyn.	351 0	50 0	Preston, Cuba.	Vancouver, B. C.	Sugar	5,250	4,475	3,264
Cumberland	28	9 11	28	9 50	28	18 42	28	Federal Steam Nav. Co.	520 0	64 2	Newport, England	Timaru, N. Z.	General	12,639	12,930	9,300
City of																
Brisbane	28	10 35	28	10 45	28	19 30	28	Hall Line, Ltd.	463 0	58 0	New York, N. Y.	Adelaide, Australia	General	6,306	9,392	7,039
Canadian																
Importer ⁵	28	9 10	28	11 30	28	20 40	28	Can. Nat. Steamships	400 0	52 0	Montreal, Canada.	Vancouver, B. C.	General	3,560	5,891	4,186
E. J. Hooper ⁵								E. J. Hooper			Cristobal, C. Z.	Gatun, C. Z.	(*)		6	6
Raft								E. J. Hooper			Cristobal, C. Z.	Gatun, C. Z.		12	12	12
Raft								E. J. Hooper			Cristobal, C. Z.	Gatun, C. Z.		14	14	14
Hurry On ⁵								B. Rodriguez			Cristobal, C. Z.	Gatun, C. Z.	(*)	1	1	1
El Porvenir ⁶								B. Rodriguez			Cristobal, C. Z.	Gatun, C. Z.	Ballast	5	5	5

¹ Tanker.² Motor ship.³ Transport.⁴ Launch.⁵ Barge.⁶ Steel, oil, and general.⁷ Towing rafts.⁸ Towing El Porvenir.

Breda	28	00.10	29	7.10	29	19.36	30	4.00	Dutch	Royal Neth. S. S. Co.	402.6	58.3	23.10	Hamburg, Germany	Corral, Chile	General	3,680	7,384	4,769
Seattle	28	00.35	29	7.15	29	15.14	29	16.07	German	Hamburg-American Line	461.0	61.0	23.6	Hamburg, Germany	Portland, Ore.	General	6,757	9,207	6,834
Centaurus	28	21.40	29	8.08	29	20.35	29	21.55	American	Isthmian S. S. Lines	409.8	54.2	24.3	Philadelphia, Pa.	Tacoma, Wash.	Steel products	7,726	6,381	4,795
Panama	28	3.40	29	8.30	29	21.43	29	22.36	American	Am.-Hawaiian Line	407.7	53.7	22.0	New York, N. Y.	Seattle, Wash.	General	4,163	7,098	5,065
Mary Pinchot	4-29	1.50	29	8.50	29	19.48	29	23.30	American	G. Archer	110.0	26.0	16.0	New York, N. Y.	Galapagos Island	Ballast	2,055	129	
Baldhill	5-29	4.00	29	9.30	29	22.12	29	23.30	American	Baldhill S. S. Co.	416.9	56.2	16.0	Mobile, Ala.	Los Angeles, Calif.	Ballast	6,728	4,690	
Horace	29	5.53	29	10.20	29	22.59	30	00.02	American	Luckenbach Line	445.0	58.0	26.0	Boston, Mass.	Seattle, Wash.	General	6,431	8,699	6,363
Luckenbach	28	23.05	29	11.20	30	00.59	30	7.45	British	Pacific Steam Nav. Co.	406.2	54.2	19.0	Hull, England	Valparaiso, Chile	General	4,507	7,334	5,037
Loreto	29	4.20	29	14.36	30	00.48	30	1.50	British	Shaw, Savill & Albion	448.3	56.6	30.0	London, England	Dunedin, N. Z.	General	6,040	8,237	5,771
Kia Ora	29	11.20	29	15.35	30	1.26	30	4.00	British	British Molasses Co.	471.0	63.0	18.0	New Orleans, La.	San Francisco, Cal.	Ballast	6,040	9,412	6,386
Athelqueen	29	13.35	29	17.15	30	1.26	30	3.28	American	States Steamship Co.	410.5	54.3	20.5	Wilmingon, Del.	Seattle, Wash.	General	5,008	6,572	4,900
Enador	29	5.00	30	6.05	30	14.36	30	23.42	American	Panama Mail S. S. Co.	380.2	51.6	24.7	New York, N. Y.	Tacabuanu, Chile	General	2,521	5,926	4,178
Santa Teresa	29	14.50	30	6.15	30	14.35	30	17.10	American	Standard Shipping Co.	429.0	59.2	23.0	New York, N. Y.	Tacabuanu, Chile	General	2,453	5,726	4,080
Geo. H. Jones	30	2.10	30	7.25	30	16.05	30	17.10	American	Transmarine Lines	324.0	46.0	20.0	Mobile, Ala.	Talara, Peru	Ballast	2,523	7,689	5,667
Susolanco	30	7.15	30	7.35	30	16.55	30	18.17	American	Navy Line-Libera-Tristina	430.0	52.0	18.3	Trieste, Italy	San Francisco, Cal.	General	2,184	7,500	6,041
Feltr	29	20.30	30	13.42	30	20.23	30	21.43	Italian	French Line	400.0	52.0	16.4	Havre, France	San Antonio, Chile	General	1,284	5,964	4,384
Pennsylvania	30	7.30	30	16.55	31	1.40	31	2.52	French	French Line	400.0	52.0	16.4	Havre, France	San Antonio, Chile	General	1,284	5,964	4,384
W. S. Rheem	29	16.50	30	17.25	31	00.11	31	1.27	American	Standard Oil Co.	500.0	68.2	19.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	11,224	7,895	9
Serie Marais	30	2.45	31	6.25	31	13.27	31	14.35	American	Standard Oil Co.	324.0	46.0	16.0	Cristobal, C. Z.	Catun, C. Z.	General	887	3,984	2,628
Eleonor	31	5.13	31	7.30	31	14.27	31	17.10	American	Christensen S. S. Co.	410.0	54.4	22.0	Baltimore, Md.	Seattle, Wash.	General	4,855	6,572	4,788
Christensen	31	7.45	31	8.40	31	15.32	31	21.40	American	Dollar Line	600.0	65.3	30.0	New York, N. Y.	San Francisco, Cal.	General	4,867	17,083	11,314
Johnson	31	17.05	31	8.50	31	17.15	31	23.15	American	N. O. & S. A. S. S. Co.	324.0	46.2	21.7	New Orleans, La.	Tacabuanu, Chile	General	2,965	3,983	2,570
Nosa Prince	30	5.20	31	10.00	31	19.25	31	20.45	American	Vacuum Oil Co.	425.0	57.2	23.0	Paulsboro, N. J.	San Francisco, Cal.	Ballast	7,510	4,989	
Gargyle	31	7.45	31	11.25	31	20.17	31	1.58	British	Imperial Oil Co.	510.0	68.2	23.0	Montreal, Canada	Talara, Peru	Ballast	11,555	7,033	
Montrilite	31	22.20	6-1	6.38	6-1	13.43	1	19.00	British	Imperial Oil Co.	510.0	68.2	19.6	Montreal, Canada	Talara, Peru	Ballast	11,555	7,033	
Vietolie	31	4.35	1	7.20	1	15.11	2	4.45	American	Cities Service Refining Co.	468.0	62.0	23.0	Hallias, N. S.	Talara, Peru	Ballast	4,200	6,030	4,421
Agawpund	0-1	4.35	1	8.15	1	16.41	1	18.05	British	N. Z. Shipping Co.	400.0	52.0	19.0	New York, N. Y.	Los Angeles, Calif.	General	1,113	2,874	1,944
Charlbury	1	8.35	1	8.55	1	17.02	1	18.35	American	Sun Oil Co.	429.3	59.2	18.8	Montreal, Canada	Brisbane, Australia	General	4,200	6,030	4,421
Atlantic Sun	1	8.10	1	9.35	1	18.25	2	1.30	American	Panama R. R. S. S. Line	251.0	43.6	19.0	Philadelphia, Pa.	Guayaquil, Ecuador	General	7,568	5,283	
Guayaquil	5-31	10.05	1	10.30	1	19.28	2	1.30	American	Argonaut S. S. Co.	440.0	56.3	27.6	New York, N. Y.	Seattle, Wash.	General	1,113	2,874	1,944
Ponoma	1	10.20	1	10.55	1	18.23	2	1.30	British	S. & J. Thompson	425.0	58.0	23.6	Baltimore, Md.	Seattle, Wash.	General	10,438	8,324	6,036
Silverguava	1	10.20	1	12.00	1	20.04	1	22.20	Italian	Italia Chileno Line	350.0	46.2	16.9	Genoa, Italy	Singapore, Sir. Set.	General	5,958	5,283	6,037
Pellegra	5-30	7.25	1	12.20	1	20.04	1	22.20	American	Charles Nelson & Co.	324.0	46.0	20.6	Baltimore, Md.	Valparaiso, Chile	General	5,958	5,283	6,037
Chetopa	6-1	14.10	1	15.35	1	22.41	2	4.05	American	Amer.-Hawaiian Line	434.0	57.0	21.0	Boston, Mass.	Seattle, Wash.	General	2,173	3,984	2,628
Arizona	1	17.45	1	19.50	2	2.29	2	4.05	American					Portland, Ore.	General	4,467	7,983	5,895	

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

* Yacht.

Santa Cecilia	25	21.00	26	3.07	26	12.40	26	17.05	American	Grace Line	408.0	55.2	22.6	Valparaiso, Chile	New York, N. Y.	Ballast	5,437	6,672	4,905
Kellerwald	26	1.50	26	6.55	26	13.35	26	16.00	German	Hamburg-American Line	399.0	54.2	16.0	Antofagasta, Chile	Hamburg, Germany	General	6,545	4,483	
Stigstad	26	7.30	26	8.24	26	15.18	26	15.18	Norwegian	A. F. Klavenseth	386.0	55.2	26.0	Los Angeles, Calif.	London, England	Gasoline	7,590	6,221	4,180
Poljana	26	11.15	26	12.07	26	20.35	27	1.25	Norwegian	Scand.-So. Pacific Line	360.7	52.0	22.3	Arica, Chile	London, England	General	5,573	5,451	3,820
Hofuku Maru	26	15.00	26	20.37	27	8.45	27	9.30	Japanese	Kokusei Kaisha Kaisha	360.7	51.0	27.0	Italo, P. I.	Boston, Mass.	Sugar	7,800	6,212	4,710
Curaca	26	15.20	27	00.42	27	13.20	27	13.20	Panamanian	Grace Line	463.0	52.4	29.0	Tucupilla, Chile	New York, N. Y.	Nitrates, copper	8,801	6,804	4,897
Stedmaker	26	16.30	27	1.40	27	12.55	27	18.25	American	Isthmian S. S. Lines	395.5	55.0	27.0	Vancover, B. C.	London, England	Lumber, grain	8,280	7,380	5,245
Chilore	26	22.05	27	5.59	27	16.05	27	16.10	American	Ore S. S. Corp.	549.0	72.2	34.6	Cruz Grande, Chile	Baltimore, Md.	Iron ore	20,000	14,558	9,348
Essequibo	27	3.00	27	7.36	27	15.00	27	22.18	British	Pacific Steam Nav. Co.	450.0	57.8	25.0	Tacabuanu, Chile	New York, N. Y.	Copper, general	3,498	9,158	6,176

** Copper, nitrates, and general.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
S-11 ¹²																			
Bohemian Club ¹	27	5:45	27	7:48	27	17:15			American	U. S. Navy	231.0	31.0		Balboa, C. Z.	Cristobal, C. Z.	Gasoline	8,911	7,204	4,730
Wekita	27	5:30	27	8:24	27	16:20	27	18:50	American	Atlantic Refining Co.	425.0	57.2	27.6	Los Angeles, Calif.	Philadelphia, Pa.	Lumber	4,750	4,112	2,846
Corinto	27	9:15	27	11:09	27	18:32	29	15:45	Italian	Malloy Transp. Co.	333.8	46.0	22.7	Westport, Oreg.	New York, N. Y.	General	2,754	2,457	7,420
Dorostar	27	8:50	27	12:34	27	21:35	28	2:15	British	Blue Star Line	518.0	64.0	30.8	Valparaiso, Chile	Genoa, Italy	General	10,056	11,673	8,143
Guatemala	27	9:08	28	4:12	28	10:25	29	00:05	American	Panama Mail S. S. Co.	360.2	51.8	23.0	Vancouver, B. C.	Newcastle, Eng.	General	2,703	5,776	4,081
Walter A.																			
Lukenbach.	28	3:00	28	4:16	28	11:30	28	13:45	American	Lukenbach Line	445.5	56.1	30.0	Portland, Oreg.	Boston, Mass.	Lumber, lead	8,108	8,785	6,567
Varg ¹³	28	00:20	28	5:39	28	13:45	28	13:45	Norwegian	Caucasian Oil Co.	390.0	55.2	25.6	Los Angeles, Calif.	Land's End, Eng.	Gasoline	7,376	5,983	3,856
Atrato ¹⁴	28	7:00	28	7:45	28	15:30			Colombian	Colombian Transp. Co.	392.0	23.0	7.0	Tunaco, Col.	Cristobal, C. Z.	Coffee, cocoa	21	160	92
Missoula	27	21:00	28	7:52	28	15:25	28	15:25	American	Hammond Lumber Co.	362.3	51.2	21.6	Vancouver, B. C.	San Juan, P. R.	Lumber	4,208	4,047	3,374
Hermion	28	9:30	28	10:37	28	20:00	28	20:50	Norwegian	Brugsdard Lumber Co.	390.0	54.0	26.2	Vancouver, B. C.	Antwerp, Belgium	General	6,692	5,746	4,282
Cambrai ¹⁴	28	10:54	28	13:29	28	19:47	28	23:15	American	U. S. Army	448.0	58.0	24.0	San Francisco, Cal.	Brooklyn, N. Y.	Army supplies	126		
Messinier	28	17:20	28	20:08	29	8:50	29	10:05	British	N. Pacific Coast Serv.	440.0	56.3	24.0	Vancouver, B. C.	Rotterdam, Holland	General	4,066	7,487	4,641
Peter Kerr.	28	20:00	28	21:55	29	9:05	29	9:05	American	Pacific-Atlantic S. S. Co.	415.0	55.7	28.0	Portland, Oreg.	Baltimore, Md.	Lumber, copper	8,746	7,704	5,707
Major D.																			
Pullen ¹⁵																			
Warblay	29	2:45	29	3:24	29	15:15	29	16:45	British	U. S. Army	390.1	55.5	24.6	Vancouver, B. C.	Gastin Lake, C. Z.	Lumber		5,908	4,257
Nora ¹	29	3:15	29	4:39	29	15:45	29	15:45	American	Sir. R. Roper & Co.	467.6	62.7	29.0	Los Angeles, Calif.	Boston, Mass.	Crude oil	13,700	9,918	7,363
Mongolia	28	16:30	29	6:19	29	14:35	29	15:10	American	Grace Line	600.0	65.3	30.0	San Francisco, Cal.	Baltimore, Md.	General	6,894	17,041	11,426
Acme ¹	29	6:10	29	8:00	29	16:25	30	16:45	American	Panama-Pacific Line	433.0	56.0	26.0	San Francisco, Cal.	New York, N. Y.	Gasoline	8,256	7,165	4,926
Orduna	29	5:40	29	8:00	29	16:25	30	3:40	British	Standard Transp. Co.	530.3	67.3	27.6	Los Angeles, Calif.	New York, N. Y.	General	5,855	17,146	12,015
Taipei	29	9:10	29	9:56	29	18:20	30	3:30	British	Pacific Steam Nav. Co.	477.8	61.3	22.6	Valparaiso, Chile	Liverpool, England	Frozen, general	4,550	10,657	7,617
Bonoech	29	9:20	29	10:45	29	19:35	29	22:15	British	Staw, Savill & Albion.	420.0	54.0	25.0	Wellington, N. Z.	London, England	Grain, lumber	6,396	6,425	4,068
Castor ¹	29	6:50	29	11:34	29	20:30	29	20:30	Swedish	Can-Am. Ship. Co.	482.1	61.8	28.0	Portland, Oreg.	Dunkirk, France	General	11,396	8,960	6,295
Hakutatsu																			
Maru	29	12:20	29	13:03	29	21:00	29	21:00	Japanese	Anglo-Saxon Pet. Co.	411.5	55.4	28.0	Los Angeles, Calif.	Land's End, Eng.	Lumber	8,220		
El Cervo ¹	29	12:30	29	14:25	29	21:50	30	00:45	British	Tatsuma Shokai	407.4	52.2	25.6	Vancouver, B. C.	New York, N. Y.	Crude oil	9,986	6,046	4,326
El Aleto ¹³	29	5:05	29	14:25	29	22:35	30	2:10	British	C. T. Bowring & Co.	440.8	57.5	26.2	La Libertad, Equa.	Philadelphia, Pa.	Petroleum	9,626	7,555	5,049
Rangitiki ¹³	29	16:00	30	8:23	30	14:54	30	14:25	British	C. T. Bowring & Co.	552.0	70.4	29.6	Cabo Blanco, Peru.	Halifax, N. S.	General	5,859	18,386	12,678
Larry Doheny	30	8:00	30	8:26	30	16:00	30	16:00	American	N. Z. Shipping Co.	430.0	59.2	28.0	Wellington, N. Z.	London, England	General	9,800	7,494	5,198
Munares	30	10:30	30	11:22	30	19:00	30	19:00	American	Richfield Oil Co.	433.0	56.0	25.6	Los Angeles, Calif.	New York, N. Y.	Gasoline	6,404	7,441	5,099
City of	30	15:30	31	1:11	31	9:00	31	9:00	American	Columbia-Pac. Ship. Co.	360.0	53.1	24.0	Los Angeles, Calif.	New Orleans, La.	Coconut oil	4,066	7,441	5,099
Panama ¹³	30	19:45	31	2:15	31	9:20			Panama	Munson S. S. Line	296.9	45.9	18.6	Tacoma, Wash.	Baltimore, Md.	Lumber, general	5,905	5,577	4,225
Dabbar	31	00:07	31	2:55	31	10:25			British	Panama Mail S. S. Co.	406.5	54.1	23.9	San Francisco, Cal.	Cristobal, C. Z.	Wheat	1,254	3,848	2,603
Begira	31	00:15	31	3:54	31	12:20			American	United Steam Nav. Co.	440.0	56.0	28.0	Vancouver, B. C.	Hull, England	General	7,500	6,124	4,608
Petra ¹³	30	16:05	31	4:36	31	13:40			Norwegian	Hegira S. S. Co.	407.8	54.7	26.0	Everett, Wash.	Newark, N. J.	Lumber	10,000	8,353	6,113
Florea ¹⁶	31	6:45	31	7:55	31	16:00			Colombian	Arthur H. Mathiesen.	150.0	27.2	9.8	Los Angeles, Calif.	Hull, England	Gasoline	8,107	6,539	4,252
Tanker.																			

¹Tanker.¹²Submarine.¹³Motorship.¹⁴Launch.¹⁵Motor schooner.¹⁶For orders.¹⁷Coffee, sugar, and general.¹⁸Coffee, hides, and cylinders.

Cal.	31	7 35	31	8 30	31	15 55	German.	Roland Line.	216.5	32.9	10.6	Guayaquil, Ecuador	Cristobal, C. Z.	628 ¹	1,105	698
Caldas ^{2,3}	31	1 50	31	8 39	31	15 55	Colombian.	National Nav. Co.	116.0	21.1	9.0	Buenaventura, Col.	Cristobal, C. Z.	131	211	124
Noorddijk.	31	12 50	31	13 40	31	23 15	Dutch.	Holland-American Line.	470.0	58.0	30.0	Victoria, B. C.	Antwerp, Belgium	11	8,888	6,012
San Mateo.	31	14 35	31	15 18	31	22 10	American.	United Fruit Co.	315.0	44.2	19.0	San Francisco, Cal.	Cristobal, C. Z.	835	3,493	2,142
Sunaneo.	31	10 30	31	19 38	6-1	8 55	American.	Transmarine Lines.	324.0	46.2	23.0	Aberdeen, Wash.	Newark, N. J.	3,987	3,984	2,628
Sugillenco.	31	17 15	31	20 00	1	9 00	American.	Transmarine Lines.	324.0	46.2	23.0	Tacoma, Wash.	Newark, N. J.	3,775	3,984	2,612
Almelo.	6-1	2 35	6-1	3 23	1	11 25	Dutch.	Royal Neth. S. S. Co.	440.0	62.6	27.0	Valparaiso, Chile.	Europe.	10,000	9,655	6,838
Mexican.	1	6 25	1	8 11	1	15 55	American.	Amer-Hawaiian Line.	472.3	57.2	28.0	Portland, Oreg.	Boston, Mass	9,710	9,258	6,914

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 26	Glucksburg	Flensburger Dampfer Co.	Pto. Colombia, Colombia.	May 26	Calamarcas	United Fruit Co.	New York via Habana.
May 26	Calamarcas	United Fruit Co.	Port Limon, Costa Rica.	May 26	Ancon	Panama R. R. S. S. Line.	New York via Haiti.
May 27	Inapaquina ²⁰	United Fruit Co.	Colon, R. P.	May 26	Wanks	Stand. Fruit S. S. Co.	San Blas, R. P.
May 27	Anaehueuna ²⁰	United Fruit Co.	Colon, R. P.	May 27	Inapaquina ²⁰	United Fruit Co.	Colon, R. P.
May 27	El Panquico ²¹	Panaman Government.	Colon, R. P.	May 27	El Panquico ²¹	Panaman Government.	Colon, R. P.
May 27	Pastores	United Fruit Co.	New York via Habana.	May 27	Anaehueuna ²⁰	United Fruit Co.	Colon, R. P.
May 28	Juan.	United Fruit Co.	Galveston, Texas.	May 27	Heredia	United Fruit Co.	New Orleans via wayports.
May 28	Sixaola	United Fruit Co.	New York via Kingston.	May 28	No. 9775 ²²	Pan-American Airways	Managua via David.
May 29	Cundinamarca ²²	United Fruit Co.	Barranquilla, Colombia.	May 28	Pastores	United Fruit Co.	Port Limon, Costa Rica.
May 29	Tactican	Seadta Airplane Co	Liverpool via wayports.	May 29	Buenos Aires	Spanish Steamship Line	Barcelona via wayports
May 30	Simon Bolivar	Royal Neth. S. S. Co.	Hamburg via wayports.	May 29	Juan.	United Fruit Co.	Perme, R. P
May 30	Suriname	United Fruit Co.	New Orleans, La.	May 29	Cundinamarca ²²	Seadta Airplane Co	Barranquilla, Colombia.
May 31	Inapaquina ²⁰	United Fruit Co.	Colon, R. P.	May 30	Sixaola	United Fruit Co.	New York via wayports.
May 31	Coppename	United Fruit Co.	Bocas, R. P.	May 30	Suriname	United Fruit Co.	Santa Marta via Pto. Col.
May 31	Amapala	Stand. Fruit S. S. Co.	New Orleans via Habana.	May 30	Simon Bolivar	Royal Neth. S. S. Co.	Port Limon, Costa Rica.
May 31	Wanks	Stand. Fruit S. S. Co.	San Blas, R. P.	May 31	Inapaquina ²⁰	United Fruit Co.	Colon, R. P.
June 1	Juan.	United Fruit Co.	Perme, R. P	May 31	Coppename	United Fruit Co.	New Orleans, La.
June 1	Simon Bolivar	Royal Neth. S. S. Co.	Port Limon, Costa Rica.	May 31	Tactican	Leyland S. S. Line.	Cartagena and Pto. Col.
June 1	Cartago	United Fruit Co.	New Orleans via Habana.	May 31	No. 8020 ²²	Pan-American Airways	Guayaquil via wayports.
June 1	Linda S. ²³	A. L. Surgeon	Colon, R. P.	June 1	Annetta I ²⁰	A. Tagarapulos	Colon, R. P.
June 1	Annetta I ²⁰	A. Tagarapulos	Colon, R. P.	June 1	Anaehueuna ²⁰	United Fruit Co.	Colon, R. P.
June 1	Anaehueuna ²⁰	United Fruit Co.	Colon, R. P.	June 1	Linda S ²³	A. L. Surgeon	Bluefields, Nic. and Limon.
				June 1	No. 9685 ²²	Pan-American Airways	Managua via David.
				June 1	Amapala	Standard Fruit S. S. Co.	New Orleans via wayports.
				June 1	Glucksburg	Flensburger Dampfer Co.	Tampico, Mexico.
				June 1	Juan	United Fruit Co.	Mobile, Alabama.
				June 1	Ninian	Leyland S. S. Line.	Liverpool via wayports.

PORT OF BALBOA.

PORT OF BALBOA.									
		22 Air-mail carrier.		23 Motor schooner.					
20 Motor boat.	21 Transport.	24	25	26	27	28	29	30	31
May 27	May 27	May 27	May 27	May 27	May 27	May 27	May 27	May 27	May 27
La Brea.	La Brea.	La Brea.	La Brea.	La Brea.	La Brea.	La Brea.	La Brea.	La Brea.	La Brea.
Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.
Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.
A. B. de Obarrio 24.	A. B. de Obarrio 24.	A. B. de Obarrio 24.	A. B. de Obarrio 24.	A. B. de Obarrio 24.	A. B. de Obarrio 24.	A. B. de Obarrio 24.	A. B. de Obarrio 24.	A. B. de Obarrio 24.	A. B. de Obarrio 24.
Dos Hermanas 24.	Dos Hermanas 24.	Dos Hermanas 24.	Dos Hermanas 24.	Dos Hermanas 24.	Dos Hermanas 24.	Dos Hermanas 24.	Dos Hermanas 24.	Dos Hermanas 24.	Dos Hermanas 24.
A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.
H. Elliot.	H. Elliot.	H. Elliot.	H. Elliot.	H. Elliot.	H. Elliot.	H. Elliot.	H. Elliot.	H. Elliot.	H. Elliot.
Sambu 24.	Sambu 24.	Sambu 24.	Sambu 24.	Sambu 24.	Sambu 24.	Sambu 24.	Sambu 24.	Sambu 24.	Sambu 24.
Chiriqui Land Co.	Chiriqui Land Co.	Chiriqui Land Co.	Chiriqui Land Co.	Chiriqui Land Co.	Chiriqui Land Co.	Chiriqui Land Co.	Chiriqui Land Co.	Chiriqui Land Co.	Chiriqui Land Co.
San Luis 24.	San Luis 24.	San Luis 24.	San Luis 24.	San Luis 24.	San Luis 24.	San Luis 24.	San Luis 24.	San Luis 24.	San Luis 24.
June 1	June 1	June 1	June 1	June 1	June 1	June 1	June 1	June 1	June 1
Carabobo	Carabobo	Carabobo	Carabobo	Carabobo	Carabobo	Carabobo	Carabobo	Carabobo	Carabobo
Colombian Government.	Colombian Government.	Colombian Government.	Colombian Government.	Colombian Government.	Colombian Government.	Colombian Government.	Colombian Government.	Colombian Government.	Colombian Government.
Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.	Union Oil Co. of Calif.
Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.	Pacific Fruit Co.
A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.	A. Valdez.
Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.
Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.	Panama Bay, R. P.
Pto. Arnuelles, R. P.	Pto. Arnuelles, R. P.	Pto. Arnuelles, R. P.	Pto. Arnuelles, R. P.	Pto. Arnuelles, R. P.	Pto. Arnuelles, R. P.	Pto. Arnuelles, R. P.	Pto. Arnuelles, R. P.	Pto. Arnuelles, R. P.	Pto. Arnuelles, R. P.

²⁴ Motor schooner.²⁵ Other than ships passing through the Canal.

Shepard Steamship Company a New Intercoastal Carrier.

A new intercoastal steamship service, that of the Shepard Steamship Company, has begun the use of the Panama Canal with the dispatch of its first vessel, the *Sea Thrush*, due to transit the Canal from Atlantic to Pacific on June 6. The line has two other vessels, the *Sage Thrush* and the *Wind Rush* and is reported in the market for three more steamers for the fleet. The operating company was formed by the Shepard & Morse Lumber Co. and the line is to be used at present primarily for transporting lumber from North Pacific to North Atlantic ports.

Additional Vessels for the Navigazione Libera-Triestina.

Press reports state that the Navigazione Libera-Triestina has announced that it will add two freighters to its service between the Mediterranean and the Pacific coast of North America and begin a fortnightly service with the sailing of the motor ship *Cellina* from San Francisco in September. The two new vessels to be added are the steamers *Livenza* and *Savoia*, each of about 9,000 tons. Other vessels in the service are the motor ships *Leme*, *Feltre*, *Rialto*, *Fella* and *Cellina*.

Notices to Mariners.

Colombia—West Coast—Buenaventura River Entrance.

THE PANAMA CANAL EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 28, 1929.

No. 544.

The following is quoted from a letter from the S. S. *Santa Cecilia*, dated May 26, 1929:

The enclosed Notice to Mariners, No. 535, dated May 6, 1929, does not agree with our observation of buoys and lights in Buenaventura River, May 24, 1929. The buoys and lights showed as follows:

- (a) The light buoy about two miles south from Vigia de San Pablo shows flashing white. This buoy is a fairway buoy placed as a leading mark about half way between the sea buoy and the flashing red light of Soldado Point.
- (b) The light buoy marking the wreck about two miles, 54 degrees from Soldado Point shows flashing white.
- (c) There are no buoys to mark the wreck in Buenaventura harbor. The wreck is marked by a hand lantern, placed on the north and south end of the wreck showing a fixed red light. These lights are very dim and can not be seen at any great distance.

(Signed) J. F. ROSE, Master.

H. BURGESS,
Governor.

Aids to Mariners—Manzanilla Bay, Canal Zone.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 31, 1929.

No. 546.

1. The red spar buoy off Coco Solo Point is permanently discontinued.
2. The entrance to Limon and Manzanillo Bays, between Coco Solo Point and the eastward end of the East Breakwater, is now marked by 2 first-class spar buoys, as follows:

(a) One red spar buoy, 255 yards from the eastward end of the East Breakwater, bearing 305° true, moored in 30 feet of water.

(b) One black spar buoy, 775 yards from the eastward end of the East Breakwater, bearing 296.5° true, moored in 30 feet of water.

Width of entrance: 540 yards. Minimum depth through entrance: 29 feet.

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending June 1, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Abraham Lincoln.....	Fred Olsen & Co.....	May 19.....	May 21.....	1,980.....	
Santa Maria.....	Grace Line.....	May 19.....	May 20.....	6.....	1
Atlas.....	Standard Transp. Co.....	May 21.....	May 22.....	10,518.....	
Chateau Thierry.....	U. S. Government.....	May 23.....	May 23.....	47.....	139
D. G. Scofield.....	Standard Oil Co.....	May 23.....	May 24.....	10,750.....	
Cuyama.....	U. S. Government.....	May 23.....	May 24.....	7,000.....	
Cauca.....	National Navigation Co.....	May 26.....	May 26.....		29
Guatemala.....	Panama Mail S. S. Co.....	May 27.....	May 28.....	295.....	
La Brea.....	Union Oil Co.....	May 27.....	May 29.....	9,905.....	
Cambral.....	U. S. Government.....	May 28.....	May 28.....	14.....	8
Breda.....	Royal Neth. S. S. Co.....	May 29.....	May 29.....	166.....	14
City of Panama.....	Panama Mail S. S. Co.....	May 30.....	May 31.....	14.....	
Ecuador.....	Panama Mail S. S. Co.....	May 30.....	May 30.....	28.....	4
Santa Teresa.....	Grace Line.....	May 30.....	May 30.....	1.....	
Caldas.....	National Navigation Co.....	May 31.....	May 31.....	10.....	
Nesa Prince.....	N. O. & S. A. S. S. Co.....	May 31.....	May 31.....	6.....	42
President Johnson.....	Dollar Line.....	May 31.....	May 31.....		4

Official Circulars.

Acting Governor.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 1, 1929.

To all concerned.—Effective June 3, 1929, and during my absence from the Isthmus, Lieut. Col. J. L. Schley, U. S. Army, Engineer of Maintenance, will be Acting Governor.

H. BURGESS,
Governor.

Duties of President of Panama Railroad Company.

PANAMA RAILROAD COMPANY,
OFFICE OF THE PRESIDENT,
BALBOA HEIGHTS, C. Z., June 1, 1929.

To all concerned.—Effective June 3, 1929, and during my absence from the Isthmus, Lieut. Col. J. L. Schley, U. S. Army, 2d Vice President, will perform such duties of the President as relate to the operations of the Company on the Isthmus.

H. BURGESS,
President.

Notice—Commissary Privileges.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 15, 1929.

1. Persons who are authorized to buy in the commissaries have no right to let anyone else use their commissary books; and they have no right to buy anything in the commissaries for other persons, except as stated below.

2. Articles bought with a commissary book must be for the personal use of the owner or his immediate family. For instance, a commissary book issued to a married employee may be used by his wife and children; and such relatives as he actually supports in his home may also make purchases if they present a written request from him.

3. Servants who are sent to buy things must present a written request each time for what is wanted, signed by the owner of the commissary book, or by his wife if a married man.

4. All commissary books presented by persons for whom they were not intended will be taken up.

5. When a commissary book is issued the owner signs an agreement to obey the conditions which are printed on the back cover of every book. Ignorance of the rules will not be accepted as an excuse for violating them.

6. All inspectors and commissary employees are instructed to watch for any misuse of commissary books.

7. Any person who misuses a commissary book or abuses the privilege granted will be subject to such punishment as can be applied in each case. Any employee who violates these rules may be laid off without pay or discharged.

8. Anyone not sure of what is intended or what may be done in certain cases should ask the manager of the store.

H. BURGESS,
Governor.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide the means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective, in the course of handling large traffic through the Canal in over 13 years of operation.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors. An illustrated pamphlet explaining in detail the arrangement may be had upon application to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

On general merchandise the rates are as follows:

(a) For handling cargo from ship's side to storage place, the customary inward local charge of \$1 per ton.

(b) For delivery or reforwarding, customary outward local charge of \$1 per ton (Total of 20 cents per ton more than regular transfer charge.)

(c) For storage, 3 cents per ton per day, except that no charge will be made for the first 35 days.

The Panama Railroad Company stores this cargo in four fireproof warehouses, 160 feet by 850 feet, at Cristobal, and in one of the same dimensions at Balboa.

Cargo stored for orders can be reforwarded from the Isthmus—each carrier to collect its proportion of the through rate instead of the local. This means that should a shipment move from New York to the Canal Zone, it will of course pay regular local rate to Balboa or Colon, as the case may be—but should owner wish to reforward to, say, "Guayaquil," he can do so by paying the oncarrier's proportion of the through rate. Upon evidence that the shipment or any part of it moved beyond the Canal Zone, the initial carrier will refund the difference between the through and local rate.

Cargo intended for warehousing at Cristobal or Balboa should be so indicated on the bill of lading, thus "Cristobal for orders" or "Balboa for orders." When so consigned it is not necessary for shippers to secure consular papers at original point of shipment, nor to have bills of lading consulated. Cargo consigned to Canal Zone for orders may be delivered in the Republic of Panama in which case it is necessary to prepare an invoice on which duties can be paid. When evidence of payment of duty is presented to the Canal Zone customs officers they will issue the necessary release and delivery can be taken in the usual way. For those on the Canal Zone who are allowed to import goods duty free the Panama Canal customs release is all that is necessary. For reshipment from storage to a foreign country the shipper takes out bill of lading, consular invoice and sobordo if necessary and cargo is forwarded as regular outward local.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," are shown in the pamphlet referred to above.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal- Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2.....	\$8.00	\$11.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
3. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
4. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds.....	11.00	14.00

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, \$0.50 per year; foreign, \$1.00; address

The Panama Canal Record, Balboa Heights, Canal Zone, or

The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII.

Balboa Heights, C. Z., June 12, 1929.

No. 45.

New High Monthly Record for Cargo in Transit from Atlantic to Pacific.

The cargo tonnage passing through the Canal from the Atlantic to the Pacific during the month of May, 1929, amounted to 920,360 long tons, the greatest amount in that direction in one month since the opening of the Canal. The heaviest Pacific-bound tonnage in any previous month was in October, 1928, when 875,641 long tons were carried through.

Details of the distribution of the cargo passing through in May, 1929, over the various routes of trade will be found in another part of this issue.

Completion of Overhaul of Pacific Locks.

The overhaul of the Pacific Locks is to be completed on June 13 and normal operation of all locks resumed on June 14.

These are the normal operating arrangements for the three sets of locks:

Miraflores: . . . 6.50 a. m. to 10.40 p. m.

Double chamber operation at all times.

Pedro Miguel: 7.00 a. m. to 10.40 p. m.

Double chamber operation from 9.30 a. m. to 5.30 p. m.

Gatun: 7.00 a. m. to 11.00 p. m.

Double chamber operation from 11.45 a. m. to 7.45 p. m.

The overhaul of the Pacific Locks began on January 3, 1929, and required 5 months and 10 days. This is considerably longer than the usual overhaul period, of between 3 and 4 months, and was due to the additional items of complete installation of 60 new cylindrical valves, and the unhinging, inspection and repair of a pair of mitergates.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,

BALBOA HEIGHTS, C. Z., June 7, 1929.

No. 547.

The following was received by the Hydrographic Office through the Captain of the Port, Balboa:

U. S. S. *Sacramento*, June 3, Little Corn Island Light, position, latitude 12° 18' North, longitude 82° 59' West, observed in operation, character normal.

J. L. SCHLEY,
Acting Governor.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, June 8, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Caldas ¹	5-31	55	2	6 00	2	14 40	2	21 20	Colombian.	National Navigation Co.	116.0	21.0	10.6	Cristobal, C. Z.	Buenaventura, Col.	General	205	211	124
Perene	31	16 20	2	6 10	2	14 48	3	17 35	Peruvian.	Peruvian Line	284.0	39.0	17.5	New York, N. Y.	Callao, Peru.	Coal, general.	1,943	2,108	1,529
Annie Johnson ²	6-1	10 40	2	6 20	2	13 54	2	19 35	Swedish.	Johnson Line	392.2	52.6	22.0	Stockholm, Sweden	San Francisco, Cal.	General	4,367	6,650	4,919
Republic ¹	1	21 20	2	7 35	2	15 50	2	16 55	American.	Tide-water Oil Co.	391.8	51.3	17.0	Baltimore, Md.	San Francisco, Cal.	Ballast	5,551	3,881	
Ani	1	23 00	2	7 30	2	16 41	3	5 10	Belgian.	Com. Int. de Com. D'Arm.	400.0	52.0	28.4	London, England	Iquique, Chile	Cement	6,638	6,617	4,792
Chileop	2	3 10	2	8 15	2	17 31	2	22 55	American.	Chile Steamship Co.	411.0	54.0	24.0	New York, N. Y.	Chancal, Chile	General	7,331	6,609	4,973
Invelia	2	6 35	2	8 19	2	18 29	2	20 54	British.	International Freighter	400.0	52.0	20.0	New York, N. Y.	Talcahuano, Chile	General	3,000	5,665	3,986
Durazzo	5-25	11 50	2	10 50	2	18 58	2	20 18	German.	Hamburg-American Line	226.0	34.0	13.3	Cristobal, C. Z.	Buenaventura, Col.	General	141	1,633	1,041
Ermore	6-1	13 35	2	11 45	2	19 24	2	21 20	American.	Ore S. S. Corp.	449.1	57.2	20.7	Newport News, Va.	Cruz Grande, Chile	Ballast	7,847	5,185	
Planet	5-31	6 35	2	12 35	2	20 21	2	22 05	German.	Hamburg-American Line	450.7	57.2	24.10	Hamburg, Germany	Valparaiso, Chile	General	5,600	7,460	5,234
Lake Elva	6-2	10 55	2	13 45	2	22 48	3	6 22	American.	Amtrug Trading Co.	253.0	43.8	22.6	Newport News, Va.	Vladivostok, Russ.	General	2,384	2,814	1,858
Call	5-31	15 55	2	14 45	2	22 49	3	00 25	German.	Roland Line	216.5	33.0	13.6	Cristobal, C. Z.	Buenaventura, Col.	General	179	1,105	698
Yankee Arrow ¹	2	17 30	2	18 10	3	1 24	3	5 10	American.	Standard Oil Co.	468.3	62.7	20.6	Boston, Mass.	Los Angeles, Calif.	Ballast	9,841	6,946	
Markland ²	2	23 30	3	6 25	3	13 03	3	18 15	Norway.	Export Petroleum Co.	408.3	55.3	18.0	Hamburg, Germany	Los Angeles, Calif.	Ballast	6,474	4,321	
David																			
McKelvy ¹	3	3 50	3	6 20	3	14 00	3	15 10	American.	Tide-water Oil Co.	430.0	59.0	20.0	Norfolk, Va.	Los Angeles, Calif.	Ballast	7,629	5,325	
Plum Branch.	3	5 50	3	7 20	3	19 52	3	21 22	British.	F. & W. Ritan	420.0	54.0	19.0	Liverpool, England	Corral, Chile	General	2,500	5,761	3,881
Clausens	3	13 45	3	13 55	3	21 50	4	7 16	American.	Isthmian S. S. Lines	410.0	54.0	23.6	New York, N. Y.	Vancouver, B. C.	General	7,121	6,581	4,795
Willwello.	3	16 00	3	16 10	3	23 12	4	00 26	American.	Quaker Line	409.8	54.9	24.3	Philadelphia, Pa.	Seattle, Wash.	General	5,398	6,821	4,927
San Mateo.	3	18 30	3	19 20	4	2 37	4	3 50	American.	United Fruit Co.	315.2	44.2	18.1	Port Limon, C. R.	San Francisco, Cal.	Bananas, etc	584	3,496	2,141
Santa																			
Teresta ¹	3		4		4				American.	Manuel Simpson				Cristobal, C. Z.	Balboa, C. Z.	Unknown	7	7	7
King Gruiffydd	3	19 30	4	6 05	4	13 30	4	14 55	British.	Dodd, Thompson & Co.	401.0	52.4	26.6	Antwerp, Belgium	Auckland, N. Z.	Basic slag	6,929	5,779	4,097
Wilbbaco	4	00 30	4	6 15	4	14 55	4	16 25	American.	States Steamship Co.	468.5	58.5	20.6	Norfolk, Va.	Seattle, Wash.	General	5,892	8,460	6,162
Julia Luckenbach.	4	3 10	4	7 25	4	15 39	4	16 40	American.	Luckenbach Line	436.6	57.0	22.5	Houston, Texas	Tacoma, Wash.	General	4,229	8,543	6,402
Royal Arrow ¹	4	5 35	4	7 30	4	17 00	4	18 10	American.	Standard Transp. Co.	467.6	62.7	28.4	Beaumont, Texas	Shanghai, China	Kerosene	11,901	9,699	6,805
Stensby ²	4	6 30	4	8 50	4	18 42	4	19 40	Danish.	W. L. Comyn & Co.	350.2	50.8	19.1	Cardenas, Cuba	Los Angeles, Calif.	Sugar	3,990	4,917	3,516
France Maru.	4	8 40	4	10 05	4	18 47	4	19 55	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0	25.0	New York, N. Y.	Kobe, Japan	Sugar ^(s)	7,137	6,200	4,658
Altair ¹	4	8 55	4	10 50	4	19 34	4	20 45	American.	Standard Oil Co.	429.3	59.2	18.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,695	5,402	
William H.																			
Doherty ¹	4	10 45	4	13 25	4	20 22	4	21 37	American.	Hustoca Petroleum Co.	435.0	56.2	23.9	Baltimore, Md.	Los Angeles, Calif.	Ballast	7,406	5,111	
Point Arena	4	17 00	4	17 15	5	1 25	5	1 25	American.	Gulf-Pacific Line	324.0	46.0	24.8	New Orleans, La.	Los Angeles, Calif.	General	3,789	3,984	2,612
Swan ⁴	4	6 20	4	6 20	4	13 22	4	13 22	American.	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	General	2,950	7,103	4,991
Ohioan	5	5 68	5	6 20	5	14 05	5	15 20	American.	Amer-Hawaiian Line	407.7	54.0	20.6	Boston, Mass.	Tacoma, Wash.	General	7,103	4,991	
Yorba Linda ¹	5	6 02	5	6 25	5	15 01	5	16 15	American.	Standard Transp. Co.	435.0	56.2	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,424	5,077	
F. J. Luckenbach.	4	23 45	5	7 35	5	15 53	5	16 50	American.	Luckenbach Line	446.0	56.0	21.8	Boston, Mass.	Seattle, Wash.	General	4,748	8,508	6,179

¹ Tanker.² Motor ship.³ Launch.⁴ Mine sweeper.⁵ Scrap iron and cotton.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Arana	2	9 15	2	9 52	2	16 30	3	11 12	British	Pacific Steam Nav. Co.	303 4	43 0	14 5	Callao, Peru	New York, N. Y.	(17)	560	2,851	1,776
Astral	2	10 45	2	11 28	2	18 33	3	11 33	American	Standard Transp. Co.	439 5	58 0	28 9	Los Angeles, Calif.	Providence, R. I.	(18)	10,272	8,913	6,210
Adria	2	19 00	3	4 00	3	11 10	3	11 10	American	Atlantic Tank Reederi.	412 0	56 0	25 3	Los Angeles, Calif.	Ellensburg, Pa.	(19)	8,440	6,579	4,574
Santa Elisa	3	4 45	3	5 55	3	13 30	3	18 08	American	Grace Line	350 3	51 7	26 3	Talcahuano, Chile	New York, N. Y.	(20)	4,080	5,057	4,335
El Lobo	3	10 29	3	11 04	3	18 35	3	22 30	British	C. T. Bowring & Co.	385 2	51 0	23 6	La Libertad, Ecua.	Philadelphia, Pa.	(21)	6,126	4,851	3,320
George W.	3	10 30	3	11 15	3	19 30	3	19 30	American	Huasteca Petroleum Co.	416 8	56 1	26 4	Los Angeles, Calif.	Baltimore, Md.	(22)	9,540	6,763	4,759
Barnes	3	12 00	3	12 10	3	18 00	4	2 10	American	Rex B. Clark	100 3	21 7	7 0	Los Angeles, Calif.	Kingston, Jamaica	(23)	4,583	3,978	2,553
Norcan	3	12 01	3	12 47	3	20 00	4	2 10	American	N. O. & S. A. S. Co.	321 0	46 3	22 0	Iquique, Chile.	New Orleans, La.	(24)	12,677	9,562	6,604
Sir Osborn	3	8 30	3	13 04	3	20 55	3	20 55	Norwegian.	Anglo-Saxon Pet. Co.	471 8	64 4	27 0	San Francisco, Cal.	Land's End, Eng.	(25)	9,177	9,282	6,853
Holmden	3	12 30	3	14 20	3	21 10	3	21 10	American	Luckenbach Line	448 9	60 2	30 6	Portland, Ore.	Mobile, Ala.	(26)	3,269	3,984	2,612
Harry Luckenbach	3	12 57	3	15 05	3	22 40	4	4 20	American	Transmarine Lines.	321 0	46 2	22 0	Seattle, Wash.	New York, N. Y.	(27)	6,856	7,946	5,698
Sunewoo	3	15 00	4	4 07	4	10 55	4	13 10	American	Grace Line	370 0	53 0	22 6	Valparaiso, Chile	New York, N. Y.	(28)	11,050	9,698	6,900
Santa Inez	3	17 30	4	5 04	4	12 20	4	12 20	American	Seas Shipping Co.	480 7	54 3	26 0	Tacoma, Wash.	Baltimore, Md.	(29)	5,825	5,962	3,650
Greylock	3	17 30	4	5 04	4	12 20	4	12 20	American	Standard Transp. Co.	407 6	62 7	27 0	Los Angeles, Calif.	New York, N. Y.	(30)	5,684	7,107	5,041
Sylvan Arrow	4	1 00	4	5 55	4	13 45	4	13 45	American	Can. Nat. Steamships	400 0	52 4	24 6	Vancouver, B. C.	Montreal, Canada	(31)	9,417	9,027	6,539
Canadian	4	4 20	4	6 51	4	14 50	4	20 25	British	Panama Government	125 6	23 5	14 6	Batban, C. Z.	Cristobal, C. Z.	(32)	20,000	15,551	4,297
Prospector	4	9 15	4	9 36	4	17 38	4	17 38	American	Amer-Hawaiian Line	407 7	53 7	23 2	Portland, Ore.	Boston, Mass.	(33)	9,000	8,308	5,850
W. H. Libby	4	12 05	4	13 36	4	21 05	4	21 05	American	Luckenbach Line	471 0	59 2	27 6	Portland, Ore.	Boston, Mass.	(34)	3,467	3,333	2,207
Steelore	4	16 00	5	4 41	5	12 05	5	15 10	American	Standard Shipping Co.	462 5	60 2	26 0	Los Angeles, Calif.	New York, N. Y.	(35)	5,804	6,179	4,521
Courageous	5	4 10	5	5 13	5	15 10	5	15 10	American	Ore S. S. Corp.	550 3	72 2	34 0	Cruz Grande, Chile	Baltimore, Md.	(36)	4,219	4,195	3,088
Courageous	5	30 23	5	6 00	5	16 05	5	16 05	American	Roosevelt S. S. Co., S. B.	456 1	56 0	27 6	Manila, P. I.	New York, N. Y.	(37)	7,000	5,759	4,013
Cerrito	5	4 00	5	7 50	5	17 00	5	17 00	German	Hamburg-American Line	227 2	34 4	11 0	Guayaquil, Ecuador	Cristobal, C. Z.	(38)	309	1,183	742
Lycia	5	9 25	5	12 52	5	23 00	5	23 00	British	Canadian Transp. Co.	300 5	44 2	21 6	Vancouver, B. C.	Boston, Mass.	(39)	6,067	7,156	5,004
Pelican	6	6 06	6	00 56	6	9 33	6	9 33	Panaman	Luis Dorati	330 1	55 0	26 0	Victoria, C. Z.	Philadelphia, Pa.	(40)	9,164	7,709	5,562
Harbridge	6	1 50	6	3 01	6	10 40	6	10 40	British	Crosby-Muir & Co.	330 1	55 0	26 0	Batban, C. Z.	New York, N. Y.	(41)	1,330	2,263	1,622
Puritas	5	16 10	6	4 34	6	12 30	6	12 30	Italian	F. & W. Ritsen	360 0	56 1	22 9	Valparaiso, Chile	Baltimore, Md.	(42)	7,518	6,055	4,870
Barat	6	2 50	6	5 43	6	13 45	6	13 45	Dutch	Indus. Arma. Gepoa	391 7	56 1	24 0	Vancouver, B. C.	Baltimore, Md.	(43)	10,000	8,000	6,000
Dakota	6	5 52	6	7 11	6	14 47	6	14 47	American	Royal Neth. S. S. Co.	202 9	33 1	12 0	Guayaquil, Ecuador	Cristobal, C. Z.	(44)	6,067	7,156	5,004
Sunbeam	6	6 40	6	7 48	6	16 04	6	16 04	American	Amer-Hawaiian Line	407 7	53 7	25 6	Seattle, Wash.	Boston, Mass.	(45)	9,164	7,709	5,562
Margarethe	6	10 30	6	11 14	6	19 00	7	10 05	German	Sun Oil Co.	429 3	59 2	26 6	Los Angeles, Calif.	Philadelphia, Pa.	(46)	1,330	2,263	1,622
Cords	6	10 45	6	12 17	6	20 00	6	20 00	American	Colombian Mar. Co.	266 8	42 1	15 3	Buenaventura, Col.	New York, N. Y.	(47)	7,518	6,055	4,870
Marian Otis	6	10 45	6	12 17	6	20 00	6	20 00	American	Arrow Line	409 6	54 1	25 0	Portland, Ore.	Baltimore, Md.	(48)	10,000	8,000	6,000
Chandler	6	10 45	6	12 17	6	20 00	6	20 00	American	Motor yacht.	100 0	10 0	4 0	Portland, Ore.	Baltimore, Md.	(49)	10,000	8,000	6,000
Tanker.	6	10 45	6	12 17	6	20 00	6	20 00	American	Motor ship.	100 0	10 0	4 0	Portland, Ore.	Baltimore, Md.	(50)	10,000	8,000	6,000

¹⁷ Coffee, cocoa, and ivory nuts.
¹⁸ Kerosene distillate.
¹⁹ Copper, nitrates, and general.
²⁰ Gasoline and kerosene.
²¹ Cocoa, ivory nuts, and lumber.
²² Coffee, cocoa, and ivory nuts.
²³ Kerosene distillate.
²⁴ Copper, nitrates, and general.
²⁵ Coffee, cocoa, and ivory nuts.
²⁶ Kerosene distillate.
²⁷ Coffee, cocoa, and ivory nuts.
²⁸ Kerosene distillate.
²⁹ Copper, nitrates, and general.
³⁰ Gasoline and kerosene.
³¹ Coffee, cocoa, and ivory nuts.
³² Kerosene distillate.
³³ Copper, nitrates, and general.
³⁴ Coffee, cocoa, and ivory nuts.
³⁵ Kerosene distillate.
³⁶ Copper, nitrates, and general.
³⁷ Coffee, cocoa, and ivory nuts.
³⁸ Kerosene distillate.
³⁹ Copper, nitrates, and general.
⁴⁰ Coffee, cocoa, and ivory nuts.
⁴¹ Kerosene distillate.
⁴² Copper, nitrates, and general.
⁴³ Coffee, cocoa, and ivory nuts.
⁴⁴ Kerosene distillate.
⁴⁵ Copper, nitrates, and general.
⁴⁶ Coffee, cocoa, and ivory nuts.
⁴⁷ Kerosene distillate.
⁴⁸ Copper, nitrates, and general.
⁴⁹ Coffee, cocoa, and ivory nuts.
⁵⁰ Kerosene distillate.

Nitro	6 13.50	6 14.38	6 23.15	7 1.45	Italian	Soc. An. Com-Ital. Oil.	421.0	48.8	26.4	Tooeppia, Chile	Norfolk, Va. ²⁴	7,043	5,742	4,180
Wilmington	6 23.50	7 1.00	7 8.50	7 8.50	American	Quaker Line	409.8	52.4	24.6	Aberdeen, Wash.	New York, N. Y.	7,600	6,510	4,827
Storren	7 3.00	7 4.45	7 11.40	7 15.10	Norwegian	Rosen & Loenneche	388.1	52.7	24.0	Los Angeles, Calif.	Land's End, Eng.	6,537	5,464	3,764
Salvador	7 5.20	7 6.15	7 13.50	7 13.50	British	Pacific Steam Nav. Co.	215.0	35.5	17.0	Champerico, Guat.	Cristobal, C. Z.	952	1,170	735
Swan	7 6.15	7 7.45	7 13.50	7 13.50	American	U. S. Navy	187.0	32.0	16.0	Balboa, C. Z.	Cristobal, C. Z.	8,128	6,390	4,382
San Eduardo	7 7.45	7 8.40	7 17.25	7 21.15	British	Eagle Transport Co.	420.0	54.0	26.0	Los Angeles, Calif.	Lizard's End, Eng. ²⁴	689		
Niagara	7 8.40	7 9.36	7 18.40	7 24.05	American	U. S. Navy	245.0	36.3	19.0	Balboa, C. Z.	Cristobal, C. Z.	6,595	5,699	4,167
Papara	7 10.20	7 11.40	7 19.30	7 24.05	American	United Fruit Co.	330.6	44.6	17.9	San Francisco, Cal.	Limón, C. R.			
American Star	7 10.45	7 11.46	7 19.47	7 24.05	American	Charles Nelson & Co.	386.8	52.2	23.5	Seattle, Wash.	Baltimore, Md.			
Pacific	7 13.00	7 14.10	7 21.55	7 24.05	British	Furness, Withy & Co.	420.0	58.0	28.0	Vancouver, B. C.	Glasgow, Scotland	7,905	5,869	
Trader ²³	7 13.15	7 14.51	7 23.00	7 24.05	British	Alfred Holt & Co.	420.0	54.0	25.6	Davao, P. I.	New York, N. Y.	6,574	6,887	4,612
Eurypylus	7 14.10	7 23.05	7 30.30	7 30.30	Japanese	Kobun Kisen Kaisha	385.0	51.0	26.6	Hilo, P. I.	Baltimore, Md.	7,800	6,209	4,698
Capeown Maru	7 16.30	7 23.41	7 30.30	7 30.30	German	Hamburg-American Line	399.4	54.2	26.8	Antofagasta, Chile	New York, N. Y.	8,367	6,791	4,997
Speedwell ²³	7 16.30	7 23.41	7 30.30	7 30.30	German	W. Thomson & Co.	405.1	52.6	23.8	Wellbourne, Wash	London, England	7,884	5,870	4,359
Bengoe	7 19.35	7 20.42	7 30.30	7 30.30	British	Com'lth & Dom. Line	480.0	60.5	23.0	Millbourne, Aust'ia	London, England	5,677	10,468	7,916
Port Darwin	7 19.35	7 20.42	7 30.30	7 30.30	British	Nippon Yusen Kaisha	445.0	58.0	24.0	Manila, P. I.	New York, N. Y.	9,822	8,052	5,743
Toba Maru	7 23.15	7 24.53	7 30.30	7 30.30	Japanese	Hamburg-American Line	448.5	58.2	27.2	Vancouver, B. C.	Hamburg, Germany	9,050	9,568	6,680
Hessen	7 23.20	7 30.33	7 30.30	7 30.30	German									
Standard	7 16.00	7 8.45	7 16.20	7 16.20	American	Standard Transp. Co.	497.6	62.7	27.0	Long Beach, Cal.	Bayonne, N. J.	9,698	6,783	
Arrow ²³	7 21.35	7 8.45	7 16.20	7 16.20	French	Cie. Aux. De Navigation	425.0	56.9	26.0	Dunkirk, France	Dunkirk, France	9,018	7,085	5,050
Melpomene ²³	7 21.35	7 8.45	7 16.20	7 16.20	American	Redwood Line	386.8	52.0	23.7	San Francisco, Cal.	New Orleans, La.	6,443	5,708	4,131
Dio	7 21.35	7 8.45	7 16.20	7 16.20	American	Can-Am. Ship. Co.	483.6	55.0	30.6	Vancouver, B. C.	New York, N. Y.	3,920	10,011	7,278
Chief Skidgate	7 6.00	7 15.35	7 19.35	7 19.35	British									
Canadun	7 6.00	7 15.35	7 19.35	7 19.35	British									
Challenger	7 6.45	7 8.45	7 20.50	7 20.50	British	Can. Nat. Steamships	400.1	52.0	16.0	Wellington, N. Z.	Montreal, Canada	2,006	6,142	4,354
Inapapina ²³	7 13.43	7 9.17	7 16.20	7 16.20	Panama	United Fruit Co.	105.0	15.0		Balboa, C. Z.	Cristobal, C. Z.	89	54	
Edgfield	7 7.20	7 10.15	7 21.55	7 21.55	American	Tampa Intercoastal Co.	409.6	54.2	27.9	Sagay, P. I.	New York, N. Y.	8,097	7,476	5,909
Point San	7 7.20	7 10.15	7 21.55	7 21.55	American									
Pablo	7 2.25	7 10.15	7 22.20	7 22.20	American	Swayne & Hoyt	324.0	46.2	20.0	Portland, Oreg	New Orleans, La.	2,973	3,984	2,591
Washington	7 8.10	7 10.55	7 23.00	7 23.00	American	The Texas Co.	425.8	57.0	26.0	Los Angeles, Calif.	Baltimore, Md.	8,874	7,481	5,216
Yorkman	7 8.50	7 12.02	7 23.00	7 23.00	American	Calmar S. S. Corp	409.8	54.2	25.9	Seattle, Wash	Wilmington, Del.	7,667	6,757	4,918
McCaulley ²⁶	7 8.50	7 12.02	7 23.00	7 23.00	American	U. S. Navy				Balboa, C. Z.	Darien, C. Z.			

²² Survey ship.

²³ Motor schooner.

²⁴ For orders.

²⁵ Sugar, coffee, and general.

²⁶ Logs, sugar, and general.

²⁷ Lumber, livestock, explosives, and general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
June 2	Patores	United Fruit Co.	Port Limón, Costa Rica.	June 2	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.
June 3	Ulua	United Fruit Co.	New York via Habana.	June 2	Pastores	United Fruit Co.	New York via Habana.
June 4	Camden	United Fruit Co.	Curacao, D. W. I.	June 2	Simon Bolivar	Royal Neth. S. S. Co.	Amsterdam via wayports.
June 4	Suriname ²⁸	United Fruit Co.	Puerto Colombia.	June 3	Camden	United Fruit Co.	New Orleans via wayports.
June 4	Gruswald	Hamburg-American Line	Hamburg via wayports.	June 5	Ulua	United Fruit Co.	Port Limón, Costa Rica.
June 5	Cristobal	Panama R. R. S. S. Line	New York via Haiti.	June 5	Gruswald	Hamburg-American Line	Port Limón, Costa Rica.
June 5	Camden	United Fruit Co.	New York via Kingston.	June 5	Camden	United Fruit Co.	Port Limón, Costa Rica.
June 5	Zacapa	United Fruit Co.	Barranquilla, Colombia.	June 5	Suriname	United Fruit Co.	Bocas, R. P.
June 5	Cundinamarca ²⁸	United Fruit Co.	New York via wayports.	June 6	Cundinamarca ²⁸	United Fruit Co.	Barranquilla, Colombia.

²⁸ Other than ships passing through the Canal.

²⁹ Air mail carrier.

MOVEMENTS OF OCEAN VESSELS.—Continued

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From	Date.	Vessel.	Line.	For—
June 6	Galicia	Hamburg-American Line	Tampico, Mexico.	June 6	Zacapa	United Fruit Co.	New York via wayports.
June 6	Saramacca	United Fruit Co.	New Orleans, La.	June 6	William M. ³⁰	G. I. Bryan	Bluefields, Nicaragua.
June 6	Texas	The Texas S. S. Co.	Port Arthur, Texas.	June 6	Mamouf	United Fruit Co.	New York via Kingston.
June 6	No. 9664 ²⁹	Pan-American Airways	Managua via wayports.	June 6	No. 9085 ²⁹	Pan-American Airways	Managua via David.
June 6	William M. ³⁰	G. I. Bryan	Colon, R. P.	June 7	Bastidas ³²	Colombian Government	Puerto Colombia.
June 7	Atlantida	Standard Fruit & S. S. Co.	New Orleans via Habana.	June 7	Saramacca	United Fruit Co.	Cartegena via wayports.
June 7	Suriname	United Fruit Co.	Bocas, R. P.	June 7	Galicia	Hamburg-American Line	Puerto Colombia.
June 7	Wauks	Standard Fruit & S. S. Co.	San Blas, R. P.	June 7	No. 8020 ²⁹	Pan-American Airways	Guayaquil via wayports.
June 7	Anachucuna ³⁴	United Fruit Co.	Colon, R. P.	June 7	Anachucuna ³⁴	United Fruit Co.	Colon, R. P.
June 7	Annette I. ³⁴	A. Tagarapulos	Avonmouth via wayports.	June 7	Annette I. ³⁴	A. Tagarapulos	Colon, R. P.
June 8	Cavina	Elders & Fyffes, Ltd	New Orleans via wayports.	June 8	Atlantida	Standard Fruit & S. S. Co.	New Orleans via wayports.
June 8	Parissima	United Fruit Co.	Bayamo via Habana	June 8	Cavina	Elders & Fyffes, Ltd	Bristol via Kingston.
June 8	Maravi	United Fruit Co.	Puerto Colombia	June 8	Texas	The Texas S. S. Co.	Tampico, Mexico.
June 8	No. 9685 ²⁹	Pan-American Airways	Managua via David.	June 8	No. 9664 ²⁹	Pan-American Airways	Managua via David.
June 8				June 8	Suriname	United Fruit Co.	New Orleans, La.
29 Air mail carrier.				31 Motor boat.			
30 Schooner.				32 Tug.			
PORT OF BALBOA.							
June 6	Rakoyo Maru	Nippon Yusen Kaisha	Hongkong, China.	June 6	Rakoyo Maru	Nippon Yusen Kaisha	Valparaiso, Chile.
June 6	Bokuyo Maru	Nippon Yusen Kaisha	Valparaiso, Chile.	June 6	Bokuyo Maru	Nippon Yusen Kaisha	Hongkong, China.
June 6	San Luis ³³	Chiriqui Land Co.	Pto. Arminelles, R. P.	June 6	San Luis ³³	Chiriqui Land Co.	P. Arminelles, R. P.
June 7	A. B. Obarrio ³³	Pacific Fruit Co.	Bayano River, R. P.	June 7	A. B. Obarrio ³³	Pacific Fruit Co.	Panama Bay, R. P.
June 7	Dos Hermanos ³³	A. Valdez	Bayano River, R. P.	June 7	Dos Hermanos ³³	A. Valdez	Panama Bay, R. P.
June 7	Sambu ³⁴	Haus Elliot	El Real, R. P.	June 7	Sambu ³⁴	Haus Elliot	Panama Bay, R. P.
June 7	Big Bill ³⁴	Haus Elliot	El Real, R. P.	June 7	Big Bill ³⁴	Haus Elliot	Panama Bay, R. P.

* Other than ships passing through the Canal.

33 Motor schooner. 34 Motor yacht.

Tanker Traffic Through the Panama Canal in May, 1929.

During the month of May, 1929, 101 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 538,440, on which tolls of \$472,454.05 were collected. Cargo amounted to 473,363 tons. In point of net tonnage, tanker traffic increased 41.3 per cent over the same traffic for the corresponding month a year ago, while cargo tonnage increased 25.7 per cent over the cargo tonnage of May, 1928.

Tanks ships comprised 19.2 per cent of the total commercial transits through the Canal during the month; made up 21.2 per cent of the total Panama Canal net tonnage; were the source of 24.5 of the tolls collected; and carried 18.6 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tankships transiting the Canal during the month of May, 1929, segregated by direction of transit and nationality of vessels, are shown in the following tabulations, with comparative totals, for the two preceding months and for May, 1928:

Nationality.	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British	11	53,323	\$39,766.85	7,652
Dutch	1	3,132	2,255.04	.....
French	1	5,050	3,636.00	.....
German	1	4,574	3,293.28	.....
Norwegian	4	21,201	15,264.72	.....
United States	34	199,107	146,391.76	12,027
Totals, May, 1929	52	286,387	210,607.65	19,679
Totals, April, 1929	39	215,199	159,166.70	22,876
Totals, March, 1929	46	243,023	182,092.48	39,581
Totals, May, 1928	32	170,811	125,686.91	12,995
<i>Pacific to Atlantic.</i>				
British	12	60,028	63,447.15	111,509
Danish	1	4,097	4,193.75	7,480
Danzig	1	5,927	6,508.75	11,300
Dutch	2	9,408	10,080.00	16,777
Norwegian	4	17,565	18,640.00	32,727
Swedish	1	6,295	6,486.25	11,396
United States	28	148,733	152,490.50	262,495
Totals, May, 1929	49	252,053	261,846.40	453,684
Totals, April, 1929	43	229,158	231,886.59	397,783
Totals, March, 1929	50	278,540	280,901.74	492,078
Totals, May, 1928	41	209,621	216,418.53	363,702

* Includes 1 tanker of coconut oil, Panama Canal net 5,099, tolls \$5,305.00, 6,406 tons of cargo; 1 tanker of molasses, Panama Canal net 4,389, tolls \$4,743.75, 9,374 tons of cargo; and 1 tanker of coconut oil, Panama Canal net 4,303, tolls \$3,843.75, 6,154 tons of cargo.

Of the total tanker traffic shown above, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months, and for May, 1928:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
May, 1929	41	227,722	\$165,842.76	1,277
April, 1929	22	121,872	87,747.84	.....
March, 1929	33	181,815	130,979.85	.....
May, 1928	26	139,992	100,794.24	.....
<i>From Los Angeles.</i>				
May, 1929	35	181,003	186,620.50	322,997
April, 1929	27	149,491	150,532.45	258,776
March, 1929	35	192,325	193,401.10	344,736
May, 1928	26	138,180	144,904.45	255,893

Commercial Traffic Through the Panama Canal in May, 1929, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of May, 1929, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for May, 1928, and 1927. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	92	472,989	365,745	588,266	365,231	\$407,099.99	267,326
East coast of United States to west coast of South America:							
British	7	27,851	21,936	36,358	22,319	24,705.69	11,132
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	2,749
German	2	2,789	2,592	3,340	1,940	3,193.90	1,137
Swedish	2	8,917	7,486	30,676	8,762	6,420.24	.....
United States	14	58,731	48,012	82,096	47,271	48,340.43	23,652
Totals	26	102,993	83,492	159,780	84,268	86,992.76	38,670
Europe to west coast of South America:							
British	7	42,013	33,067	55,221	33,591	40,182.01	20,077
Chilean	1	1,417	1,347	2,221	1,319	1,020.24	.....
Dutch	3	17,431	11,438	19,391	11,493	14,297.50	13,090
French	3	13,469	11,785	17,808	11,727	14,610.30	4,640
German	4	20,124	14,187	22,336	13,466	17,733.75	24,034
Greek	1	3,433	2,234	3,536	2,223	2,792.50	5,400
Italian	1	9,329	5,176	11,718	6,750	6,470.00	1,245
Norwegian	2	9,192	5,836	9,557	5,783	7,295.00	13,319
Yugoslav	2	8,592	6,749	10,871	6,723	8,436.25	13,511
Totals	24	125,000	91,819	152,659	93,075	112,838.55	95,316
East coast of United States to Far East:							
British	6	32,145	18,291	31,116	18,396	22,863.75	35,235
Danish	2	5,683	4,768	7,857	4,785	5,960.00	6,430
Japanese	6	28,487	24,015	36,316	23,335	30,018.75	41,213
Norwegian	3	12,723	7,435	12,935	7,399	9,293.75	21,521
United States	4	23,575	17,182	27,463	17,038	20,265.45	23,012
Totals	21	102,613	71,691	115,687	70,953	88,341.70	127,411
Europe to west coast Canada:							
British	7	37,690	29,246	47,202	29,358	34,301.90	12,555
Dutch	2	13,679	10,642	16,989	10,604	13,302.50	6,034
French	2	9,766	7,442	12,059	7,443	9,302.50	6,337
German	3	19,238	12,869	21,239	12,972	16,086.25	15,200
Italian	2	12,538	9,997	15,181	9,583	12,496.25	3,572
Norwegian	1	5,637	4,509	7,116	4,493	5,636.25	8,886
Totals	17	98,548	74,705	119,786	74,453	91,125.65	52,584
Europe to west coast of United States:							
British	4	18,234	16,115	26,583	16,149	13,128.48	.....
Danish	1	4,467	2,690	4,473	2,737	3,216.24	.....
Dutch	1	3,132	2,760	4,647	2,642	2,255.04	.....
French	1	5,050	4,356	7,011	3,989	3,636.00	.....
German	2	10,918	7,658	13,111	7,673	8,075.78	5,501
Norwegian	5	27,154	21,487	36,133	21,469	19,710.97	2,041
Swedish	1	5,221	3,097	5,234	3,602	3,871.25	7,500
United States	1	6,396	5,428	8,946	5,429	4,605.12	.....
Totals	16	80,572	63,591	106,138	63,690	58,498.88	15,042
East coast of United States to Australasia:							
British	7	33,988	24,835	39,806	24,729	31,043.75	40,849
Norwegian	2	9,004	4,996	8,629	4,968	6,245.00	14,020
United States	3	16,353	12,995	18,820	12,710	16,243.75	7,505
Totals	12	59,345	42,826	67,255	42,407	53,532.50	62,374

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Cristobal, C. Z., to west coast of South America:...							
Colombian.....	4	1,257	1,196	1,948	1,210	\$1,476.50	1,122
Dutch.....	1	742	294	780	323	367.50	229
German.....	5	4,046	3,084	5,551	3,137	3,614.77	3,135
Peruvian.....	1	2,405	989	3,305	1,514	1,236.25	308
Totals.....	11	8,450	5,563	11,584	6,184	6,695.02	4,794
Europe to Australasia:							
British.....	7	53,814	39,940	63,803	39,928	49,925.00	56,130
Around the World:							
British.....	2	11,258	8,548	13,792	8,572	10,685.00	9,296
Swedish.....	1	6,190	3,278	5,841	4,083	4,097.50	6,992
United States.....	3	26,867	20,719	34,183	20,719	25,898.75	13,332
Totals.....	6	44,315	32,545	53,816	33,374	40,681.25	29,620
East coast of United States to west coast of Canada:							
British.....	1	4,262	3,029	4,867	2,999	3,068.64	.....
United States.....	5	23,542	17,346	27,742	17,024	21,682.50	38,425
Totals.....	6	27,804	20,375	32,609	20,023	24,751.14	38,425
Cristobal, C. Z., to west coast of United States:							
Panaman.....	1	2,606	1,384	3,644	2,594	1,730.00	3,356
United States.....	3	6,993	6,393	10,292	6,363	7,938.20	2,175
Totals.....	4	9,599	7,777	13,936	8,957	9,668.20	5,531
Cristobal to west coast of Central America:							
British.....	3	2,063	1,900	3,436	1,906	2,353.90	2,999
Norwegian.....	1	504	423	732	391	528.75	286
Totals.....	4	2,567	2,323	4,168	2,297	2,882.65	3,285
Canadian intercoastal:							
British.....	3	8,521	6,777	11,626	7,731	8,404.08	4,290
East coast of United States to Philippine Islands:							
British.....	1	5,001	3,800	6,055	3,790	4,750.00	5,377
United States.....	2	12,062	8,803	13,274	8,258	11,003.75	17,448
Totals.....	3	17,063	12,603	19,329	12,048	15,753.75	22,825
East coast Canada to Austral- asia:							
British.....	3	15,553	12,008	19,386	12,068	15,010.00	14,584
East coast of Canada to west coast of South Amer- ica:							
British.....	2	13,526	11,952	22,618	12,626	9,738.00	.....
West Indies to west coast of Canada:							
Norwegian.....	2	7,703	6,265	9,825	5,955	7,831.25	11,204
West Indies to Far East:							
British.....	2	8,890	6,445	10,374	6,449	8,056.25	14,732
East coast of South America to west coast of United States:							
Norwegian.....	1	4,722	2,728	4,624	2,765	3,410.00	2,303
United States.....	1	5,040	3,731	5,823	3,705	4,663.75	5,003
Totals.....	2	9,762	6,459	10,447	6,470	8,073.75	7,306
Europe to west coast of Cen- tral America:							
British.....	1	4,058	3,205	5,213	3,210	4,006.25	5,500
German.....	1	3,272	2,517	4,165	2,547	3,146.25	3,183
Totals.....	2	7,330	5,722	9,378	5,757	7,152.50	8,683
Foreign ships in ballast— United States inter- coastal:							
British.....	1	6,386	5,524	8,780	5,145	4,597.92	.....
East coast of United States to Hawaiian Islands:							
United States.....	1	1,740	1,542	2,647	1,542	1,927.50	3,006

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of Canada to Far East:							
British	1	6,889	4,489	7,049	4,511	\$5,611.25	7,994
West Indies to west coast of United States:							
United States	1	6,070	5,140	8,207	5,092	4,370.40	
West Indies to west coast of South America:							
French	1					5,875.00	
Central American intercoastal:							
Norwegian	1	2,268	1,859	3,124	1,868	2,323.75	3,471
East coast of Central America to west coast United States:							
United States	1	2,234	2,096	3,266	2,040	2,620.00	688
East coast of Central America to west coast South America:							
British	1	4,343	3,601	5,923	3,616	4,501.25	7,652
South American intercoastal:							
United States	1	950	923	1,768	981	1,140.00	240
East coast of South America to west coast of Canada:							
United States	1	4,989	3,517	5,550	3,517	4,396.25	2,757
East coast of South America to Far East:							
Japanese	1	5,821	4,170	7,267	4,387	5,212.50	3,670
Europe to Balboa, C. Z.:							
United States	1	5,935	4,340	7,075	4,323	5,425.00	10,750
Egypt to west coast of United States:							
British	1	4,514	3,560	5,587	3,513	3,250.08	
Grand totals, May, 1929	278	1,329,095	1,011,384	1,668,713	1,014,479	1,164,303.77	920,360
Grand totals, May, 1928	243	1,082,871	835,725	1,363,566	832,286	962,722.86	725,345
Grand totals, May, 1927	254	1,213,276	937,887	1,527,638	941,128	1,043,949.52	758,941

* Naval vessel of 11,750 displacement tons.

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States	79	399,828	310,205	497,507	311,113	\$387,510.50	560,343
West coast of South America to east coast of United States:							
British	12	54,114	44,466	74,375	45,675	55,582.50	92,394
Chilean	1	4,672	3,433	7,310	3,976	4,291.25	4,891
German	3	9,228	6,092	9,853	5,869	7,615.00	14,669
Japanese	1	4,611	4,223	5,838	4,219	5,278.75	8,250
Norwegian	1	3,347	2,389	4,044	2,307	2,986.25	6,350
Panamanian	1	4,897	4,014	6,386	4,067	5,017.50	8,891
Swedish	1	4,421	3,743	15,339	4,377	4,678.75	21,850
United States	11	52,403	43,139	72,845	42,638	53,742.15	111,841
Totals	31	137,693	111,499	195,990	113,128	139,192.15	269,136
West coast of Canada to Europe:							
British	13	70,004	48,970	79,371	49,164	61,212.50	97,775
Dutch	2	12,678	10,266	16,039	10,236	12,832.50	19,567
French	1	5,563	4,282	6,863	4,287	5,352.50	8,420
German	4	24,596	17,216	28,745	17,421	21,520.00	34,301
Norwegian	2	10,372	7,973	12,855	8,065	9,966.25	14,716
United States	1	5,245	3,843	6,188	3,822	4,803.75	8,286
Totals	23	128,458	92,550	150,061	92,995	115,687.50	183,065
West coast of United States to Europe:							
British	8	35,170	28,648	46,569	28,923	35,810.00	56,719
Danish	1	4,097	3,355	5,722	3,406	4,193.75	7,480
Dutch	2	9,408	8,064	13,246	7,709	10,080.00	16,777
Italian	1	6,054	5,031	7,061	4,460	6,288.75	9,014
Norwegian	5	23,419	19,591	32,955	19,487	24,488.75	41,211
Swedish	1	6,295	5,189	8,945	6,592	6,486.25	11,396
United States	1	8,619	7,026	11,247	6,955	8,782.50	15,900
Totals	19	95,062	76,904	125,745	77,532	96,130.00	158,497

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to Europe:							
Belgian.....	1	6,211	4,522	7,130	4,013	\$5,652.50	9,800
British.....	4	25,208	18,987	31,780	19,740	23,733.75	27,577
Chilean.....	1					14,892.00	
Danzig.....	1	5,927	5,207	8,744	5,026	6,508.75	11,300
Dutch.....	1	4,798	4,050	6,908	3,924	5,068.75	8,794
German.....	6	28,413	19,127	31,177	18,830	23,415.26	35,533
Italian.....	1	7,420	5,418	12,003	6,058	6,772.50	2,764
Norwegian.....	1	3,820	2,333	3,886	2,335	2,916.25	5,573
Yugoslav.....	1	4,189	3,259	5,387	3,272	4,073.75	8,349
Totals.....	17	85,986	62,903	107,015	63,198	93,033.51	109,690
West coast of South America to Cristobal, C. Z.:							
Colombian.....	5	1,349	1,277	2,101	1,278	1,587.15	1,480
Dutch.....	1	742	294	780	323	367.50	488
German.....	6	4,930	3,497	6,401	3,590	4,371.25	2,864
Totals.....	12	7,021	5,068	9,282	5,191	6,325.90	4,832
Philippine Islands to east coast United States:							
Danish.....	1	2,562	1,481	2,480	1,471	1,851.25	3,835
Japanese.....	5	24,634	21,840	31,512	21,353	26,953.10	38,126
Norwegian.....	1	4,530	2,508	4,268	2,498	3,135.00	7,500
United States.....	4	22,264	16,877	24,255	15,070	21,096.25	34,092
Totals.....	11	54,290	42,706	62,515	40,392	53,035.60	83,553
Australasia to Europe:							
British.....	9	76,434	55,955	91,802	57,241	69,943.75	49,472
West coast of Canada to east coast United States:							
British.....	3	12,845	8,623	13,724	8,528	10,778.75	18,778
Japanese.....	1	5,175	4,067	6,537	4,049	5,083.75	8,220
Norwegian.....	1	5,136	4,112	6,552	4,122	5,140.00	8,400
Swedish.....	1	3,528	2,417	4,104	3,128	3,021.25	6,095
United States.....	1	5,542	4,230	6,896	4,267	5,350.00	7,286
Totals.....	7	32,226	23,499	37,813	24,094	29,373.75	48,779
West coast of United States to Cristobal, C. Z.:							
Panaman.....	1	2,603	1,383	2,461	1,384	1,728.75	1,128
United States.....	5	11,368	10,457	16,786	10,282	13,018.20	4,146
Totals.....	6	13,971	11,840	19,247	11,666	14,746.95	5,274
West coast of South America to east coast Canada:							
British.....	4	21,277	18,872	33,966	20,638	23,590.00	45,676
West coast of Central America to Cristobal, C. Z.:							
British.....	3	2,063	1,900	3,426	1,906	2,375.00	2,178
German.....	1	855	722	1,306	717	920.50	144
Totals.....	4	2,918	2,622	4,742	2,623	3,277.50	2,322
West coast of United States to West Indies:							
United States.....	3	13,068	10,226	16,602	10,241	12,782.50	22,227
Australasia to east coast of Canada:							
British.....	3	12,647	9,801	16,306	9,975	12,251.25	8,476
Around the World:							
British.....	1	16,521	10,086	20,175	12,162	12,607.50	
German.....	1	12,735	7,772	19,692	9,931	9,715.00	
Totals.....	2	29,256	17,858	39,867	22,093	22,322.50	
Canadian intercoastal:							
British.....	2	8,486	6,357	10,310	6,360	7,946.25	12,894
Australasia to east coast of United States:							
British.....	1	4,129	3,258	5,334	3,242	4,072.50	2,032
United States.....	1	5,102	3,973	6,326	3,973	4,866.25	6,688
Totals.....	2	9,231	7,231	11,660	7,215	9,038.75	8,720

* Naval vessel of 29,784 displacement tons.

THE PANAMA CANAL RECORD

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Hawaiian Islands to east coast United States:							
United States	2	6,129	5,337	8,378	5,054	\$6,671 25	12,684
West coast of Central America to Cristobal, C. Z.:							
French	1	5,580	4,237	7,030	4,265	5,296 25	8,942
German	1	3,533	2,542	4,201	2,554	2,543 76	.....
Totals	2	9,113	6,779	11,231	6,819	7,840 01	8,942
Balboa, C. Z. to Cristobal, C.Z.							
Norwegian	1	504	423	732	391	362 88	.....
United States	1	20	15	20	16	14 40	.....
Totals	2	524	438	752	407	377 28	.....
Central American intercoastal:							
German	1	3,500	2,809	4,611	2,784	2,520 00	.....
South American intercoastal:							
British	1	4,345	3,757	6,094	3,664	3,128 40	.....
West coast of United States to east coast South America:							
British	1	5,261	3,544	5,714	3,620	4,430 00	4,150
Far East to east coast of United States:							
Japanese	1	4,773	3,516	5,652	3,451	4,395 00	3,563
West coast of South America to West Indies:							
United States	1	4,068	2,817	4,661	2,921	3,521 25	7,100
Far East to West Indies:							
Norwegian	1	4,245	2,537	4,362	2,516	3,171 25	7,084
Grand totals, May, 1929	246	1,167,810	897,630	1,481,885	906,931	1,132,242 80	1,616,479
Grand totals, May, 1928	265	1,191,741	936,169	1,519,638	935,267	1,156,246 97	1,772,243
Grand totals, May, 1927	217	1,035,616	820,134	1,348,764	825,588	1,022,121 21	1,620,772

Traffic by Nationality for May, 1929.

The following tabulation shows the commercial traffic through the Canal during the month of May, 1929, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for May, 1928 and 1927:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British	67	340,998	258,268	424,795	260,606	\$300,184 20	248,402
Chilean	2	6,122	4,813	9,531	5,295	5,352 74	2,749
Colombian	4	1,257	1,196	1,948	1,210	1,476 50	1,122
Danish	3	10,150	7,458	12,330	7,522	9,176 24	6,430
Dutch	7	34,984	25,134	41,807	25,062	30,222 54	19,353
French	7	28,285	23,583	36,878	23,159	33,423 80	10,977
German	17	60,387	42,907	69,742	41,735	51,850 70	52,190
Greek	1	3,433	2,234	3,536	2,223	2,792 50	5,400
Italian	3	21,867	15,173	26,899	16,333	18,966 25	4,817
Japanese	7	34,308	28,185	43,583	27,722	35,231 25	44,883
Norwegian	18	78,907	55,538	92,675	55,091	62,274 72	77,051
Panamanian	1	2,606	1,384	3,644	2,594	1,730 00	3,356
Peruvian	1	2,405	989	3,305	1,514	1,236 25	308
Swedish	4	20,328	13,861	41,751	16,447	14,388 99	14,492
United States	134	674,466	523,912	845,418	521,243	587,560 84	415,319
Yugoslav	2	8,592	6,749	10,871	6,723	8,436 25	13,511
Totals, May, 1929	278	1,329,095	1,011,384	1,668,713	1,014,479	1,164,303 77	920,360
Totals, May, 1928	243	1,082,871	835,725	1,363,566	832,286	962,722 86	725,345
Totals, May, 1927	254	1,213,276	937,887	1,527,638	941,128	1,043,949 52	758,941

* Includes naval vessel of 11,750 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	1	6,211	4,522	7,130	4,013	\$5,652.50	9,800
British	65	348,504	263,224	438,956	270,838	327,462.15	418,121
Chilean	2	4,672	3,433	7,310	3,976	19,183.25	4,891
Colombian	5	1,349	1,277	2,101	1,278	1,587.15	1,480
Danish	2	6,659	4,836	8,202	4,877	6,045.00	11,315
Danzig	1	5,927	5,207	8,744	5,026	6,508.75	11,300
Dutch	6	27,626	22,674	36,973	22,192	28,348.75	45,626
French	2	11,143	8,519	13,893	8,552	10,648.75	17,362
German	23	87,790	59,777	105,986	61,696	72,602.77	87,511
Italian	2	13,474	10,449	19,064	10,518	13,061.25	11,778
Japanese	8	39,493	33,646	49,539	33,072	41,710.60	58,159
Norwegian	13	55,373	41,866	69,654	41,721	52,166.63	90,834
Panaman	2	7,500	5,397	8,847	5,451	6,746.25	10,019
Swedish	3	14,244	11,349	28,388	14,097	14,186.25	39,341
United States	110	533,656	418,195	671,711	416,352	522,259.00	790,593
Yugoslav	1	4,189	3,259	5,387	3,272	4,073.75	8,349
Totals, May, 1929	246	1,167,810	897,630	1,481,885	906,931	1,132,242.80	1,616,479
Totals, May, 1928	265	1,191,741	936,169	1,519,638	935,267	1,156,246.97	1,772,243
Totals, May, 1927	217	1,035,616	820,134	1,348,764	825,588	1,022,121.21	1,620,772

* Includes naval vessel of 29,784 displacement tons.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	1	6,211	4,522	7,130	4,013	\$5,652.50	9,800
British	132	689,502	521,492	863,751	531,444	627,646.35	666,523
Chilean	4	10,794	8,246	16,841	9,271	24,535.99	7,640
Colombian	9	2,606	2,473	4,049	2,488	3,063.65	2,602
Danish	5	16,809	12,284	20,532	12,399	15,221.24	17,745
Danzig	1	5,927	5,207	8,744	5,026	6,508.75	11,300
Dutch	13	62,610	47,898	78,780	47,254	58,571.29	64,979
French	9	39,428	32,102	50,771	31,711	44,072.55	28,339
German	40	148,177	102,684	175,728	103,431	124,453.47	139,701
Greek	1	3,433	2,234	3,536	2,223	2,792.50	5,400
Italian	5	35,341	25,622	45,963	26,851	32,027.50	16,595
Japanese	15	73,801	61,831	93,122	60,794	76,941.85	193,042
Norwegian	31	134,280	97,404	162,329	96,812	114,441.35	167,885
Panaman	3	10,106	6,781	12,491	8,045	8,476.25	13,375
Peruvian	1	2,405	989	3,305	1,514	1,236.25	308
Swedish	7	34,572	25,210	70,139	30,544	28,575.24	53,833
United States	244	1,208,122	942,107	1,517,129	937,595	1,109,819.84	1,205,912
Yugoslav	3	12,781	10,008	16,258	9,995	12,510.00	21,860
Totals, May, 1929	524	2,496,905	1,909,014	3,150,598	1,921,410	2,296,546.57	2,536,839
Totals, May, 1928	508	2,274,612	1,771,894	2,883,204	1,767,553	2,118,969.83	2,497,588
Totals, May, 1927	471	2,248,892	1,758,021	2,876,402	1,766,716	2,066,070.73	2,379,713

* Includes naval vessel of 29,784 displacement tons.

* Includes naval vessel of 11,750 displacement tons.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending June 8, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Caldas	National Navigation Co	June 2	June 2		34
Bokuyo Maru	Nippon Yusen Kaisha	June 6	June 6		25
Rakuyo Maru	Nippon Yusen Kaisha	June 6	June 6	112	
Toba Maru	Nippon Yusen Kaisha	June 7	June 8	77	
Santa Rita	Grace Line	June 7	June 7		6
Virginia	Panama-Pacific Line	June 7	June 7		186

Storage for Automobiles on Wheels on Pier 6, Cristobal.

Due to the receipt and transshipment at Cristobal of increasing numbers of automobiles on wheels it has become necessary to add to the storage space at the terminal. This was done by the erection of a mezzanine floor some 13 feet above the deck of the dock, with the necessary ramp within Pier 6 shed near the outer end. The floor is within the four central bays of the pier and is approximately 90 feet long by 75 feet in width. It affords storage for approximately 60 automobiles while at the same time the space below the mezzanine is used for the storage of general cargo. Cars are hauled up the ramp by means of tractor and necessary tackle.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending June 8, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Adolf von Baeyer.	Hamburg-American Line.		May 26.		724
Ancon.	Panama R. R. S. S. Line.		May 26.		878
Cauca.	National Navigation Co.		May 26.		136
Wanks.	Standard Fruit & S. S. Co.		May 26.		11
Calamares.	United Fruit Co.	May 26.	May 26.	8	302
Santa Cecilia.	Grace Line.	May 26.	May 26.	21	67
Essequibo.	Pacific Steam Nav. Co.	May 27.	May 27.	(¹)	37
Acajutla.	Pacific Steam Nav. Co.		May 27.		1,131½
Heredia.	United Fruit Co.		May 27.		222
Pastores.	United Fruit Co.	May 27.	May 29.	606	52
Colombo.	Italian Line.	May 27.	May 29.	162	856
Loreto.	Pacific Steam Nav. Co.	May 28.	May 29.	77	75
Atrato.	Colombian Transp. Co.	May 28.		21	
Breda.	Royal Neth. S. S. Co.	May 28.	May 29.	297	142
Seattle.	Hamburg-American Line.	May 28.	May 29.	8	305
Guatemala.	Panama Mail S. S. Co.	May 28.	May 29.	679	125
Buenos Aires.	Spanish Line.		May 29.		340
Orduna.	Pacific Steam Nav. Co.	May 29.	May 29.	40	148
Feltre.	Nav. Libera-Triestina.	May 29.	May 30.	220	(²)
Ecuador.	Panama Mail S. S. Co.	May 29.	May 30.	165	421
Sixtola.	United Fruit Co.	May 29.	May 30.	924	462
Suriname.	United Fruit Co.	May 30.	May 30.	407	(²)
Pellgra.	Italo-Cilena Line.	May 30.	June 1.	40	(²)
Pennsylvania.	French Line.	May 30.	May 30.	140	9
Simon Bolivar.	Royal Neth. S. S. Line.	May 30.	May 30.	100	24
Tactician.	T. & J. Harrison Line.	May 30.	May 31.	669	2
Nosa Prince.	N. O. & S. A. S. Co.	May 30.	May 31.	7	295
Coppename.	United Fruit Co.	May 31.	May 31.	3½	411
Guayaquil.	Panama R. R. S. S. Line.	May 31.	June 1.	886	35
San Mateo.	United Fruit Co.	May 31.	June 1.	1,163	127
City of Panama.	Panama Mail S. S. Co.	May 31.		1,385	
Perene.	Peruvian Line.	May 31.		138	
Amapala.	Standard Fruit & S. S. Co.	May 31.	June 1.	260	462
Planet.	Hamburg-American Line.	May 31.		96	
Cali.	North German Lloyd.	May 31.		628	
Caldas.	National Navigation Co.	May 21.		147	
Floreana.	Colombian Transp. Co.	May 31.		318	
Wanks.	Standard Fruit S. S. Co.	May 31.		143	
Ninian.	Leyland Line.		June 1.		701
Cartago.	United Fruit Co.	June 1.		994	
Simon Bolivar.	Royal Neth. S. S. Co.	June 1.		14	
Annie Johnson.	Johnson Line.	June 1.		313	
Linda S.	R. Feuillebois.	June 1.	June 1.	(¹)	24
Juan.	United Fruit Co.	June 1.	June 1.	(¹)	484½
Perene.	Peruvian Line.		June 2.		20
Planet.	Hamburg-American Line.		June 2.		230
Cali.	North German Lloyd.		June 2.		179
Caldas.	National Navigation Co.		June 2.		205
Wanks.	Standard Fruit & S. S. Co.		June 2.		¾
Simon Bolivar.	Royal Neth. S. S. Co.		June 2.		702
Annie Johnson.	Johnson Line.		June 2.		39
Durazzo.	Hamburg-American Line.		June 2.		145
Pastores.	United Fruit Co.	June 2.	June 2.	7½	401
Cartago.	United Fruit Co.		June 3.		337
Buenaventura.	Panama R. R. S. S. Line.	June 2.	June 3.	50	473
Arana.	Pacific Steam Nav. Co.	June 2.	June 3.	238	21

¹ No cargo discharged.

² No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Phygia	Hamburg-American Line	June 2	June 7	126	953
San Mateo	United Fruit Co.	June 3	June 3	(¹)	$\frac{1}{2}$
Ulua	United Fruit Co.	June 3	June 5	436	113
Santa Inez	Grace Line	June 4	June 4	50	(²)
Grünwald	Hamburg-American Line	June 4	June 5	131	14
Camden	United Fruit Co.	June 4	June 6	4,908	(²)
Suriname	United Fruit Co.	June 4	June 6	$\frac{1}{2}$	163
Pacific Shipper	Furness, Withy & Co.	June 5	June 6	(¹)	292
Oroya	Pacific Steam Nav. Co.	June 5	June 6	201	1 $\frac{1}{2}$
Manaquei	United Fruit Co.	June 5	June 6	949	336
Zacapa	United Fruit Co.	June 5	June 6	569	619
Cristobal	Panama R. R. S. S. Line	June 5		3,917	
Cerigo	Hamburg-American Line	June 5		382	
William M.	R. Feuillebois	June 6	June 6	(¹)	29 $\frac{1}{2}$
St. Theresa	United Fruit Co.		June 7		467
Texas	Texas Oil Co.	June 6	June 7	7,471	(²)
Saramacca	United Fruit Co.	June 6	June 7	483	(¹)
Arizona	French Line	June 6	June 7	109	5
Galicia	Hamburg-American Line	June 6	June 7	2	1,144
Finn	Colombian Maritime Co.	June 6	June 7	2	(²)
Margarethe Cords	Colombian Maritime Co.	June 6	June 7	352	(²)
Baralt	Royal Neth. S. S. Co.	June 6	June 8	350	142
Suriname	United Fruit Co.	June 7	June 8	166 $\frac{1}{2}$	562
Esparta	United Fruit Co.	June 7	June 8	850	157
Dinteldijk	Holland-American Line	June 7	June 8	22	344
Atlantida	Standard Fruit & S. S. Co.	June 7	June 8	359	539
Almagro	Pacific Steam Nav. Co.	June 7	June 8	7	161
Salvador	Pacific Steam Nav. Co.	June 7		952	
Wanks	Standard Fruit & S. S. Co.	June 7		160	
Parissima	United Fruit Co.	June 8		1,302	
Hessen	Hamburg-American Line	June 8	June 8	(¹)	158
Maravi	United Fruit Co.	June 8		547	
Toba Maru	Nippon Yusen Kaisha	June 8	June 8	176	(²)
Cavina	Elders & Fyffes, Ltd.	June 8	June 8	32	(²)
Port Darwin	Com'lth & Dom. Line	June 8		307	

¹ No cargo discharged.² No cargo laded.³ Three cases.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective May 28, 1929:

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.22
Brass, sheet, average	Lb.	.35
Bronze, Tobin, average	Lb.	.21
Gasoline, motor grade	Gal.	.14 $\frac{1}{2}$
Metal, yellow	Lb.	.24
Oakum, Navy, spun	Lb.	.15
Oakum, Navy, unspun	Lb.	.17
Oil, Diesel, at Cristobal only, in bulk, no surcharge	Bbl. of 42 gals.	1.80
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.28
Oil, burning, Celza	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135	Gal.	.43
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250	Gal.	.58
Oil, engine, gas, extra heavy, in drums, Gulftriton No. 2250	Gal.	.50
Oil, kerosene, in drums	Gal.	.11
Oil, marine engine	Gal.	.54
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.13
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.13
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.15
Waste, cotton, white	Lb.	.16

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal- Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2.....	\$8.00	\$11.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
3. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
4. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds.....	11.00	14.00

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Volume XXII. Balboa Heights, C. Z., June 19, 1929. No. 46.

Canal Traffic During the First Fifteen Days of June.

During the first 15 days of June, 249 commercial vessels and 6 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,055,913.22, and on the launches \$26.85, or a total tolls collection of \$1,055,940.07.

The daily average of transits of commercial vessels was 16.6 and the average tolls collection \$70,394.21, as compared with an average of 16.73 transits and \$72,396.46 in tolls for the first 15 days of the previous month. The average amount of tolls paid by each of the commercial transits was \$4,240.62, as compared with \$4,326.48 for the first 15 days of May. With respect to the number of transits, commercial traffic for the first 15 days of June was the lightest since the first half period of September, 1928, when 232 ships passed through, while the tolls collected were the smallest since October, 1928, when \$1,031,136.02 was collected for the first 15 days of that month.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 11½ months of the current fiscal year, with the daily averages of transits and tolls:

	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July	509	\$2,109,083.19	16.41	\$68,034.94
August	526	2,199,069.31	16.97	70,937.72
September	487	2,111,230.56	16.23	70,374.35
October	557	2,274,945.30	17.97	73,385.33
November	527	2,225,937.48	17.57	74,197.91
December	579	2,443,029.39	18.67	78,807.39
January	603	2,502,815.12	19.45	80,735.97
February	522	2,211,961.20	18.64	78,998.62
March	536	2,343,865.55	17.29	75,608.57
April	540	2,281,087.27	18.00	76,036.24
May	524	2,296,546.57	16.90	74,082.15
June (first 15 days)	249	1,055,913.22	16.60	70,394.21
Totals, first 11½ months of fiscal year, 1929	6,159	26,055,484.16	17.60	74,444.24
Totals, first 11½ months of fiscal year, 1928	6,226	25,974,572.91	17.73	74,001.63
Totals, first 11½ months of fiscal year, 1927	5,259	23,296,679.19	15.02	66,561.94

As compared with the first 11½ months of the fiscal year 1928, the corresponding period this year has had 67 fewer transits, while the tolls collected during the first 11½ months of this year are higher by almost \$81,000 than the revenue collected from commercial traffic in the first 11½ months of the fiscal year 1928.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost, plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.			Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.		Net.
Ferncliffe ¹⁶ .	10	00.20	10	7.31	10	16.10	10	16.10	Norwegian.	Fern Line	382.7	53.4	25.1	Bangkok, Siam.	Habana, Cuba	Rice	7,450	6,112	4,284
Pacific Fir.	10	3.20	10	8.33	10	18.25	10	18.25	American.	Dimon S. S. Corp.	410.5	54.0	24.5	Seattle, Wash.	New York, N. Y.	Lumber	8,085	6,624	4,883
Martha ¹⁶ .	2	14.20	10	9.15	10	16.47			Norwegian.	Chr. Haanevig, Jr.	183.2	30.0	11.0	Buenaventura, Col.	Cristobal, C. Z.	Ballast		780	504
Commercial	10	5.30	10	10.14	10	19.10	10	21.34	American.	Moore & McCormack.	380.3	52.3	24.1	Valparaiso, Chile.	Charleston, S. C.	Nitrates	7,400	5,657	4,253
Traveler.																			
Henry D.	10	8.00	10	11.06	10	20.40	10	20.40	American.	Union Sulphur Co.	356.0	51.6	23.6	Astoria, Wash.	Philadelphia, Pa.	Lumber	4,980	5,367	2,925
Whiton	10	20.25	10	21.59	11	9.20	11	12.45	British.	Thompson S. S. Co.	398.5	55.2	24.0	Portland, Oreg.	Cobb, Ireland	Wheat	7,950	6,189	4,509
Rio Dorado																			
Gen. G. W.																			
Getty ¹⁷ .			10	7.20	10				American.	U. S. Army	98.0	22.0		Balboa, C. Z.	Cristobal, C. Z.				2
Bucaneer ¹⁸ .			10	7.48	10				American.	Lieut. H. C. Downey.				Balboa, C. Z.	Cristobal, C. Z.				2
Dorothy	11	1.00	11	3.01	11	10.15	11	10.15	American	Lukenbach Line	448.9	60.2	28.6	Portland, Oreg.	Boston, Mass.	Lumber, general.	9,500	9,294	6,861
Lukenbach.	11	5.20	11	6.06	11	13.55	11	18.23	British	J. H. Welsford & Co.	400.0	52.0	24.0	Noumea, New Cal.	New York, N. Y.	Chromite ore	6,500	6,067	4,449
Inkun.	11	5.30	11	6.40	11	14.00	11	14.00	Dutch.	Phs. Van Ommeren	370.0	52.0	24.0	Los Angeles, Calif.	Le Havre, France.	Gasoline	5,984	4,878	3,132
Shledrecht ¹⁶ .	10	11.30	11	8.10	11	15.20	11	16.10	American.	Panama-Pacific Line	574.4	80.3	28.0	San Francisco, Cal.	New York, N. Y.	General	5,070	24,504	17,565
California.	11	6.00	11	9.16	11	17.55	11	19.30	British.	Pacific Steam Nav. Co.	401.6	59.3	26.0	Talcahuano, Chile	Liverpool, England	General	9,118	8,817	6,063
Kansas	11	8.30	11	10.18	11	19.10	11	19.10	American.	Amer-Hawaiian Line.	404.6	59.3	24.0	Portland, Oreg.	Boston, Mass.	General	5,768	6,779	4,921
Magellan	11	8.00	11	10.30	11	19.50	11	24.00	American.	Charles Nelson & Co.	324.0	46.2	24.0	Pt. Townsend, Wash.	New York, N. Y.	Lumber, copper.	4,300	3,984	2,628
Marsodak	11	11.00	11	11.58	11	21.23	11	21.23	American.	Munson S. S. Line	370.0	53.2	25.4	Portland, Oreg.	Baltimore, Md.	Lumber, general.	6,000	5,688	4,297
Mundella	11	15.00	11	16.06	11	22.40	11	22.40	American.	Swayne & Hoyt	324.0	46.2	21.0	Portland, Oreg.	New Orleans, La.	General	2,550	3,984	2,617
Point Fernin	11	22.10	11	23.40	12	8.40	12	8.40	American.	Quaker Line	410.0	54.4	24.3	Aberdeen, Wash.	New York, N. Y.	General	6,946	6,484	4,675
West Montop	11	23.50	12	00.55	12	9.25	12	15.48	Dutch.	Holland-American Line.	487.0	61.0	25.6	Vancouver, B. C.	Rotterdam, Holland	General	9,351	9,165	7,056
Moerdijk																			
Franklin K.	11	16.45	12	6.09	12	13.10	12	13.10	American.	Pan-Am. Pet. & Tr. Co.	435.0	56.2	26.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline	9,700	7,405	5,131
Lane ¹ .	12	6.37	12	14.40					American.	U. S. Navy	292.0	44.0	17.5	Balboa, C. Z.	Cristobal, C. Z.	Lumber	5,400	5,434	4,011
Cleveland	11	15.30	12	7.25	12	15.05	12	15.05	British.	Canadian Transp. Co.	387.6	52.0	23.6	Vancouver, B. C.	Boston, Mass.	Gasoline	13,605	9,610	6,396
Golden Sea	12	8.40	12	9.33	12	17.55	12	17.55	American.	Sun Oil Co.	480.6	66.0	28.6	Pontarenes, C. R.	Marcus Hook, Pa.	Ballast	985	985	606
Sunail ¹⁶ .	10	1.05	12	9.42	12	18.50	12	18.50	Norwegian.	Panama Mail S. S. Co.	195.1	32.9	11.0	Liquique, Chile.	Cristobal, C. Z.	Beans, nitrates	3,670	3,252	2,010
Stella	12	9.20	12	10.11	12	19.05	12	21.20	American.	N. O. & S. A. S. S. Co.	299.4	45.0	22.3	Manila, P. I.	East coast, U. S. A.	Sugar	7,500	5,572	4,134
Nosa Chief	12	10.00	12	10.50	12	19.05	12	19.05	Norwegian.	Isbrandtsen Moller Co.	378.8	50.2	22.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline	9,300	7,481	4,775
Fordford ¹⁶ .	12	12.15	12	12.57	12	20.23	12	20.23	American.	Standard Oil Moller Co.	425.0	57.2	28.0	Los Angeles, Calif.	Providence, R. I.	Gasoline	11,041	9,841	6,985
S. C. T. Dodd	12	12.20	12	13.54	12	22.10	12	22.10	American.	Standard Oil Co. of Cal.	408.3	62.7	28.0	Los Angeles, Calif.	Philadelphia, Pa.	Lumber	7,500	7,047	5,132
Levant Arrow	12	15.45	12	21.28	13	8.50	13	8.50	American.	Isthmian S. S. Co.	394.1	55.1	26.6	San Francisco, Cal.	New York, N. Y.	General	1,880	3,714	4,023
A. L. Kent	12	16.00	13	4.43	13	11.15	13	11.15	American.	Panama Mail S. S. Co.	360.9	51.6	26.1	Port Allen, T. H.	New York, N. Y.	Sugar	8,929	7,611	5,450
El Salvador	12	16.00	13	4.43	13	11.15	13	11.15	American.	Isthmian S. S. Co.	424.2	56.2	26.1	Aberdeen, Wash.	Wilmington, Del.	General	7,000	6,755	4,886
Atlanta City	13	1.45	13	5.00	13	13.32	13	17.17	American.	Oriental Navigation Co.	410.5	54.2	24.6	Guayaquil, Ecuador	Cristobal, C. Z.	Coffee, general	284	238	163
Oran	13	11.30	13	12.19	13	19.40	13	19.40	American.	North German Lloyd	216.5	32.9	15.6	Buenaventura, Col.	Cristobal, C. Z.				
Manizales	13	13.10	13	14.28	13	21.05	16	13.20	German.										
Cauca ¹⁶ .	13	20.05	13	22.34	14	9.20			Colombian.	Cia. Nacional de Nav.	107.0	23.0	11.0	Buenaventura, Col.	Cristobal, C. Z.				

¹ Tanker.

¹⁶ Motor ship.

¹⁷ Tug.

¹⁸ Launch.

¹⁹ Lumber and paper pulp.

²⁰ Pear pulp and lumber.

¹⁶ Paper pulp and lumber.¹⁷ Tug.¹⁸ Launch.¹⁹ Motor ship.²⁰ Tanker.

La Perla	13	21	10	13	22	19	14	9	12	15	14	10	American	United Fruit Co.	325	2	48	1	18	6	San Francisco, Cal.	Port Limon, C. R.	General	610	4	033	2,261
Buenos Aires	13	22	15	14	6	52	14	14	15	14	15	40	Swedish	Johnson Line	440	0	56	0	27	0	Honolulu, T. H.	Stockholm, Sweden	General	7,115	7	591	5,061
Jamaica	14	00	20	14	7	07	14	15	15	15	15	45	British	Pacific Steam Nav. Co.	220	0	34	0	14	0	Champerico, Guat	Cristobal, C. Z.	(²¹)	892	1	187	622
Swan	14	00	20	14	7	07	14	15	15	15	15	45	American	U. S. Navy	188	0	36	0	14	0	Balboa, C. Z.	Cristobal, C. Z.	(²²)	7,971	14	827	10,030
Oropesa	14	5	10	14	7	50	14	17	15	15	15	15	15	Pacific Steam Nav. Co.	530	0	66	0	28	6	Talcahuano, Chile	Liverpool, England	General	3,200	2	033	1,835
Winterhude	14	11	20	14	4	53	15	16	57	16	7	45	Finish	Gustaf Erikson	285	5	40	1	22	3	Salaverry, Peru	London, England	General	5,200	6	754	4,800
Oregonian	14	13	45	14	15	02	14	21	40	14	21	40	American	Amer-Hawaiian Line	404	6	53	9	26	0	Seattle, Wash	Boston, Mass	General	6,764	6	567	4,917
Texas	11	7	00	15	6	19	15	14	45	15	14	45	American	U. S. Navy	565	0	92	0			Los Angeles, Calif	Baltimore, Md	Lumber, ore	8,202	7	918	6,101
Atlantic	14	18	40	15	6	58	15	17	47	15	17	47	American	Argonaut S. S. Line	410	5	54	3	25	0	Tacoma, Wash	Hamburg, Germany	(²³)	5,947	5	654	4,123
Barn	14	14	25	15	7	21	15	16	50	16	1	30	Dutch	Royal Neth. S. S. Co.	400	6	58	3	25	9	Corral, Chile	Baltimore, Md	General, lumber	5,074	6	642	4,860
Sutherland	15	1	25	15	7	53	15	18	57	15	18	57	American	Charles Nelson & Co.	380	0	52	6	24	0	South Bend, Wash	Stockholm, Sweden	(²⁴)	11,375	9	302	6,127
Axel Johnson	15	2	00	15	8	04	15	18	49	16	21	16	Swedish	Johnson Line	409	0	52	6	24	0	Vancouver, B. C.	Hamburg, Germany	Gasoline	6,197	5	798	4,118
Penelope	15	4	50	15	8	48	15	19	45	15	19	45	Danzig	Standard Oil Co.	489	0	63	0	26	9	Talara, Peru	Tocopilla, Chile	Lumber	7,500	5	748	3,954
Theofano	15	8	15	15	9	05	15	20	35	15	23	15	Greek	S. Livanos	405	5	54	2	24	0	Tocopilla, Chile	Azores, ²⁵	Nitrates	6,197	5	798	4,118
Woodfield	15	9	30	15	10	07	15	21	40	15	21	40	British	Woods, Taylor & Brown	400	0	53	0	24	0	Vancouver, B. C.	New York, N. Y.	Lumber	5,059	3	984	2,628
Sungetico	15	10	50	15	11	25	15	21	40	15	21	40	British	Transmarine Lines	324	0	46	2	23	0	Aberdeen, Wash	Port Newark, N. J.	Lumber	7,500	5	748	3,954
Queen Maud	15	11	10	15	12	19	15	22	03	15	22	03	British	Thomas Dunlop & Sons	400	2	52	3	25	0	Tocopilla, Chile	Savannah, Ga	Nitrates				

²¹ Coffee, hides and general. ²² Sealing ship. ²³ British. ²⁴ Coffee, hides and general. ²⁵ Copper, beans, and cotton. ²⁶ Nitrates, copper, and general. ²⁷ Wheat, fruit, and general. ²⁸ For orders.

²¹ Tanker. ²² Minesweeper. ²³ Sailing ship. ²⁴ Battleship. ²⁵ Coffee, hides, and general. ²⁶ Copper, beans, and cotton. ²⁷ Wheat, fruit, and general. ²⁸ For orders. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.														* DEPARTURES.									
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—																
June 9	Ulua	United Fruit Co	Port Limon, C. R.	June 9	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.																
June 10	Merican	Leyland S. S. Line	Liverpool via waypoints.	June 9	Ulua	United Fruit Co	New York via Habana.																
June 10	Toloca	United Fruit Co	New York via Habana.	June 9	Cristobal	Panama R. R. S. S. Line	New York via Haiti.																
June 10	No. 9604 ²⁹	Pan-American Airways	Managua via waypoints.	June 10	Maravi	United Fruit Co	New Orleans via Kingston.																
June 10	No. 8020 ²⁹	Pan-American Airways	Guayaquil via waypoints.	June 10	Parisma	United Fruit Co	New Orleans via waypoints.																
June 10	Mary V ³⁰	H. C. Robinson	San Andres.	June 11	No. 9685 ²⁹	Pan-American Airways	Managua via David.																
June 11	Cyrensen	Royal Netherlands S. S. Co.	Amsterdam via waypoints.	June 11	Mericio	Leyland S. S. Line	Port Limon and Costa Rica.																
June 11	Pellerin de la Touche	French Line	Havre via waypoints.	June 11	Cyrensen	Royal Netherlands S. S. Co	Port Limon, Costa Rica.																
June 11	No. 9688 ²⁹	Pan-American Airways	Managua via waypoints.	June 11	Anelucuna ³¹	United Fruit Co	Colon, R. P.																
June 11	Anelucuna ³¹	Hamburg-American Line	Colon, R. P.	June 12	Toloca	United Fruit Co	Port Limon, Costa Rica.																
June 12	Orinoco	Hamburg-American Line	Hamburg via waypoints.	June 12	Orinoco	United Fruit Co	Colon, R. P.																
June 12	Swiftarrow	C. D. Mallory & Co.	Curacao, D. W. I.	June 12	Inapaquina ³¹	United Fruit Co	Colon, R. P.																
June 12	Santa Marta	United Fruit Co	New York via Kingston.	June 13	Cundinamarca ²⁹	Scadia Airplane Co	Barraquilla, Colombia.																
June 12	Cundinamarca ²⁹	United Fruit Co	Barraquilla, Colombia.	June 13	No. 9604 ²⁹	Pan-American Airways	Managua via David.																
June 13	Inapaquina ³¹	United Fruit Co	New Orleans, La.	June 13	Santa Marta	United Fruit Co	New York via waypoints.																
June 14	Anapala	Standard Fruit & S. S. Co	New Orleans via Habana.	June 13	Swiftarrow	C. D. Mallory & Co	Curacao, D. W. I.																
June 14	Cyrensen	Royal Netherlands S. S. Co	Port Limon, Costa Rica.	June 13	Mary V ³⁰	French Line	Havre via waypoints.																
June 14	Saramuca	United Fruit Co	Cartagena, Colombia.	June 13	Copequane	United Fruit Co	Puerto Colombia.																
June 14	Mayari	Levyland S. S. Line	Boston via waypoints.	June 14	No. 8120 ²¹	Pan-American Airways	New Orleans, La.																
June 15	Atlantian	Port Limon, Costa Rica.	Port Limon, Costa Rica.	June 14	Saramuca	United Fruit Co	Colon, R. P.																
June 15	Orinoco	Standard Fruit & S. S. Co.	Colon, R. P.	June 14	Annetta I. ³¹	United Fruit Co	Colon, R. P.																
June 15	Wanks	United Fruit Co	Colon, R. P.	June 14	Annetta I. ³¹	United Fruit Co	Colon, R. P.																
June 14	Annetta I. ³¹	A. Tagarapulos	Colon, R. P.	June 15	Inapaquina ³¹	United Fruit Co	Colon, R. P.																

²⁹ Air mail carrier. ³⁰ Motor schooner. ³¹ Motor boat.

* Other than ships passing through the Canal.

(Continued on page 658, column 2.)



PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 98 per cent of all cargo moving from the Pacific to the Atlantic during the month of May, 1929. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month a year ago are listed below, showing the differences:

Commodity.	May, 1929.	May, 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley	11,599	13,759	-2,160
Borax	7,585	10,491	-2,906
Canned goods (fish, fruit, vegetables, etc.)	44,911	44,370	+541
Coffee	12,072	15,238	-3,166
Cold storage (food products)	27,538	24,410	+3,128
Copra	9,138	11,045	-1,907
Flour	6,428	12,967	-6,539
Fruit, dried	11,057	12,297	-1,240
Fruit, fresh	22,641	6,624	+16,017
Lumber	334,538	394,467	-59,929
Metals, various	52,656	60,233	-7,577
Nitrates	140,425	157,727	-17,302
Oats	8,250	15,774	-7,524
Oils, mineral	432,368	356,243	+76,125
Ores (principally iron)	127,905	157,332	-29,427
Rice	13,108	1,278	+11,830
Sugar	75,298	32,921	+42,377
Wheat	129,597	310,708	-181,111
Wool	20,001	18,632	+1,369

* Does not include fresh fruits.

The above 19 commodity groups comprise 92.6 per cent of the cargo from the Pacific to the Atlantic during May, 1929. As will be noted the greater part of these items showed decreases under May of last year, wheat alone falling off 181,111 tons. Mineral oils and sugar registered the greatest increases.

(Continued on page 656.)

Regulating Level of Gatun Lake.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 18, 1929.

To all concerned.—1. The following schedule for maintaining Gatun Lake during the 1929 rainy season will be adhered to as closely as conditions permit.

2. The Lake will be allowed to fill to elevation 85.50 before any water is wasted over the spillway. However, spilling for sanitary purposes or for exhibition will be permitted upon approval of the Chief of Surveys. The Lake will be held between elevations 85.50 and 86.00 until October 1; filled to elevation 86.50 in October; and to elevation 87.00 after November 1, to be varied slightly according to water supply conditions. After spillage is begun, a variation of 0.50' from above elevations will be allowed to lessen the number of gate operations.

J. L. SCHLEY,
Acting Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 14, 1929.

No. 549.

The following was received by the Hydrographic Office through the Marine Superintendent, The Panama Canal:

U. S. S. *Galveston*, June 14, construction work beacons entering range, Corinto Harbor, completed, lights burning. Front range, fixed white; rear range, occulting white; period 10 seconds, flash 2 seconds, eclipse 8 seconds.

(No signature.)

J. L. SCHLEY,
Acting Governor

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending June 15, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Witell.	North German Lloyd.	June 9.	June 9.	256	43
Tongking.	Danish East Asiatic Co.	June 9.	June 9.	158	(*)
Ulua.	United Fruit Co.	June 9.	June 9.	17	85
Cristobal.	Panama R. R. S. S. Line.	June 9.	June 9.		1,161
Cerigo.	Hamburg-American Line.	June 9.	June 9.		208
Wauks.	Standard Fruit & S. S. Co.	June 9.	June 9.		7
Ludwigshafen.	North German Lloyd.	June 9.	June 10.	(*)	70
Wiegand.	North German Lloyd.	June 9.	June 10.	77	505
Parismina.	United Fruit Co.	June 9.	June 10.		43
Maravi.	United Fruit Co.	June 9.	June 10.		198
Venezuela.	Panama Mail S. S. Co.	June 9.	June 11.	400	104
Aconcagua.	Chilean Line.	June 10.	June 10.	8	(*)
M. F. Elliott.	Standard Oil Co.	June 10.	June 10.	783	(*)
Mercian.	Leyland S. S. Line.	June 10.	June 11.	658	28
Tolosa.	United Fruit Co.	June 10.	June 12.	638	50½
Crijnsen.	Royal Netherlands S. S. Co.	June 11.	June 11.	32½	(*)
Grootendijk.	Holland-American Line.	June 11.	June 12.	369	43
Pellerin de Latouche.	French Line.	June 11.	June 13.	369	583
Moerdijk.	Holland-American Line.	June 12.	June 12.	(*)	275
Orinoco.	Hamburg-American Line.	June 12.	June 12.	221	(*)
Swiftarrow.	C. D. Mallory & Co.	June 12.	June 13.	11,650	(*)
Santa Marta.	United Fruit Co.	June 12.	June 13.	759	613
City of Panama.	Panama Mail S. S. Co.	June 12.	June 13.		2,572
El Salvador.	Panama Mail S. S. Co.	June 13.	June 14.	603	251
Coppename.	United Fruit Co.	June 13.	June 14.	752	328
Bennekom.	Royal Netherlands S. S. Co.	June 13.	June 15.	189	268
Manizales.	North German Lloyd.	June 13.	June 13.	737	
Saramacca.	United Fruit Co.	June 14.	June 14.	2	363
Oropesa.	Pacific Steam Navigation Co.	June 14.	June 15.	31	17
Jamaica.	Pacific Steam Navigation Co.	June 14.	June 14.	892½	
Lochkatrine.	Pacific Steam Navigation Co.	June 14.	June 15.	7	381½
Crijnsen.	Royal Netherlands S. S. Co.	June 14.	June 15.	7	209
Amapala.	Standard Fruit & S. S. Co.	June 14.	June 15.	307	510
Cauca.	National Navigation Co.	June 14.	June 14.	284	
La Perla.	United Fruit Co.	June 14.	June 15.	1,204	3
Heredia.	United Fruit Co.	June 15.	June 15.	850	
Camden.	United Fruit Co.	June 15.	June 15.	5,340	
Baarn.	Royal Netherlands S. S. Co.	June 15.	June 15.	160	(*)
Wauks.	Standard Fruit & S. S. Co.	June 15.	June 15.	134	
Mayari.	United Fruit Co.	June 15.	June 15.	273	1,061
Linda S.	R. Feuillebois.	June 15.	June 15.	(*)	40
Portland.	Hamburg-American Line.	June 15.	June 15.	12	
Santa Maria.	Grace Line.	June 13.	June 13.	(*)	39

* No cargo discharged.

* No cargo laded.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective June 19, 1929:

Commodities.	Unit.	Price.
Brass, bar, average.	Lb.	\$0.22
Brass, sheet, average.	Lb.	.35
Bronze, Tobin, average.	Lb.	.21
Gasoline, motor grade.	Gal.	.14½
Metal, yellow.	Lb.	.24
Oakum, Navy, spun.	Lb.	.15
Oakum, Navy, unspun.	Lb.	.17
Oil, Diesel, at Cristobal only, in bulk, no surcharge.	Bbl. of 42 gals.	1.80
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.	Gal.	.28
Oil, burning, Celza.	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.	Gal.	.43
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.	Gal.	.58
Oil, engine, gas, extra heavy, in drums, Gulftriton No. 2250.	Gal.	.50
Oil, kerosene, in drums.	Gal.	.11
Oil, marine engine.	Gal.	.54
Paint, lead, white, dry.	Lb.	.14
Paint, lead, white, in oil.	Lb.	.13
Paint, zinc oxide, dry.	Lb.	.10
Paint, zinc oxide, in oil.	Lb.	.13
Grease, gear, chain and wire rope, lubricating.	Lb.	.05
Grease, yellow, cup, No. 3.	Lb.	.08
Grease, yellow, eup, No. 5.	Lb.	.09
Soda, ash.	Lb.	.03
Waste, cotton, colored.	Lb.	.15
Waste, cotton, white.	Lb.	.16

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, May, 1929.—Continued from page 654.
(Figures represent tons of 2,240 pounds.)

From—	SOUTH AMERICA.					NORTH AMERICA.							ASIA.					AUSTRALASIA.			Grand totals.	Per cent of total cargo.		
	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	West coast of United States.	West coast of Canada.	West coast of Central America.	West coast of North America. ¹	Balboa, C. Z. ²	Hawaii.	Total, North America.	Japan.	China.	Philippines.	Far East. ¹	Total, Asia.	Australia.	New Zealand.			Australasia. ¹	Total, Australasia.
NORTH AMERICA:																								
UNITED STATES—																								
North Atlantic ports.....	17,853	2,452	720	6,614	886	28,525	235,398	1,263	3,038		1,304	8,427	249,430	53,479	18,907	13,481	3,323	99,190	27,678	21,993		49,671	426,816	46.4
South Atlantic ports.....							4,209						4,209	1,590	85	150	360	2,185					6,394	0.7
Gulf ports.....	4,214	156	175	929	418	5,892	54,648	3,705	15		10,750	61	69,179	40,120	20,673	4,761	250	65,804	17,781	9,214		26,995	167,870	18.2
Totals, U. S.....	22,067	2,608	895	7,543	1,304	34,417	294,255	4,968	3,053		12,054	8,488	322,818	85,189	39,065	18,392	13,933	167,179	45,459	31,207		76,666	631,080	65.3
Cristobal, C. Z. ²	981	1,680	1,102	1,024	1,707	6,494	6,514	93	10,221				16,828					2,120	3,063	4,978		8,041	14,751	1.6
East coast of Canada.....							300	4,290					4,590	750	1,370			17,832					32,827	3.6
West Indies.....	364			240		604	3,179	11,212					14,391	3,100	14,732								9,732	1.1
East coast of Mexico and Central America.....	5,840					5,840	421		3,471				3,892											
Totals, North America.....	29,252	4,288	1,997	8,807	3,011	47,355	304,669	20,533	16,745		12,054	8,488	362,519	99,039	55,767	18,392	13,933	187,131	48,522	36,185		84,707	681,712	74.1
EUROPE:																								
British Isles.....	19,378	85	75	3,220	7,389	30,147	1,514	3,625	5,500				10,639									48,381	89,167	9.7
Belgium.....	9,117	1,703	637	1,024	2,774	15,228	22,482	2,242	633		4		25,361									40,589	4.4	
France.....	1,262		60	286	41	1,649	2,836	84	120				3,040									4,689	0.5	
Germany.....	2,455	365	497	1,630	174	5,121	6,707	3,019	1,907		564		12,197									17,318	1.9	
Holland.....	1,065	5	246	1,177	685	3,178	3,389	123	316				3,512									6,690	0.7	
Italy.....	4,207		226	1,627		6,060	16		396		1,770		2,212									2,212	0.2	
Norway and Sweden.....	59		25			84	112		51				173									257	0.1	
Spain and Portugal.....	15,815	353	573	1,892	15,614	34,247	11,267	2,761	167		557		14,752						6,992			6,992	15,234	1.7
Europe ¹	53,358	2,511	2,314	10,881	26,650	95,714	49,884	11,999	9,290		2,895		74,068									48,995	5.3	
Totals, Europe.....	6	257				263	11,616	140	790				12,546	642	42			684				13,493	1.5	
East coast of South America.....	82,616	7,656	4,311	19,688	29,661	143,332	366,109	32,707	26,825		14,949	8,488	449,133	99,681	55,809	18,392	13,933	187,815	55,514	84,566		140,089	920,360	100.0
Grand totals.....																								
Per cent of total cargo:																								
May, 1929.....	9.0	0.8	0.5	2.1	3.2	15.6	39.8	3.6	2.9		1.6	0.9	48.8	10.8	6.1	2.0	1.5	20.4	6.0	9.2		15.2	100.0	.....
May, 1928.....	6.5	1.7	0.6	2.8	2.4	14.4	44.6	2.1	2.6		0.1	2.6	52.0	10.0	7.5	1.6	1.5	20.6	1.0	6.9		13.0	100.0	.....
M, 1927.....	3.6	1.3	0.1	0.9	8.1	14.0	44.9	4.6	1.7	0.3	0.1	0.6	52.2	7.6	2.3	1.7	5.1	16.7	7.6	6.4		17.1	100.0	.....

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and trans-shipment cargo.

¹ Includes both local and transit cargo.

² General cargo not routed so as to allow segregation between definite ports.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, May, 1929.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.										East coast of South America.	Egypt.	Africa.	Grand totals.	Per cent of total cargo.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	West Indies.	East coast of Central America.	Cristobal, C. Z.*	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. †	Total, Europe.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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1 General cargo not routed so as to allow segregation between definite ports.

2 Includes both local and transit cargo.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., June 26, 1929. No. 47.

Tourists to Visit Canal in 1929-30 Season.

Reservations of facilities, such as special trains, water transportation through Gaillard Cut, and hotel accommodations, have been made for about 35 large parties of tourists scheduled to visit the Canal and Panama during the dry season of 1929-30. These are in addition to the cruises of the United Fruit Company, which will arrive twice weekly during the height of the season. On the basis of the size of the cruise vessels scheduled to bring parties there should be about 12,000 to 15,000 tourists on them, and the United Fruit Company is expected to bring between 1,000 and 2,000 more. In these figures there is no consideration of ordinary passenger arrivals on vessels engaged in regular services through the Canal or to its terminal ports.

Indications are that next season's tourist business will be the largest since the construction of the Canal. Canal visitors in 1912 numbered over 20,000 and those in 1913 over 25,000.

"Pennsylvania" to be Launched Next Month.

Recent reports indicate that the steamship *Pennsylvania* of the Panama-Pacific Line, which was laid down late last August, will be ready for launching in July, and ready for service in October or November of this year.

The *Pennsylvania* is the third of the trio of turbo-electricliners built by the International Mercantile Marine for operation between New York and San Diego, Los Angeles, and San Francisco, via the Panama Canal. The *Virginia* and the *California* are the sister ships of the *Pennsylvania*.

The fact that the *California* and the *Virginia*, now in operation, are the first passenger ships to employ electric propulsion has made their operation of unusual interest in the marine field.

Airplane Service Between the Canal Zone and David, R. P.

The Pan American Airways, Inc., began an aerial passenger and express service between Cristobal (France Field) and David, R. P., on June 3, 1929. The first plane left David on June 3 with four passengers for Panama City and one for Cristobal; the first flight in the other direction was made on June 4 with one passenger from Cristobal and one from Panama City. Since that time the service has been maintained with three flights in each direction weekly. Planes leave Cristobal on Tuesdays, Thursdays and Saturdays at 7.00 a. m., and Panama City at 7.30 a. m. From David, planes leave on Mondays, Thursdays and Saturdays at 12.30 p. m. The time between the two terminals is approximately two and one-half hours. Stops are made at Panama City for the convenience of passengers. The fare between Cristobal and David is \$50.00 one way and \$80.00 for the round trip. Thirty pounds of baggage are carried free for each passenger and excess baggage is carried for 25 cents per pound.

CANAL WORK IN MAY, 1929.

The following is the report of the Acting Governor to the Secretary of War, of Canal work in the month of May, 1929.

BALBOA HEIGHTS, C. Z., June 17, 1929.

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

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of May, 1929.

NUMBER OF TRANSITS.

During the month 524 commercial vessels passed through the Canal. In addition to these, 18 nonseagoing launches measuring under 20 tons, and 40 vessels belonging to the United States Government transited the Canal. There was also one transit of a Panaman Government vessel and two transits of a vessel solely for repairs, on which no tolls were collected, making a total of 585 transits for the month, or a daily average of 18.87.

Tolls on the 524 commercial vessels amounted to \$2,296,546.57, and on the launches to \$179.58, a total of \$2,296,726.15, or a daily average on all traffic of \$74,087.94.

Total commercial traffic for the past month was lower by 16 transits than the traffic for April, 1929, although the tolls collected during the past month were slightly higher than the revenue collected from commercial traffic in April, 1929. As compared with the corresponding month last year, commercial traffic for May, 1929, was greater by 16 transits and over \$175,000.00 in tolls.

A review of the commercial traffic for the first 11 months of the current fiscal year reveals that while transits are 65 fewer than for the corresponding period in the fiscal year 1928, the record year in Canal traffic, net tonnage of vessels, Panama Canal measurement, tons of cargo carried, and tolls collected are slightly higher than these items for the first 11 months of the fiscal year 1928.

The total number of craft of all kinds transiting the Canal during the month of May, 1929, as compared with the same month in 1928 and 1927, are shown in the following tabulation:

	May, 1929.	May, 1928.	May, 1927.
Commercial vessels	524	508	471
Launches (under 20 tons measurement)	18	12	20
Noncommercial vessels:			
United States Government	40	35	43
Panaman Government	1	1	2
Colombian Government		2	
Vessels transiting for repairs	2	8	2
Totals	585	566	538

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Totals.
Gatun	5	5	10
Pedro Miguel	30	34	64
Miraflores	27	24	51
Totals	62	63	125

COMMERCIAL TRAFFIC. ¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the fiscal year 1929, to the end of May, 1929, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1927-8	1928-9	1927-8.	1928-9.	1927-8.	1928-9.	1927-8.	1928-9.
July.....	509	509	2,406,955	2,318,395	2,450,468	2,291,955	\$2,215,515.99	\$2,109,083.19
August.....	543	526	2,513,614	2,437,246	2,429,947	2,425,336	2,274,040.55	2,199,069.31
September....	540	487	2,532,942	2,295,053	2,397,753	2,313,011	2,294,432.34	2,111,230.56
October.....	567	557	2,585,752	2,515,380	2,717,646	2,582,477	2,380,115.97	2,274,945.30
November....	559	527	2,591,717	2,468,297	2,488,882	2,501,630	2,369,267.99	2,225,937.48
December....	589	579	2,616,728	2,698,140	2,573,828	2,714,987	2,398,459.75	2,443,029.39
January.....	540	603	2,422,770	2,771,280	2,372,061	2,858,835	2,212,752.50	2,502,815.12
February....	547	522	2,460,111	2,428,530	2,660,425	2,550,498	2,253,755.37	2,211,961.20
March.....	542	536	2,441,077	2,567,961	2,428,662	2,743,768	2,223,370.57	2,343,865.55
April.....	531	540	2,384,491	2,488,176	2,473,884	2,719,668	2,187,607.82	2,281,087.27
May.....	508	524	2,274,612	2,496,905	2,497,588	2,536,839	2,118,969.83	2,296,546.57
Totals....	5,975	5,910	27,230,769	27,485,363	27,491,144	28,239,004	24,928,288.68	24,999,570.94

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panaman, and Colombian Governments, including merchant vessels chartered by these Governments, and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for May, 1929, as compared with the corresponding month in 1928 and 1927, and the monthly averages for the calendar year 1928:

	May, 1929.	May, 1928.	May, 1927.	Average per month for calendar year 1928.
Number of vessels.....	524	508	471	528
Panama Canal net tonnage.....	2,496,905	2,274,612	2,248,892	2,411,953
United States net tonnage.....	1,909,014	1,771,894	1,758,021	1,851,471
Registered gross tonnage.....	3,150,598	2,883,204	2,876,402	3,029,975
Registered net tonnage.....	1,921,410	1,767,553	1,766,716	1,855,554
Tolls.....	\$2,296,546.57	\$2,118,969.83	\$2,066,070.73	\$2,197,996.86
Tons of cargo carried.....	2,536,839	2,497,588	2,379,713	2,450,132

The average daily number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial transits only:

	Average per day.			Average per day for calendar year 1928.
	May, 1929.	May, 1928.	May, 1927.	
Number of transits.....	16.90	16.38	15.19	17.31
Panama Canal net tonnage.....	80,545	73,374	72,545	79,080
Tolls.....	\$74,082.15	\$68,353.86	\$66,629.90	\$72,065.47
Tons of cargo carried.....	81,833	80,567	76,765	80,332

* Does not include \$543.75 collected on supplemental bills.

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during May, 1929, as compared with May, 1928, and 1927, are shown in the following tabulation:

	Average per vessel.		
	May, 1929.	May, 1928.	May, 1927.
Panama Canal net tonnage.....	4,765	4,477	4,774
United States net tonnage.....	3,643	3,488	3,732
Registered gross tonnage.....	6,012	5,675	6,107
Registered net tonnage.....	3,667	3,479	3,751
Tolls.....	\$4,382.72	\$4,171.20	\$4,385.41
Tons of cargo (including vessels in ballast).....	4,841	4,916	5,052
Tons of cargo (laden vessels only).....	5,726	5,728	6,246

* Does not include \$543.75 collected on supplemental bills.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provisions that tolls shall not exceed \$1.25 per ton nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.943 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.72 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of May, 1929, the following tabulation shows a comparison of tolls actually collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1.00 laden and \$0.60 ballast. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian	\$5,652.50	\$6,211.00	\$558.50	
British	627,646.35	662,418.00	34,771.65	
Chilean	24,535.99	25,119.20	583.21	
Colombian	3,063.65	2,606.00		\$457.65
Danish	15,221.24	15,022.20		199.04
Danzig	6,508.75	5,297.00		1,211.75
Dutch	58,571.29	61,357.20	2,785.91	
French	44,072.55	43,283.00		789.55
German	124,453.47	141,444.60	16,991.13	
Greek	2,792.50	3,133.00	640.50	
Italian	32,027.50	35,341.00	3,313.50	
Japanese	76,941.85	73,801.00		3,140.85
Norwegian	114,441.35	125,598.00	11,156.65	
Panaman	8,476.25	10,106.00	1,629.75	
Peruvian	1,236.25	2,405.00	1,168.75	
Swedish	28,575.24	31,005.20	2,429.96	
United States	1,109,819.84	1,119,401.60	9,581.76	
Yugoslav	12,510.00	12,781.00	271.00	
Totals	\$2,296,546.57	\$2,376,630.00	\$80,083.43	\$5,798.84
Net increase for all traffic			80,083.43	

¹ Includes \$14,892.00 collected for naval vessel.

² Includes \$5,875.00 collected for naval vessel.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade	\$8,646.51
United States foreign trade	3,590.65
United States - Canal Zone trade	2,655.40
Net increase	\$9,581.76

¹ Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in May, 1929, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Belgian		1.58	1.58
British	.89	1.27	1.10
Chilean	.58	1.05	.82
Colombian	.89	1.10	1.00
Danish	1.13	1.70	1.44
Danzig		2.13	2.13
Dutch	.61	1.65	1.09
French	.47	1.56	.82
German	.95	1.37	1.18
Greek	1.57		1.57
Italian	.22	.87	.47
Japanese	1.31	1.47	1.39
Norwegian	1.33	1.65	1.49
Panaman	1.29	1.33	1.32
Peruvian	.13		.13
Swedish	1.27	2.76	2.00
United States	.92	1.48	1.22
Yugoslav	1.57	1.99	1.70
Averages, May, 1929	.93	1.44	1.20
Averages, May, 1928	.90	1.51	1.27
Averages, May, 1927	.97	1.56	1.31

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of May, 1929, is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden	4	19,707	\$18,598.05	48	247,708	\$258,718.00
Ballast	48	266,680	192,009.60	1	4,345	3,128.40
General cargo ships:						
Laden	207	974,743	898,939.05	189	874,461	824,513.10
Ballast	16	67,722	48,707.11	4	12,020	8,654.40
Noncargo-carrying ships:						
Naval vessels	1		5,875.00	1		14,892.00
Passenger vessels				2	29,256	22,322.50
Yachts	2	243	174.96	1	20	14.40
Totals	278	1,329,095	1,164,303.77	246	1,167,810	1,132,242.80
Method of propulsion:						
Steam	222	1,049,913	940,467.63	199	937,975	917,852.11
Motor	55	278,875	223,467.74	46	229,815	214,376.29
Motor schooner	1	307	368.40	1	20	14.40
Totals	278	1,329,095	1,164,303.77	246	1,167,810	1,132,242.80

Of the 421 steam-driven vessels, 300 were oil burning, 116 coal burning, and five burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of May, 1929. If tolls had been assessed against these vessels at commercial rates, the amount would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Ammunition ships	1	4,405	\$5,506.25			
Cruisers	3	9,600	4,800.00	4	11,025	\$5,512.50
Mine sweepers	3	2,850	1,425.00	4	3,800	1,900.00
Motor sailers	4	40	30.00			
Store ships				1	3,394	4,242.50
Submarines	4	5,496	2,748.00	5	4,314	2,157.00
Supply ships	1	3,434	4,292.50			
Tankers	1	5,120	3,840.00	1	5,003	6,003.60
U. S. Army vessels:						
Launches	1	10	7.50			
Mine planters	2	2,416	1,208.00			
Transports	1	3,908	4,885.00	4	15,177	18,971.25
Totals, U. S. Government	21		28,742.25	19		38,786.85
Panaman Government vessels:						
Transports	1	101	72.72			
Vessels for repairs:						
Tankers	1	1,645	1,233.75	1	1,645	1,233.75
Grand totals	23		30,048.72	20		40,020.60

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of May, 1929, carried cargo as follows: Atlantic to Pacific, 7,135 tons; Pacific to Atlantic, 951 tons; total, 8,086 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement transiting the Canal during the month of May, 1929. These launches, although paying tolls, are exempted from statements concerning commercial traffic:

	Number.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	12	100	\$106.08
Pacific to Atlantic.....	6	71	73.50
Totals.....	18	171	\$179.58

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of May, 1929, are shown in the following tabulation:

		Cristobal.	Balboa.	Total.
Local cargo arriving.....	tons	143,312	60,539	203,851
Local cargo shipped.....	tons	9,920	1,004	10,924
Transit cargo arriving.....	tons	2,579,487	2,558,932	5,138,419
Transit cargo clearing.....	tons	2,574,434	2,540,394	5,114,828
Cargo received for transshipment.....	tons	39,792	87	39,879
Cargo transshipped.....	tons	38,259	40	38,299
"Canal Zone for Orders" cargo:				
Number of receipts issued.....		80	31	111
Number of withdrawals.....		416	183	599
Tons received.....		2,123	257	2,380
Tons withdrawn.....		1,540	184	1,724
Packages received.....		6,583	3,081	9,669
Packages withdrawn.....		6,154	2,043	8,197
Vessels supplied with bunker coal:				
Commercial, other than Panama Railroad Company.....		75	4	79
Coal supplied to above vessels:				
Commercial, other than Panama Railroad Company.....	tons	23,078	66	23,144
Coal issued, miscellaneous:				
Panama Canal departments.....	tons	105	57	162
U. S. Army, excepting vessels.....	tons	31	1	32
Individuals and companies.....	tons	185		185
Panama Railroad Company.....	tons	11		11
Transferred to Navy.....	tons	124		124
Total sales and issues.....	tons	23,534	124	23,658
Coal on hand May 1, 1929.....	tons	52,562		52,562
Coal on hand, June 1, 1929.....	tons	68,374		68,374
Coal received during month.....	tons	39,346		39,346
Coal received from Navy.....	tons		124	124
Fuel oil issued from Panama Canal tanks:				
Panama Canal departments.....	bbls.	7,033.37	17,129.94	24,163.31
Panama Railroad Company.....	bbls.	519.64		519.64
U. S. Army and Navy.....	bbls.		425.69	425.69
Individuals and companies.....	bbls.		139.62	139.62
Total sales and issues.....	bbls.	7,553.01	17,695.25	25,248.26
Fuel oil on hand, June 1, 1929.....	bbls.	18,325.13	8,190.48	26,515.61
Diesel oil received during May.....	bbls.		1,562.00	1,562.00
Diesel oil sold during May.....	bbls.	100.26	1,562.00	1,662.26
Diesel oil on hand, June 1, 1929.....	bbls.	16,572.80	493.25	17,066.05
Miscellaneous transfers.....	bbls.	429.48	17,551.91	17,981.39
Gasoline and kerosene pumped for The Panama Canal.....	bbls.	8,940.46	14,272.72	23,213.18
Gasoline pumped for individuals and companies.....	bbls.	689.12	6,212.25	6,901.37
Oil pumped for individuals and companies.....	bbls.	592,317.50	489,122.03	1,081,439.53
Oil pumped for U. S. Shipping Board.....	bbls.		17,068.54	17,068.54
Oil pumped for U. S. Navy.....	bbls.	2,715.00	53,333.00	56,048.00
Total fuel oil, gasoline and kerosene handled.....	bbls.	612,744.83	615,255.70	1,228,000.53
Admeasurement of vessels:				
U. S. equivalent certificates issued.....		25	2	27
Measured for Panama Canal net tonnage.....		10	1	11
Remeasured for Panama Canal net tonnage.....		22	2	24
Panama Canal net tonnage corrected.....			8	8
U. S. equivalent tonnage corrected.....		7	16	23
Services of harbor equipment:				
Tugs, total operating hours.....		491½	347	838½
Launches, total operating hours.....		1,474½	1,875	3,349½

	Cristobal.	Balboa.	Total.
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$15,307.50	\$11,630.00	\$26,937.50
Pilotage.....	20,619.00	7,974.00	28,593.00
Seamen.....	12,960.00	11,552.00	24,512.00
Launch service.....	2,049.50	2,972.50	5,022.00
Wharfage.....	16,960.25	5,515.89	22,476.14
Ships measured.....	165.00	10.00	175.00
Miscellaneous.....	900.85	507.00	1,407.85
Ships repaired at Panama Canal shops:			
Commercial.....	62	12	74
U. S. Army and Navy.....	8	6	14
Panama Canal equipment.....	3	7	10
Totals.....	73	25	98
Vessels dry-docked:			
Commercial.....	7	5	12
U. S. Army and Navy.....	3	1	4
Panama Canal equipment.....		2	2
Totals.....	10	8	18
Clearances issued.....	302	290	592
Bills of health issued.....	313	292	605

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships Entering.</i>						
All vessels, including those transiting Canal..	626	3,615,574	2,219,979	557	3,336,261	2,060,517
Vessels entering port but not transiting Canal..	72	334,307	201,148	11	36,041	22,440
Vessels transiting Canal and handling passengers and cargo at terminal ports ..	128	800,117	481,824	106	616,713	373,850
<i>Ships Clearing.</i>						
All vessels, including those transiting Canal..	618	3,595,121	2,205,961	561	3,332,700	2,060,906
Vessels clearing port but not transiting Canal..	71	343,855	205,738	14	41,923	26,004
Vessels transiting Canal and handling passengers and cargo at terminal ports ..	123	797,315	479,949	106	619,663	376,928

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports	1,228	947	2,175	26	46	72
From Pacific ports	228	152	380	325	189	514
Total disembarking.....	1,456	1,099	2,555	351	235	586
Embarking:						
For Atlantic ports	1,751	1,027	2,778	121	476	597
For Pacific ports	251	251	502	306	184	490
Total embarking.....	2,002	1,278	3,280	427	660	1,087
Remaining on board:						
From Atlantic to Pacific ports	1,261	2,242	3,503	1,486	2,447	3,933
From Pacific to Atlantic ports	1,972	3,340	5,312	2,079	3,016	5,095
From Atlantic to Atlantic ports	515	196	711			
From Pacific to Pacific ports				13	154	167
Total remaining on board.....	3,748	5,778	9,526	3,578	5,617	9,195
Total arriving.....	5,204	6,877	12,081	3,929	5,852	9,781
Total departing.....	5,750	7,056	12,806	4,005	6,277	10,282

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	278	56	20.2
Pacific to Atlantic.....	246	49	19.9
Totals.....	524	105	20.0

In addition to the aforesaid, 73 passenger-carrying vessels called at the port of Cristobal and 2 at Balboa without transiting the Canal, making a total of 180 passenger-carrying vessels calling at Canal ports during the month.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of May, 1929:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Totals.
Sales at Cristobal to:						
Commercial vessels.....	\$2,666.31	\$13,881.91	\$28,461.58	\$536.52	\$7,919.94	\$53,466.26
Government vessels.....	168.75	871.10	10,228.39	116.74	1,134.61	12,519.59
P. R. R. vessels.....	9.45	179.86	1,698.17	595.02	361.15	2,843.65
Total sales, May, 1929.....	2,844.51	14,932.87	40,388.14	1,248.28	9,415.70	68,829.50
Total sales, May, 1928.....	2,098.03	13,202.83	41,109.58	911.83	8,028.57	65,350.84
Total sales, May, 1927.....	1,830.20	16,083.63	49,354.60	1,078.20	8,830.40	77,177.03
Sales at Balboa to:						
Commercial vessels.....	732.53	12,048.45	13,636.84	263.80	5,062.08	31,743.70
Government vessels.....	1,537.44	1,889.76	13,373.00	834.69	986.31	18,621.20
P. R. R. vessels.....				40.28		40.28
Total sales, May, 1929.....	2,269.97	13,938.21	27,009.84	1,138.77	6,048.39	50,405.18
Total sales, May, 1928.....	1,687.98	15,890.82	31,380.49	1,040.79	6,435.62	56,435.70
Total sales, May, 1927.....	1,132.46	10,758.92	23,412.76	443.02	4,780.07	40,527.23

The aggregate sales to Government vessels during the month was \$31,140.79; to Panama Railroad vessels, \$2,883.93; and to other commercial vessels, \$85,209.96; making the total sales to all vessels, \$119,234.68.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of May, 1929, as compared with the corresponding month in 1928 and 1927:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. †			May 1929.	May 1928.	May 1927.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	234	263	497	9	6	15	512	498	460
Pedro Miguel.....	232	248	480	12	16	28	508	531	495
Miraflores.....	233	247	480	12	12	24	504	519	484
Number of vessels put through locks.									
Gatun.....	246	279	525	41	39	80	605	590	546
Pedro Miguel.....	246	278	524	58	60	118	642	625	600
Miraflores.....	246	278	524	45	49	104	628	610	603

† Includes tolls-paying launches under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	48	42	41
Panama Canal equipment.....	10	64	51
Launches (under 20 tons).....	19	9	9
Panaman Government vessels.....	1	1	1
Vessels for repairs.....	2	2	2

The total consumption of water for lockages and loss in leakage was as follows in May, 1929, as compared with the preceding month and the corresponding month in 1928:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,549,000,000	1,327,630,000	1,375,420,000
Leakage.....	30,000,000		20,000,000
Totals, May, 1929.....	1,579,000,000	1,327,630,000	1,395,420,000
Totals, April, 1929.....	1,109,080,000	1,333,090,000	1,410,370,000
Totals, May, 1928.....	1,679,830,000	1,518,820,000	1,602,320,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of May, 1929, are shown in comparative form in the following tabulation:

	May.		May—Years of record.		
	1929.	1928.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	1,750	1,423	5,220	491	2,088
Maximum momentary discharge for the month.....	12,070	20,874	61,200	231	.....
Gatun Lake watershed, total yield.....	3,812	3,622	8,665	1,417	4,551
Gatun Lake watershed, net yield.....	3,154	2,964	7,964	583	3,891
Draft on Gatun Lake for lockages and power.....	2,663	2,681	2,704	1,067	2,035

¹ May 5, 1918.

² May, 1914, not included.

The total yield of the Gatun Lake watershed was 16 per cent below the 16-year May average, or 3,812 c. f. s., compared with an average of 4,551 c. f. s. Maximum and minimum total yields of record for May are 8,665 c. f. s. in 1918 and 1,417 c. f. s. in 1920, respectively. The lake varied from the minimum elevation of 82.50 feet on the 15th to 83.17 feet on the 31st, averaged 82.82 feet, and ended at elevation 83.13 feet. Miraflores Lake varied from elevation 53.06 feet on the 27th and 28th to 53.98 feet on the 21st, averaged 53.55 feet, and ended at elevation 53.36 feet.

SEISMOLOGY.

Seismic disturbances were recorded during the month on the 1st, 25th, 26th and 30th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,584,000 kilowatt hours, and the computed water consumption was 4,255,873,152 cubic feet. Continuous service was maintained at this station throughout the month. The Miraflores Diesel-electric station had a gross generator output of 25,000 kilowatt hours, and the fuel oil consumption was 70.15 barrels. Load was carried by Diesel units three times during the month. Overhaul of engines continued throughout the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were completed on 44 vessels during the month. There were 349 work orders issued during the month, as compared with 374 for the previous month.

MECHANICAL DIVISION.

During the month miscellaneous repairs were made on 73 vessels at Cristobal and 28 at Balboa. Ten vessels were dry-docked at Cristobal and 8 at Balboa. Annual overhaul of the United States submarine *S-14* was started during the month. Work was carried forward on the annual overhaul of the mine planter *Graham*. Work was completed on tug *Trinidad* and tug *Coco Solo* during the month.

MUNICIPAL ENGINEERING DIVISION.

Work was carried forward on several improvement projects in the cities of Colon and Panama, and in the Canal Zone. On the Madden Road, 5,000 linear feet were cleared and 22,000 cubic yards of material were moved in connection with the grading. At the site of the Madden Dam the operation of diamond drills was continued throughout the month.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 762,439,250 gallons.

DREDGING DIVISION.

West Lirio slide showed movement during the entire month of May. A dipper dredge worked 15½ days on the slide, excavating 86,750 cubic yards of material. Cucaracha, South Cucaracha, East and West Culebra slides showed no movement during the month. There were no other slides and no delays to shipping during the month.

The total excavation during May was 519,390 cubic yards as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	Cubic yards	Cubic yards	Cubic yards
Work excavation:			
Canal prism, Gaillard cut—			
Project No. 2.	4,400	41,000	45,400
Lirio slide	17,350	69,400	86,750
Canal prism, Pacific entrance:			
Project No. 1 (extension).	130,700		130,700
Maintenance.	18,900		18,900
Balboa inner harbor:			
Project No. 1	3,000	65,000	68,000
Maintenance	3,350		3,350
Plant excavation:			
Albrook Field	165,200		165,200
Dredging sand at Chame.	1,090		1,090
Totals.	343,990	175,400	519,390

On the Albrook Field project 165,200 cubic yards of material were pumped into the fill through an average pipeline length of 7,356 feet and an average lift of 18 feet. Of the amount pumped into the field, 119,000 cubic yards remained in place.

The ferry crossing at the north end of Pedro Miguel locks operated 31 days during the month. Five hundred and twenty-six trips were made, and 215 Panama Canal, 77 U. S. Army, and 3,543 other vehicles, a total of 3,835, were ferried across the Canal.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women and children, occupying Panama Canal quarters on May 31, 1929, totaled 21,786, composed of 7,590 Americans, 2,734 of whom were men, 2,271 women, and 2,585 children; 239 Europeans, 96 of whom were men, 37 women, and 106 children; and 13,957 West Indians, 4,219 of whom were men, 2,596 women, and 7,142 children. The total number of persons in quarters on May 31, 1928, was 21,400.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of May 15, 1929, with a comparison of the working force for the preceding month and for May, 1928:

	As of May 15, 1929.			Total employees.	
	Gold.	Silver.	Total.	April 1929.	May 1928.
Operation and Maintenance:					
Office.	45	62	107	110	78
Electrical.	155	166	321	323	350
Municipal Engineering.	116	1,769	1,885	1,968	757
Lock Operation.	307	972	1,279	1,389	913
Dredging.	193	990	1,183	1,187	1,047
Mechanical.	430	845	1,275	1,235	1,267
Marine.	212	699	911	966	881
Fortifications.	32	527	559	472	307
Totals.	1,490	6,030	7,520	7,550	5,600
Supply Department:					
Quartermaster.	205	1,930	2,135	2,034	2,003
Subsistence.	8	104	112	117	113
Commissary.	225	1,276	1,501	1,499	1,343
Cattle Industry.	4	151	155	162	147
Hotel Washington.	8	106	114	119	106
Transportation.	68	226	294	297	265
Totals.	518	3,793	4,311	4,228	3,977

	As of May 15, 1929			Total employees.	
	Gold.	Silver.	Total.	April 1929.	May 1928.
Accounting Department.....	200	6	206	202	201
Health Department.....	272	825	1,097	1,094	1,166
Executive Department.....	518	294	812	815	787
Totals.....	990	1,125	2,115	2,111	2,154
Panama Railroad Company:					
Superintendent.....	46	282	328	344	299
Transportation.....	63	131	194	190	176
Receiving and Forwarding Agency.....	99	1,509	1,608	1,636	1,342
Coaling Stations.....	48	279	327	419	323
Totals.....	256	2,201	2,457	2,579	2,140
Grand totals, May, 1929.....	3,254	13,149	16,403		
Grand totals, April, 1929.....	3,212	13,256		16,468	
Grand totals, May, 1928.....	3,022	10,849			13,871

Additions to the gold force on the Isthmus in May were as follows: Employed in the United States, 11; reemployed in the United States, 1; employed on the Isthmus, 32; reemployed on the Isthmus, 15; total 59. Separations from the gold force totaled 43, as follows: Resigned, 26; discharged, 13; retired, 1; died, 3. At the end of the month there were on file 251 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 206 deaths occurred during the month of May, 1929, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 19.09 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 30; tuberculosis (various organs), 25; organic diseases of the heart, 19; nephritis (acute and chronic), 18; and diarrhea and enteritis, 17. There were 12 deaths from cancer, 10 from apoplexy, 8 from syphilis, and 1 each from typhoid fever, diphtheria, dysentery and erysipelas. There were 19 deaths among nonresidents. These are not included in the above statistics.

There were 288 live births, and 7 stillbirths, reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 27.33 per 1,000 population. Deaths among children under 1 year of age numbered 41, giving an infant mortality rate based on the number of live births reported of 142.36.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during May was 120, of whom 30 were employees (5 white and 25 colored), 8 were members of employees' families (1 white and 7 colored), 11 were Canal Zone agriculturists, 18 were other civilian nonemployees, and 53 were Army and Navy personnel. Of the 38 employees and members of employees' families, 33 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There was 1 death from malaria among residents, a black nonemployee residing in Panama, regarding whom no data as to probable place of infection were obtainable.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions and received on the Isthmus during the month totaled \$352,478.12, of which \$326,888.82 was for the Department of Operation and Maintenance and \$25,589.30 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap and obsolete and second-hand material amounted to \$52,742.37.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of April, 1929, as compared with April, 1928, and the figures for the first ten months of the current fiscal year as compared with the same period in the fiscal year 1928.

It is impossible to submit the figures for the month of May at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	April 1929.	April 1928.	To end of April.	
			This year.	Last year.
Tolls	\$2,278,505.21	\$2,187,724.47	\$22,699,003.31	\$22,808,175.49
Other receipts	338,360.76	288,361.14	3,300,897.89	2,951,120.02
Total transit revenues	2,616,865.97	2,476,085.61	25,999,901.20	25,759,295.51
Total transit expenses	1,255,023.73	1,056,391.47	11,052,246.87	10,123,177.78
Net transit revenues	1,361,842.24	1,419,694.14	14,947,654.33	15,636,117.73
Three per cent capital charge	614,929.83	612,372.24	6,157,594.50	6,115,902.54
Transit surplus	746,912.41	807,321.90	8,790,059.83	9,520,215.19
Business revenues	1,419,405.43	1,446,910.47	14,299,269.00	13,867,863.11
Business expenses	1,335,606.78	1,405,094.43	13,406,209.70	13,126,212.34
Net business revenues	83,798.65	41,816.04	893,222.30	741,650.77
Three per cent capital charge	62,153.07	59,980.25	649,615.22	647,570.67
Business surplus	21,645.58	18,164.21	243,607.08	94,080.10
Combined revenues	4,036,271.40	3,922,996.08	40,299,170.20	39,627,158.62
Combined expenses	2,590,630.51	2,461,485.90	24,458,293.57	23,249,390.12
Net revenues	1,445,640.89	1,461,510.18	15,840,876.63	16,377,768.50
Three per cent capital charge	677,082.90	672,352.49	6,807,209.72	6,763,473.21
Combined surplus	768,557.99	789,157.69	9,033,666.91	9,614,295.49

* Indicates deficit.

Respectfully,

J. L. SCHLEY,
Acting Governor.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 14, 1929.

No. 549.

The following was received by the Hydrographic Office through the Marine Superintendent, The Panama Canal:

U. S. S. *Galveston*, June 14, construction work beacons entering range, Corinto Harbor, completed, lights burning. Front range, fixed white; rear range, occulting white; period 10 seconds, flash 2 seconds eclipse 8 seconds.
(No signature).

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 21, 1929.

No. 552.

The South Frailes whistling buoy near Cape Mala, R. P., is reported missing. Further notice will be given when buoy is replaced.

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 27, 1929.

No. 554.

The following is quoted from Notice to Mariners, Washington, June 15, 1929:

Venezuela, Gulf of Venezuela, Las Piedras Bay, Light Discontinued. The second officer of the American steamer *Haxbar* reports that the fixed white light elevated 100 feet and visible 5 miles formerly shown on the bluff overlooking the bay, in latitude 11° 42' 18" N., longitude 70° 13' 22" W., no longer exists.

H. BURGESS,
Governor.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Cristobal, C. Z., for Week Ending June 22, 1929.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Martha	H. C. Stevenson	June 16	June 16		640
Floreana	Colombian Transport Co.	June 16	June 16		487
Stella	Panama Mail S. S. Co.	June 16	June 16		1,390½
Manizales	North German Lloyd	June 16	June 16		322
Heredia	United Fruit Co.	June 16	June 16		109
Axel Johnson	Johnson Line	June 16	June 16		806
Portland	Hamburg-American Line	June 16	June 16		474
Wanks	Standard Fruit & S. S. Co.	June 16	June 16		1½
Orinoco	Hamburg-American Line	June 16	June 16		1,247
Lisbon Maru	Nippon Yusen Kaisha	June 16	June 16	106	(²)
Tolosa	United Fruit Co.	June 16	June 16	3	164
Carl Legien	Hamburg-American Line	June 16	June 17	385	388
Coppename	United Fruit Co.	June 17	June 17	14	78
Santa Barbara	Grace Line	June 17	June 17	60	24
Cid	Pacific Steam Nav. Co.	June 17	June 18	580	58
Calamares	United Fruit Co.	June 17	June 19	1,072	52
Uribe	Estrada G. Hermanos	June 18	June 19	476	
Moveria	Donaldson Brothers	June 18	June 19	(¹)	347
Acajutla	Pacific Steam Nav. Co.	June 18	June 19	339	
Metapan	United Fruit Co.	June 19	June 20	348	259
Argun Maru	Osaka Shosen Kaisha	June 19	June 20	443	(²)
Oreoma	Pacific Steam Nav. Co.	June 19	June 20	129	42
Ancon	Panama R. R. S. S. Line	June 19	June 19	5,689	
Juan S. Eleano	Spanish Line	June 19	June 19	185	
Inapaquina	United Fruit Co.	June 19	June 21	52	(²)
Pacific Grove	Furness, Withy & Co.	June 19	June 21	(¹)	315
Nitokris	Hamburg-American Line	June 19	June 22	140	596
Heluan	Hamburg-American Line	June 20	June 20	48	(²)
Esequiibo	Pacific Steam Nav. Co.	June 20	June 21	37	(²)
Suriname	United Fruit Co.	June 20	June 21	563	112
Cali	North German Lloyd	June 20	June 22	765	314
Orazio	Italian Line	June 20	June 22	580	(²)
Salvador	Pacific Steam Nav. Co.	June 21	June 21		1,026
Cauca	National Navigation Co.	June 21	June 21		213
Caldas	National Navigation Co.	June 21	June 21	244	
Coppename	United Fruit Co.	June 21	June 21	11	553½
San Jose	United Fruit Co.	June 21	June 22	365	158
Heinrich Arp	Colombian Mar. Co.	June 21	June 22	11	(²)
Swiftarrow	C. D. Mallory & Co.	June 21	June 21	11,917	
San Francisco	Hamburg-American Line	June 21	June 22	(¹)	123
Maeabi	United Fruit Co.	June 21	June 21	35	452
Atlantida	Standard Fruit & S. S. Co.	June 21	June 21	119	609
Guatemala	Panama Mail S. S. Co.	June 22	June 22	525	
Nosa King	N. O. & S. A. S. S. Co.	June 22	June 22	13	
Curtago	United Fruit Co.	June 22	June 22	619	
William M.	R. Feuillebois	June 22	June 22	(¹)	30
Indiana	French Line	June 22	June 22	471	
Wanks	Standard Fruit & S. S. Co.	June 22	June 22	75	
Losida	Pacific Steam Nav. Co.	June 22	June 22	80	
Ia Paz	Pacific Steam Nav. Co.	June 22	June 22	58	
Ariguani	Elders & Fyffes, Ltd.	June 22	June 22	15	(²)

¹ No cargo discharged.² No cargo laded.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Balboa, C. Z., for Two Weeks Ending June 22, 1929.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Sirius	U. S. Navy	June 10	June 10	104	3
Tong King	East Asiatic Co.	June 10	June 10	542	
M. F. Elliott	Standard Shipping Co.	June 11	June 12	3,888	
Venezuela	Panama Mail S. S. Co.	June 11	June 11	26	
Chateau Thierry	U. S. Army	June 11	June 12		29
El Salvador	Panama Mail S. S. Co.	June 12	June 13	185	
City of Panama	Panama Mail S. S. Co.	June 13	June 13		5
Bearn	Royal Neth. S. S. Co.	June 14	June 15	169	
Bennekom	Royal Neth. S. S. Co.	June 15	June 15	130	26
Lisbon Maru	Nippon Yusen Kaisha	June 15	June 16	169	
Minden	North German Lloyd	June 15	June 16	4	
Emma H. Coppage	Texas Co.	June 16	June 17	10,004	
Cedarhurst	Steamer Cedarhurst Corp.	June 18	June 20	6,922	
Acajutla	Pacific Steam Nav. Co.	June 18	June 18	4	
Argun Maru	Osaka Shosen Kaisha	June 19	June 19	430	
Swiftsure	Farmers L. & T. Co.	June 19	June 20	11,193	
Cauca	National Navigation Co.	June 21	June 21		29

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, June 22, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Water draft.	From—	For—	Cargo.	Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Tons.	Gross. Net.
Floreana ²	5-31	16.00	16	6.12	16	14.35	16	19.47	Colombian.	Colombian Transp. Co.	150.0	27.0	10.3	Cristobal, C. Z.	Buenaventura, Col.	General	500	410 307
Martha ³	6-10	16.47	16	6.15	16	15.18	17	18.10	Norwegian.	H. C. Stevenson	183.0	30.0	14.2	Cristobal, C. Z.	Pt. Armuelles, R.P.	General	635	780 504
Stella	12	18.50	16	6.10	16	14.30	16	16.00	Norwegian	Panama Mail S. S. Co.	193.1	32.9	16.3	Cristobal, C. Z.	Puntarenas, C. R.	General	1,350	985 606
Belgium Maru	15	20.45	16	6.15	16	13.45	16	15.20	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0	13.0	Wilmington, Del.	Tocopilla, Chile	Ballast	6,219	4,611
Canadian	15	20.40	16	7.30	16	16.18	16	18.05	British	Can. Nat. Steamships	400.4	52.0	23.8	Montreal, Canada.	Dunedin, N. Z.	General	4,653	5,954 4,139
Maria	16	1.38	16	7.32	16	17.15	16	18.41	Yugoslav	Baburizza & Co.	399.6	53.0	25.0	Split, Ser. Cr., Slov.	Antofagasta, Chile	Cement	6,600	5,508 4,163
Petrinovic	16	6.10	16	8.35	16	17.40	17	1.04	Danish	Isbrandtsen Moller Co.	308.0	44.0	16.6	New York, N. Y.	Yokohama, Japan	General	2,640	3,361 2,582
Lica Maersk	16	5.10	16	8.15	16	17.07	16	20.55	British	Lambert Latta & Co.	426.0	59.0	25.9	Hamburgh, Germany	Port Pirie, Aust'ia	General	8,700	7,130 5,322
Anglo-Indian	15	6.20	16	9.45	16	18.00	16	23.05	German	Hawthorpe-American Line	422.2	61.2	24.0	Hamburgh, Germany	Vancouver, B. C.	Superph. bannans	6,431	9,139 6,606
Portland	13	6.50	16	9.30	16	18.39	16	20.06	American	The Texas S. S. Co.	416.8	56.1	18.0	New York, N. Y.	Wilmington, Calif.	Ballast	7,150	5,330
Illinois	13	21.05	16	13.20	16	20.16	16	21.40	German	North German Lloyd	216.5	32.9	13.7	Cristobal, C. Z.	Buenaventura, Col.	General	410	1,132 741
Manizates	13	21.05	16	13.20	16	20.16	16	21.40	German	North German Lloyd	216.5	32.9	13.7	Cristobal, C. Z.	Buenaventura, Col.	General	410	1,132 741
Horozaka	16	6.30	17	6.00	17	13.47	17	15.00	British	N. Z. Shipping Co.	511.1	64.1	31.6	London, England	Auckland, N. Z.	General	7,826	12,623 8,763
Cape Ortega	17	1.30	17	6.25	17	14.38	17	15.35	British	Lytle Shipping Co.	405.0	52.0	20.0	Newcastle, N. Y.	Vancouver, B. C.	(?)	4,538	6,650 4,071
Bohemian	17	1.40	17	7.30	17	14.58	17	16.15	American	Atlantic Refining Co.	425.0	57.2	22.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,204	4,739
Club ¹	17	2.00	17	8.35	17	15.45	17	17.00	German	Hamburg-American Line	395.2	53.9	25.0	Hamburg, Germany	Valparaiso, Chile	General	5,867	7,145 5,474
Carl Legien	17	8.15	17	9.55	17	16.36	18	1.26	American	United Fruit Co.	329.8	48.1	19.0	Port Limon, C. R.	San Francisco, Cal.	Bananas	4,480	4,033 2,951
La Pecla	17	10.10	17	11.00	17	20.31	17	21.00	American	West India Oil Co.	390.0	54.2	25.0	Baytown, Texas.	Los Angeles, Calif.	Fuel oil ⁸	6,922	6,209 4,303
Cedarhurst ¹	17	1.05	17	12.35	17	19.18	18	12.20	Venezuelan	Venezuela Gulf Oil Co.	320.0	55.0	9.6	Las Piedras, Ven.	Balboa, C. Z.	Ballast	8,987	8,214 6,183
Crode Lindo ¹	17	15.43	17	16.25	18	11.00	18	13.05	American	Tampa Intercoastal Co.	415.0	56.0	28.4	New Orleans, La.	Hilo, P. I.	General	1,976	6,625 5,046
Volunteer	17	15.43	17	16.25	18	11.00	18	13.05	American	McComick S. S. Co.	420.0	54.0	18.0	Buenos Aires, Arg.	San Francisco, Cal.	General	8,987	8,214 6,183
West Cactus	17	17.50	17	18.05	18	11.45	18	14.54	American	U. S. Navy	180.0	35.6	18.6	Cristobal, C. Z.	Balboa, C. Z.	(?)	3,461	3,983 2,629
Mallard ⁵	17	8.10	17	8.10	17	14.54	18	15.15	American	Charles Nelson & Co.	324.0	46.2	18.6	Charleston, S. C.	Seattle, Wash.	General	8,804	7,330 5,241
Suved	17	20.05	18	6.20	18	13.12	18	15.15	American	Isishman S. S. Lines	395.5	55.0	27.0	Baltimore, Md.	Vancouver, B. C.	General	3,461	3,983 2,629
Mobile City	17	22.50	18	7.20	18	14.50	18	15.57	American	U. S. Army	330.0	46.2	18.6	Baltimore, Md.	Vancouver, B. C.	General	8,804	7,330 5,241
Kenowis ⁶	18	2.00	18	8.30	18	15.18	18	15.57	American	C. T. Bowring & Co.	431.0	58.3	20.0	New York, N. Y.	Balboa, C. Z.	Army supplies	3,306	7,285 4,856
Benedict ¹	18	6.18	18	9.45	18	17.29	18	21.52	British	American Tankers Corp	400.8	54.0	19.0	Southampton, Eng.	Los Angeles, Calif.	Ballast	6,336	4,389
Phoenix ¹	18	10.45	18	11.05	18	18.05	18	19.55	American	Blue Star Line	420.0	55.0	19.6	Philadelphia, Pa.	Talara, Peru	Ballast	7,521	5,852
Gofhstar	18	11.10	18	12.30	18	19.28	18	20.30	British	Texas Gulf-Sulphur Co.	415.0	54.3	24.1	Newcastle, Eng'd	Vancouver, B. C.	Ballast	7,700	6,752 5,101
West Lynn ³	18	19.05	18	19.25	19	11.46	19	14.15	British	Moore & McCormack	342.2	48.0	15.6	Galveston, Tex.	Valparaiso, Chile	Sulphur	800	3,929 2,798
Novasil	18	23.45	19	6.30	19	13.00	19	14.10	Norwegian.	Arrow Line	409.0	54.2	18.6	New York, N. Y.	Valparaiso, Chile	General	3,782	6,615 4,966
Jane Christenson.	19	3.20	19	7.05	19	14.17	19	15.40	American	Luckenbach Line	496.0	68.2	22.6	Baltimore, Md.	San Francisco, Cal.	General	4,802	11,487 8,762
Lewis	19	5.10	19	8.25	19	15.04	19	16.05	American	Luckenbach Line	496.0	68.2	22.6	Baltimore, Md.	San Francisco, Cal.	General	4,802	11,487 8,762
Luckenbach.	19	5.20	19	8.25	19	15.04	19	16.05	American	Luckenbach Line	496.0	68.2	22.6	Baltimore, Md.	San Francisco, Cal.	General	4,802	11,487 8,762
Missouri	19	6.10	19	9.20	19	16.48	19	17.55	American	Amer.-Hawaiian Line.	445.0	59.8	19.6	Boston, Mass.	Seattle, Wash.	General	4,080	8,507 6,020
Moveria ¹	18	1.40	19	11.25	19	17.52	19	18.56	British	Donaldson Brothers	385.6	51.0	19.7	Glasgow, England	Vancouver, B. C.	General	1,450	4,724
El Cervo ¹	19	11.40	19	12.00	19	19.13	19	20.25	British	Anglo-Ecuador Oilfields.	407.0	52.0	18.0	Philadelphia, Pa.	La Libertad, Ecua.	Ballast	6,046	4,326

¹ Tanker.² Motor ship.³ Coffee, linseed, and general.⁴ South to Balboa for dry-docking.⁵ Cargo discharged at Balboa.⁶ U. S. Army transport.⁷ Coke, steel, and firebricks.⁸ Mine sweeper.⁹ U. S. Army transport.

19	15	15	19	17	50	20	10	34	American	C. D. Mallory & Co.	345-0	50	0	20	0	Philadelphia, Pa.	San Francisco, Cal.	Steel, cardboard	3,019
Mahag	19	16	28	20	6	10	20	13	08	20	14	25	British	19	18	28	20	General	3,858
Oreca	19	16	28	20	6	10	20	13	08	20	14	25	British	19	18	28	20	General	4,417
City of Hereford	19	16	28	20	6	10	20	13	08	20	14	25	British	19	18	28	20	General	4,303
Adelaide	19	16	28	20	6	10	20	13	08	20	14	25	British	19	18	28	20	General	5,781
Orient	19	16	28	20	6	10	20	13	08	20	14	25	British	19	18	28	20	General	3,879
India Arrow	19	21	25	20	7	12	20	15	07	20	16	35	American	19	21	25	20	General	7,426
Taketoyo Maru	20	00	02	20	8	30	20	16	18	20	17	34	Japanese	20	00	02	20	General	7,506
Larry Donkey	20	5	30	20	10	00	20	16	18	20	17	34	Japanese	20	5	30	20	General	7,494
Brethbain	20	5	30	20	10	00	20	16	18	20	17	34	Japanese	20	5	30	20	General	7,137
Nanza	20	5	30	20	10	00	20	16	18	20	17	34	Japanese	20	5	30	20	General	5,054
Italy	20	16	07	20	19	40	21	9	30	21	11	00	Japanese	20	16	07	20	General	4,073
Pacific Grove	19	14	35	21	6	12	21	13	10	21	14	20	British	19	14	35	21	General, etc.	5,811
J. R. Gordon	21	4	35	21	7	10	21	14	17	21	15	50	American	21	4	35	21	General, bananas	5,914
Florence	21	4	35	21	7	10	21	14	17	21	15	50	American	21	4	35	21	Sulphur	7,226
Lukenbach	21	4	35	21	7	10	21	14	17	21	15	50	American	21	4	35	21	General	4,730
Salvador	21	4	35	21	7	10	21	14	17	21	15	50	American	21	4	35	21	General	6,581
Cauca	21	4	35	21	7	10	21	14	17	21	15	50	American	21	4	35	21	General	4,925
Sartaria	21	7	00	21	9	45	21	18	30	21	19	38	British	21	7	00	21	General	6,002
Essequibo	20	21	15	21	17	05	21	18	11	21	19	00	American	20	21	15	21	General	984
Hayre Maru	21	15	47	21	17	05	21	18	11	21	19	00	American	21	15	47	21	General	1,270
Orario	20	5	25	22	6	10	22	12	15	22	13	40	Japanese	20	5	25	22	General	215
Silverbeech	21	22	50	22	7	25	22	14	21	22	22	17	British	21	22	50	22	General	65
Port Cisborne	22	5	40	22	7	25	22	14	21	22	22	17	British	22	5	40	22	General	3,983
Mongolia	22	7	35	22	8	30	22	15	54	22	24	00	American	22	7	35	22	General	9,158
Point Gorda	22	7	35	22	8	30	22	15	54	22	24	00	American	22	7	35	22	General	6,845
Reaper	21	23	45	22	9	45	22	16	31	22	17	35	American	21	23	45	22	General	6,539
Nordfarer	22	2	20	22	10	50	22	17	30	22	22	18	Danish	22	2	20	22	General	1,169
Henrich Arp	21	22	20	22	10	50	22	17	30	22	22	18	Danish	21	22	20	22	General	12,977
Nitokris	19	18	40	22	12	10	22	19	34	22	20	48	German	19	18	40	22	General	9,373
New Jersey	22	10	30	22	13	05	22	20	15	22	21	30	American	22	10	30	22	General	8,226
Cal.	22	16	45	22	14	40	22	21	39	22	23	00	German	22	16	45	22	General	6,039
Montanan	22	14	30	22	14	45	22	21	39	22	23	00	German	22	14	30	22	General	11,426
Clies Service	22	15	15	22	15	30	22	22	36	22	23	52	American	22	15	15	22	Sulphur, general	3,750
Empire	22	15	15	22	15	30	22	22	36	22	23	52	American	22	15	15	22	General	3,984
Motor Sailor	22	15	15	22	15	30	22	22	36	22	23	52	American	22	15	15	22	General	7,137

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Wilkeno	15	8	00	16	6	08	16	14	00	16	14	00	American	Williams S. S. Line	415.0	55.7	27.2	Tacoma, Wash.	New York, N. Y.	Lumber, general	7,975	7,750	5,805
Minden	15	19	30	16	6	46	16	14	30	16	18	20	German	Kosmos Line	350.7	51.0	13.6	Champerloo, Guat	Bremen, Germany	Ballast	4,822	3,272	
Northmoor	16	00	30	16	7	45	16	15	17	11	10	British	Moor Line, Ltd.	375.0	52.6	25.0	Portland, Oreg.	United Kingdom	Wheat	7,400	6,051	4,612	
Izarda	16	00	10	16	8	31	16	17	30	16	21	15	Yugoslav	Yugoslav Lloyd	360.0	50.3	21.6	Cruz Grande, Chile	Baltimore, Md	Iron ore	6,100	4,953	3,406
Parthenia	16	8	45	16	9	36	16	17	45	16	23	55	British	Donaldson Bros.	400.0	51.9	24.4	Vancouver, B. C.	Glasgow, Scotland	General	6,049	5,831	4,341
Lisbon Maru	15	21	15	16	10	38	16	17	45	16	21	30	Japanese	Nippon Yusen Kaisha	445.0	58.0	23.6	Manila, P. I.	New York, N. Y.	(¹)	8,636	8,015	5,849
Felix Taussig	16	5	50	16	11	40	16	18	40	16	21	30	American	Norton, Lilly & Co.	395.0	55.0	23.0	Tacoma, Wash.	Avonmouth, Eng.	General	7,602	7,056	4,964
Chin	16	12	20	16	13	14	16	20	40	16	23	20	British	Cayzer, Irvine & Co.	430.6	53.6	25.6	Pagoumne, Soc. Is.	United Kingdom	(¹)	7,000	6,922	4,857
MacGillivray	16	12	05	16	14	12	16	22	15	17	1	20	Norwegian	Iver Christensen.	371.1	52.1	24.8	Cruz Grande, Chile	Baltimore, Md	Iron ore	7,200	5,007	3,702
Empire Arrow	16	14	10	16	14	51	16	22	40	16	22	40	American	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif	New York, N. Y.	Gasoline	11,080	9,841	6,946
Santa	16	10	40	17	6	11	17	13	20	17	18	25	American	Grace Line	466.0	64.0	26.0	Talcahuano, Chile.	New York, N. Y.	(¹)	5,852	10,587	6,633
Barbara	16	10	40	17	6	11	17	13	20	17	18	25	American	Grace Line	466.0	64.0	26.0	Talcahuano, Chile.	New York, N. Y.	(¹)	5,852	10,587	6,633

¹ Tanker

² Motor ship

³ Sugar, coconut, and general.

⁴ Copper and chrome ore.

⁵ Copper, nitrates and general.

¹ Sugar, coconut, and general.² Motor ship.³ Copper, nitrates and general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.	
Sun ¹⁶	16	15 30	17	6 47	17	14 40	17	14 40	American.	Sun Oil Co.	480	6	66	0	29	Los Angeles, Calif	Gasoline.	13,669	9,620	6,476
W. L. Stead ¹	10	15 35	17	7 14	17	15 50	17	15 50	American.	Huasteca Petroleum Co.	416	8	56	1	27	Los Angeles, Calif	Gasoline.	9,000	6,751	4,795
Cid	17	8 15	17	7 25	17	16 20	18	1 40	British.	Pacific Steam Nav. Co.	264	8	41	2	17	New York, N. Y.	General	1,450	2,746	1,626
Peru ¹⁶	17	9 35	17	11 02	17	17 50	17	20 55	Danish.	East Asiatic Co.	425	3	53	2	29	Vancouver, B. C.	(*)	9,261	7,407	5,660
Cambrai ¹⁷	14	20 10	17	12 13	17	18 30	19	11 05	American.	U. S. Army	448	0	58	9	25	Balboa, C. Z.				
Memphis ¹⁶	15	6 24	18	6 11	18	13 00	18	16 50	American.	U. S. Navy	553	0	55	0	18	New York, N. Y.				
Karamia ¹⁶	17	12 20	18	6 35	18	14 18	18	14 18	British.	Shaw, Savill & Albion.	483	0	64	0	23	San Diego, Calif.				
Milwaukee ¹⁸	17	7 02	18	7 16	18	15 27	18	16 50	American.	Dunedin, N. Z.	555	0	55	0	18	Hampton Rds., Va.				
Surico.	16	7 45	18	7 35	18	16 05	18	16 05	American.	U. S. Navy	555	0	55	0	18	London, England.	Frozen, general.	4,725	11,729	8,373
Acajutla ¹⁸	18	1 00	18	7 42	18	16 05	18	16 50	British.	Transmarine Lines.	324	0	46	2	22	Hampton Rds., Va.				
Trenton ¹⁸	15	6 49	18	8 13	18	16 50	18	16 50	American.	Pacific Steam Nav. Co.	215	7	33	5	12	Port Newark, N. J.	Lumber	3,772	3,981	2,628
Urbe	18	1 30	18	9 01	18	17 25	18	18 10	Colombian.	U. S. Navy	555	0	55	0	18	Cristobal, C. Z.	Coffee, wood, etc.	339	1,273	7,500
Californian ¹⁶	18	9 35	18	10 37	18	18 10	18	18 10	American.	Colombian Mar. Co.	227	4	31	7	12	San Diego, Calif.	Coffee, general	476	1,154	663
Leborne	18	3 00	18	13 47	19	13 55	19	13 55	American.	Amer-Hawaiian Line	450	0	59	8	24	Buenaventura, Col.	General	7,530	8,567	6,020
										Ore S. S. Corp.	550	0	72	2	34	Portland, Oreg	Iron ore	20,000	14,325	4,635
Katrina	18	16 30	18	17 26	19	12 10	19	12 10	American.	Lukenbach Line	446	0	56	1	26	Portland, Oreg	General	5,111	8,508	6,179
Rotoria	18	14 12	19	6 18	19	14 55	19	14 55	British.	N. Z. Shipping Co.	526	0	61	4	23	Wellington, N. Z.	Frozen, general.	5,094	12,646	9,439
Pacific	18	20 45	19	7 06	19	15 55	19	15 55	British.	Furness, Withy & Co.	450	0	60	5	27	London, England.	General	8,650	10,086	7,226
S-20 ¹⁹	19	7 25	19	16 20	19	22 00	19	22 00	American	U. S. Navy	231	0	21	0		Balboa, C. Z.	Lumber	7,358	6,656	4,954
Buchanan	19	11 30	19	12 10	19	20 07	19	22 00	British	Sir W. R. Smith & Sons	401	6	54	3	25	Cheminains, B. C.	Corrugated iron	300 lbs		
Juanta ¹⁸	19	6 00	19	11 58	19	21 15	19	21 15	Panama	Panama Corporation.	26	5	8	5		Panama, P.	Lumber, copper	8,319	7,643	5,657
Eastern Knight	19	12 45	19	13 42	19	21 12	19	21 12	American	Quaker Line	427	0	56	0	26	Portland, Oreg	Army general	2,979	7,273	5,294
Kenow ¹⁷	18	15 18	19	14 53	19	22 05	23	9 35	American	U. S. Army	390	0	54	2	20	Mindt, C. Z.	General	10,116	8,315	6,100
Argun Maru	19	7 40	19	15 37	19	23 38	20	15 25	Japanese	Osaka Shosen Kaisha	415	0	55	6	19	Balboa, C. Z.	Lumber, general	3,800	3,984	2,630
Archer	19	14 55	19	16 32	20	11 25	20	15 25	American	Roosevelt S. S. Co., S. B.	440	0	56	0	28	Hong Kong, China.	General	7,635	7,621	5,513
Buffalo Bridge	19	14 55	19	16 32	20	11 25	20	15 25	American	Nelson S. S. Co.	324	0	46	2	23	New York, N. Y.	General	7,635	7,621	5,513
Hehan	20	06 20	20	8 06	20	16 07	20	23 15	German.	Hamburg-American Line	441	0	52	8	26	New York, N. Y.	General	7,635	7,621	5,513
Cal.	20	8 45	20	9 48	20	16 45	22	14 40	German.	Roland Line	216	5	33	9	13	Baltimore, Md.	Lumber, general	7,635	7,621	5,513
St. Therese	20	11 45	20	12 39	20	19 30	20	19 30	Norwegian.	Hamburg-American Line	441	0	52	8	26	Magallanes, Chile.	General	7,635	7,621	5,513
Texas	20	13 30	21	6 20	21	12 50	20	20 40	American.	United Fruit Co.	238	1	44	4	12	Guayaquil, Ecuador	Coffee, cacao	763	1,105	698
S-13 ¹⁹	20	19 00	21	6 20	21	12 50	20	20 40	American.	Amer-Hawaiian Line	471	0	57	2	25	Pt. Armutales, R. P.	Ballast	6,874	9,151	6,966
Algonquin ²¹	20	19 00	21	6 38	21	14 12	21	14 12	American.	U. S. Navy	231	0	31	0		New Orleans, La	General	6,874	9,151	6,966
Massena	21	1 00	21	7 18	21	14 50	21	14 50	American.	Standard Transp. Co.	435	0	56	0	27	Balboa, C. Z.	Gasoline	8,080	7,002	5,337
Caldas ¹⁶	20	19 45	21	6 54	21	14 20	21	14 20	Colombian.	Calmar S. S. Co.	385	0	51	2	26	Los Angeles, Calif	Lumber	6,000	6,242	4,471
Silra ¹⁶	21	7 35	21	8 38	21	16 00	21	18 00	Norwegian.	National Navigation Co.	116	0	21	1	10	Bayonne, N. J.	Coffee	244	211	124
San Francisco ¹⁶	21	2 00	21	8 46	21	15 45	22	00 10	German.	Anglo-Saxon Pet. Co.	455	0	56	6	24	Philadelphia, Pa.	General	9,200	7,533	5,071
Harvester	21	9 10	21	10 06	21	17 32	21	20 37	American.	Hamburg-American Line	432	3	59	1	24	Cristobal, C. Z.	Gasoline	6,202	8,454	5,341
Canadian	21	9 15	21	10 39	21	18 30	21	22 06	British.	The Texas Co.	416	8	56	1	27	Europe	General	8,774	9,977	5,183
Ranger	21	9 15	21	10 39	21	18 30	21	22 06	British.	Can. Nat. Steamships	399	8	52	3	23	Baltimore, Md.	Lumber	5,380	5,879	4,121
Tanker.										Can. Nat. Steamships	399	8	52	3	23	Vancouver, B. C.	Wm. lumber, and general.	5,380	5,879	4,121
										U. S. Army transport.										
										¹⁶ Motor ship.										
										¹⁷ U. S. Army transport.										
										¹⁸ Cruiser										
										¹⁹ Submarine.										
										²⁰ Launch.										

¹⁶ Motor ship.¹⁷ U. S. Army transport.¹⁸ Cruiser.¹⁹ Submarine.²⁰ Launched.²¹ Montreal, Canada.

San Jose	21	9 20	21	10 50	21	18 45	22	14 35	American	United Fruit Co.	330 0	44 6	17 0	San Francisco, Cal.	Port Limon, C. R.	Coffee, general	362 3, 675	2 359
Lena	21	11 15	21	12 00	21	19 12	21	19 12	American	Lockenbach Line	425 0	53 8	26 8	Los Angeles, Calif.	New Orleans, La.	General	5 100	7 217
Queen Eleanor	13	12 45	21	14 42	21	22 40	22	00 40	British	Dupont de Nemours	400 3	52 3	24 8	Iquique, Chile	New York, N. Y.	Nitrates	7 850	5 708
Nikola	21	14 30	21	15 39	22	9 38	23	4 55	Yugoslav	Yugoslav Lloyd	400 6	52 3	25 0	Iquique, Chile	Alexandria, Egypt	Nitrates	7 575	5 826
Rendal	21	17 10	21	18 20	22	15 05	22	17 00	Norwegian	Ragnar Holtz	250 9	43 1	19 0	Piscoadores Is., Peru	London, England	Guano	3 050	3 969
Mahard	21	19 30	22	6 00	22	14 20			American	U. S. Navy	188 0	31 0		Balboa, C. Z.	Cristobal, C. Z.	(23)		
Ojaren	21	19 30	22	6 39	22	15 28	22	17 10	Swedish	Caucasian Oil Co.	399 7	54 9	24 0	Los Angeles, Calif.	Spezia, Italy	Gasoline	7 068	
Hartside	21	21 40	22	7 09	22	17 05	22	18 35	British	J. J. Moore & Co.	363 8	50 5	20 0	Nanose Bay, B. C.	New York, N. Y.	Lumber	5 078	4 977
La Paz	22	20 20	22	7 40	22	18 35	23	12 10	British	Pacific Steam Nav. Co.	406 3	54 2	27 0	Corral, Chile	Hull, England	(24)	7 383	7 216
Indiana	22	4 20	22	8 27	22	19 10	24	12 35	French	French Line	417 8	56 0	25 0	Vancouver, B. C.	Le Havre, France	General	7 716	7 157
Herman																		
Falk	22	8 25	22	9 19	22	19 30	22	19 30	American	Oil Transp. Co.	431 0	59 2	26 3	Los Angeles, Calif.	New York, N. Y.	Gasoline	9 539	7 862
Francis E.																		
Powell	22	8 45	22	9 47	22	20 10	22	20 10	American	Atlantic Refining Co.	431 0	59 2	26 9	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline	9 464	7 860

²¹ Tanker. ²² Tender. ²³ Towing raft. ²⁴ Oats, barley, copper, nitrates, and cotton.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
June 16.	Tolosa.	United Fruit Co.	Port Limon, Costa Rica.	June 16.	Wanka.	Standard Fruit & S. S. Co.	San Blas, R. P.
June 17.	Coppenhame.	United Fruit Co.	Puerto Colombia.	June 16.	Mayari.	United Fruit Co.	New York via Kingston.
June 17.	Calamarc.	United Fruit Co.	New York via Habana.	June 16.	Atlantian.	Leyland S. S. Line	Colombian ports.
June 17.	No. 9688 ²⁵	Pan-American Airways	Managua via wayports.	June 16.	Orinoco.	Hamburg-American Line	Hamburg via wayports.
June 18.	No. 9776 ²⁵	Pan-American Airways	Buenaventura, Colombia.	June 16.	Tolosa.	United Fruit Co.	New York via Habana.
June 18.	No. 8966 (Peru) ²⁵ .	E. M. Phillips	San Jose, Costa Rica.	June 16.	Camden.	United Fruit Co.	Santa Marta, Colombia.
June 18.	No. 5630 ²⁵	United Fruit Co.	Progreso.	June 17.	Heredia.	United Fruit Co.	New Orleans via wayports ^{1a} .
June 18.	Annetta I. ²⁶	A. Tagarapulos	Colon, R. P.	June 17.	No. 9776 ²⁵	Pan-American Airways	Buenaventura, Colombia.
June 19.	Inapaquina ²⁶ .	United Fruit Co.	Colon, R. P.	June 17.	Coppenhame.	United Fruit Co.	Bocas, R. P.
June 19.	Ancon.	United Fruit Co.	New York via Kingston	June 18.	No. 9664 ²⁵	Pan-American Airways.	Managua via David.
June 19.	Juan Sebastian Elcano	Panama R. R. S. S. Line.	New York via Haiti.	June 19.	Annetta I. ²⁶ .	A. Tagarapulos	Colon, R. P.
June 19.	Colombia No. 28 ²⁵ .	Spanish Line	Barcelona via wayports.	June 19.	Inapaquina ²⁶	United Fruit Co.	Colon, R. P.
June 20.	Suriname.	Scudth Airplane Co.	Barraquilla, Colombia.	June 19.	Calamarc.	United Fruit Co.	Port Limon, Costa Rica.
June 20.	No. 9664 ²⁵ .	United Fruit Co.	New Orleans, La.	June 20.	No. 9688 ²⁵	Pan-American Airways	Managua, Nicaragua.
June 21.	Atlantida.	Pan-American Airways	Managua via wayports.	June 20.	Colombia No. 28 ²⁵ .	Scudth Airplane Co.	Barraquilla, Colombia.
June 21.	Coppenhame.	Standard Fruit & S. S. Co.	New Orleans via Habana.	June 20.	Metapan.	United Fruit Co.	New York via wayports.
June 21.	Suffarow.	United Fruit Co.	Breca, R. P.	June 21.	No. 9776 ²⁵	Pan-American Airways	Managua via wayports.
June 21.	Mactibi.	C. D. Mallory & Co.	Cruceco, D. W. I.	June 21.	No. 8944 ²⁵ .	Pan-American Airways	Guayaquil and wayports.
June 21.	Mercian.	United Fruit Co.	Puerto Colombia.	June 21.	Sriname.	United Fruit Co.	Port Limon and Bocas.
June 21.	Annetta ²⁶ .	Leyland S. S. Line.	Svanilla.	June 21.	Coppenham ²⁵ .	United Fruit Co.	New Orleans, La.
June 22.	William M. ²⁷ .	G. I. Bryan.	Colon, R. P.	June 21.	No. 5630 ²⁵	United Fruit Co.	David, R. P.
June 22.	Wanka.	Standard Fruit & S. S. Co.	San Blas, R. P.	June 22.	William M. ²⁷ .	G. I. Bryan.	Bluefields, Nicaragua.
June 22.	Arguani.	Elders & Tyffes, Ltd	Avenmouth via wayports.	June 22.	Mactibi.	United Fruit Co.	New York via wayports.
June 22.	Cartago.	United Fruit Co.	New Orleans via Habana.	June 22.	No. 9685 ²⁵	Pan-American Airways.	Managua via David.
June 22.	No. 9688 ²⁵ .	Pan-American Airways	Managua, Nicaragua.	June 22.	No. 8966 (Peru) ²⁵ .	E. M. Phillips	Lima via wayports.
				June 22.	Atlantida.	Standard Fruit & S. S. Co.	New Orleans via wayports ^{1a} .
				June 22.	Arguani.	Elders & Tyffes, Ltd	Kingston, Jamaica.

²⁵ Air mail carrier. ²⁶ Motor boat. ²⁷ Schooner.

* Other than ships passing through the Canal.

(Continued on page 678, column 2.)

United States Intercoastal Traffic by Commodities for May, 1929.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for May, 1929, and the totals for May, 1928 and 1927. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Agricultural implements.....	493	25	518
Alfalfa meal.....		200	200
Ammonia.....	31		31
Asbestos.....	212		212
Asphalt.....	86	144	230
Automobiles.....	1,581	158	1,739
Automobile accessories.....	213	9	222
Barley.....	106	26	132
Beans.....	29	2,307	2,336
Borax.....	277	1,477	1,754
Bricks.....	654		654
Burlap.....		29	29
Calcium carbide.....	140		140
Camphor.....		78	78
Canned:			
Fish.....	527	2,620	3,147
Fruit.....	1,024	17,598	18,622
Meat.....	42	714	756
Milk.....		646	646
Soup.....	1,340		1,340
Vegetables.....	550	4,132	4,682
Miscellaneous.....	3,180	1,030	4,210
Cellite filtereel.....		100	100
Cement.....	430		430
Charcoal.....	99	59	158
Chemicals.....	1,534	64	1,598
China and fire clay.....	186		186
Cocoa.....	246		246
Cocanuts.....		144	144
Coffee.....	363	290	653
Coke.....	889		889
Cold storage:			
Cheese.....		40	40
Eggs.....		191	191
Lard.....	829		829
Other.....	181	200	381
Confectionery.....	1,032		1,032
Cork.....	411		411
Cotton.....	86	1,472	1,558
Cyanide.....	366		366
Drugs.....	529		529
Dyewoods.....	10	20	30
Earthenware.....	77	208	285
Explosives.....	139		139
Flour.....	208	5,478	5,686
Fruit:			
Dried.....		3,023	3,023
Fresh.....		40	40
Fullers earth.....	50		50
Furniture.....	260		260
General.....	58,325	17,119	75,444
Glass and glassware.....	2,113	54	2,167
Glue.....	60		60
Granite.....	25		25
Guano.....	5		5
Hair.....		11	11
Hardwoods.....	348	2,447	2,795
Hay.....		42	42
Hemp.....	40	1,246	1,286
Honey.....		35	35
Infusorial earth.....		30	30
Ink.....	15		15
Jute.....	65		65
Leather.....		100	100
Lime.....		25	25
Linoleum.....	928	50	978
Liquors.....	20		20
Lumber.....	1,470	228,374	229,844

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Manufactured goods:			
Iron and steel	127,057	404	127,461
Machinery	6,530	356	6,886
Railroad material	811		811
Tinplate	14,651		14,651
Textiles	4,827		4,827
Miscellaneous	12,450	1,395	13,845
Matches	273		273
Metals:			
Copper		2,954	2,954
Iron	4,197		4,197
Lead	25	1,799	1,824
Scrap	75	416	491
Tin		58	58
Zinc	50	540	590
Other	50	18	68
Milk, powdered	60	301	361
Molasses	215		215
Musical instruments	32		32
Oils:			
Cottonseed	508		508
Crude		13,700	13,700
Gasoline, benzine, naphtha		201,442	201,442
Linseed	50		50
Lubricating and greases	4,973	289	5,262
Olive	33		33
Wood		85	85
Other	116	184	300
Ores:			
Iron	494		494
Magnesite		1,847	1,847
Other	29		29
Paint	472	32	504
Paper	5,906	2,711	8,617
Paper pulp		5,779	5,779
Peanuts	198	246	444
Phosphates	135		135
Porcelain	72	582	654
Potash	40		40
Rags	28	289	317
Rice	1,013		1,013
Rope	156		156
Rosin	879		879
Rubber:			
Manufactured	2,115	130	2,245
Raw	178	50	228
Scrap		5	5
Salt	201		201
Sand	28		28
Seeds:			
Hemp		44	44
Other		567	567
Shells	2,754		2,754
Silk		165	165
Skins and hides	36	2,101	2,137
Slag	800		800
Slate	1,032		1,032
Soap	3,143	473	3,616
Soda	672		672
Soda ash	1,756		1,756
Soda, bicarbonate	176		176
Soda, caustic	317		317
Starch	20		20
Sugar	44	11,545	11,589
Sulphur	8,596		8,596
Syrup	186		186
Talc	14	83	97
Tallow		290	290
Tar	119		119
Tartar	26		26
Tea		1	1
Tobacco	3,009	101	3,110
Toys	150	4	154
Turpentine	185		185
Waste	262	139	401
Wax	77	96	173
Wheat	40	115	155
Wine		60	60
Wool	25	2,741	2,766
Zinc oxide	65		65
Totals, May, 1929	294,255	546,192	840,447
Totals, May, 1928	250,734	598,179	848,913
Totals, May, 1927	276,139	638,236	914,375

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Diesel oil is sold by The Panama Canal at Cristobal at \$1.80 per barrel.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.25 per barrel at Balboa and Cristobal. Diesel oil, Balboa only, \$1.80 per barrel.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers at \$8.00 per ton of 2,240 pounds at Cristobal, and \$11.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, \$8.00 per ton at Balboa. When coal is delivered from lighters in quantities of 50 tons or more, the price is \$9.00 per ton at Cristobal, \$12.00 at Balboa. If less than 50 tons is taken from lighters, prices are \$11.00 per ton at Cristobal and \$14.00 per ton at Balboa with minimum charge for 20 tons and maximum charge not to exceed that for 50 tons at \$9.00 Cristobal and \$12.00 Balboa. For furnishing lump coal for galley use, or run of mine coal, in sacks, \$6.00 additional per ton; but if vessel furnishes sacks \$3.00 additional per ton.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

For trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, when requested, an additional charge of 90 cents per ton will be made for extra handling.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Tolls Charges for Transit of The Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity \$1. 20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity .72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton. .50
4. Army and navy transports, colliers, hospital ships, and supply ships, the vessels to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton. 1.20
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton.
6. Vessels returning from Gatun Lake to original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage in such cases, as provided in Paragraph 4, Item 3, of the tariff, and for handling lines in accordance with Item 4 of the tariff.

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

MOVEMENTS OF OCEAN VESSELS.—Continued from page 675.

PORT OF BALBOA.

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	From—	Date.	Vessel.	Line.
June 16,	Emma H. Coppage.	Los Angeles, Calif.	June 17,	Emma H. Coppage.	Texas S. S. Co.
June 20,	Sambu ²⁸	Bayano River, R. P.	June 20,	Sambu	Hans Elliot.
June 20,	Des Hermanos ²⁸	Bayano River, R. P.	June 20,	Des Hermanos ²⁸	A. Valdez.
June 20,	A. B. de Obarrio ²⁸	Bayano River, R. P.	June 20,	A. B. de Obarrio ²⁸	Pacific Fruit Co.

* Other than ships passing through the Canal.

²⁸ Motor schooner.

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Volume XXII. Balboa Heights, C. Z., July 3, 1929. No. 48.

Canal Traffic During Fiscal Year 1929—Record Tolls Collection.

The total number of commercial vessels transiting the Canal during the fiscal year ended June 30, 1929, aggregated 6,413, and the total tolls collection was \$27,127,376.91. Tolls collected during the fiscal year 1929 exceeded the previous high mark for a year's tolls collection (fiscal year 1928 with \$26,944,499.77) by almost \$183,000.00. The number of commercial transits for 1929 fell short by 43 of the previous record of 6,456 established during the fiscal year 1928. In addition to the new high record for a year's tolls collection, new high figures for tons of cargo and ship tonnage were established during the year, although the exact figures will not be known until later.

The daily average number of commercial transits during the year was 17.57, as compared with 17.63 for the fiscal year 1928. The daily average tolls collection amounted to \$74,321.58, as compared with \$73,618.85 for the previous fiscal year.

In the following tabulation, the number of commercial transits and the amount of tolls collected are shown for the fiscal year 1929, with the daily averages of transits and tolls, together with the totals for the fiscal years 1928 and 1927:

	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July	509	\$2,109,083.19	16.41	\$68,034.94
August	526	2,199,069.31	16.97	70,937.72
September	487	2,111,230.56	16.23	70,374.35
October	557	2,274,945.30	17.97	73,385.33
November	527	2,225,937.48	17.57	74,197.91
December	579	2,443,029.39	18.67	78,807.39
Totals, first 6 months	3,185	13,363,295.23	17.31	72,626.60
January, 1929	603	2,502,815.12	19.45	80,735.97
February	522	2,211,961.20	18.64	78,998.62
March	536	2,343,865.55	17.29	75,608.57
April	540	2,281,087.27	18.00	76,036.24
May	524	2,206,546.57	16.90	74,082.15
June	503	2,127,805.97	16.76	70,926.87
Totals, last 6 months	3,228	13,764,081.68	17.82	76,044.65
Totals, fiscal year 1929	6,413	27,127,376.91	17.57	74,321.58
Totals, fiscal year 1928	6,456	26,944,499.77	17.63	73,618.85
Totals, fiscal year 1927	6,475	24,228,830.11	15.00	66,380.36

Canal Traffic in June, 1929.

During the month of June, 1929, 503 commercial vessels and 10 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,127,805.97, and on the launches \$45.87, or a total tolls collection of \$2,127,851.84.

The daily average number of transits of commercial vessels for the month was 16.76, and the daily average tolls collection \$70,926.87. The average amount of tolls paid by each of the commercial transits was \$4,230.23, as compared with \$4,382.72 for the month of May, 1929.

Traffic for the past month was the lightest since September, 1928, when 487 vessels transited.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, June 29, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Losada ¹	22	13.50	23	6.05	23	13.37	23	19.53	British	Pacific Steam Nav. Co.	405.0	54.2	20.0	Hull, England	Corral, Chile	General	4,440	7,221	4,844
Agwamars ¹	22	19.10	23	6.15	23	14.20	23	15.30	American	International S. S. Co.	429.3	59.0	22.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,596	5,209	
El Lobo ¹	22	19.30	23	7.20	23	14.55	23	16.30	British	Atlantic Refining Co.	385.2	51.0	18.6	Philadelphia, Pa.	La Libertad, Ecuador	Ballast	4,851	3,326	
Chinese Prince ²	22	21.15	23	7.20	23	15.08	23	16.30	British	Rio Cape Line	441.6	60.0	22.0	New York, N. Y.	Yokohama, Japan	General	4,683	9,254	6,265
Fernmore ²	22	21.45	23	8.40	23	16.06	23	17.25	Norwegian	Fern Line	381.0	53.8	25.0	Galveston, Tex.	Shanghai, China	General	6,183	6,291	4,530
Steele ²	22	10.45	23	8.53	23	16.53	23	18.30	American	Ore S. S. Corp.	350.0	72.2	20.2	Baltimore, Md.	Cruz Grande, Chile	Ballast	15,551	4,297	
Kenwick ²	19	22.05	23	9.35	23	17.06	23	19.20	American	U. S. Army	390.0	54.2	20.1	Cristobal, C. Z.	San Francisco, Calif.	Army supplies	2,078	3,978	2,553
Son King	22	10.20	23	10.55	23	18.03	23	20.09	American	N. O. & S. A. S. S. Co.	324.0	46.2	21.9	New Orleans, La.	Talcahuano, Chile	General	2,610	3,978	2,553
Pacific Cedar	23	10.30	23	11.55	23	18.33	23	20.09	American	Dillon S. S. Corp.	339.0	54.0	23.2	New York, N. Y.	Los Angeles, Calif.	General	4,800	6,138	4,354
Steel Exporter	23	5.20	23	11.40	23	19.03	23	20.33	American	Isthmian S. S. Lines	324.2	57.0	27.0	Baltimore, Md.	Shanghai, China	General	8,076	7,611	5,590
Missoula	23	13.10	24	6.15	24	13.20	24	15.45	American	Hammond Lumber Co.	362.3	51.2	21.8	San Juan, P. R.	Los Angeles, Calif.	Ballast	4,947	3,374	
Ida	23	16.40	24	6.35	24	14.03	24	15.25	Norwegian	Knut Knutsen	266.9	42.2	18.0	Oslo, Norway	San Antonio, Chile	(?)	2,237	2,095	1,407
West Cape	24	2.20	24	6.40	24	14.46	24	16.20	American	Munson, McCork Line	409.5	54.2	22.0	New York, N. Y.	Tacoma, Wash.	General	5,136	6,566	4,960
Santa Veronica	24	2.30	24	7.15	24	16.15	24	23.45	American	Isthmian S. S. Lines	251.0	44.0	23.0	Baltimore, Md.	Honolulu, T. H.	(*)	2,834	2,823	1,740
Canadian	24	5.40	24	7.35	24	15.09	24	16.50	British	Can. Nat. Steamships	400.0	52.0	17.0	Montreal, Canada	Vancouver, B. C.	General	1,590	5,885	4,073
Winnet	24	5.50	24	8.30	24	16.25	24	21.59	American	Isthmian S. S. Lines	410.0	56.0	20.9	New York, N. Y.	Tacoma, Wash.	General	10,770	7,780	5,811
Challenger ²	24	5.50	24	8.50	24	17.30	24	18.44	American	Redwood Line	381.0	52.0	23.0	Mobile, Ala.	San Francisco, Calif.	General	4,624	5,732	4,131
Abdon	24	6.25	24	8.35	24	17.15	24	18.44	American	United Fruit Co.	332.0	44.3	19.6	Port Limon, C. R.	San Francisco, Calif.	Bananas, coffee	545	3,675	2,359
San Jose	12	14.00	24	9.40	24	18.21	24	19.44	American	U. S. Navy	292.0	44.0	18.0	Cristobal, C. Z.	Balboa, C. Z.	General	2,117	5,776	4,081
Cleveland ⁴	22	19.25	24	10.04	24	17.52	25	19.36	American	Panama Mail S. S. Co.	360.0	52.0	21.3	New York, N. Y.	San Francisco, Calif.	General	7,705	6,347	4,453
Guatemala	24	6.00	24	11.35	24	18.47	24	20.05	American	Calmar S. S. Corp.	384.6	51.2	26.3	Baltimore, Md.	Seattle, Wash.	Steel, general	1,229	6,672	4,905
Calmar	24	6.00	24	11.35	24	18.47	24	20.05	American	Grace Line	408.0	55.0	17.3	Baltimore, Md.	Callao, Peru	General, etc.	2,129	6,672	4,905
Romulus	23	14.05	24	12.50	24	19.52	24	21.00	American	West India Oil Co.	391.8	51.3	15.5	Liverpool, England	Los Angeles, Calif.	Ballast	5,601	3,913	
San Cecelia	23	14.05	24	13.30	24	20.25	24	21.30	American	Anglo-American Oil Co.	424.5	57.0	16.0	Baytown, Tex.	Los Angeles, Calif.	Ballast	2,379	1,892	1,646
Summit	24	11.25	24	13.18	24	21.58	25	7.40	British	Norton, Lilly & Co.	260.0	39.0	20.1	New York, N. Y.	Honolulu, T. H.	Submarine amm ⁿ	1,892	1,646	
Tusitola ²	24	22.05	25	6.15	25	16.32	25	19.45	American	Sun Oil Co.	429.3	59.2	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,709	5,562	
Sunbeam ²	25	6.25	25	7.15	25	14.08	25	16.55	American	Ore S. S. Corp.	561.0	72.0	22.0	Philadelphia, Pa.	Cruz Grande, Chile	General	15,560	4,496	
Amerikaland ²	25	7.35	25	8.12	25	15.32	25	18.11	Swedish	F. & W. Ritson	400.0	52.0	24.0	Baltimore, Md.	Valparaiso, Chile	General	4,375	5,403	3,960
Cherry Branch	25	1.30	25	8.12	25	16.32	25	20.00	British	F. & W. Ritson	400.0	52.0	24.0	Baltimore, Md.	Valparaiso, Chile	General	4,375	5,403	3,960
North-umbertland	25	7.40	25	10.45	25	21.40	26	1.38	British	Federal Steam Nav. Co.	530.0	63.0	31.6	Liverpool, England	New Plymouth, N. Z.	General	10,343	13,268	9,124
Sheafmead	25	11.05	25	11.25	25	20.13	25	21.30	British	Canadian Transp. Co.	380.0	53.6	21.0	Cornebrook, N. F.	Tacoma, Wash.	Paper	4,340	4,466	
Nora ¹	25	9.10	25	13.45	25	22.25	26	4.17	American	Arrow Oil Co.	467.6	62.7	20.6	Beaumont, Texas	Iquique, Chile	Fuel oil	12,446	9,918	7,363
Aachen	24	17.50	25	14.55	25	22.40	25	23.53	German	North German Lloyd	431.2	56.0	25.6	Hamburg, Germany	Valparaiso, Chile	General	6,471	7,196	4,956
Willmotto	25	14.40	25	14.55	25	23.10	26	2.41	American	Seaboard Corp.	390.0	41.2	24.0	Baltimore, Md.	Honolulu, T. H.	(*)	6,100	6,162	4,483
Impero	25	7.10	25	19.50	26	13.16	26	15.00	Italian	Calisti	458.0	32.6	21.5	Genoa, Italy	Valparaiso, Chile	General	941	4,250	4,849
George W	25	15.55	26	6.10	26	14.11	26	15.25	American	Huasteca Petroleum Co.	416.8	56.1	18.6	Baltimore, Md.	Los Angeles, Calif.	Ballast	6,763	4,759	
Barnes ¹	25	16.05	26	6.05	26	14.50	26	15.25	Panaman	Panaman Government	125.0	23.0	0.0	Cristobal, C. Z.	Panama, R. P.	Ballast	288	101	
El Paquico ²	26	6.05	26	6.05	26	14.50	26	15.25	American	Panaman Government	125.0	23.0	0.0	Cristobal, C. Z.	Panama, R. P.	Ballast	288	101	

¹ Tanker.² Motor ship.³ U. S. Army transport.⁴ Cruiser.⁵ Sailing ship.⁶ Panama Government transport.⁷ Paper, cement, and dynamite.⁸ Fertilizer and cobbings.

Benj. Franklin	25	14	05	26	7	10	26	15	16	Norwegian.	Fred Olsen & Co.	452.0	59.5	19.3	Oslo, Norway.	Vancouver, B. C.	Cement, general.	2,180	9,082	6,140
Bowes Castle.	25	17	47	26	7	10	26	17	04	British.	Barber S. S. Line.	418.5	56.1	28.0	New York, N. Y.	Shanghai, China.	General.	7,591	6,675	4,712
J. L. Lucken-	25	23	05	26	8	25	26	17	16	American.	Luckenbath Line.	448.9	60.2	22.0	Boston, Mass.	Seattle, Wash.	General.	5,000	9,294	6,861
bach.	25	23	05	26	9	30	26	17	40	Dutch.	Royal Neth. S. S. Co.	410.0	58.2	25.7	Hamburg, Germany.	Corral, Chile.	General.	6,176	7,820	5,980
Barnevel	26	00	10	26	10	50	26	17	00	American.	Standard Shipping Co.	411.6	53.4	18.0	Hankow, China.	Los Angeles, Calif.	Ballast.	3,504	7,380	5,330
W. H. Tilford	26	00	10	26	11	45	26	18	45	American.	Amer-Hawaiian Line.	415.0	53.7	20.0	Boston, Mass.	Seattle, Wash.	General.	4,795	6,755	4,873
Alaskan.	26	15	30	26	18	55	27	12	45	American.	Quaker Line.	360.3	52.0	22.0	Wilmington, Del.	Portland, Ore.	General.	1,857	3,577	2,748
Ontario	26	16	00	26	18	55	27	12	45	American.	Grace Line.	360.3	52.0	22.0	New York, N. Y.	Tacabano, Chile.	General.	1,853	3,577	2,748
Santa Elisa.	26	16	05	27	6	05	27	15	31	British.	Pacific Steam Nav. Co.	303.0	43.0	18.4	New York, N. Y.	Callao, Peru	General.	1,853	3,577	2,748
Alvarado.	26	18	55	27	6	05	27	15	31	British.	Pacific Steam Nav. Co.	303.0	43.0	18.4	Hamburg, Germany.	Los Angeles, Calif.	Ballast.	7,365	5,065	5,065
Phobos.	26	18	55	27	11	15	27	17	43	Dutch.	Anglo-Saxon Pet. Co.	440.0	59.4	19.4	New York, N. Y.	San Francisco, Cal.	Ballast.	7,060	5,025	5,025
Solana.	27	10	55	27	11	15	27	17	43	American.	Tide-water Oil Co.	419.5	56.5	19.0	Montreal, Canada.	Los Angeles, Calif.	Ballast.	6,319	4,373	4,373
Petrolia.	27	6	05	27	11	50	27	18	41	British.	Anglo-Saxon Pet. Co.	412.0	53.3	21.7	Hamburg, France.	Vancouver, B. C.	General.	4,684	8,043	5,454
Notre Dame	27	9	45	27	12	25	27	20	12	French.	French Line.	427.0	58.3	20.8	Hamburg, Germany.	Champerio, Guat.	General.	3,670	5,529	3,770
de Fourviere.	27	11	50	27	13	15	27	20	31	German.	Hamburg-American Line.	375.0	50.9	22.0	Fremantle, Aust'lia	Los Angeles, Calif.	Ballast.	5,914	4,917	3,528
Aragona.	27	11	50	27	13	15	27	20	31	Swedish.	The Texas S. S. Co.	449.0	50.0	23.6	Pr. Arthur, Tex.	Los Angeles, Calif.	Ballast.	7,484	5,216	5,216
Falsterbo.	27	14	55	27	15	10	27	22	20	American.	The Texas S. S. Co.	425.0	57.0	22.0	Baltimore, Md.	Champerio, Guat.	General.	1,138	1,273	706
Washington.	27	14	55	27	15	10	27	22	20	British.	Pacific Steam Nav. Co.	215.0	34.0	17.0	Cristobal, C. Z.	Callao, Peru	Ballast.	343	480	343
Acapulca.	18	16	05	28	6	05	28	13	04	Peru.	Pacific Steam Nav. Co.	150.8	28.2	9.0	Hamburg, Germany.	Los Angeles, Calif.	Ballast.	9,402	6,586	6,586
Till.	25	23	15	28	6	10	28	16	00	American.	Till Co.	480.5	66.0	23.0	Chester, Pa.	Los Angeles, Calif.	General.	5,476	15,286	10,533
Delaware Sun	27	18	45	28	6	10	28	14	01	American.	Sun Oil Co.	480.5	66.0	23.0	New York, N. Y.	Round the world.	General.	3,700	6,375	4,912
Wilson.	28	5	00	28	7	15	28	15	04	American.	Dollar Line.	516.0	72.2	29.0	New York, N. Y.	Los Angeles, Calif.	General.	3,167	10,795	8,142
Gen. M. H.	27	19	40	28	7	25	28	16	54	American.	Arrow Line.	402.6	53.0	20.6	Jacksonville, Fla.	Los Angeles, Calif.	Ballast.	7,340	5,453	5,453
Sherman.	27	21	10	28	8	35	28	17	48	British.	American Mail Line.	420.0	54.0	23.0	Newcastle, Engl'd	Los Angeles, Calif.	Ballast.	6,807	5,047	5,047
Saxonslar.	27	21	30	28	8	40	28	18	48	American.	The Texas S. S. Co.	416.8	56.0	20.0	Claymont, Del.	Los Angeles, Calif.	General.	1,637	3,984	2,612
New York.	27	22	35	28	9	55	28	18	52	American.	Transmarine Line.	324.0	46.2	18.10	New York, N. Y.	San Francisco, Cal.	General.	3,075	4,112	2,846
Sotopoco.	27	22	35	28	9	55	28	18	52	American.	Malsah S. S. Co.	333.8	48.0	18.6	New York, N. Y.	Seattle, Wash.	General.	9,698	6,783	6,783
Mallenak.	28	6	20	28	9	55	28	18	52	American.	Malsah S. S. Co.	333.8	48.0	18.6	New York, N. Y.	Seattle, Wash.	General.	3,167	10,795	8,142
Standard	28	4	00	28	10	05	28	19	31	American.	Standard Transp. Co.	467.6	62.7	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	6,137	7,480	5,533
Arrow.	28	5	00	28	11	43	28	19	59	British.	Com'th & Dom. Line.	480.0	60.3	26.5	Newcastle, Eng.	Sydney, Australia.	General.	3,167	10,795	8,142
Port Denison.	28	1	55	28	12	40	28	20	41	Swedish.	Johnson Line.	427.0	56.0	23.4	Gothenburg, Swed	San Francisco, Cal.	General.	4,953	10,772	7,581
Balboa.	28	1	55	28	12	40	28	20	41	American.	Standard Oil Co.	425.0	57.2	19.6	Baltimore, Md.	Los Angeles, Calif.	Ballast.	4,953	10,772	7,581
S. C. T. Dodd.	26	17	25	28	14	50	28	22	48	British.	Royal Mail S. P. Co.	485.0	62.0	24.0	Rotterdam, Holland	Vancouver, B. C.	General.	4,318	9,335	6,844
Lochmar.	26	17	25	28	14	50	28	22	48	American.	Pete Hulsebosch.	470.0	61.0	20.5	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	4,318	9,335	6,844
Coimman.	28	11	45	29	6	05	29	13	44	German.	National German Lloyd	416.0	52.0	26.8	Antwerp, Belgium	Vancouver, B. C.	General.	7,694	5,513	4,724
Saale.	28	11	45	29	6	05	29	13	44	Colombian.	North American Navigation Co.	416.0	52.0	26.8	Cristobal, C. Z.	Buenaventura, Col.	General.	7,694	5,513	4,724
Caldas.	28	18	35	29	7	05	29	15	42	French.	Blue Diamond Cement.	401.0	52.9	22.0	Antwerp, Belgium	Los Angeles, Calif.	General.	6,412	4,186	4,186
Emile L. D.	28	18	35	29	7	05	29	15	42	French.	Blue Diamond Cement.	401.0	52.9	22.0	Fall River, Mass.	Los Angeles, Calif.	Ballast.	6,412	4,186	4,186
Lumen.	28	20	35	29	8	35	29	16	34	German.	Anglo-Saxon Pet. Co.	441.0	55.0	17.0	Hamburg, Germany	San Francisco, Cal.	Ballast.	10,458	8,310	6,005
Stagerak.	28	20	35	29	8	35	29	16	34	American.	Atlantic Line Redere.	441.0	55.0	17.0	New York, N. Y.	Portland, Ore.	Steel, general.	3,331	5,956	4,172
Hanley.	28	22	40	29	9	45	29	18	45	American.	Norton, Lilly & Co.	440.0	56.0	30.0	Montreal, Canada.	Adelaide, Australia	General.	3,331	5,956	4,172
Canadian	29	00	10	29	10	55	29	18	18	British.	Can. Nat. Steamships	400.0	52.0	20.10	Newark, N. J.	Seattle, Wash.	General.	3,331	5,956	4,172
Victor.	29	6	20	29	12	49	29	20	23	American.	Transmarine Line.	324.0	46.0	21.7	Baltimore, Md.	San Francisco, Cal.	General.	4,200	.....	.....
Wisconsin	29	11	05	29	12	35	29	20	07	American.	Charles Nelson & Co.	324.0	46.0	22.2	New York, N. Y.	Adelaide, Australia	General.	2,261	7,097	5,268
City of	29	12	20	29	14	10	29	21	12	American.	Roosevelt S. S. Co., S.B.	401.9	54.2	21.0	New York, N. Y.	Fremantle, Aust'lia	General.	5,000	6,295	4,663
Rayville.	29	13	58	29	14	55	29	22	17	British.	Avenue Shipping Co.	375.2	53.6	21.11	New York, N. Y.	Adelaide, Australia	General.	5,000	6,295	4,663
Winton.	29	13	58	29	14	55	29	22	17	British.	Avenue Shipping Co.	375.2	53.6	21.11	New York, N. Y.	Adelaide, Australia	General.	5,000	6,295	4,663

11 Paper, cement, and pulp.

12 Sand, steel, and paper.

13 Kerosene, lubricating oil, and grease.

14 Launch.

15 Auxiliary bark.

16 Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Pat Doherty ¹	22	18 32	23	6 00	23	14 05	23	14 05	American.	Richfield Oil Co.	430 2	59 2	27 6	Los Angeles, Calif.	New York, N. Y.	Gasoline.	9,158	7,978	5,839
Oak Branch	22	21 15	23	6 54	23	15 05	23	15 05	British.	F. & W. Oilson	385 0	49 8	22 7	Corral, Chile.	Liverpool, England	General	5,780	5,209	4,035
Corinto	23	4 45	23	7 44	23	15 40	23	15 40	American.	Panama Mail S. S. Co.	261 1	40 0	15 0	San Francisco, Cal.	Cristobal, C. Z.	General	700	3,252	1,549
Crode Lindo ¹⁵	17	19 18	23	8 19	23	15 25	23	15 25	Venezuelan.	Venezuela Gulf Oil Co.	325 0	55 0	10 6	Balboa, C. Z.	Maracaibo, Venez.	Ballast	3,497	2,067	
W. S. Ruehm	23	3 50	23	8 58	23	17 37	23	17 37	American.	Standard Oil Co. of Cal.	500 0	68 2	28 6	Los Angeles, Calif.	Marcus Hook, Pa.	Gasoline.	14,000	11,224	7,895
Durazzo	23	8 00	23	9 40	23	18 15	23	18 15	German.	Hamburg-American Line	227 0	34 4	12 3	Guayaquil, Ecuador	Cristobal, C. Z.	(*)	383	1,633	1,041
Witram	23	8 30	23	10 48	23	20 23	23	20 23	German.	North German Lloyd	449 0	58 0	25 0	Vancouver, B. C.	Hamburg, Germany	General	7,500	7,820	5,661
Nevada ¹	23	11 25	23	12 24	23	20 23	23	20 23	American.	The Texas Co.	434 8	56 2	28 0	Los Angeles, Calif.	Boston, Mass.	Crude oil	9,605	7,425	5,202
Dean Emery ¹	23	13 30	23	14 09	23	21 45	23	21 45	American.	Pan-Am. Pet. & Tr. Co.	429 3	59 2	25 6	Los Angeles, Calif.	Baltimore, Md.	Gasoline	9,400	7,709	5,517
Point San Pedro	23	15 30	23	16 06	23	23 00	23	23 00	American.	Swayne & Hoyt	324 0	46 2	20 1	San Francisco, Cal.	New Orleans, La.	General	2,858	3,974	2,572
Victorious	23	19 30	24	6 19	24	14 43	24	14 43	American.	Tampa Intercoast Co.	440 1	56 0	27 0	Manila, P. I.	New Orleans, La.	(*)	10,021	8,328	6,036
Willpalo	24	4 00	24	7 05	24	17 05	24	17 05	American.	Williams S. S. Line	386 8	52 2	24 8	Bellingham, Wash.	Baltimore, Md.	Lumber	6,613	5,680	4,080
ElBro	24	4 30	24	7 49	24	15 55	24	15 55	British.	Pacific Steam Nav. Co.	450 3	57 8	23 0	Talcahuano, Chile	New York, N. Y.	General	3,472	9,291	6,301
Finmore	24	9 30	24	10 32	24	19 28	24	19 28	American.	Ore S. S. Corp.	449 1	57 2	29 1	Cruz Grande, Chile	Baltimore, Md.	Iron ore	11,600	7,487	5,185
Finn ¹⁶	23	8 30	24	11 12	24	19 45	24	23 55	Swedish.	Colombia Mar. Co.	273 7	41 0	16 0	Buenaventura, Col.	New York, N. Y.	(*)	1,082	2,472	1,513
Henry S. Grove	24	16 30	25	6 26	25	13 35	25	13 35	American.	Nautilus S. S. Co.	404 6	53 9	25 6	Seattle, Wash.	Baltimore, Md.	Lumber, general	5,251	6,755	4,688
Copeman	24	16 50	25	7 13	25	16 00	25	16 00	British.	G. A. Harrison	259 9	37 4	16 0	Vancouver, B. C.	Cardiff, Wales.	Lumber	2,125	1,850	1,230
Hawaiian.	24	21 55	25	7 25	25	14 45	25	14 45	American.	Hallett, Dixon	400 6	53 9	24 5	Portland, Ore.	Boston, Mass.	General	5,330	6,766	4,767
Vancouver Maru	24	23 30	25	8 14	25	18 35	25	18 35	Japanese.	Amer-Hawaiian Line	385 0	51 0	25 6	Pulapandan, P. I.	Atlantic coast, U. S.	Sugar	7,458	5,919	4,389
Sabotawan	25	8 00	25	8 34	25	18 40	25	18 40	American.	Kokusai Kisen Kaisha.	386 8	52 2	24 0	San Francisco, Cal.	New Orleans, La.	General	6,300	5,708	4,138
Bendeleuch	25	8 00	25	9 35	25	19 20	25	23 05	British.	Redwood Line, Inc.	410 6	54 0	23 5	Vancouver, B. C.	Avonmouth, Eng.	Lumber, wheat	7,752	6,221	4,227
Virgilio ¹⁶	25	5 40	25	12 31	25	20 12	25	20 12	Italian.	W. Thomson & Co.	502 7	61 8	23 0	Valparaiso, Chile.	Genoa, Italy	General	1,027	12,941	9,329
Edward	25	12 20	25	13 23	25	20 40	25	20 40	American.	Lukenbach Line	436 6	57 2	29 0	Portland, Ore.	Boston, Mass.	General	6,973	8,543	6,427
Lukenbach.	25	12 20	25	13 23	25	20 40	25	20 40	American.	E. J. Hooper	436 6	57 2	29 0	Portland, Ore.	Boston, Mass.	General	6,973	8,543	6,427
E. J. Hooper ¹⁷	25	12 20	25	13 23	25	20 40	25	20 40	American.	E. J. Hooper	436 6	57 2	29 0	Portland, Ore.	Boston, Mass.	General	6,973	8,543	6,427
Pacific ¹⁷	25	12 20	25	13 23	25	20 40	25	20 40	American.	E. J. Hooper	436 6	57 2	29 0	Portland, Ore.	Boston, Mass.	General	6,973	8,543	6,427
Tamara.	26	4 12	26	6 11	26	14 10	27	4 10	British.	Shaw, Savill & Albion	500 4	63 3	25 6	Balboa, C. Z.	Gatun Lake, C. Z.	Frozen, general.	3,433	13,562	9,383
Bodegraven.	25	21 25	26	6 39	26	15 25	26	12 10	Dutch.	Royal Ned. S. S. Co.	400 6	58 6	25 8	Lyttelton, N. Z.	London, England	General	8,042	7,384	6,018
Handicap ¹⁶	25	21 50	26	7 14	26	17 25	26	19 00	Norwegian.	Royal Ned. S. S. Co.	415 3	54 7	25 8	Lyttelton, N. Z.	London, England	General	7,825	7,286	5,445
Bennetis	25	23 53	26	7 40	26	16 00	26	17 15	British.	Brussard Line	400 0	52 0	24 9	Seattle, Wash.	Antwerp, Belgium	General	7,387	9,312	8,102
Jane Maersk ¹¹⁶	25	17 50	26	8 24	26	16 50	26	17 45	Danish.	Ben Line, Ltd.	400 0	52 0	24 9	Portland, Ore.	United Kingdom	Grain	9,312	8,102	5,623
Guayaquil	26	3 30	26	8 45	26	16 13	26	16 13	American.	Anglo-Saxon Pet. Co.	456 8	59 7	26 6	Los Angeles, Calif.	Curacao, D. W. I.	Gasoline	9,312	8,102	5,623
Atlantic Sun ¹	26	9 00	26	9 31	26	17 30	26	17 50	American.	Panama R. R. S. S. Line	251 0	43 6	15 6	Guayaquil, Ecuador	Curacao, D. W. I.	General	9,250	7,568	5,283
Orbita	26	2 30	26	11 10	26	19 10	26	17 50	British.	Sun Oil Co.	429 3	59 2	26 0	Los Angeles, Calif.	New York, N. Y.	General	1,042	2,874	1,944
Santa Cruz	26	11 31	26	12 55	26	20 25	26	23 50	American.	Pacific Steam Nav. Co.	550 3	67 3	28 5	Talcahuano, Chile	Philadelphia, Pa.	Gasoline	9,250	7,568	5,283
Colombia	26	10 45	27	6 14	27	13 10	28	10 05	American.	Grace Line	384 0	50 2	20 0	Antofagasta, Chile	Liverpool, England	(*)	4,368		
San Quirino ¹	26	14 57	27	6 40	27	14 30	27	14 30	American.	Panama Mail S. S. Co.	380 0	48 7	22 0	San Francisco, Cal.	New York, N. Y.	General	3,012		
Lochgil ¹⁶	26	16 40	27	7 06	27	17 15	27	14 30	British.	Anglo-Mexican Pet. Co.	406 9	52 2	25 0	Wilmington, Calif.	United Kingdom	Coffee, general	1,491	6,015	4,281
	26	16 40	27	7 06	27	17 15	27	23 20	British.	Royal Mail S. P. Co.	485 6	62 3	29 8	Vancouver, B. C.	Rotterdam, Holland	Gasoline	7,390	6,156	4,212
																Grain, general.	9,497	10,803	7,606
Tanker.																			

¹Tanker.¹⁵South for dry docking only.¹⁶Motorship.¹⁷Launch.¹⁸Coffee, cocoa, and rice.¹⁹Sugar, copra, and general.²⁰Coffee, hides and general.²¹Ores, copper, and wool.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
June 26.	Sixaola.	United Fruit Co.	New York via Kingston.	June 26.	Annetta I. ²⁸	A. Tagarapulos.	Colon, R. P.
June 26.	Novian.	Leyland S. S. Line.	Liverpool via waypoints.	June 26.	Pastores.	United Fruit Co.	Port Limon, Costa Rica.
June 26.	Darien. ²⁹	Seadta Airplane Co.	Barranquilla, Colombia.	June 26.	Stuyvesant.	Royal Neth. S. S. Co.	Port Limon, Costa Rica.
June 25.	Nora B. ²⁷	H. Blackwood.	Colon, R. P.	June 26.	Nora B. ²⁷	H. Blackwood.	Bluefields, Nicaragua.
June 27.	Grunewald.	Hamburg-American Line.	Tampico, Mexico.	June 27.	Darien. ²⁶	Seadta Airplane Co.	Barranquilla, Colombia.
June 27.	Saramacca.	United Fruit Co.	New Orleans, La.	June 27.	No. 9685. ²⁶	Pan-American Airways.	Managua via David.
June 27.	Linda S. ²⁷	Pan-American Airways.	Managua via waypoints.	June 27.	Sixaola.	United Fruit Co.	New York via waypoints.
June 27.	Inapaquina. ²⁸	A. L. Surgeon.	Colon, R. P.	June 27.	Novian.	Leyland S. S. Line.	Port Limon, Costa Rica.
June 27.	Annetta I. ²⁸	United Fruit Co.	Colon, R. P.	June 27.	Linda S. ²⁷	A. L. Surgeon.	Bluefields, Nicaragua.
June 28.	Suriname.	A. Tagarapulos.	Bocas, R. P.	June 28.	Inapaquina. ²⁸	United Fruit Co.	Colon, R. P.
June 28.	Wanka.	Standard Fruit & S. S. Co.	New Orleans via waypoints.	June 28.	Saramacca.	United Fruit Co.	Puerto Colombia.
June 28.	Stuyvesant.	Royal Neth. S. S. Co.	San Blas, R. P.	June 28.	No. 9706. ²⁶	Pan-American Airways.	Curacao via waypoints.
June 29.	Planter.	T. & J. Harrison.	Port Limon Costa Rica.	June 28.	No. 8044. ²⁶	Pan-American Airways.	Guayaquil via waypoints.
June 29.	Managu.	United Fruit Co.	Liverpool via waypoints.	June 28.	Grunewald.	Hamburg-American Line.	Cartagena, Colombia.
June 29.	Parinama.	United Fruit Co.	New York via waypoints.	June 28.	Suriname.	United Fruit Co.	New Orleans, La.
June 29.	No. 9685. ²⁶	Pan-American Airways.	New Orleans via Habana.	June 29.	No. 9688. ²⁶	Pan-American Airways.	Managua via David.
			Managua via David.	June 29.	Amapala.	Standard Fruit & S. S. Co.	New Orleans via waypoints.
				June 29.	Managu.	United Fruit Co.	New York via Kingston.
				June 29.	Stuyvesant.	Royal Neth. S. S. Co.	Amsterdam via waypoints.

PORT OF BALBOA.

²⁶ Air mail carrier. ²⁷ Motor schooner. ²⁸ Motor boat.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
June 27.	A. B. De Obarrio. ²⁹	Pacific Fruit Co.	El Real, R. P.	June 27.	A. B. De Obarrio. ²⁹	Pacific Fruit Co.	Panama Bay, R. P.
June 28.	Dos Hermanos. ²⁹	Bayano River, R. P.	Bayano River, R. P.	June 28.	Dos Hermanos. ²⁹	A. Valdez.	Panama Bay, R. P.
June 28.	Sambu. ²⁹	Bayano River, R. P.	Puerto Armuelles, R. P.	June 28.	Sambu. ²⁹	Hans Elliot.	Panama Bay, R. P.
June 29.	San Luis. ²⁹	Chiriqui Land Co.		June 29.	San Luis. ²⁹	Chiriqui Land Co.	Puerto Armuelles, R. P.

²⁹ Motor schooner.²⁹ Other than ships passing through the Canal.

New Records Established for Largest Cargo and Lowest Cost of Tolls per Ton of Cargo Through the Canal.

The Swedish motor ship *Svealand*, operated by Axel Brostrom & Son, and chartered by the Ore Steamship Corporation, transited the Canal on June 29, 1929, with a cargo of 22,146 long tons of iron ore, bound from Cruz Grande, Chile, to Baltimore, Maryland.

This is the largest cargo carried through the Canal on any ship to date. The previous record was 22,000 tons, made on October 27, 1922, by the tank steamship *William Rockefeller*, carrying crude oil.

The *Svealand* established also on the above transit a new record for low cost of tolls per ton of cargo. The tolls paid amounted to \$4,678.75 or a pro rata cost of \$0.2113 per ton of cargo. The previous record of \$0.2141 was made by the *Svealand* on May 21, 1929.

The *Svealand* is 550.1 feet long, 72 feet beam, of 15,339 gross and 4,377 net tons, national registered tonnage, and 4,461 net tons, Panama Canal measurement. The draft of the ship at the time of transit on June 29, was 34 feet.

Notice to Mariners.

Manzanillo Bay and Limon Bay.

THE PANAMA CANAL, EXECUTIVE OFFICE

BALBOA HEIGHTS, C. Z., June 28, 1929.

No. 555.

Letters and numbers designating various aids to navigation in Manzanillo and Limon Bays have been assigned as follows:

- M-1 Front Range Light, Margarita.
- M-2 Rear Range Light, Margarita.
- E-1 Black Spar, East Breakwater Entrance.
- E-2 Red Spar, East Breakwater Entrance.
- C-3 Outer Black Spar, Coco Solo Basin.
- C-4 Red Spar, Coco Solo Approach, 16-ft. Spot.
- C-5 Inner Black Spar, Coco Solo Basin.
- C-6 Outer Red Spar, Coco Solo Basin.
- C-8 Inner Red Spar, Coco Solo Basin.
- E-7 Fixed Green Electric Spar, Ft. De Lesseps Approach.
- M-11 Black Spar, Between Pier No. 6 and the Mole.
- E-12 Flashing Red Electric Spar (former "P"), at Coaling Station.
- F-13 Black Spar, French Canal, opposite Coaling Station.
- E-14 Fixed Red Electric Spar (former "Q"), at Coaling Station.
- F-15 Black Spar, French Canal, opposite Coaling Station.
- E-16 Fixed Red Electric Spar (former "R"), at Coaling Station.
- E-17 Fixed White Electric Spar (former "N"), at Coaling Station.
- E-18 Fixed Red Electric Spar (former "S"), at Coaling Station.
- E-19 Fixed White Electric Spar (former "O"), at Coaling Station.

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending June 27, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cambrai.....	U. S. Government.....	June 14.....	June 17.....	1,377	635
Corinto.....	Panama Mail S. S. Co.....	June 23.....	June 23.....	11	
Kenowis.....	U. S. Government.....	June 23.....	June 24.....		65
Guatemala.....	W. R. Grace & Co.....	June 24.....	June 25.....	54	3
Barneveld.....	Royal Netherlands S. S. Co.....	June 26.....	June 26.....	55	
Colombia.....	Panama Mail S. S. Co.....	June 26.....	June 27.....	95	24
Benjamin Franklin.....	Fred Olsen & Co.....	June 26.....	June 27.....	1,678	
Santa Elisa.....	Grace Line.....	June 27.....	June 27.....	1	
Indien.....	Orienta Ved Stradden.....	June 27.....	June 28.....	215	

Directory of The Panama Canal.

Executive Department.

Headquarters, Balboa Heights.

COL. HARRY BURGESS, U. S. A., Governor.

M. B. Stevens, Secretary.

C. A. McILVAINE, Executive Secretary.

JNO. H. SMITH, Chief Clerk, Executive Office.

GUY JOHANNES, Chief, Police and Fire Division.

C. H. CALHOUN, Chief, Division of Civil Affairs.

BEN M. WILLIAMS, Superintendent, Division of Schools.

E. F. ATTAWAY, General Secretary, Bureau of Clubs and Playgrounds.

C. J. RILEY, District Attorney, Ancon.

N. A. BECKER, Land Agent and Assistant Counsel, Ancon.

Department of Operation and Maintenance.

(Under immediate direction of the Governor as head of the department.)

Headquarters, Balboa Heights.

LIEUT. COL. J. L. SCHLEY, U. S. A., Engineer of Maintenance.

J. G. CLAYBOURN, Superintendent of Dredging, Paraiso.

LEONARD FOOTE, Assistant Superintendent, Dredging Division, Paraiso.

MAJ. RAYMOND A. WHEELER, U. S. A., Assistant Engineer of Maintenance.

A. C. GARLINGTON, Electrical Engineer, Electrical Division.

W. R. HOLLOWAY, Superintendent, Pacific Locks, Pedro Miguel.

E. D. STILLWELL, Superintendent, Gatun Locks, Gatun.

J. J. WALSH, Supervisor, Gatun Dam, Gatun.

E. S. RANDOLPH, Designing Engineer, Madden Dam.

L. W. LEWIS, Office Engineer.

R. Z. KIRKPATRICK, Chief of Surveys, Section of Surveys.

G. W. GREEN, Municipal Engineer, Division of Municipal Engineering.

CAPT. C. H. WOODWARD, U. S. N., Marine Superintendent, Marine Division.

COMMANDER ISAAC C. KIDD, U. S. N., Captain of the Port, Cristobal.

COMMANDER S. A. TAFFINDER, U. S. N., Captain of the Port, Balboa.

BOARD OF LOCAL INSPECTORS, COMMANDER ISAAC C. KIDD, U. S. N., *Chairman*,

COMMANDER S. A. TAFFINDER, U. S. N., and LIEUT. PHILIP S. FLINT, U. S. N., members.

John J. Walker, Recorder.

BOARD OF ADMEASURERS, CAPT. C. H. WOODWARD, U. S. N., *Chairman*.

O. MAESSEN, Inspector of Hulls and Boilers.

F. KARIGER, Pilot in Charge, Lighthouse Subdivision, Gatun.

CAPT. ROY W. RYDEN, Naval Constructor, U. S. N., Superintendent of Mechanical Division, Balboa.

H. H. EVANS, Assistant Superintendent, Mechanical Division, Balboa.

LIEUT. WESLEY M. HAGUE, U. S. N., Assistant to the Superintendent, Mechanical Division, Balboa.

W. H. STONE, Production Superintendent, Cristobal Shops, Cristobal.

Supply Department.

Headquarters, Balboa Heights.

ROY R. WATSON, Chief Quartermaster.

J. H. K. HUMPHREY, Assistant Chief Quartermaster.

J. E. HIGGINS, Agronomist, Balboa Heights.

B. C. POOLE, District Quartermaster, Ancon-Balboa, Balboa Heights.

J. M. KING, District Quartermaster, Cristobal-Gatun, Cristobal.

C. PETERS, District Quartermaster, Pedro Miguel.

A. W. GOULET, General Manager, Commissary Division, Cristobal (P. R. R.)

J. B. FIELDS, Constructing Quartermaster.

E. H. PARMELEE, General Storekeeper, Balboa.

A. P. E. DOYLE, Printer, The Panama Canal Press, Mount Hope.

Accounting Department.

Headquarters, Balboa Heights.

ELWYN GREENE, Auditor, Panama Canal.

WILSON H. KROMER, Assistant Auditor on the Isthmus.

ROBERT W. GLAW, Paymaster.

ALFRED H. MOHR, Collector.

JOHN J. LUCKEY, Chief Accountant.

SAMUEL BARDELSON, Chief Examiner.

H. H. HUDSON, Claim Officer.

M. L. DUFF, Railroad Accountant.

Health Department.

Headquarters, Balboa Heights.

LIEUT. COL. JOSEPH F. SILER, U. S. A., Chief Health Officer.

DR. D. P. CURRY, Assistant Chief Health Officer.

DR. M. F. HARALSON, U. S. P. H. S., Chief Quarantine Officer.

COL. GEORGE M. EKWURZEL, U. S. A., Superintendent, Gorgas Hospital, Ancon.

MAJ. H. P. MAKEL, U. S. A., Superintendent, Colon Hospital, Cristobal.

CAPT. C. C. ODOM, U. S. A., Superintendent, Corozal Hospital, Corozal.

DR. HENRY GOLDTHWAITE, Health Officer of Panama City, Ancon.

DR. J. L. BYRD, Health Officer of Cristobal-Colon, Cristobal.

DR. C. A. HEARNE, Quarantine Officer, Cristobal.

DR. J. D. ODOM, Quarantine Officer, Balboa.

Courts.

HON. JAMES J. LENIHAN, District Judge, Ancon.

F. H. SHEIBLEY, Clerk of Court, Ancon.

J. S. CAMPBELL, Senior Assistant Clerk of Court, Cristobal.

JOHN T. BARRETT, Canal Zone Marshal, Ancon.

J. W. BLACKBURN, Magistrate, Balboa.

P. E. MURRAY, Magistrate, Cristobal.

Wage and Complaints Boards.

Balboa Heights.

Wage Board:

MAJ. RAYMOND A. WHEELER, representing The Panama Canal.

H. A. McCONAUGHEY, representing employees.

Board on Complaints Concerning Working Conditions:

MAJ. RAYMOND A. WHEELER, and Head of Department or Division interested, representing The Panama Canal.

H. A. McCONAUGHEY and A. M. WRIGHT, representing employees.

The Panama Canal in the United States.

Headquarters, Munitions Building, 19th and "B" Streets, NW., Washington, D. C.

A. L. FLINT, General Purchasing Officer and Chief of Office.

E. E. WEISE, Assistant to the Chief of Office.

E. D. ANDERSON, Chief Clerk, Purchasing Department.

NOBLE MOORE, Assistant Auditor.

W. J. SHERIDAN, Assistant Purchasing Agent, 24 State St., New York, N. Y.

A. S. PERRY, Assistant Purchasing Agent, New Orleans, La.

W. A. E. DOYING, Inspecting Engineer, Washington, D. C.

Panama Railroad Company.

Headquarters, Balboa Heights.

COL. HARRY BURGESS, U. S. A., President.

LIEUT. COL. J. L. SCHLEY, U. S. A., Second Vice President.

S. W. HEALD, Superintendent.

ROBERT BEVERLEY, Assistant to Superintendent.

M. F. FOSTER, Master of Transportation.

M. B. CONNOLLY, Roadmaster.

R. B. WALKER, Receiving and Forwarding Agent, Cristobal.

A. L. PRATHER, Superintendent, Coaling Plants, Cristobal.

C. W. LEE, Commercial Agent.

JOHN O. COLLINS, Counsel, Ancon.

Office in the United States, 24 State Street, New York City.

T. H. ROSSBOTTOM, Vice President.
 W. R. PEIZER, Assistant to Vice President and Secretary.
 V. M. NEWTON, Treasurer.
 W. E. H. JOHNSTON, Acting Auditor.
 W. K. B. POTTS, Superintending Engineer.
 RICHARD REID ROGERS, General Counsel.
 A. E. PATERSON, Freight Traffic Manager.
 T. S. SPRAGUE, General Freight Agent.
 A. M. GIBSON, Acting Passenger Agent.
 _____ Claim Agent.
 E. HATTON, Pier Superintendent.
 W. J. SHERIDAN, Commissary Purchasing Agent.
 A. S. PERRY, Assistant Commissary Purchasing Agent, New Orleans, La.

Directory of Officials of the Panaman Government.

(Revised as of October 20, 1923.)

The Honorable FLORENCIO HARMODIO AROSEMENA, President of the Republic.
 Mr. MANUEL DE JESUS QUIJANO, Secretary General of the Presidencia.
 Mr. LUIS MORALES H., Private Secretary to the President.
 Colonel ROBERTO CHIARI, Aide de Camp to the President.
 The Honorable ADRIANO ROBLES, Secretary of Government and Justice.
 Mr. ENOCH ADAMES V., Subsecretary of Government and Justice.
 The Honorable J. D. AROSEMENA, Secretary of Foreign Relations.
 Doctor RICARDO A. MORALES, Subsecretary of Foreign Relations.
 The Honorable JEPHTHA B. DUNCAN, Secretary of Public Instruction.
 Mr. MANUEL E. MELO, Subsecretary of Public Instruction.
 The Honorable T. GABRIEL DUQUE, Secretary of Finance and Treasury.
 Mr. JULIO QUIJANO, Subsecretary of Finance and Treasury.
 The Honorable LUIS F. CLEMENT, Secretary of Agriculture and Public Works.
 Mr. C. J. QUINTERO, Subsecretary of Agriculture and Public Works.
 Mr. CARLOS CLEMENT, Chief of Materials and Purchases.
 Dr. MIGUEL ANGEL GRIMALDO B., Magistrate, Supreme Court of Justice (President).
 Dr. JUAN VASQUEZ V., Magistrate, Supreme Court of Justice (Vice-President).
 Dr. DANIEL BALLE, Magistrate, Supreme Court of Justice.
 Dr. MANUEL A. HERRERA L., Magistrate, Supreme Court of Justice.
 Dr. ERASMO MENDEZ, Magistrate, Supreme Court of Justice.
 Dr. ARISTIDES ARJONA, Attorney General of the Nation.
 Dr. F. J. DE LA OSSA, Superior Judge of the Republic.
 Dr. JOSE DOMINGO SOTO, Executive Judge of the Republic.
 Dr. JOSE ISAAC FABREGA, Prosecuting Attorney of the Superior Court.
 Mr. JOSE MARIA GOYTIA, Director General of Posts and Telegraphs.
 Colonel RICARDO ARANGO, Commandant, National Police Corps.
 Mr. F. H. BALDWIN, Fiscal Agent of the Republic.
 Mr. TOMAS GUARDIA, Chief Engineer of the Republic.
 Gen. IGNACIO QUINZADA, Director General of Statistics.
 Mr. EZEQUIEL FERNANDEZ J., Registrar General of Civil Affairs.
 Mr. DAMASO A. CERVERA, Registrar General of Property.
 DR. RAFAEL NEIRA A., Administrator General of Liquor Tax.
 Mr. ENRIQUE LINARES, Manager, Banco Nacional de Panama.
 The Honorable ARCHIBALDO E. BOYD, Governor of the Province, Panama.
 The Honorable INOCENCIO GALINDO, JR., Governor of the Province of Colon.
 The Honorable JULIO AROSEMENA, Alcalde of the District, Panama.
 The Honorable R. G. DE PAREDES, Alcalde of the District, Colon.
 Mr. JUAN A. GUIZADO, Inspector General, Panama Fire Department.
 Mr. MAXIMINO WALKER H., Commandant, Colon Fire Department.
 Mr. CARLOS DE DIEGO, Captain of the Port, Panama.
 Mr. AGUSTIN OSES, Captain of the Port, Colon.
 Mr. JOSE AGUSTIN ARANGO, Superintendent, Santo Tomás Hospital, Panama.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors. An illustrated pamphlet explaining in detail the arrangement may be had upon application to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

On general merchandise the rates are as follows:

(a) For handling cargo from ship's side to storage place, the customary inward local charge of \$1 per ton.

(b) For delivery or reforwarding, customary outward local charge of \$1 per ton. (Total of 20 cents per ton more than regular transfer charge.)

(c) For storage, 3 cents per ton per day, except that no charge will be made for the first 35 days.

The Panama Railroad Company stores this cargo in four fireproof warehouses, 160 feet by 850 feet, at Cristobal, and in one of the same dimensions at Balboa.

Cargo stored for orders can be reforwarded from the Isthmus—each carrier to collect its proportion of the through rate instead of the local. This means that should a shipment move from New York to the Canal Zone, it will of course pay regular local rate to Balboa or Colon, as the case may be—but should owner wish to reforward to, say, "Guayaquil," he can do so by paying the oncarrier's proportion of the through rate. Upon evidence that the shipment or any part of it moved beyond the Canal Zone, the initial carrier will refund the difference between the through and local rate.

Cargo intended for warehousing at Cristobal or Balboa should be so indicated on the bill of lading, thus "Cristobal for orders" or "Balboa for orders." When so consigned it is not necessary for shippers to secure consular papers at original point of shipment, nor to have bills of lading consulated. Cargo consigned to Canal Zone for orders may be delivered in the Republic of Panama in which case it is necessary to prepare an invoice on which duties can be paid. When evidence of payment of duty is presented to the Canal Zone customs officers they will issue the necessary release and delivery can be taken in the usual way. For those on the Canal Zone who are allowed to import goods duty free the Panama Canal customs release is all that is necessary. For reshipment from storage to a foreign country the shipper takes out bill of lading, consular invoice and sobordo if necessary and cargo is forwarded as regular outward local.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," are shown in the pamphlet referred to above.

Tolls Charges for Transit of The Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity..... \$1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity..... .72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton..... .50
4. 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
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton.
6. Vessels returning from Gatun Lake to original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current T  r  f of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, White male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat....	Tuesdays, Thursdays, and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m.; Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Section "B:"	
Ward 5, Male, private rooms, American boys.....	Daily, 9.30 to 11 a. m.; 2.00 to 4.30 p. m.;
Ward 6, Foreign, male and female, private rooms, American girls.....	6.30 to 8.00 p. m.
Ward 7, White female, private rooms.....	(No visitors permitted in nursery.)
Ward 8, Obstetrical department, white females (Nursery).....	
Section "C:"	
Ward 9, White foreign, male.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p. m.
Ward 11, Colored, male, surgical.....	
Ward 12, Colored, male, medical, eye and ear.....	
Ward 13, Colored, male, G. U.....	
Ward 14, American, male, G. U.....	
Section "D:"	
Ward 15, American, male, surgical.....	{ Tuesdays, Thursdays, and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m.
Ward 16, American, male, medical, eye and ear.....	{ Sundays and holidays, 9.30 to 11 a. m.; 2.00 to 4.00 p. m.
Ward 17, Colored children.....	{ Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p. m.
Ward 18, White children.....	Daily, 9.30 to 11 a. m.; 2 to 4 p. m.
Ward 19, Colored, female, medical.....	{
Ward 20, Colored, female, surgical, obstetrical.....	{ Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p. m.
Isolation.....	No visitors permitted except to visit tuberculosis patients, Thursdays, Sundays, and holidays, 1.30 to 3 p. m.

Permission to visit outside of visiting hours will be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., July 10, 1929. No. 49.

New High Records for Year's Commercial Measurement Tonnage, Tolls, and Tons of Cargo Carried.

Supplementing article appearing in THE PANAMA CANAL RECORD of July 4, 1929, in which it was stated that traffic through the Canal during the fiscal year 1929 had broken all previous records for a year's traffic with respect to tolls collected, exact figures are now available and indicate that ship tonnages (with the exception of United States net) and tons of cargo carried also surpass the corresponding totals for these items for the fiscal year 1928, which were the previous high marks in Canal traffic. As was stated in last week's issue, the number of transits were 43 fewer in 1929 than in 1928.

The following tabulation shows the number of transits, tonnage, tolls collected, and tons of cargo carried during the past fiscal year, as compared with the corresponding totals made during the previous record year (fiscal year 1928), and the amount of the increases or decreases:

Commercial traffic.	Fiscal year, 1929.	Fiscal year, 1928.	Increase.
Number of transits.....	6,413	6,456	43
Tonnage:			
Panama Canal net.....	29,837,794	29,458,634	379,160
United States net.....	22,793,847	22,863,796	69,949
Registered gross.....	37,464,792	37,202,874	261,918
Registered net.....	22,900,317	22,847,689	52,628
Tolls collected.....	\$27,127,376.91	\$26,944,499.77	\$182,877.14
Tons of cargo.....	30,663,006	29,630,709	1,032,297

* Indicates a decrease.

French Line to Increase Fleet.

The Compagnie Generale Transatlantique (French Line), operators of a fleet of vessels between Europe and the Pacific coast of North America, is planning to add four carriers to its service. The additional vessels, now under construction, are the motor ships *Washington* and *Oregon*, and the steamers *Wyoming* and *Wisconsin*. All of the vessels will be of 9,500 tons, equipped with refrigerator space, and will have an average sea speed, fully laden, of 13½ knots. Accommodations will be provided for 40 passengers.

The first of the new vessels to appear in Canal waters will be the motor ship *Oregon*, which is due to arrive in the early part of January, 1930.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, July 6, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.		Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Rialto ²	29	11 07	30	6 05	30	12 39	30	14 20	Italian	Italian Line	430 0	55 0	19 3	Trieste, Italy	Vancouver, B. C.	General	1,990	7,789	6,025
Innesmoor ²	29	20 05	30	6 22	30	13 52	30	17 30	British	Moore Line, Ltd.	375 0	52 6	25 0	Casa Blanca, Mor	Japan	Phosphates	7,500	6,055	4,615
Rubine	30	5 55	30	7 00	30	14 35	30	23 30	British	N. Z. Shipping Co.	480 0	60 3	29 6	London, England	Wellington, N. Z.	General	6,048	11,443	8,417
Lio ²	30	5 55	30	7 40	30	14 38	30	15 45	American	Standard Transp. Co.	431 0	59 0	19 2	Providence, R. I.	Los Angeles, Calif.	Ballast	7,816	5,112	5,112
Georgian	30	7 10	30	9 10	30	16 15	30	17 25	American	Amor-Hawayan Line.	435 0	57 6	18 0	Philadelphia, Pa.	San Francisco, Cal.	General	2,755	7,983	5,882
Durazo	23	18 15	30	10 00	30	16 54	30	18 20	German	Hamburg-American Line	227 5	34 0	13 10	Cristobal, C. Z.	Guayaquil, Ecuador	General	571	1,633	1,041
Bolivar ²	30	21 35	1	6 12	1	14 00			Venezuela	Venezuelan Gulf Oil Co.	305 0	50 0	9 6	Maracaibo, Venez.	Balboa, C. Z.	Ballast			
Maybashi	7-1	2 50	1	7 00	1	15 16	1	16 20	Japanese	Nippon Yusen Knisha.	445 0	58 0	23 11	Baltimore, Md.	Kobe, Japan	General	7,561	8,012	5,749
Marc			1	7 15	1	16 38			American	U. S. Navy	180 0	35 6		Cristobal, C. Z.	Balboa, C. Z.	(⁹)			
Mallard ⁴			1	7 15	1	16 38			American	U. S. Navy	231 0	21 10		Cristobal, C. Z.	Balboa, C. Z.	General	2,486	5,682	4,086
S-15 ⁵			1	8 25	1	15 29			American	Hammond Line	336 0	52 0	16 0	Philadelphia, Pa.	Seattle, Wash.	General	520	3,684	2,234
Defacto		1 6 15	1	9 42	1	16 32		1 16 25	American	United Fruit Co.	330 6	44 0	19 6	Port Limon, C. R.	San Francisco, Cal.	Coffee, bananas	776	2,873	1,776
Limon	6-30	7 09	1	9 55	1	17 32		1 18 50	American	Panama R. S. S. Line	231 0	43 0	18 8	New York, N. Y.	Guayaquil, Ecuador	General	9,253	7,472	5,542
Buenaventura.			1	9 55	1	17 32		1 18 50	American	Isthmian S. S. Lines	424 8	55 0	27 0	Baltimore, Md.	Vancouver, B. C.	(¹⁰)	6,205	4,286	
Robin Gray	7-1	9 32	1	11 00	1	18 23	2	1 33	American	U. S. Tank Ship Co.	390 0	54 2	17 0	New Orleans, La.	Kahului, Hawaii.	Ballast	1,200	6,558	4,753
Castana ¹	1	11 25	1	12 10	1	19 04	1	20 25	American	U. S. Tank Ship Co.	409 0	54 2	17 0	Philadelphia, Pa.	Seattle, Wash.	General			
Wind Rush.	1	12 20	1	14 25	1	21 45	1	23 00	American	Shepard S. S. Co.	292 0	44 0	18 3	Cristobal, C. Z.	Balboa, C. Z.	Ballast	192	1,183	742
Galveston ⁶	1	13 55	1	18 50	1	21 45	1	23 00	American	U. S. Navy	200 0	33 1	12 8	Cristobal, C. Z.	Gatun, C. Z.	General	4,000	6,524	4,686
Jeane ⁷			1	16 54					American	A. M. Butcher	200 0	33 1	12 8	Cristobal, C. Z.	Buenaventura, Col.	Sugar			
Baralt	6-27	22 15	2	6 08	2	14 40		2 16 00	Dutch	Royal Neth. S. Co.	400 0	52 0	19 0	Cristobal, C. Z.	Seattle, Wash.	General			
Dalworth	7-1	16 25	2	6 03	2	15 20		2 16 50	British	Furness, Withy & Co.	436 0	56 2	20 0	Cardenas, Cuba	Los Angeles, Calif.	Ballast	7,405	5,131	
Franklin K.	1	18 00	2	6 20	2	15 47	2	16 33	American	Huasteca Petroleum Co.	390 0	54 0	21 8	Norfolk, Va.	Vancouver, B. C.	General	6,846	5,623	4,230
Hesperos	1	18 40	2	7 25	2	16 52	2	18 00	Norwegian	Brusgaard Kios. & Co.	513 0	68 3	24 0	Antwerp, Belgium	Los Angeles, Calif.	Ballast	11,719	8,619	
California	2	4 25	2	7 45	2	17 17	2	18 00	American	Standard Oil Co.	457 0	60 0	19 0	London, England	Los Angeles, Calif.	Ballast	7,917	4,849	
Standard ¹	2	8 10	2	8 35	2	19 07	2	20 18	British	Anglo-Saxon Pet. Co.	435 0	53 0	26 3	Amsterdam, Holland	San Antonio, Chile	General	5,692	7,525	5,154
Telena ²	2	8 10	2	8 35	2	19 07	2	20 18	German	Hamburg-Germany	391 0	53 7	17 6	Hamburg, Germany	Los Angeles, Calif.	Ballast	415	6,126	3,669
Rhodopis	1	17 15	2	9 20	2	20 24	2	21 35	Norwegian	A. F. Klavens & Co.	436 9	58 0	25 0	New York, N. Y.	San Francisco, Cal.	Army supplies			
Solstad ²	2	3 55	2	10 50	2	20 24	2	21 35	American	U. S. Army	412 0	53 2	19 0	Hamburg, Germany	Balboa, C. Z.	Ballast	6,296	4,395	
St. Michel ⁸	1	2 30	2	12 05	2	20 00	2	21 35	Dutch	Anglo-Saxon Pet. Co.	410 5	51 3	21 3	Philadelphia, Pa.	Seattle, Wash.	General	5,254	6,573	4,916
Scopas ¹	2	7 30	2	13 20	2	20 55	2	22 25	American	Pacific-Atlantic S. S. Co.	485 0	58 0	23 6	Liverpool, England	Talcahuano, Chile	General	4,975	9,356	6,561
West Katon	2	18 45	3	19 15	3	13 40	3	14 40	British	Pacific Steam Nav. Co.	410 0	53 5	22 6	Newcastle, England	Los Angeles, Calif.	Ballast	6,010	4,094	
Orta	2	14 30	3	6 30	3	14 58	3	16 00	British	Reinhold Oil Co.	334 0	46 2	23 0	New Orleans, La.	Vancouver, B. C.	General	4,388	3,984	2,617
Oilpioneer ¹	3	6 30	3	7 25	3	16 53	3	19 30	American	Swayne & Hoyt	446 0	56 0	25 0	Boston, Mass.	Seattle, Wash.	General	5,575	8,552	6,236
Point Reyes	3	6 40	3	8 20	3	16 55	3	19 30	American	Luckenbach Line	404 9	53 0	25 0	Santiago, Cuba	Auckland, N. Z.	Sugar	7,454	5,651	4,076
K. I. Luckenbach	3	10 42	3	12 30	3	19 10	4	5 32	American	Andrew Weir & Co.	446 0	56 0	25 0	Boston, Mass.	Seattle, Wash.	General	5,575	8,552	6,236
Dunrobin	3	4 15	3	12 20	3	20 06	3	21 55	British	Andrew Weir & Co.	404 9	53 0	25 0	Santiago, Cuba	Auckland, N. Z.	Sugar	7,454	5,651	4,076

¹ Tanker. ² Motor ship.³ South for dry docking only.⁴ Mine sweeper. ⁵ Submarine.⁶ Cruiser. ⁷ Launch. ⁸ U. S. Army transport.⁹ Towing submarine S-15. ¹⁰ Steel, tinplate, and general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	Salt draft.			Nature.	Tons.	Gross.	Net.
Huntingdon.....	1	14.45	2	6.12	2	14.10	2	16.15	British.	Federal Steam Nav. Co.	520.7	64.0	24.0	Bluff, N. Z.	Liverpool, England	Frozen, general.	7,251	12,945	9,378
El Lobo.....	1	15.15	2	6.40	2	17.05	2	17.05	British.	C. T. Bowring & Co.	355.2	51.0	23.0	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil.	6,164	4,851	3,326
Cauca.....	1	18.00	2	6.57	2	17.30	2	17.30	Colombian.	Nacional Navigation Co.	107.2	23.0	11.0	Buenaventura, Col.	Cristobal, C. Z.	Sugar.	283	238	163
Maltran.....	2	4.30	2	7.09	2	17.20	2	17.20	American.	Mallory Transport Co.	333.8	48.0	22.6	New York, N. Y.	New York, N. Y.	Lumber.	4,800	4,172	2,827
Garroyle.....	2	1.30	2	7.51	2	18.20	2	18.20	American.	Vacuum Oil Co.	425.0	57.0	27.0	San Francisco, Cal.	Philadelphia, Pa.	Lubricating oil.	10,117	7,810	4,989
Virginia.....	1	11.15	2	8.14	2	16.20	2	16.55	American.	Panama-Pacific Line	586.0	80.2	30.0	San Francisco, Cal.	New York, N. Y.	General.	7,500	25,254	18,170
Republic.....	2	6.40	2	8.58	2	18.35	2	18.35	American.	Petroleum Nav. Co.	331.8	51.2	23.9	San Francisco, Cal.	Baltimore, Md.	Gasoline.	5,107	5,551	3,902
Orinoco.....	2	9.15	2	9.53	2	19.10	2	19.10	American.	States S. S. Co.	336.4	52.2	23.6	Seattle, Wash.	Wilmington, Del.	Lumber, cork.	5,688	5,455	3,799
Alaska.....	2	11.45	2	12.20	2	19.45	2	19.45	Norwegian.	Scand.-So. Pacific Co.	410.5	54.1	23.6	San Antonio, Chile.	Curacao, D. W. I.	Nitrates, copper.	7,121	6,563	3,028
Iowa.....	2	11.55	2	12.46	2	20.25	2	20.25	American.	Amer.-Hawaiian Line.	407.7	53.7	23.0	Portland, Oreg.	Boston, Mass.	General.	5,673	7,079	5,028
Robin Hood.....	2	16.25	3	6.11	3	13.50	3	13.50	American.	Seas Shipping Co.	424.8	55.2	24.6	Everett, Wash.	New York, N. Y.	Lumber.	6,817	7,473	5,533
Presidente.....	2	29.8.30	3	6.55	3	19.10	4	00.35	Argentine.	Argentine Government.	279.0	44.0	19.0	Valparaiso, Chile.	Habana, Cuba.	Ballast.	.....	1,406	2,700
Vsurgis.....	3	5.30	3	7.14	3	20.50	.....	.....	German.	North German Lloyd	231.2	37.8	12.0	Punatrenas, C. R.	Cristobal, C. Z.	General.	7,726	9,641	6,989
Enterprise.....	2	18.30	3	7.21	3	18.40	3	18.40	British.	Furness-Pacific, Ltd.	435.9	60.1	27.5	Vancouver, B. C.	Glasgow, Scotland.	Nitrates	7,870	6,536	4,516
Wasgenwald.....	2	20.30	3	7.45	3	19.30	3	23.50	German.	Hamburg-American Line	399.4	54.2	26.3	Talcahuano, Chile.	Hamburg, Germany	General.	1,832	5,906	4,187
Canadian.....	3	4.30	3	8.16	3	20.00	3	23.35	British.	Can. Nat. Steamships	400.3	52.2	18.0	Auckland, N. Z.	Montreal, Canada.	Wool, hides, gum	10,114	11,487	8,762
Andrea F.....	3	4.05	3	9.10	3	20.35	3	20.35	American.	Luckenbach Line	496.0	68.2	27.0	Portland, Oreg.	Boston, Mass.	Lumber, general.	7,119	8,240	5,395
Tacoma Star.....	3	8.45	3	9.53	3	22.40	4	3.15	British.	Blue Star Line	450.0	58.5	26.6	N. Westminster, B. C.	Liverpool, England	General.	550	1,132	741
Manizales.....	3	9.15	3	10.30	3	23.10	.....	.....	German.	North German Lloyd	216.5	32.9	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	9,660	8,229	5,982
Glanorgan.....	3	9.55	3	11.06	3	23.35	4	8.26	British.	Royal Mail S. P. Co.	445.0	58.0	27.2	Vancouver, B. C.	Antwerp, Belgium	General.	360	1,572	1,011
sure.....	3	10.00	3	11.10	3	22.30	.....	.....	German.	Hamburg-American Line	239.3	34.6	12.7	Guayaquil, Ecuador	Cristobal, C. Z.	Lumber.	6,063	5,615	3,759
Cerigo.....	3	8.30	3	13.18	4	00.10	4	00.45	British.	Canadian Transp. Co.	400.1	53.2	25.0	Vancouver, B. C.	Montreal, Canada.	General.	.....	.....	.....
Oakworth.....	3	8.30	3	13.18	4	00.10	4	00.45	British.	Canadian Transp. Co.	400.1	53.2	25.0	Vancouver, B. C.	Montreal, Canada.	General.	.....	.....	.....
Gen. Wm. M. Graham.....	3	15.18	3	21.30	3	21.30	.....	.....	American.	U. S. Army	160.2	32.0	.....	Balboa, C. Z.	Cristobal, C. Z.	Mine planter.	.....	.....	.....
Charles H. Cramp.....	3	16.30	4	6.06	4	13.37	4	13.37	American.	Argonaut S. S. Co.	404.6	53.9	25.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	6,208	6,755	4,750
Pacific.....	3	18.33	4	6.27	4	14.20	4	14.20	American.	Dimon S. S. Corp.	409.6	54.3	24.6	Tacoma, Wash.	Baltimore, Md.	Lumber.	7,658	6,537	4,841
Andromede.....	3	22.00	4	6.27	4	17.15	5	1.00	French.	Messageries Maritimes	450.3	51.9	22.0	Nouauea, New Cal.	Dunkirk, France.	General.	3,924	7,984	5,472
Hampton.....	4	2.00	4	7.49	4	16.30	4	16.30	American.	Oil Transport Co.	431.0	59.2	26.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	9,561	8,093	5,347
Roads.....	4	6.30	4	8.13	4	17.25	4	21.30	German.	Hamburg-American Line	374.2	53.6	13.0	Champerico, Guat.	Hamburg, Germany	Ballast.	8,540	6,837	5,043
Phrygia.....	4	6.00	4	8.31	4	18.28	4	22.50	British.	C. T. Bowring & Co.	420.3	54.6	26.6	Los Angeles, Calif.	Land's End, Eng.	Benzine.	.....	.....	.....
Cordelia.....	4	6.00	4	8.31	4	18.28	4	22.50	British.	C. T. Bowring & Co.	420.3	54.6	26.6	Los Angeles, Calif.	Land's End, Eng.	Benzine.	.....	.....	.....

22 Cocoa, ivory nuts, coffee, and general.

20 Rice, coffee, and hides.

19 For orders.

18 Training ship.

17 Motor ship.

1 Tanker.

Santore.....	4	7	30	4	19	30	American.....	Ore S. S. Corp.....	449.1	57.2	30.0	Cruz Grande, Chile	Baltimore, Md.....	11.811	7.808	5.139				
Schwaben.....	4	9	45	4	10	46	4	19	05	German.....	North German Lloyd.....	491.5	63.8	26.7	Vancouver, B. C.....	Antwerp, Belgium.....	9.580	10.002	6.743	
Point Montara.....	4	11	00	4	20	10	American.....	Swayze & Hoyt.....	324.0	46.2	21.0	Portland, Ore.....	New Orleans, La.....	3.007	3.984	2.612				
Heinrich Arp.....	4	9	45	4	12	45	5	11	25	German.....	Colombia Mar. Co.....	237.0	37.0	13.0	Bucavventura, Col.....	New York, N. Y.....	7.718	1.718	1.167	
Pear Branch.....	4	11	30	4	20	50	4	21	35	British.....	F. & W. Risson.....	398.6	53.8	21.7	Corral, Chile.....	Liverpool, England.....	5.418	5.700	3.866	
K. R. Kingsbury.....	4	13	55	4	15	05	American.....	Standard Oil Co. of Cal.....	440.0	58.2	28.6	Los Angeles, Calif.....	Baltimore, Md.....	10.000	9.033	5.938				
Oil Trader.....	4	18	30	5	13	48	5	13	48	British.....	British Oil Shipping Co.....	410.0	53.5	23.0	San Francisco, Cal.....	Land's End, Eng.....	8.053	5.928	3.919	
Edgar F.....	5	7	04	5	14	25	5	14	25	American.....	Luckenbach Line.....	425.0	57.3	31.6	Portland, Ore.....	Mobile, Ala.....	8.691	8.568	6.648	
Kentnekan.....	5	1	19	5	7	24	5	14	55	American.....	Amer.-Hawaiian Line.....	414.6	53.7	25.4	Seattle, Wash.....	Boston, Mass.....	5.419	7.046	4.941	
Suternco.....	5	6	40	5	7	42	5	15	45	American.....	Transmarine Lines.....	324.0	46.2	25.0	Aberdeen, Wash.....	Newark, N. J.....	4.100	3.984	2.628	
Paniquaco.....	5	8	06	5	15	35	5	15	35	Panama.....	Panama Government.....	125.6	23.6	14.5	Balboa, C. Z.....	Cristobal, C. Z.....	Revenue cutter.....			
Birmingham.....	5	8	00	5	17	05	5	22	54	American.....	Isthmian S. S. Lines.....	333.5	55.0	27.4	Vancouver, B. C.....	Avonmouth, Eng.....	7.957	7.304	5.188	
City.....	5	8	30	5	17	25	5	17	25	American.....	Redwood Line, Inc.....	386.8	52.2	23.4	San Francisco, Cal.....	Mobile, Ala.....	6.600	5.705	4.167	
Doebet.....	5	10	10	5	19	15	5	20	50	American.....	Transmarine Lines.....	324.0	46.2	25.6	Seattle, Wash.....	New York, N. Y.....	3.918	3.984	2.612	
Sudisco.....	5	11	10	5	21	30	5	21	30	British.....	W. Runciman & Co.....	339.6	53.0	25.0	Portland, Ore.....	Dublin, Ireland.....	8.162	5.988	4.326	
Orangeator.....	5	10	10	5	21	30	5	21	30	British.....	W. Runciman & Co.....	339.6	53.0	25.0	Portland, Ore.....	Dublin, Ireland.....	8.162	5.988	4.326	
Condor.....	5	14	00	5	23	25	6	00	55	Chilean.....	Soc. Mart. Comun.....	356.4	45.3	28.0	Valparaiso, Chile.....	New York, N. Y.....	4.775	4.421	3.063	
Machise.....	5	14	00	5	23	10	6	4	55	American.....	Mailory Transport Co.....	333.8	45.0	23.0	Newport, Ore.....	Poughkeepsie, N. Y.....	4.000	4.162	2.898	
Oakmar.....	5	20	50	6	13	45	6	13	45	American.....	Calmor S. S. Corp.....	354.4	51.2	23.0	Gray's fur, Wash.....	Poughkeepsie, N. Y.....	6.000	6.327	4.433	
Negada.....	6	6	00	6	15	20	6	23	00	German.....	Hamburg-American Line.....	410.0	50.7	26.0	Corral, Chile.....	Hamburg, Germany.....	3.709	6.478	4.530	
San Mateo.....	6	14	30	6	21	43	7	14	15	American.....	United Fruit Co.....	315.2	41.2	20.6	San Francisco, Cal.....	Port Limon, C. R.....	643	3.496	2.141	

* Tanker.

** For orders.

** Wheat, lumber, general.

** Nitrate, cotton, general.

** Wheat, barley, spelter, lumber, and general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.

* DEPARTURES.

Date.....	Vessel.....	Line.....	From.....	Date.....	Vessel.....	Line.....	For.....
June 30.....	Atlas.....	Royal Netherlands S. S. Co.....	Curacao, D. W. I.....	June 30.....	Planter.....	T. & J. Harrison.....	Cartagena, Colombia.....
July 1.....	Pastores.....	United Fruit Co.....	Port Limon, Costa Rica.....	June 30.....	Wanka.....	Standard Fruit & S. S. Co.....	San Blas, R. P.....
July 1.....	Frederic Ewing.....	Pan-Am. Pet. & Transp. Co.....	Aruba, D. W. I.....	June 30.....	Pastors.....	United Fruit Co.....	New York via Habana.....
July 1.....	No. 9776 ²⁶	Pan-American Airways.....	Barranquilla, Colombia.....	July 1.....	Perismina.....	United Fruit Co.....	New Orleans via wayports.....
July 1.....	Saramacca.....	United Fruit Co.....	Puerto Colombia.....	July 1.....	Saramacca.....	United Fruit Co.....	Bocas, R. P.....
July 1.....	Swiftarrow.....	United Fruit Co.....	Curacao, D. W. I.....	July 2.....	No. 9664 ²⁶	Pan-American Airways.....	Managua via David.....
July 1.....	Ulua.....	United Fruit Co.....	New York via Habana.....	July 2.....	Frederic Ewing.....	Pan-Am. Pet. & Transp. Co.....	San Nicolas via Arula.....
July 1.....	No. 9688 ²⁶	Pan-American Airways.....	Managua via David.....	July 2.....	Merican.....	United Fruit Co.....	Cartagena, Colombia.....
July 1.....	Rugia.....	Hamburg-American Line.....	Hamburg via wayports.....	July 3.....	Ulua.....	Leyland S. S. Line.....	Port Limon, Costa Rica.....
July 2.....	Southern Star.....	American International Airways.....	Tampa, Fla. via wayports.....	July 3.....	Rugia.....	Hamburg-American Line.....	Avonmouth via wayports.....
July 2.....	No. 1283 ²⁶	United Fruit Co.....	Colon, R. P.....	July 3.....	Carare.....	Elders & Fryfe.....	Curacao, D. W. I.....
July 2.....	Inapaquina ²⁷	Panama R. R. S. S. Line.....	New York via Haiti.....	July 3.....	Swiftarrow.....	C. D. Mallory & Co.....	Managua via wayports.....
July 3.....	Cristobal.....	Pan-American Airways.....	Avonmouth via wayports.....	July 4.....	Colombia No. 28 ²⁶	Seadla Airplane Co.....	Barranquilla, Colombia.....
July 3.....	Carare.....	Elders & Fryfe.....	New York via Kingstn.....	July 4.....	No. 9088 ²⁶	Pan-American Airways.....	Managua via David.....
July 3.....	Zacapa.....	United Fruit Co.....	Barranquilla, Colombia.....	July 5.....	Zacapa.....	United Fruit Co.....	New York via wayports.....
July 3.....	Colombia No. 28 ²⁶	Seadla Airplane Co.....	Guayaquil via wayports.....	July 5.....	No. 9776 ²⁶	Anachucuna ²⁷	Colon, R. P.....
July 3.....	No. 8044 ²⁶	Pan-American Airways.....	New Orleans, La.....	July 5.....	No. 8044 ²⁶	Pan-American Airways.....	Curacao via Colon, ports.....
July 4.....	Coppaname.....	United Fruit Co.....		July 5.....		Pan-American Airways.....	Guayaquil via wayports.....

* Motor boat.

* Other than ships passing through the Canal.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.							
* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 4.	No. 9664 ²⁸ .	Pan-American Airways.	Managua via David.	July 5.	Coppename.	United Fruit Co.	Port Limon via Bocas.
July 5.	Saramacca.	United Fruit Co.	Bocas, R. P.	July 5.	Saramacca.	United Fruit Co.	New Orleans, La.
July 5.	Atlantida.	Standard Fruit & S. S. Co.	New Orleans via Habana.	July 6.	Atlantida.	Standard Fruit & S. S. Co.	New Orleans via wayports.
July 5.	Maravi.	United Fruit Co.	New York via wayports.	July 6.	Maravi.	United Fruit Co.	New York via Kingston.
July 5.	Anachuena ²⁹ .	United Fruit Co.	Colon, R. P.	July 6.	Linda S ³⁰ .	A. L. Surgeon.	Bluefields, Nicaragua.
July 6.	Wanka.	Standard Fruit & S. S. Co.	San Blas, R. P.	July 6.	No. 9685 ²⁸ .	Pan-American Airways.	Managua via David.
July 6.	Wanka.	Standard Fruit & S. S. Co.	Puerto Cabezas.				
July 6.	No. 9686 ²⁸ .	Pan-American Airways.	Managua via David.				
July 6.	Hereda.	United Fruit Co.	New Orleans via Habana.				
July 6.	Linda S. ³⁰ .	A. L. Surgeon.	Colon, R. P.				
							</

* Other than ships passing through the Canal.

³¹ Motor schooner.

"Scadta" Makes Survey of Coasts for Air Services.

The completion by the Sociedad Colombo-Alemana de Transportes Aëros ("Scadta") of a survey for its West Coast service has been announced by the local representatives of the company. This survey was made by Dr. Troll, professor of geography of the University of Munich, who was a recent visitor in Panama, and covers climatic, geographical, and atmospheric conditions over the shore lines followed by "Scadta" seaplanes.

The present West Coast service of this company extends from Cristobal to Paita, Peru, with intermediate stops at Buenaventura, Colombia, and Guayaquil, Ecuador. The planes now proceed on the Atlantic side as far as Sautata, at the mouth of the Atrato River, then follow the Atrato to the divide, then down to Buenaventura and on down the Pacific.

Notice to Mariners.

THE PANAMA CANAL EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 29, 1929.

No. 556

The following was received by the Hydrographic Office from the Pilot in Charge, Lighthouse Subdivision, The Panama Canal:

The South Frailes gas and whistling buoy near Cape Mala, Republic of Panama, reported missing in Notice to Mariners No. 552, dated June 21, 1929, is now in position and functioning.

(Signed) F. KARIGER, *Pilot in Charge.*

H. BURGESS,
Governor.

Traffic by Nationality for June, 1929.

The following tabulation shows the commercial traffic through the Canal during the month of June, 1929, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for June, 1928 and 1927:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,792	4,142	6,512	4,038	\$5,177.50	6,638
British.....	71	378,023	279,312	458,520	281,594	320,636.80	257,884
Chilean.....	1	4,672	3,433	7,310	3,976	4,201.25	2,908
Colombian.....	4	718	692	1,052	692	846.50	1,046
Danish.....	5	18,695	12,732	20,936	12,879	15,915.00	25,482
Danzig.....	1	6,127	5,268	8,939	5,007	4,411.44	.....
Dutch.....	6	31,004	22,507	37,299	22,168	26,105.55	22,332
French.....	4	20,996	17,067	25,328	15,453	21,333.75	17,609
German.....	18	63,107	44,210	73,799	43,956	53,807.67	54,521
Italian.....	4	23,164	16,772	28,802	17,597	20,965.00	4,921
Japanese.....	6	29,172	24,834	36,712	24,448	28,904.27	34,012
Norwegian.....	13	42,856	31,605	52,282	31,572	36,310.54	36,510
Panamanian.....	2	2,657	1,434	2,547	1,434	1,792.50	3,557
Peruvian.....	2	1,872	1,818	2,620	1,445	2,086.05	1,943
Swedish.....	6	24,410	17,518	46,894	20,834	18,960.24	16,956
United States.....	127	630,965	491,052	789,228	490,383	551,904.70	406,407
Yugoslav.....	1	4,163	3,593	5,687	3,562	4,491.25	6,660
Totals, June, 1929.....	272	1,287,393	977,989	1,604,457	981,038	1,117,940.01	899,386
Totals, June, 1928.....	270	1,257,739	946,939	1,547,357	948,858	1,079,160.72	765,234
Totals, June, 1927.....	247	1,158,119	896,347	1,460,310	896,671	999,889.89	708,569

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	55	278,026	207,411	344,880	210,757	\$259,263.75	332,921
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	3,011
Colombian.....	3	950	894	1,543	902	1,115.30	1,004
Danish.....	4	18,492	15,363	23,485	15,444	19,203.75	31,473
Danzig.....	1	6,127	5,268	8,939	5,007	6,585.00	11,375
Dutch.....	7	30,629	18,369	31,552	18,671	22,961.25	41,884
Finnish.....	1	1,835	1,828	1,979	1,709	2,202.00	3,200
French.....	3	14,150	10,993	18,105	10,813	13,741.25	23,518
German.....	15	57,827	41,294	67,973	41,044	50,780.99	74,279
Greek.....	2	8,001	5,141	8,256	5,066	6,426.25	15,200
Italian.....	3	17,522	12,405	22,112	13,123	15,506.25	15,072
Japanese.....	5	25,933	21,616	32,332	21,152	26,840.55	32,958
Norwegian.....	13	45,325	35,561	57,768	34,775	43,488.47	76,661
Panamanian.....	1	54	51	86	50	63.75	.....
Swedish.....	7	27,347	20,568	52,432	24,817	25,710.00	69,286
United States.....	108	520,740	404,152	654,422	403,233	504,882.40	779,099
Yugoslav.....	2	7,375	5,410	8,550	5,426	6,762.50	13,675
Totals, June, 1929.....	231	1,065,038	809,790	1,341,724	815,965	1,009,865.96	1,524,616
Totals, June, 1928.....	211	970,126	750,666	1,230,149	751,298	937,050.37	1,374,331
Totals, June, 1927.....	208	994,807	777,474	1,285,036	783,842	970,488.08	1,520,528

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,792	4,142	6,512	4,038	\$5,177.50	6,638
British.....	126	656,049	486,723	803,300	492,351	579,900.55	590,805
Chilean.....	2	9,377	6,899	14,620	7,952	8,623.75	5,919
Colombian.....	7	1,668	1,586	2,595	1,594	1,961.80	2,050
Danish.....	9	37,187	28,095	44,421	28,323	35,118.75	56,955
Danzig.....	2	12,254	10,536	17,878	10,014	10,996.44	11,375
Dutch.....	13	61,633	40,876	68,851	40,839	49,066.80	64,216
Finnish.....	1	1,835	1,828	1,979	1,709	2,202.00	3,200
French.....	7	35,146	28,060	43,433	26,266	35,075.00	41,127
German.....	33	120,934	85,504	141,772	85,000	104,588.66	128,800
Greek.....	2	8,001	5,141	8,256	5,066	6,426.25	15,200
Italian.....	7	40,686	29,177	51,004	30,720	36,471.25	19,993
Japanese.....	11	55,105	46,450	69,044	45,600	55,744.82	66,970
Norwegian.....	26	88,181	67,166	110,050	66,347	79,799.01	113,171
Panamanian.....	3	2,711	1,485	2,633	1,484	1,856.25	3,557
Peruvian.....	2	1,872	1,818	2,620	1,445	2,086.05	1,943
Swedish.....	13	51,757	38,086	99,326	45,651	44,670.24	86,242
United States.....	235	1,151,705	895,204	1,443,650	893,616	1,056,787.10	1,185,506
Yugoslav.....	3	11,538	9,003	14,237	8,988	11,253.75	20,335
Totals, June, 1929.....	503	2,352,431	1,787,779	2,946,181	1,797,003	2,127,805.97	2,424,002
Totals, June, 1928.....	481	2,227,865	1,697,605	2,777,506	1,700,156	2,016,211.09	2,139,565
Totals, June, 1927.....	455	2,152,926	1,673,821	2,745,346	1,680,513	1,970,377.97	2,229,097

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII.

Balboa Heights, C. Z., July 17, 1929.

No. 50.

Canal Traffic During the First Fifteen Days of July.

During the first 15 days of July, 260 commercial vessels and four small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,108,580.48, and on the launches \$12, or a total tolls collection of \$1,108,592.48.

The daily average of transits of commercial vessels was 17.33 and the average tolls collection \$73,905.36, as compared with 16.60 transits and \$70,394.21 in tolls for the first 15 days of the previous month. The average amount of tolls paid by each of the commercial transits was \$4,263.77, as compared with \$4,240.62 for the first 15 days of June.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 6½ months of the current calendar year, with the daily averages of transits and tolls, together with the totals for the first 6½ months of the calendar year 1928 and 1927:

	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	603	\$2,502,815.12	19.45	\$80,735.97
February.....	522	2,211,961.20	18.64	78,998.62
March.....	536	2,343,865.55	17.29	75,608.57
April.....	540	2,281,087.27	18.00	76,036.24
May.....	524	2,296,546.57	16.90	74,082.15
June.....	503	2,127,805.97	16.76	70,926.87
July (first 15 days).....	260	1,108,580.48	17.33	73,905.36
Totals, first 6½ months of calendar year 1929.....	3,488	14,872,662.16	17.79	75,880.93
Totals, first 6½ months of calendar year 1928.....	3,394	14,007,606.80	17.22	71,104.60
Totals, first 6½ months of calendar year 1927.....	3,027	13,357,135.01	15.44	68,148.65

Supplement No. 13—Tariff No. 9.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., July 12, 1929.

ITEM 45—RIGHT OF BASIN.

Effective August 1, 1929, vessels of more than ten (10) Panama Canal gross tons propelled by machinery or sail and all other vessels of more than twenty (20) Panama Canal gross tons (vessels of the United States, Panaman and Colombian Governments excepted) shall be assessed a right of basin charge of one-half cent per Panama Canal gross ton for each day such vessel shall remain in Canal Zone waters at an anchorage or moorings other than at structures for which wharfage or moorage is charged by the Panama Canal.

No charge will be made against vessels removed from Canal Zone waters within thirty days. Vessels remaining more than thirty days shall be charged for the full time they remain in Canal Zone waters.

Bills will be prepared by:

- The Port Captain, Cristobal, for all vessels in waters north of Gamboa.
- The Port Captain, Balboa, for all vessels in waters south of Gamboa.

H. BURGESS,
Governor, The Panama Canal,
President, Panama Railroad Company.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, July 13, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Visurgis	3	20 50	7	6 08	7	13 49	7	17 55	German	North German Lloyd	231.0	37.8	14.6	Cristobal, C. Z.	Puntarenas, C. R.	General	1,008	1,406	855
Dio	6	15 55	7	6 20	7	14 03	7	14 20	American	Redwood Line	381.0	52.0	20.6	New Orleans, La.	San Francisco, Cal.	Gen., coke, etc.	2,899	5,708	4,133
Bethore	6	6 12	7	6 15	7	13 48	7	15 35	American	Ore S. S. Corp.	550.0	72.0	23.2	Norfolk, Va.	Cruz Grande, Chile	Ballast	15,476	4,354	
Apple Branch	7	5 35	7	7 15	7	14 42	7	16 05	British	Nauticus S. S. Co.	376.0	51.0	19.0	Liverpool, England	Corral, Chile	General	2,236	5,112	3,511
Pennsylvania	7	5 57	7	7 35	7	14 54	7	16 05	American	Amer-Hawaiian Line	407.7	53.7	20.6	Boston, Mass.	Portland, Oreg.	General	4,183	7,107	5,041
Pongsvannun	7	9 20	7	10 00	7	17 51	7	23 58	American	Argonaut S. S. Co.	400.0	56.0	25.7	Mobile, Ala.	San Francisco, Cal.	Steel rails, etc.	8,195	6,517	4,729
Margaret	6	22 05	7	12 10	7	18 37	7	23 06	Swedish	Johnson Line	405.0	54.0	24.3	Stockholm, Sweden	San Francisco, Cal.	General	4,651	7,048	5,337
Johnson	6	12 10	7	13 10	7	20 48	7	22 00	American	Ore S. S. Corp.	549.0	72.0	24.8	New York, N. Y.	Cruz Grande, Chile	Ballast	14,325	4,685	
Lebore	7	6 08	7	13 50	7	21 59	7	23 06	Norwegian	G. T. Fargjoe	297.7	43.6	20.0	Norfolk, Va.	Callao, Peru	Coal	3,269	2,832	1,912
Askeladden	6	12 20	7	16 40	8	11 16	8	12 55	German	Hamburg-American Line	227.0	34.0	15.7	Cristobal, C. Z.	Guayaquil, Ecuador	General	355	1,572	1,011
Cerigo	3	22 30	7	16 40	7	8 33	7	8 33	American	H. E. Merryman	432.0	59.0	21.10	Cristobal, C. Z.	Gatun, C. Z.	Ballast	4,933	8,454	6,344
Ark	7	8 40	8	6 10	8	14 55	8	18 15	German	Hamburg-American Line	416.9	56.2	18.0	Hamburg, Germany	Vancouver, B. C.	Ballast	6,706	4,639	
Los Angeles	7	20 25	8	6 20	8	14 57	8	16 15	American	Shell Oil Co.	410.5	54.3	19.0	New York, N. Y.	San Francisco, Cal.	Ballast	3,120	6,583	5,014
Hadnot	7	20 25	8	6 20	8	14 57	8	16 15	American	Shell Oil Co.	410.5	54.3	19.0	New York, N. Y.	San Francisco, Cal.	Ballast	3,120	6,583	5,014
West Notus	8	3 10	8	7 10	8	15 53	8	19 53	American	McCormick S. S. Co.	265.0	42.0	12.0	Buenos Aires, Arg.	San Francisco, Cal.	Coffee, guano	497	2,203	1,622
Margaret	8	6 05	8	7 15	8	15 53	8	17 30	German	Colombian Mar. Co.	461.0	60.4	26.0	New York, N. Y.	Buenaventura, Col.	General	8,082	9,997	7,063
Corda	8	1 30	8	8 10	8	16 54	8	18 15	Norwegian	Barber S. S. Line	231.0	21.10		New York, N. Y.	Shanghai, China	General	8,082	9,997	7,063
Tai Yin	8	1 30	8	8 10	8	16 54	8	18 15	Norwegian	Barber S. S. Line	231.0	21.10		New York, N. Y.	Shanghai, China	General	8,082	9,997	7,063
S-12	8	8 25	8	8 25	8	16 34	8	18 15	American	U. S. Navy	231.0	21.10		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
S-13	8	8 25	8	8 25	8	16 34	8	18 15	American	U. S. Navy	231.0	21.10		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
S-20	8	8 25	8	8 25	8	16 34	8	18 15	American	U. S. Navy	231.0	21.10		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Steel Sealor	8	9 27	8	9 45	8	15 54	8	23 08	American	Ishman S. S. Lines	425.0	56.0	25.0	Philadelphia, Pa.	Singapore, S. S. S.	Steel, general	7,932	7,611	5,454
Pipiriki	8	10 05	8	10 25	8	17 40	8	23 08	British	Norton, Lilly & Co.	300.0	45.0	20.5	Dunedin, N. Z.	Dunedin, N. Z.	General	5,121	8,710	6,216
Nosa Chief	8	7 00	8	12 00	8	18 36	8	19 53	American	N. O. & S. S. Co.	385.3	51.2	27.10	New Orleans, La.	Talcahuano, Chile	General	2,154	3,256	2,010
Pennar	8	9 05	8	12 45	8	20 54	8	22 15	American	Calmar S. S. Line	450.0	58.0	19.7	Baltimore, Md.	Seattle, Wash.	General	8,028	6,224	4,465
Gaasterdijk	7	17 00	8	13 45	8	20 54	8	22 15	Dutch	Holland-American Line	450.0	58.0	19.7	Rotterdam, Holland	Vancouver, B. C.	General, steel	3,800	9,038	6,164
Rochester	8	14 10	9	6 02	9	13 36	9	15 30	American	U. S. Navy	380.0	64.0	26.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Trinidad	8	22 05	9	6 10	9	14 09	9	15 30	American	B. L. Shipping Co.	416.0	56.2	26.5	Amsterdam, Holland	Los Angeles, Calif.	Crescite	8,659	6,728	4,734
Westmountain	8	22 05	9	6 10	9	14 09	9	15 30	American	B. L. Shipping Co.	416.0	56.2	26.5	Amsterdam, Holland	Los Angeles, Calif.	Crescite	8,659	6,728	4,734
Arto	9	00 35	9	7 05	9	14 22	9	15 30	American	Standard Oil Co.	435.0	56.2	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,386	5,117	
Arto	9	9 15	9	7 35	9	16 41	9	22 12	Norwegian	Scand.-So. Pacific Co.	368.5	53.7	23.6	New York, N. Y.	Los Angeles, Calif.	Ballast	7,386	5,117	
Vinland	9	15 10	9	9 30	9	16 41	9	22 12	Norwegian	Scand.-So. Pacific Co.	368.5	53.7	23.6	New York, N. Y.	Los Angeles, Calif.	Ballast	7,386	5,117	
Lorenzo	9	12 20	9	10 20	9	17 10	9	18 20	British	Norton, Lilly & Co.	470.5	62.0	24.5	Antwerp, Belgium	Corral, Chile	General	7,169	5,413	3,965
San Mateo	9	14 10	9	13 20	9	20 07	9	21 34	American	United Fruit Co.	315.2	44.2	20.0	New York, N. Y.	Brisbane, Australia	General	6,593	3,571	6,087
Chickasaw City	9	13 55	9	14 10	9	21 40	9	3 05	American	Port Lyonnais, C. R.	400.0	55.0	27.6	Port Lyonnais, C. R.	San Francisco, Cal.	General, bananas	5,051	3,496	2,141
Pacific Spruce	9	14 15	9	14 30	9	21 40	9	3 05	American	Ishman S. S. Lines	395.5	55.0	27.6	Baltimore, Md.	San Francisco, Cal.	General, steel	8,729	7,322	5,237
Empire Arrow	9	15 10	9	15 30	9	22 15	9	23 29	American	Dominion S. S. Corp.	409.0	54.0	23.6	New York, N. Y.	Seattle, Wash.	General	6,786	6,624	4,757
Epitaur	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10	17 40	American	Standard Transp. Co.	468.3	62.7	27.0	Providence, R. I.	Los Angeles, Calif.	Ballast	9,841	6,946	
Leikanger	9	18 25	10	6 08	10	15 38	10												

Thalia ²	9	23	25	10	7	40	10	17	34	11	00	07	Danzig	459	3	63	2	17	0	Hamburg-Germany	Talera, Peru	Ballast	9,018	5,929
Hertford	10	1	10	10	8	35	10						British	520	0	63	0	31	0	Pt. Chalmers, N.Z.	General	11,500	12,933	8,991
Lilian	10	2	30	10	9	00	10	18	26	10	19	15	American	443	0	60	2	23	0	Tacoma, Wash.	General	5,867	9,294	6,866
Barbara Cates	10	3	55	10	10	10	10	18	42	10	19	45	American	409	5	54	2	17	6	Seattle, Wash.	General	3,700		
Columbian	10	5	35	10	9	55	10	19	11	10	20	15	American	404	6	54	0	24	0	Tacoma, Wash.	General	3,653	6,760	4,450
Annan	10	6	58	10	10	55	10						Danish	410	0	55	0	24	7	Vancouver, B. C.	General	6,050	7,067	5,286
Ethan Allen	10	3	35	10	11	48	10	20	40	10	22	60	American	439	6	60	0	24	6	Yokohama, Japan	Gen., kerosene	8,383	8,979	6,525
Modavia	9	2	00	10	12	37	10	19	38	10	23	22	British	385	0	54	0	18	3	Vancouver, B. C.	General	1,434	6,719	4,979
George																								
Washington ²	10	11	10	10	14	25	10	21	41	11	1	45	Norwegian	425	5	55	3	19	1	Vancouver, B. C.	Iron, general	3,541	7,505	5,627
Urdaneta ¹	10	15	45	10	15	55	10	22	30				Venezuelan	305	0	50	0	12	6	Balboa, C. Z.	Ballast			
L-10 ³	8	17	45	11	5	55	11	14	35	11	20	48	American	116	0	27	1	8	0	Maracaibo, Venez.	Ballast			
City of Cauberra	11	01	50	11	6	08	11	13	21	11	14	35	Colombian	433	2	51	8	20	0	Buenaventura, Col.	General	8,847	9,175	6,704
Yari Moura	11	00	50	11	6	23	11	14	37	11	16	40	British	425	0	53	8	17	6	Far East	General	6,009	5,147	
W. S. Rheem ¹	11	2	55	11	7	30	11	15	30	11	16	40	Japanese	500	0	63	2	19	6	Arica, Chile	Ballast	11,224	7,895	
Topia	11	9	05	11	10	50	11	18	40	11	20	00	American	371	5	59	1	17	6	Los Angeles, Calif.	Ballast	5,080	3,740	
Santa Barbara	11	1	35	11	11	00	11	16	37	10	20	45	American	406	0	64	0	24	0	Taitahuano, Chile	General	3,352	10,687	6,663
Disha Walker	11	1	05	11	13	25	11	19	36	11	21	18	American	429	2	33	2	19	5	Los Angeles, Calif.	Ballast	7,978	5,783	
Albert Voelter	10	21	35	11	14	35	11	21	58	13	1	25	German	409	0	54	0	24	0	San Antonio, Chile	General	6,739	7,173	5,514
Yefikou Mam.	11	18	25	11	6	20	12	15	00	12	16	53	Japanese	335	0	51	0	26	10	Yawata, Japan	Scrap rails, etc	7,202	5,933	4,595
S-167	12	6	12	12	6	12	12	12	58				American	231	0	21	10			Balboa, C. Z.	Ballast			
Sunungteo	11	23	55	12	6	12	12	15	40	12	22	00	American	324	0	46	0	17	0	San Francisco, Cal.	General	1,270	3,984	2,628
President																								
Van Buren	12	3	05	12	7	35	12	16	24	12	22	30	American	502	0	62	0	26	6	Shanghai, China	General	5,037	12,023	8,495
Tamiahua ¹	11	21	15	12	7	40	12	17	25	12	18	55	American	500	0	71	2	20	0	Long Beach, Calif.	Ballast	11,667	8,373	
Steel Voyager	12	9	15	12	9	20	12	17	10	12	18	49	American	395	5	55	0	27	6	Manila, P. I.	(*)	8,363	7,330	5,249
Egerto ²	12	6	55	12	10	05	12	17	54	12	22	57	Norwegian	430	0	61	0	22	0	Antwerp, Belgium	Ballast	8,461	6,104	
W. H. Libby ¹	12	9	50	12	11	00	12	18	20	12	19	45	American	462	0	60	0	20	0	Los Angeles, Calif.	Ballast	8,165	5,472	
Dean Emery ¹	12	8	33	12	12	15	12	19	18	12	20	50	American	429	3	59	2	20	2	Baltimore, Md.	Ballast	7,709	5,477	
Nebaska	12	6	35	13	6	07	13	14	13	13	15	55	British	430	0	32	0	21	6	Vancouver, B. C.	General, bananas	3,157	8,578	5,588
S-117	12	6	35	13	6	10	13	17	25				American	219	3	20	8			Balboa, C. Z.	Ballast			
Pat Doheny ¹	12	16	57	13	7	20	13	15	00	13	16	15	American	430	2	59	2	19	6	Los Angeles, Calif.	Ballast	7,978	5,839	
Britia ¹	12	19	15	13	7	35	13	15	28	13	16	40	Norwegian	407	8	54	7	17	6	Los Angeles, Calif.	Ballast	6,539	4,252	
Chief Skidgate	13	1	20	13	8	20	13	16	12	13	17	35	British	433	0	57	0	25	0	Yokohama, Japan	Phosphate	6,000	10,011	7,278
Peter Kerr	13	5	20	13	8	30	13	16	13	13	17	35	American	415	0	55	6	26	10	Seattle, Wash.	General	9,080	7,704	5,707
Martha ¹	8	17	45	13	9	35	13	17	27	14	2	04	Norwegian	183	2	30	1	1	3	Pt. Armuellas, R. P.	General	500	780	504
Varg ¹	13	4	05	13	9	45	13	17	02	13	18	25	Norwegian	390	0	55	0	13	0	Hamburg, Germany	Ballast	5,983	3,856	
Hegra	13	8	15	13	9	50	13	18	36	13	20	00	American	440	0	56	0	25	0	Seattle, Wash.	Iron, steel	10,329	8,353	6,113
Reynolds	13	2	40	13	11	00	13	18	42	14	6	23	British	407	0	53	5	18	8	Wellington, N. Z.	General	3,700		
El Salvador	12	11	28	13	12	28	13	19	18	14	11	46	American	340	0	51	6	22	7	San Francisco, Cal.	Coffee, steel	2,438	5,710	4,023

* Steel, cotton, and sulphate ammonia.

7 Submarine.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

* Ballbox for dry docking.

2 Tanker.

Lemuel	6	16	30	7	6	27	7	15	00	7	15	00	American	Mystic S. S. Co.	437.2	63.7	30.0	Seattle, Wash.	Boston, Mass.	Lumber	10,500	9,105	6,004
Burrows	7	2	00	7	7	04	7	16	15	7	16	15	American	Starks S. S. Co.	410.0	54.4	24.6	Los Angeles, Calif.	Philadelphia, Pa.	Lumber, general	7,174	6,476	4,682
West Mingo	7	2	00	7	7	04	7	16	15	7	16	15	American	Starks S. S. Co.	410.0	54.4	24.6	Los Angeles, Calif.	Philadelphia, Pa.	Lumber, general	7,174	6,476	4,682
Castle Town	7	5	30	7	7	47	7	17	20	7	18	30	American	Charles Nelson & Co.	321.7	50.2	21.4	Seattle, Wash.	Baltimore, Md.	Lumber, general	3,883	3,372	2,568
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
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Paul Shoup	7	8	30	7	8	30	7	17	35	7	18	35	American	Associated Oil Co.	424.4	58.5	27.0	San Francisco, Cal.	Bayonne, N. J.	Lumber, general	9,600	7,353	5,182
Paul Shoup	7	8	30	7																			

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Lenox ⁹	3	7 55	7	10 05	7	18 10	7	18 10	Italian	Nav. Libera-Tristina	450.0	57.0	23.0	Vancouver, B. C.	Trieste, Italy	General	9,242	8,805	6,497
Tsuyama Maru	7	6 45	7	13 50	7	21 00	8	9 39	Japanese	Nippon Yusen Kaisha.	445.0	58.0	23.0	Manila, P. I.	Boston, Mass.	(¹¹) Ore, general	7,839	7,956	5,681
Oakpark	7	10 15	7	14 34	7	22 50	7	22 50	American	Roosevelt S. S. Co., S. B.	402.6	53.2	23.0	Whalla, Australia	Baltimore, Md		6,300	6,570	4,798
Pat ¹⁰	7	8 00	7	8 00	7	8 00	7	8 00	American	Charles Morgan	384.0	64.9	28.0	Balboa, C. Z.	Catun Lake, C. Z.	Cruiser	21,654	15,551	4,297
Rocheater ¹¹	8	2 00	8	6 13	8	14 10	9	6 02	American	U. S. Navy	550.3	72.2	34.6	Balboa, C. Z.	Cristobal, C. Z.	Iron ore	2,775	7,764	4,672
Marore	7	22 40	8	6 37	8	17 10	8	17 10	American	Ore S. S. Corp.	421.8	56.2	23.7	Baltimore, Md	New York, N. Y.	General	255	211	124
Teno	7	22 40	8	7 22	8	15 35	9	00 05	Chilean	Chilean Line	116.0	31.0	10.0	Talcahuano, Chil	Cristobal, C. Z.	Ballast	780	504	
Caldas ⁹	7	18 30	8	7 35	8	17 40			Colombian	South American Line.	181.0	30.1	10.0	Buenaventura, Col	Cristobal, C. Z.	Ballast	780	504	
Martha ⁹	7	22 30	8	7 50	8	17 35			Norwegian	Chr. Hannevitz	149.1	57.2	30.0	Buenaventura, Col	Cristobal, C. Z.	Iron ore	11,811	7,808	5,139
Feltre	8	5 05	8	8 09	8	18 20	8	18 20	American	Ore S. S. Corp.	380.6	48.7	22.0	Cruz Grande, Chile	Baltimore, Md	Coal, general	1,840	5,926	4,178
Hudson	8	15 15	9	6 30	9	13 30	10	00 35	American	Panama Mail S. S. Co.	395.2	50.7	25.0	San Francisco, Cal	New York, N. Y.	General	6,008	5,748	4,225
Ecuador	8	15 30	9	6 43	9	15 00	10	1 15	French	French Line	414.7	55.7	26.6	Valparaiso, Chile	Le Havre, France.	General	9,500	7,717	5,763
Willboro	8	19 30	9	7 05	9	15 18	9	15 18	American	Williams Line	393.4	54.0	25.6	Seattle, Wash	New York, N. Y.	(¹⁴) General	8,181	6,585	4,631
Wido	9	00 50	9	7 39	9	19 05	10	1 45	American	Richland Line	425.0	55.0	26.6	Corral, Chile	Hamburg, Germany	General	8,084	6,982	4,834
Zenon	9	1 20	9	8 05	9	18 25	10	11 25	French	French Line	471.2	59.1	24.0	Vancouver, B. C.	Le Havre, France.	General	6,817	9,032	6,658
Nebraskan.	9	4 43	9	8 45	9	19 05	9	19 05	American	Amer-Hawalian Line	549.6	72.2	34.3	Portland, Oreg	Boston, Mass	General	20,000	14,538	9,348
Chilore	10	2 00	10	6 05	10	18 25	10	18 25	American	Ore S. S. Corp.	307.0	51.0	13.0	Cruz Grande, Chile	New York, N. Y.	Iron ore	6,370	8,659	6,363
Bolivar ¹²	1	14 00	10	6 46	10	14 10	10	14 10	Venezuelan	Venezuela Gulf Oil Co.	445.0	58.0	25.3	Balboa, C. Z.	Maracaibo, Venez.	Ballast	6,714	6,809	4,842
Erforce	9	15 50	10	7 12	10	16 05	10	16 05	American	Luckenbach Line	412.4	54.2	23.6	Portland, Oreg	Boston, Mass	General	8,957	10,793	7,619
Graefia	9	18 30	10	7 35	10	19 20	10	19 20	British	Donaldson Line	485.5	62.0	28.6	Vancouver, B. C.	Glasgow, Scotland	General	8,000		
Drechttdijk	10	4 40	10	7 47	10	16 45	10	19 30	Dutch	North Pacific Coast Line	429.0	53.9	27.6	Vancouver, B. C.	Rotterdam, Holland	(¹⁵) General	461	1,105	698
Beurruachan.	10	7 40	10	8 30	10	20 25	10	21 20	British	Wm. Thomson & Co	216.5	32.9	13.6	Portland, Oreg	London, England		3,321	2,833	1,740
Cal	10	8 45	10	9 53	10	21 00			German	Roland Line	251.0	43.6	22.0	Quayquil, Ecuador	Cristobal, C. Z.	Cacao, coffee.	6,580	5,926	4,362
Santa Isabel	10	7 55	10	14 35	10	21 45	10	21 45	American	American & Cuban Line	390.0	55.0	22.0	Hilo, I. I.	New York, N. Y.	Sugar	6,000	5,585	4,157
L-55 ¹⁰	10	16 10	11	6 34	11	14 45	12	5 25	American	U. S. Army	381.4	53.9	23.4	Balboa, C. Z.	Cristobal, C. Z.		10,455	9,505	6,644
Ooterpool	10	16 10	11	7 10	11	14 50	12	5 25	British	Sir R. Roper & Co.	447.2	62.7	28.4	Chemunus, B. C.	St. Johns, N. B.	Lumber	4,496	6,533	4,772
Key West	10	21 00	11	7 10	11	14 50	12	5 25	Norwegian	Knut Knutsen	249.9	33.5	12.0	Tucupilla, Chile	Hamburg, Germany	Nitrates	5,976	11,706	8,320
Alkmaar	6-30	10 30	11	7 45	11	16 15	11	19 00	Dutch	Royal Neth. S. S. Co.	407.2	60.4	22.5	Buenaventura, Col	Europe	Ballast	1,442	6,254	4,099
Hegre	10	35 11	12	11 08	12	17 10	12	21 35	Norway	Knut Knutsen	483.0	50.2	22.0	Hongkong, China.	New York, N. Y.	(¹⁶) Frozen, general	8,366	6,362	4,245
Hague Maru	10	35 11	12	11 08	12	17 10	12	21 35	Japanese	Oaka S. S. Co.	407.2	60.4	22.5	Guayaquil, Ecuador	New York, N. Y.	General	694	3,683	2,373
Tanaka ⁹	11	5 30	11	14 14	11	19 50	12	1 57	British	Shaw, Savill & Albion.	370.0	55.1	26.0	Valparaiso, Chile	Land's End, Eng.	Gasoline	8,288	7,004	5,017
Santa Rita	11	20 55	12	6 24	12	13 05	12	13 15	American	Grace Line	417.6	55.1	26.0	San Francisco, Cal	Port Limon, C. R.	General	6,544	13,137	9,067
Abadan ¹¹	11	20 55	12	6 24	12	13 05	12	13 15	American	Concordia S. S. Co.	330.6	44.6	18.7	Valparaiso, Chile	Hamburg, Germany	General	7,300	5,770	4,073
Isparia	11	17 05	12	7 05	12	15 25	13	15 52	American	United Fruit Co.	438.6	53.6	24.4	San Francisco, Cal	Port Limon, C. R.	General	11		
Iauri	11	18 00	12	7 40	12	17 00	12	22 05	German	Hamburg-American Line	525.3	62.9	25.4	Valparaiso, Chile	Liverpool, England	General			
Oroya	12	6 40	12	8 09	12	16 10	12	23 58	British	Pacific Steam Nav. Co.	400.6	52.2	25.0	Talcahuano, Chile	Rotterdam, Holland	Wheat, general			
Benivolich	11	21 50	12	8 38	12	17 35	12	19 20	British	William Thomson & Co.	400.6	52.2	25.0	Astoria, Oreg	Rotterdam, Holland	Wheat, general			

¹¹ Copper, lumber, general.¹² Sugar, wood, oil, general.¹³ For orders.¹⁴ Rice, bean, oil, general.¹⁵ Motor ship.¹⁶ Launch.¹⁷ Cruiser.¹⁸ Wheat, pulp, lumber.¹⁹ Rice, bean, oil, general.²⁰ Launch.²¹ Tanker.

Joseph Seep	12 00 10	12 9 14	12 17 50	12 17 50	Standard Shipping Co.	429.3	59.2	26.0	Los Angeles, Calif	New York, N. Y.	Gasoline	9,500	7,825	5,616
Illinois	12 4 40	12 9 30	12 18 15	12 18 15	The Texas Co.	416.8	56.1	25.6	Wilmington, Calif	New York, N. Y.	Gasoline	7,615	7,150	5,330
San Fernando	12 9 10	12 9 59	12 20 20	12 20 20	Anglo-Mexican Pet. Co.	530.4	69.4	22.0	Antofagasta, Chile	Pto. Mexico, Mex.	Ballast	13,266	9,609	
City of San Francisco	11 20 37	12 11 12	12 19 30	12 19 30	Panama Mail S. S. Co.	296.9	45.9	19.0	San Francisco, Cal.	Cristobal, C. Z.	(18)	1,225	3,848	2,406
Remuera	12 00 40	12 12 05	12 18 45	12 19 15	N. Z. Shipping Co.	485.0	62.2	22.9	Wellington, N. Z.	London, England	Frozen, general	3,736	11,911	8,945
Panama	12 12 00	12 12 52	12 21 15	12 21 15	Amer-Hawaiian Line	407.7	53.7	25.0	Los Angeles, Calif	New York, N. Y.	General	6,188	7,098	5,065
Annie Johnson	12 10 50	12 13 46	12 22 50	13 21 45	Johnson Line	392.0	52.6	25.9	San Francisco, Cal.	Stockholm, Sweden	General	5,601	6,650	4,919
Steele	13 4 30	13 6 31	13 15 25	13 15 25	Ore S. S. Corp.	550.3	72.2	33.9	Cruz Grande, Chile	New York, N. Y.	Iron ore	20,000	15,551	4,297
Charles R. McCormick	12 17 30	13 6 41	13 15 45	13 15 45	McCormick S. S. Co.	402.4	53.2	26.0	Seattle, Wash.	Baltimore, Md.	Lumber, general	7,851	7,082	5,167
Gen. G. W. Getty	13	6 41	13 15 50	14 8 00	U. S. Army	98.0	22.0		Balboa, C. Z.	Cristobal, C. Z.	Tug			
George	12 17 35	13 7 24	13 16 35	14 18 50	French Line	410.0	52.7	26.2	Vancouver, B. C.	Le Havre, France	General	7,626	6,830	4,932
Salvador	12 22 00	13 7 40	13 16 55	14 19 00	Pacific Steam Nav. Co.	215.0	33.5	15.0	Champerico, Guat.	Cristobal, C. Z.	(19)	618	1,270	735
Argon	1 15 43	13 7 30	13 17 00	13 21 05	Jas. L. Detweiler	120.0	21.5	12.9	Ensenada, Mexico	Antwerp, Belgium	Ballast			
Bohemian Club	13 3 30	13 8 30	13 17 25	13 17 25	Atlantic Refining Co.	425.0	57.2	26.4	Los Angeles, Calif	Philadelphia, Pa.	Gasoline	9,269	7,204	4,739
Herman Frasch	13 5 40	13 10 13	13 18 30	13 18 30	Union Sulphur Co.	356.0	51.6	25.0	Westport, Oreg.	Poughkeepsie N. Y.	Lumber	5,300	5,349	2,950
Emil Kirndorf	13 5 50	13 10 06	13 18 15	14 1 25	Hamburg-American Line	409.8	55.8	23.0	Corral, Chile	Hamburg, Germany	General	6,348	7,141	5,468
Hedron	13 10 00	13 11 01	13 20 00	13 20 00	Haffron S. S. Co.	440.0	56.0	25.0	Everett, Wash.	Baltimore, Md.	Lumber	9,750	8,312	6,017

¹⁹ Wood, coffee, sugar.

¹⁸ Dynamite, coffee, hides.

¹ Tanker.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.					* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—		
July 7	Annetta I. ²⁰	A. Tagarapulos	Colon, R. P.	July 7	Inapaquina ²⁰	United Fruit Co	Colon, R. P.		
July 7	Ulua	United Fruit Co	Port Limon, C. R.	July 7	Ulua	United Fruit Co	New York via Habana.		
July 7	No. 9776 ²¹	Pan-American Airways	Curacao via waypoints.	July 7	Anachucua ²⁶	United Fruit Co	Colon, R. P.		
July 7	Anachucua ²⁰	United Fruit Co	Colon, R. P.	July 7	Annetta I. ²⁰	A. Tagarapulos	Colon, R. P.		
July 7	Annetta I. ²⁰	A. Tagarapulos	Colon, R. P.	July 7	Wauks	Standard Fruit & S. S. Co.	San Blas, R. P.		
July 8	No. 8044 ²¹	Pan-American Airways	Guayaquil via waypoints.	July 7	Wauks	Standard Fruit & S. S. Co.	Puerto Cabezas.		
July 8	No. 9635 ²¹	Pan-American Airways	Managua via David.	July 7	Cristobal	Panama R. R. S. S. Line	New York via Haiti.		
July 8	Tolosa	United Fruit Co	New York via Habana.	July 7	Southern Star	American International Airways.	Talara, Peru.		
July 8	Flndre	French Line	Have via waypoints.	July 7	No. 1283 ²¹	United Fruit Co	New Orleans via waypoints.		
July 9	William M. ²²	G. I. Bryan	Colon, R. P.	July 8	Heredia	United Fruit Co	Managua via David.		
July 9	Isla de Pines ²⁰	Colon Import & Export Co.	Colon, R. P.	July 9	No. 9688 ²¹	Pan-American Airways	Curacao via Colombia.		
July 9	Inapaquina ²⁰	United Fruit Co	Colon, R. P.	July 9	No. 9776 ²¹	Pan-American Airways	Curacao, D. W. I.		
July 9	Venezuela	Royal Neth. S. S. Co.	Amsterdam via waypoints.	July 9	Atlas	Royal Neth. S. S. Co.	Bluefield, Nicaragua.		
July 10	Santa Marta	United Fruit Co	New York via Kingston.	July 9	William M. ²²	G. I. Bryan	Colon, R. P.		
July 10	Lizzie D. Peabody ²³	M. P. Martinez	Colon, R. P.	July 9	Annetta I. ²⁰	A. Tagarapulos	Colon, R. P.		
July 10	Durien C-35 ²¹	Seadla Airplane Co	Barranquilla, Colombia.	July 10	Inapaquina ²⁰	United Fruit Co	Port Limon, Costa Rica.		
July 10	Magdalena	Hamburg via waypoints.	Hamburg via waypoints.	July 10	Venezuela	Royal Neth. S. S. Co.	Port Limon, Costa Rica.		
July 11	Camden	United Fruit Co	Curacao, D. W. I.	July 10	Tolosa	United Fruit Co	Have via waypoints.		
July 11	Suriname	United Fruit Co	New Orleans, La.	July 11	Flandre	French Line			

* Other than ships passing through the Canal.

²² Motor boat.

²¹ Air mail carrier.

²³ Schooner.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 11	Swiftlight	C. D. Mallory & Co.	Curacao, D. W. I.	July 11	No. 9685 ²⁴	Pan-American Airways	Managua via David.
July 11	No. 9688 ²⁴	Pan-American Airways	Managua via David.	July 11	Darien C-35 ²⁴	Seadta Airplane Co.	Barranquilla, Colombia.
July 11	No. 9776 ²⁴	Pan-American Airways	Curacao via waypoints.	July 11	Santa Marta	United Fruit Co.	New York via waypoints.
July 12	Coppename	United Fruit Co.	Bocas, R. P.	July 11	Magdalena	Hamburg-American Line.	Port Limon, Costa Rica.
July 12	Anapala	Standard Fruit & S. S. Co.	New Orleans via Habana.	July 11	Camden	United Fruit Co.	Curacao via Boes.
July 12	Venezuela	Royal Nether. S. S. Co.	Port Limon, Costa Rica.	July 12	Suriname	United Fruit Co.	Puerto Colombia.
July 12	Darien C-35 ²⁴	Seadta Airplane Co.	Barranquilla, Colombia.	July 12	No. 8044 ²⁴	Pan-American Airways	Guayaquil via waypoints.
July 12	Winks	Standard Fruit & S. S. Co.	San Blas, R. P.	July 12	Coppename	United Fruit Co.	New Orleans, La.
July 12	Ancheutuna ²⁵	United Fruit Co.	Colon, R. P.	July 12	Darien C-35 ²⁴	Seadta Airplane Co.	Balboa, C. Z.
July 12	Annetta I. ²⁵	A. Tagarapulos	Colon, R. P.	July 12	Ancheutuna ²⁵	United Fruit Co.	Colon, R. P.
July 12	Nora B. ²⁶	H. Blackwood	Colon, R. P.	July 12	Annetta I. ²⁵	United Fruit Co.	Colon, R. P.
July 12	Darien C-35 ²⁴	Seadta Airplane Co.	Balboa, C. Z.	July 12	Inapaquina ²⁵	A. Tagarapulos	Colon, R. P.
July 12	Mayari	United Fruit Co.	New York via waypoints.	July 13	Darien C-35 ²⁴	Seadta Airplane Co.	Barranquilla, Colombia.
July 13	Magdalena	Hamburg-American Line.	Port Limon, Costa Rica.	July 13	Swiftlight	Pan-American Airways	Managua via David.
July 13	Cartago	United Fruit Co.	New Orleans and Habana	July 13	Amapala	C. D. Mallory & Co.	Curacao, D. W. I.
July 13	No. 9685 ²⁴	Pan-American Airways	Managua via David.	July 13	Lizzie D. Peabody ²⁶	Standard Fruit & S. S. Co.	New Orleans and waypoints.
July 13	St. Therese	United Fruit Co.	New Orleans and waypoints.	July 13	Nora B. ²⁶	M. P. Martinez	Colon, R. P.
²⁴ Air mail carrier. ²⁵ Motor boat. ²⁶ Motor schooner.				PORT OF BALBOA.			
July 6	San Luis ²⁷	Chiriqui Land Co.	Pto. Armuelles, R. P.	July 11	Rakuyo Maru	Nippon Yusen Kaisha.	Hongkong, China.
July 11	Rakuyo Maru	Nippon Yusen Kaisha	Valparaiso, Chile.	July 12	Dos Hermanos ²⁷	A. Valdez	Panama Bay, R. P.
July 11	Frost ²⁸	West India Oil Co.	Talara, Peru.	July 12	Sambu ²⁷	Hans Elliot.	Panama Bay, R. P.
July 12	Dos Hermanos ²⁷	A. Valdez	Bayano River, R. P.	July 12	A. B. De Obarrio ²⁷	Pacific Fruit Co.	Panama Bay, R. P.
July 12	Sambu ²⁷	Hans Elliot	Bayano River, R. P.				
July 12	A. B. De Obarrio ²⁷	Pacific Fruit Co.	Bayano River, R. P.				

* Other than ships passing through the Canal.

²⁵ Motor ship.²⁷ Motor schooner.

Transits of vessels of both the United States and Great Britain, the nations contributing the larger portion of the Canal's traffic, declined in 1929, there having been 2,700 and 1,783 transits, respectively, as compared with 2,753 and 1,842 respectively, in 1928. German shipping, which has been increasing rapidly from year to year, had 402 transits in 1929 as compared with 316 in 1928. Dutch and Swedish shipping also showed slight increases over the previous year, while Japan registered a slight decrease.

Consideration by League of Nations Committee of Aids to Navigation.

THE PANAMA CANAL RECORD has received from the Information Section of the League of Nations a copy of the general report and proposals of the Technical Committee for Buoyage and Lighting of Coasts. The main efforts of the committee are summarized in a number of proposals for signals which might be adopted as standardized or unified practice throughout the maritime world. The proposals are to be submitted to governments for examination in anticipation of an international conference on the subject, scheduled for the latter months of 1930.

"Scadta" Extends Service.

Announcement has been made by the local agents of the Sociedad Colombo-Alemana de Transportes Aereos ("Scadta") of the extension of its mail and passenger service from Guayaquil, Ecuador, formerly the southern terminal of the service, to Paita, Peru. According to the new itinerary, passengers embarking in the Scadta plane, which leaves every Thursday from Cristobal, will arrive in Guayaquil on the following day, and in Paita on Saturday morning.

The inauguration of the first service instituted by this concern between the Isthmus and Colombia was on April 17, 1929, announcement of which appeared in THE PANAMA CANAL RECORD of that date.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 16, 1929.

No. 563.

The following is quoted from H. O. Notice to Mariners No. 27, dated July 6th:

Panama, Limon Bay, Colon, Naval Radio Station to be moved. The Colon Naval Radio Station (NAX) is being dismantled and will be reestablished in the vicinity of Fort Davis Station, the north tower in latitude $9^{\circ} 17' 45.4''$ N., longitude $79^{\circ} 54' 32.4''$ W., and the south tower in latitude $9^{\circ} 17' 40''$ N., longitude $79^{\circ} 54' 33.4''$ W.

The towers will each be 200 feet high above the ground and each will carry a fixed red light at one-third and two-thirds of its height and a flashing red light at the top.

West Indies, Caribbean Sea, Navassa Island Light, Characteristic. The light on Navassa Island consists of two sets of burners, each set working independently of the other. One light shows 1 flash every 15 seconds, flash 2.5 seconds, eclipse 12.5 seconds; the other shows 1 flash every 2 seconds, flash 0.3 seconds, eclipse 1.7 seconds. In case one light is damaged and rendered inoperative the other will continue to function. Each light has a luminous power of 7,500 candles.

Approximate position: $18^{\circ} 24' 10''$ N., $75^{\circ} 00' 50''$ W.

Colombia, North Coast, Puerto Cispata, Buoys Reported Missing. The second officer of the Panaman vessel *Marari* reports that on June 4, 1929, the two buoys shown on H. O. Chart 986 in Puerto Cispata were missing.

Nicaragua, West Coast, Corinto Harbor Approach, Nonexistence of Shoal Depth. The commanding officer of the U. S. S. *Galveston* reports that the 25-foot spot shown on H. O. Chart 2604 at a distance of 1,270 yards 286° from Cordon Head Lighthouse does not exist, the least depth found at this point being 29.2 feet.

H. BURGESS,
Governor.

Tanker Traffic Through the Panama Canal in June, 1929.

During the month of June, 1929, 99 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 540,648, on which tolls of \$478,203.79 were collected. Cargo amounted to 525,934. In point of net tonnage, tanker traffic increased 12 per cent over the same traffic for the corresponding month a year ago, while cargo tonnage increased 20.7 per cent over the cargo tonnage of June, 1928.

Tank ships comprised 19.7 per cent of the total commercial transits through the Canal during the month; made up 23 per cent of the total Panama Canal net tonnage; were the source of 22.5 per cent of the tolls collected; and carried 21.7 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of June, 1929, segregated by direction of transit and nationality of vessels, are shown in the following tabulations, with comparative totals, for the two preceding months and for June, 1928:

Nationality.	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British	14	79,771	\$61,424.75	25,500
Danzig	1	6,127	4,411.44	.....
Dutch	1	5,065	3,646.80	.....
German	1	4,186	3,013.92	.....
Norwegian	2	8,657	6,233.04	.....
United States	33	180,862	137,480.09	34,559
Totals, June, 1929	52	284,668	216,210.04	60,059
Totals, May, 1929	52	286,387	210,607.65	19,679
Totals, April, 1929	39	215,199	159,166.70	22,876
Totals, June, 1928	51	270,917	207,154.95	53,676
<i>Pacific to Atlantic.</i>				
British	8	38,844	42,302.50	78,139
Danish	1	5,623	5,837.50	9,312
Danzig	1	6,127	6,585.00	11,375
Dutch	1	3,132	3,450.00	5,984
French	1	5,050	5,445.00	9,018
German	1	4,574	4,790.00	8,431
Norwegian	4	21,890	23,360.00	40,636
Swedish	1	3,335	3,958.75	7,068
United States	29	167,405	166,265.00	295,912
Totals, June, 1929	47	255,980	261,993.75	465,875
Totals, May, 1929	49	252,053	261,846.40	453,684
Totals, April, 1929	43	229,153	231,886.59	397,783
Totals, June, 1928	39	211,872	215,261.95	382,036

Of the total tanker traffic shown above, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months, and for June, 1928:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
June, 1929	38	204,823	\$150,165.87	10,212
May, 1929	41	227,722	165,842.76	1,277
April, 1929	22	121,872	87,747.84	.....
June, 1928	37	202,294	147,178.32	4,641
<i>From Los Angeles.</i>				
June, 1929	40	215,723	218,943.75	384,793
May, 1929	35	181,003	186,620.50	322,997
April, 1929	27	149,491	150,532.45	258,776
June, 1928	27	141,569	144,231.95	261,233

Tanker Traffic Through the Panama Canal During Fiscal Year 1929.

During the fiscal year ended June 30, 1929, 1,083 tank ships transited the Canal, carrying 5,512,481 tons of cargo, principally mineral oil products. These vessels had a combined net tonnage, Panama Canal measurement, of 5,844,263, and were the source of \$5,145,632.19 in tolls.

Tank ships comprised 16.8 per cent of the total commercial transits; made up of 19.6 per cent of the total Panama Canal net tonnage; paid 18.9 per cent of the total tolls collected; and carried 17.9 per cent of the total cargo in transit through the Canal.

Tanker traffic through the Canal in 1929 was lower than in 1928, both relatively and in actual traffic, there having been 1,121 transits in 1928, representing 6,243,969 net tons, paying \$6,436,437.16 in tolls, and carrying 5,829,722 tons of cargo.

Expressed in terms of percentage, the following tabulation shows the volume of tanker traffic through the Canal in the past four years:

	Per cent of total traffic.			
	No. of transits.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Fiscal year 1929.....	16.8	19.6	18.9	17.9
Fiscal year 1928.....	17.3	21.2	20.1	19.7
Fiscal year 1927.....	24.2	29.1	27.4	26.1
Fiscal year 1926.....	20.9	25.6	24.5	23.3

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the fiscal year 1929, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the previous three fiscal years:

	No. of vessels.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
Belgian.....	2	9,952	\$9,292.72	8,100
British.....	134	681,807	516,935.51	108,541
Danish.....	6	33,620	24,206.40	.....
Danzig.....	13	80,972	58,299.84	.....
Dutch.....	7	28,665	21,953.26	7,124
French.....	9	41,350	30,904.80	6,000
German.....	6	25,993	18,714.96	.....
Norwegian.....	35	169,266	124,838.43	15,922
Panamanian.....	2	13,300	9,576.00	.....
Peruvian.....	1	144	103.68	.....
Swedish.....	5	25,829	18,596.88	.....
United States.....	326	1,835,526	1,353,359.71	139,085
Yugoslav.....	1	4,189	3,016.08	.....
Totals.....	547	2,950,613	2,183,798.27	284,772
<i>Pacific to Atlantic.</i>				
Belgian.....	2	9,952	11,420.00	19,100
British.....	119	602,923	633,097.67	1,077,089
Danish.....	5	27,092	28,101.25	50,793
Danzig.....	16	100,304	105,020.00	183,844
Dutch.....	7	28,665	30,943.75	52,253
French.....	7	33,143	35,891.25	59,902
German.....	5	21,807	23,180.00	42,083
Norwegian.....	35	169,048	179,199.95	311,088
Panamanian.....	1	6,450	7,062.50	12,772
Swedish.....	6	31,214	33,002.50	58,665
United States.....	333	1,863,052	1,874,915.05	3,360,120
Totals.....	536	2,893,650	2,961,833.92	5,227,709
Grand totals, fiscal year 1929.....	1,083	5,844,263	5,145,632.19	5,512,481
Grand totals, fiscal year 1928.....	1,121	6,243,969	5,436,437.16	5,829,722
Grand totals, fiscal year 1927.....	1,324	7,624,112	6,658,806.90	7,250,579
Grand totals, fiscal year 1926.....	1,090	6,343,240	5,626,167.93	6,073,779

Of the 5,227,709 tons of tanker cargo from the Pacific, approximately 83 per cent originated in California and the remaining 17 per cent (with the exception of a small number of cargoes of molasses and coconut oil) originated in Peru and Ecuador. About 65 per cent of this tonnage was destined to the United States, 21 per cent to Europe, and the balance to Cristobal, West Indies, Canada, Central America, and South Africa. The larger part of the tanker cargoes from the Atlantic came from Texas, Mexico, Colombia and Venezuela and were bound for China, Canada, and South America.

Of the total mineral oil tonnage carried in tankers through the Canal in 1929, approximately 65 per cent was gasoline, benzine or naphtha; 20 per cent crude; and the remainder consisted of gas and fuel oils, lubricating oils, and kerosene.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective July 15, 1929:

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.22
Brass, sheet, average.....	Lb.	.35
Bronze, Tobin, average.....	Lb.	.21
Gasoline, motor grade.....	Gal.	.14½
Metal, yellow.....	Lb.	.24
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.17
Oil, Diesel, at Cristobal only, in bulk, no surcharge.....	Bbl. of 42 gals.	1.80
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.43
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.53
Oil, engine, gas, extra heavy, in drums, Gulftriton No. 2250.....	Gal.	.50
Oil, kerosene, in drums.....	Gal.	.11
Oil, marine engine.....	Gal.	.54
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.13
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.15
Waste, cotton, white.....	Lb.	.16

Price of Coal at the Canal.

Coal is obtainable from the plants operated by The Panama Canal at the prices shown below, effective June 15, 1928:

	Cristobal-Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2.....	\$8.00	\$11.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.....		8.00
3. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	9.00	12.00
4. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds.....	11.00	14.00

Commercial Traffic Through the Panama Canal in June, 1929, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of June, 1929, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for June, 1928 and 1927. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	89	453,429	349,147	560,559	349,779	\$392,133.92	283,906
East coast of United States to west coast of South America:							
British	9	32,114	28,857	57,060	29,936	28,383.07	14,780
Chilean	1	4,672	3,433	7,310	3,976	4,291.25	2,908
German	1	1,167	998	1,428	813	1,247.50	352
Japanese	1	4,611	4,223	5,838	4,219	3,319.92	
Norwegian	1	2,798	2,020	3,194	1,987	2,525.00	800
Peruvian	1	1,529	1,483	2,155	1,169	1,834.80	1,943
Swedish	3	10,430	5,050	16,937	5,439	8,053.99	542
United States	15	74,636	61,848	101,119	61,019	62,021.60	31,783
Totals	32	131,957	107,912	195,041	108,558	111,677.13	53,108
Europe to west coast of South America:							
Belgian	1	4,792	4,142	6,512	4,038	5,177.50	6,638
British	5	30,057	24,335	39,951	24,532	30,418.75	20,228
Danzig	1	6,127	5,268	8,939	5,007	4,411.44	
Dutch	2	11,786	6,713	11,343	6,628	8,391.25	13,018
German	5	24,997	18,684	29,822	18,400	23,355.00	28,025
Italian	3	17,139	11,716	21,794	13,099	14,645.00	2,931
Norwegian	3	9,622	7,874	13,128	7,841	8,220.67	8,345
Peruvian	1	343	335	465	276	251.25	
Yugoslav	1	4,163	3,593	5,687	3,562	4,491.25	6,660
Totals	22	109,026	82,660	137,641	83,383	99,362.11	85,845
East coast of United States to Far East:							
British	5	27,689	17,366	29,120	17,119	21,707.50	26,943
Danish	2	5,072	3,419	5,733	3,456	4,273.75	5,022
Japanese	5	24,561	20,611	30,874	20,229	25,554.35	34,012
Norwegian	2	9,068	4,985	8,384	4,952	6,231.25	14,093
United States	7	32,897	24,375	39,146	24,230	30,468.75	47,234
Totals	21	99,287	70,756	113,257	69,986	88,265.60	127,304
Europe to west coast of Canada:							
British	8	47,589	34,855	53,711	33,199	39,638.23	17,172
Danish	1	5,317	4,219	6,645	4,244	5,273.75	8,670
Dutch	1	7,551	5,776	9,399	5,814	7,220.00	4,577
French	2	10,643	9,061	12,360	7,394	11,826.25	7,705
German	2	13,634	8,881	14,518	8,851	11,101.25	10,894
Italian	1	6,025	5,056	7,098	4,498	6,320.00	1,990
Norwegian	2	9,846	8,190	13,339	8,310	10,237.50	8,537
Totals	17	100,605	76,038	117,070	72,310	91,116.98	59,545
Europe to west coast of United States:							
British	6	29,781	24,724	38,932	24,598	22,020.82	
Danish	1	4,790	2,720	4,605	2,785	3,400.00	7,800
Dutch	2	10,925	9,724	15,777	9,403	10,126.80	4,599
French	1	4,724	3,663	5,961	3,657	4,578.75	7,694
German	2	10,852	7,569	13,176	7,588	8,006.42	6,431
Norwegian	1	4,321	3,748	6,361	3,769	3,111.12	
Swedish	2	10,452	6,308	10,514	7,890	7,885.00	10,500
Totals	15	75,845	58,456	95,326	59,690	59,128.91	37,024
East coast of United States to Australasia:							
British	9	51,949	33,307	54,275	33,405	41,633.75	49,526
Swedish	1	3,528	2,417	4,104	3,128	3,021.25	5,914
United States	2	10,310	7,437	11,747	7,362	9,296.25	4,459
Totals	12	65,787	43,161	70,126	43,895	53,951.25	59,899

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Cristobal to west coast of South America:							
Colombian	3	411	390	647	384	\$478.10	546
Dutch	1	742	294	780	323	367.50	138
German	6	5,230	3,395	6,523	3,506	4,243.75	1,739
Totals	10	6,383	4,079	7,950	4,213	5,089.35	2,423
Europe to Australasia:							
British	6	47,204	34,587	58,546	36,373	43,233.75	43,382
French	1	5,629	4,343	7,007	4,402	5,428.75	2,210
Totals	7	52,833	38,930	65,553	40,775	48,662.50	45,592
Cristobal to west coast of Central America:							
British	2	1,441	1,236	2,298	1,304	1,607.50	2,122
Colombian	1	307	302	405	308	368.40	500
Norwegian	2	1,110	908	1,587	873	1,135.00	1,985
Totals	5	2,858	2,496	4,290	2,485	3,110.90	4,607
East coast of United States to Philippine Islands:							
British	3	16,159	10,451	17,970	10,639	13,063.75	17,821
United States	1	6,183	5,780	7,717	5,791	7,225.00	8,987
Totals	4	22,342	16,231	25,687	16,430	20,288.75	26,808
East coast of Canada to Australasia:							
British	4	16,861	12,761	20,927	12,915	15,951.25	15,009
East coast of Central America to west coast of United States:							
United States	4	9,134	8,361	13,520	8,242	10,398.20	2,329
Foreign Vessels in ballast— United States inter- coastal:							
British	3	21,454	19,126	31,967	19,620	15,479.67	.....
East coast of United States to Hawaiian Islands:							
United States	3	7,819	6,283	9,394	6,281	7,811.45	11,313
West Indies to west coast of United States:							
Danish	1	3,516	2,374	3,953	2,394	2,967.50	3,990
United States	2	7,699	6,216	10,228	6,193	5,543.28	.....
Totals	3	11,215	8,590	14,181	8,587	8,510.78	3,990
Around the World:							
United States	2	19,028	14,573	24,661	14,515	18,216.25	9,690
East coast of United States to west coast Canada:							
British	1	4,627	3,172	5,140	3,156	3,331.44	.....
United States	1	4,784	3,445	5,557	3,430	4,306.25	4,730
Totals	2	9,411	6,617	10,697	6,586	7,637.69	4,730
Canadian Intercoastal:							
British	2	8,255	6,576	11,239	6,929	8,220.00	2,010
East coast of Canada to west coast United States:							
British	2	8,839	6,208	10,153	6,142	6,544.81	4,340
Europe to west coast of Central America:							
German	2	7,227	4,683	8,332	4,798	5,853.75	7,080
East coast of South America to west coast Canada:							
Norwegian	1	4,375	2,431	4,000	2,485	3,038.75	1,411
United States	1	5,046	3,587	5,580	3,541	4,483.75	1,976
Totals	2	9,421	6,018	9,580	6,026	7,522.50	3,387
East coast of United States to west coast of Central America:							
Norwegian	1	1,716	1,449	2,239	1,355	1,811.25	1,339
East coast Canada to west coast South America:							
British	1	7,033	5,973	11,410	6,711	5,063.76	.....
West Indies to west coast of Canada:							
British	1	4,177	3,168	4,982	3,177	3,960.00	6,001

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West Indies to west coast of South America:							
British.....	1	9,609	8,309	13,056	8,335	\$10,386.25	16,800
West Indies to Australasia:							
British.....	1	4,404	2,704	4,418	2,684	3,380.00	7,450
Africa to Australasia:							
British.....	1	4,166	2,612	4,212	2,548	3,265.00	6,800
Africa to Far East:							
British.....	1	4,615	2,678	4,392	2,649	3,347.50	7,500
Cristobal to west coast of United States:							
Panaman.....	1	2,603	1,383	2,461	1,384	1,728.75	3,485
Cristobal to Balboa:							
Panaman.....	1	54	51	86	50	63.75	72
Grand totals, June, 1929..	272	1,287,393	977,989	1,604,457	981,038	1,117,940.01	899,386
Grand totals, June, 1929..	270	1,257,739	946,939	1,547,357	948,858	1,079,160.72	765,234
Grand totals, June, 1927..	247	1,158,119	896,347	1,460,310	896,671	999,889.89	708,569

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	79	411,950	316,018	509,620	316,202	\$395,022.50	594,262
West coast of South America to east coast of United States:							
British.....	8	29,536	23,093	39,038	23,753	28,866.25	42,701
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	3,011
German.....	2	6,619	4,597	6,995	4,129	5,700.15	9,706
Italian.....	1	4,180	3,926	4,901	3,132	4,907.50	7,044
Norwegian.....	2	5,378	4,529	6,173	4,111	5,661.25	10,200
Swedish.....	2	8,917	7,486	30,676	8,762	9,357.50	43,746
United States.....	14	52,329	42,072	73,344	41,423	52,384.45	108,966
Yugoslav.....	1	3,406	2,232	3,555	2,212	2,790.00	6,100
Totals.....	31	115,070	91,401	171,992	91,498	113,999.60	231,474
West coast of South America to Europe:							
British.....	6	40,459	30,546	51,026	31,597	38,182.50	38,808
Danzig.....	1	6,127	5,268	8,939	5,007	6,585.00	11,375
Dutch.....	3	18,957	10,474	18,035	10,888	13,092.50	26,130
Finnish.....	1	1,835	1,828	1,979	1,709	2,202.00	3,200
French.....	1	4,164	3,252	5,343	3,269	4,065.00	6,784
German.....	3	16,564	11,914	19,224	12,032	14,892.50	23,182
Greek.....	1	4,568	2,907	4,720	2,843	3,633.75	8,300
Italian.....	1	9,329	5,176	11,718	6,750	6,470.00	1,028
Norwegian.....	1	1,368	1,194	2,017	1,197	1,492.50	3,050
United States.....	1	4,339	3,795	5,731	3,512	4,743.75	8,380
Totals.....	19	107,760	76,354	128,732	78,804	95,359.50	130,237
West coast United States to Europe:							
British.....	8	34,054	26,118	42,785	26,136	32,647.50	61,029
Dutch.....	1	3,132	2,760	4,647	2,642	3,450.00	5,984
French.....	1	5,050	4,356	7,011	3,999	5,445.00	9,018
German.....	1	4,574	3,832	6,358	3,637	4,790.00	8,431
Norwegian.....	4	22,264	17,377	28,814	17,174	21,721.25	39,261
Swedish.....	2	8,195	5,948	10,616	7,689	7,435.00	12,143
United States.....	1	4,964	3,663	5,856	3,663	4,578.75	7,602
Totals.....	18	82,233	64,054	106,087	64,930	80,067.50	143,468
West coast of Canada to Europe:							
British.....	6	31,226	20,908	34,064	21,050	26,135.00	41,993
Danish.....	1	5,660	5,233	6,919	5,223	6,541.25	9,361
Dutch.....	1	7,056	4,547	7,310	4,495	5,683.75	9,351
French.....	1	4,936	3,385	5,751	3,555	4,231.25	7,716
German.....	4	23,307	16,174	26,884	16,365	20,217.50	30,773
Italian.....	1	4,013	3,303	5,493	3,241	4,128.75	7,000
Totals.....	14	76,198	53,550	86,421	53,929	66,937.50	106,194

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Philippine Islands to east coast of United States:							
British.....	1	4,612	3,540	5,848	3,563	\$1,425.00	6,574
Danish.....	1	2,791	1,875	3,173	1,928	2,343.75	5,000
Japanese.....	4	20,639	17,435	25,723	17,112	21,614.30	30,030
Norwegian.....	1	4,134	3,214	5,242	3,264	4,017.50	7,500
United States.....	4	23,886	20,041	29,771	19,963	25,051.25	37,234
Totals.....	11	56,062	46,105	69,757	45,830	57,451.80	86,338
West coast of South America to Cristobal:							
Colombian.....	3	950	894	1,543	902	1,115.30	1,004
Dutch.....	2	1,484	588	1,560	646	735.00	419
German.....	4	3,491	2,260	4,347	2,334	2,825.00	2,187
Norwegian.....	1	504	423	732	391	362.88	.....
Swedish.....	1	1,513	1,307	1,600	1,054	1,633.75	1,082
Totals.....	11	7,942	5,472	9,782	5,327	6,671.93	4,692
Australasia to Europe:							
British.....	8	64,173	47,421	77,486	47,996	59,276.25	40,996
West coast of Canada to east coast of United States:							
British.....	5	22,916	15,921	25,269	15,879	19,901.25	24,724
Danish.....	1	4,418	3,585	5,702	3,583	4,481.25	7,800
Swedish.....	1	3,061	2,421	3,898	2,992	3,026.25	4,600
Totals.....	7	30,395	21,927	34,869	22,454	27,408.75	37,124
West coast of United States to east coast of Central America:							
United States.....	4	9,227	8,489	13,558	8,403	10,558.20	2,107
West coast of United States to Cristobal:							
British.....	1	5,162	4,579	7,417	4,524	5,723.75	9,560
Danish.....	1	5,623	4,670	7,691	4,710	5,837.50	9,312
Norwegian.....	1	5,071	4,342	7,313	4,307	5,427.50	9,200
United States.....	1	99	98	140	98	73.50	.....
Totals.....	4	15,955	13,689	22,561	13,639	17,062.25	28,072
West coast of Central America to Cristobal:							
British.....	3	2,063	1,900	3,436	1,906	2,375.00	2,184
Norwegian.....	1	606	485	855	482	436.32	.....
Totals.....	4	2,669	2,385	4,291	2,388	2,811.32	2,184
Canadian interoceanic:							
British.....	3	13,535	9,743	16,333	10,074	12,178.75	18,805
Hawaiian Islands to east coast of United States:							
United States.....	2	7,180	4,993	8,334	4,992	6,241.25	12,257
Australasia to east coast of United States:							
British.....	1	4,449	2,777	4,504	2,795	3,471.25	6,500
United States.....	1	5,167	3,816	6,094	3,816	4,770.00	7,627
Totals.....	2	9,616	6,593	10,598	6,611	8,241.25	14,127
Australasia to east coast of Canada:							
British.....	2	9,848	7,676	12,617	7,743	9,595.00	3,806
West coast of South America to Egypt:							
Greek.....	1	3,433	2,234	3,536	2,223	2,792.50	6,900
Yugoslav.....	1	3,969	3,178	4,995	3,214	3,972.50	7,575
Totals.....	2	7,402	5,412	8,531	5,437	6,765.00	14,475
West coast of South America to Canada:							
British.....	2	13,786	11,950	22,719	12,492	14,937.50	31,774
West coast of Central America to east coast of U. S.							
Norwegian.....	1	1,716	1,490	2,289	1,355	1,235.52	.....
West coast Central America to Europe:							
German.....	1	3,272	2,517	4,165	2,547	2,355.84	.....

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of United States to Cristobal:							
United States.....	1	1,549	1,167	1,974	1,161	\$1,458.75	664
Hawaiian Islands to Europe:							
Swedish.....	1	5,661	3,406	5,642	4,320	4,257.50	7,715
Far East to east coast of United States:							
Japanese.....	1	5,294	4,181	6,609	4,040	5,226.25	2,928
Far East to West Indies:							
Norwegian.....	1	4,284	2,507	4,333	2,494	3,133.75	7,450
West coast of Canada to West Indies:							
British.....	1	2,207	1,239	2,338	1,249	1,548.75	3,467
Balboa to Cristobal:							
Panaman.....	1	54	51	86	50	63.75	.....
Grand totals, June, 1929	231	1,065,038	809,790	1,341,724	815,965	1,009,865.96	1,524,616
Grand totals, June, 1928..	211	970,126	750,666	1,230,149	751,293	937,050.37	1,374,331
Grand totals, June, 1927..	208	994,807	777,474	1,285,036	783,842	970,488.08	1,520,528

United States Intercoastal Traffic by Commodities for June, 1929.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for June, 1929, and the totals for June, 1928 and 1927. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Aeroplanes.....	34	.....	34
Agricultural implements.....	1,303	129	1,432
Alfalfa.....	.....	220	220
Alfalfa meal.....	.....	307	307
Ammonia.....	56	.....	56
Asbestos.....	191	.....	191
Asphalt.....	384	249	633
Automobiles.....	986	97	1,083
Automobile accessories.....	1,216	33	1,249
Bark, cascara.....	.....	73	73
Beans.....	15	1,151	1,166
Borax.....	.....	565	565
Bricks.....	32	.....	32
Burlap.....	147	90	237
Calcium carbide.....	28	.....	28
Camphor.....	.....	41	41
Canned goods:			
Fish.....	210	5,415	5,625
Fruit.....	296	11,535	11,831
Meat.....	37	30	67
Milk.....	20	610	630
Soup.....	1,451	.....	1,451
Vegetables.....	977	1,534	2,511
Miscellaneous.....	1,694	5,356	7,050
Carbon, black.....	176	.....	176
Celite filtercel.....	.....	337	337
Cement.....	846	.....	846
Charcoal.....	149	125	274
Chemicals.....	2,167	233	2,400
China and fire clay.....	255	.....	255
Coal.....	3,333	.....	3,333
Coconuts.....	.....	684	684
Coffee.....	61	44	105
Coke.....	2,032	.....	2,032

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Cold storage:			
Butter	100		100
Cheese	159		159
Eggs		75	75
Lard	463		463
Meat	12		12
Other	91		91
Confectionery	563		563
Cork	91		91
Cotton	98	1,233	1,331
Cyanide	100		100
Drugs	437	56	493
Earthenware	99	89	188
Eggs, dried		212	212
Explosives	63		63
Fertilizer	18		18
Flour	242	5,587	5,829
Fruit, dried	33	5,632	5,665
Fuller's earth	18		18
Furniture	382		382
General	41,894	14,752	56,646
Glass and glassware	2,649	170	2,819
Graphite	17		17
Guano	100		100
Hair		60	60
Hardwoods	1,006	11	1,017
Hay		25	25
Hemp		978	978
Honey		8	8
Infusorial earth		53	53
Ink	18		18
Jute	150	30	180
Linoleum	423	94	517
Liquors	48		48
Lumber	1,360	177,788	179,148
Malt	179		179
Manufactured goods:			
Iron and steel	124,392	1,025	125,417
Machinery	4,470	253	4,723
Railroad material	2,615		2,615
Tinplate	11,293		11,293
Textiles	7,124	159	7,283
Miscellaneous	11,400	3,072	14,472
Matches	136	71	207
Metals:			
Antimony		953	953
Copper	100	5,023	5,123
Iron	3,092		3,092
Lead		763	763
Scrap	22	175	197
Tin	75	49	124
Zinc		645	645
Other	668	25	693
Milk, powdered	40	526	566
Molluscs	134		134
Musical instruments	25		25
Nuts	3	225	228
Oats	20		20
Oils:			
Cottonseed	189		189
Crude	200	22,789	22,989
Gas oil, fuel oil	27		27
Gasoline, benzine, naptha.		254,737	254,737
Kerosene		10,272	10,272
Linseed	700		700
Lubricating and greases	5,165	20	5,185
Olive	20		20
Vegetable	240		240
Wood	60	86	176
Other	10	21	31
Ores:			
Copper		550	550
Lead		100	100
Magnesite		2,253	2,253
Manganese	25		25
Other	200		200
Paint	549	43	592
Paper	7,284	6,401	13,685
Paper pulp		9,977	9,977
Paper roofing	118		118
Peanuts	80	216	296
Peas		20	20
Phosphates	697		697
Porcelain	55	638	693
Bags		430	430

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Rice.....	95	75	170
Rope.....	245	15	260
Rosin.....	987		987
Rubber:			
Manufactured.....	1,354	411	1,765
Raw.....	61		61
Scrap.....	6	20	26
Salt.....	301		301
Sand.....	2,054		2,054
Seeds.....		293	293
Shells.....	1,814		1,814
Silk.....	10	145	155
Skins and hides.....		2,082	2,082
Slag.....	1,000		1,000
Slate.....	597		597
Soap.....	3,560	137	3,697
Soda.....	334		334
Soda ash.....	793		793
Soda, bicarbonate.....	415		415
Soda, caustic.....	995		995
Starch.....	12		12
Sugar.....	113	16,466	16,579
Sulphur.....	6,931		6,931
Syrup.....	140		140
Tallow.....		218	218
Tar.....	120		120
Tea.....	44		44
Tobacco.....	1,392	103	1,495
Toys.....	129		129
Turpentine.....	50		50
Vegetables.....		84	84
Waste.....	89	200	289
Wax.....	227	71	298
Wheat.....		35	35
Wine.....	5	164	169
Wool.....	34	4,883	4,917
Totals, June, 1929.....	274,074	582,630	856,704
Totals, June, 1928.....	246,570	535,928	782,498
Totals, June, 1927.....	262,663	695,054	957,717

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending July 13, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Visurgis.....	North German Lloyd	July 3	July 3	800	
Corinto.....	Panama Mail S. S. Co.	July 3	July 3		13
California.....	Panama-Pacific Kaisha	July 5	July 5		173
Tsuyama Maru.....	Nippon Yusen Kaisha	July 7	July 7	307	
Ecuador.....	Panama Mail S. S. Co.	July 8	July 9	92	
Vinland.....	Ole Knutsen	July 9	July 9	14	
Annam.....	East Asiatic Co.	July 10	July 10	282	
Hague Maru.....	Osaka Shosen Kaisha	July 10	July 11	781	
Rakuyo Maru.....	Nippon Yusen Kaisha	July 11	July 11	92	31
Caldas.....	National Navigation Co.	July 11	July 11		3
Albert Voegler.....	Hamburg-American Line	July 11	July 12	662	
Santa Barbara.....	Grace Line	July 11	July 11	5	
City of San Francisco.....	Panama Mail S. S. Co.	July 11	July 12	37	
Frost.....	Hans Ericson	July 11	July 11	268	
El Salvador.....	Panama Mail S. S. Co.	July 13	July 14	75	2

Official Circular.

Appointment.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 18, 1929.

To all concerned.—The appointment of Capt. Roy W. Ryden, U. S. Navy, as Assistant to the Governor, The Panama Canal, is hereby announced, to date from June 19, 1929.

Effective June 20, 1929, Captain Ryden will be Superintendent, Mechanical Division, vice Capt. William McEntee, relieved from duty with The Panama Canal.

H. BURGESS,
Governor.

Binders for The Panama Canal Record.

Cardboard covers, punched and fitted with brass fasteners forming binders for THE PANAMA CANAL RECORD are offered for sale at 25 cents a set, for the benefit of those who wish to keep a file of the issues for ready reference. Orders may be addressed to The Panama Canal, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Three Weeks Ending July 13, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon	Panama R. R. S. S. Line		June 23		2,965
Juan S. Elcano	Spanish Line		June 23		117
Nosa King	N. O. & S. A. S. S. Co.		June 23		101
Wanks	Standard Fruit & S. S. Co.		June 23		8 $\frac{1}{2}$
Losada	Pacific Steam Nav. Co.		June 23		81
La Paz	Pacific Steam Nav. Co.		June 23		155
Calamares	United Fruit Co.	June 23	June 23	19	81
Romulus	West India Oil Co.	June 23	June 24	7,283	(*)
Corinto	Panama Mail S. S. Co.	June 23	June 23	714	
Durazzo	Hamburg-American Line	June 23	June 30	383	572
Guatemala	Panama Mail S. S. Co.		June 24		501
Cartago	United Fruit Co.		June 24		222
Indiana	French Line		June 24		236
Santa Cecilia	Grace Line	June 24	June 24	(*)	103
Finn	Colombian Maritime Co.	June 24	June 24	160	(*)
Ebro	Pacific Steam Nav. Co.	June 24	June 24	8	64
Aachen	North German Lloyd	June 24	June 25	48	121
Guadeloupe	French Line	June 24	June 26	312	320
Pastores	United Fruit Co.	June 24	June 26	730	110
Nora B.	H. Blackwood	June 25	June 25	(*)	2 $\frac{1}{2}$
Impero	Soc. Italo Cileña	June 25	June 26	85	(*)
Benjamin Franklin	Fred Olsen & Co.	June 25	June 26	340	254
Barneveld	Royal Netherlands S. S. Co.	June 25	June 26	430	134
Santa Cruz	Grace Line	June 26	June 26	130	(*)
Stuyvesant	Royal Netherlands S. S. Co.	June 26	June 26	82	2
Bodegraven	Royal Netherlands S. S. Co.	June 26	June 26	41	(*)
Inapaquina	United Fruit Co.	June 26	June 26	40	(*)
Orbita	Pacific Steam Nav. Co.	June 26	June 26	94	$\frac{1}{2}$
Guayaquil	Panama R. R. S. S. Line	June 26	June 27	11	51
Sixtoia	United Fruit Co.	June 26	June 27	739	568
Aragonia	Hamburg-American Line	June 26	June 27	39	(*)
Alvarado	Pacific Steam Nav. Co.	June 26	June 27	50	118
Novian	Leyland S. S. Line	June 26	June 27	574	6
Lochmonar	Pacific Steam Nav. Co.	June 26	June 28	52	597
Lochgoil	Pacific Steam Nav. Co.	June 27	June 27	(*)	128
Notre Dame					
de Fourviere	French Line	June 27	June 27	10	(*)
Linda S.	R. Feuillebois	June 27	June 27	(*)	37 $\frac{1}{2}$
Grunewald	Hamburg-American Line	June 27	June 28	11	718
St. Andre	French Line	June 27	June 28	664	(*)
Grandon	Hamburg-American Line	June 27	June 28	172	52
Baralt	Royal Netherlands S. S. Co.	June 27	June 28	111	
Inapaquina	United Fruit Co.	June 27	June 28	29	(*)
Saramacca	United Fruit Co.	June 27	June 28	566	184
Colombia	Panama Mail S. S. Co.	June 27	June 28	836	145
Acajutla	Pacific Steam Nav. Co.		June 28		1,138
Suriname	United Fruit Co.	June 28	June 28	4	422
Balboa	Johnson S. S. Line	June 28	June 28	138	73
Saale	North German Lloyd	June 28	June 28	(*)	165
Limon	United Fruit Co.	June 28	June 29	614	136
Amapala	Standard Fruit & S. S. Co.	June 28	June 29	289	441
Caldas	National Nav. Co.		June 29		81
Stuyvesant	Royal Netherlands S. S. Co.	June 29	June 29	(*)	458
Rialto	Nav. Lib.-Triestina	June 29	June 29	284	(*)
Managui	United Fruit Co.	June 29	June 29	39	332
Wanks	Standard Fruit & S. S. Co.	June 29	June 30	139	4
Parismina	United Fruit Co.	June 29	June 30	1,033	
Pastores	United Fruit Co.	June 30	June 30	4	91
Buenaventura	Panama R. R. S. S. Co.	June 30	June 30	284	
Atlas	Royal Netherlands S. S. Co.	June 30	June 30	$\frac{1}{2}$	
Planter	T. & J. Harrison	June 29	June 30	625	(*)
Parismina	United Fruit Co.		July 1		60
Buenaventura	Panama R. R. S. S. Line		July 1		96
Saramacca	United Fruit Co.	July 1	July 1	58	49
Santa Teresa	Grace Line	July 1	July 1	50	(*)
Rhodopis	Hamburg-American Line	July 1	July 2	31	237
Abraham Lincoln	Norway-Pacific Line	July 1	July 2	(*)	573
Frederic Ewing	Pan-Amer. Petroleum Co.	July 1	July 2	10,625	(*)
Ulua	United Fruit Co.	July 1	July 3	418	27
Swiftarrow	C. D. Mallory & Co.	July 1	July 3	12,000	(*)
Mercian	Leyland Line		July 2		62 $\frac{1}{2}$
Baralt	Royal Neth. S. S. Co.		July 2		193
Cauca	National Navigation Co.	July 2		283	
Rugia	Hamburg-American Line	July 2		116	35
Orita	Pacific Steam Nav. Co.	July 2	July 3	105	21
Pacific Reliance	Furness, Withy & Co.	July 2	July 3	(*)	339
Glamorganshire	Pacific Steam Nav. Co.	July 3	July 3	(*)	7
Corinto	Panama Mail S. S. Co.		July 3		2,260

* No cargo discharged.

* No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z.—Continued.

Name of vessel.	Line or charterer	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cerigo	Hamburg-American Line	July 3		395	
Manizales	North German Lloyd	July 3	July 6	405	331
Inapaquina	United Fruit Co.	July 3		35	
Aconeagua	Chilean Line	July 3	July 3	(¹)	8
Cristobal	Panama R. R. S. S. Line	July 3		3,701	
Zacapa	United Fruit Co.	July 3	July 4	415	253
Santa Inez	Grace Line	July 4	July 5	50	(²)
Coppename	United Fruit Co.	July 4	July 5	648	11
Heinrich Arp	Colombian Mar. Co.	July 4	July 5	186	(²)
Saramacca	United Fruit Co.	July 5	July 5	7	413
Atlantida	Standard Fruit & S. S. Co.	July 5	July 6	256	454
Maravi	United Fruit Co.	July 5	July 6	429	273
Margaret Johnson	Johnson Line	July 6		202	
Negada	Hamburg-American Line	July 6	July 6	35	68
Linda S.	R. Feuillebois	July 6	July 6	(¹)	39
Waunta	Standard Fruit & S. S. Co.	July 6		574	
Wanka	Standard Fruit & S. S. Co.	July 6		144	
San Mateo	United Fruit Co.	July 6		953	
Heredia	United Fruit Co.	July 6		994	
Cristobal	Panama R. R. S. S. Line		July 7		910
Cerigo	Hamburg-American Line		July 7		355
Wanka	Standard Fruit & S. S. Co.		July 7		4
San Mateo	United Fruit Co.		July 7		64
Visargis	North German Lloyd		July 7		1,008
Ulua	United Fruit Co.	July 7	July 7	30	51
Los Angeles	Hamburg-American Line	July 7	July 8	7	549
Gasterdijk	Holland-American Line	July 7	July 8	539	(²)
Tsuyama Maru	Nippon Yusen Kaisha	July 7	July 8	161	(²)
Heredia	United Fruit Co.		July 8		8
Nusa Chief	N. O. & S. A. S. S. Co.	July 8	July 8	4	128
Teno	Chilean Line	July 8	July 9	27	146
Tolosa	United Fruit Co.	July 8	July 10	206	64½
Caldas	National Navigation Co.	July 8	July 11	283	50
Martha	H. C. Stevenson	July 8	July 13	(¹)	486
Atlas	Royal Neth. S. S. Co.		July 9		39
Zenon	French Line	July 9	July 9	145	(²)
William M.	R. Feuillebois	July 9	July 9	(¹)	29½
Modavia	Donaldson Line	July 9	July 10	(²)	331
Wido	North German Lloyd	July 9	July 10	143	2
Hudson	French Line	July 9	July 10	331	(²)
Inapaquina	United Fruit Co.	July 9	July 10	25	(²)
Ecuador	Panama Mail S. S. Co.	July 9	July 10	279	263
Flandre	French Line	July 9	July 11	333	653
Annam	Danish East Asiatic Line	July 10	July 10	92	(²)
Amsterdam	Royal Neth. S. S. Co.	July 10		302	
Drechtidijk	Holland-American Line	July 10	July 10	(¹)	24
Venezuela	Royal Neth. S. S. Co.	July 10	July 10	18	(²)
Albert Voegler	Hamburg-American Line	July 10	July 11	65	271
Cali	North German Lloyd	July 10		475	
Magdalena	Hamburg-American Line	July 10	July 11	215	(²)
Santa Marta	United Fruit Co.	July 10	July 11	826	491
Camden	United Fruit Co.	July 11	July 11	9,432	(²)
Santa Barbara	Grace Line	July 11	July 11	(¹)	42
Suriname	United Fruit Co.	July 11	July 12	432	94
Swiftlight	C. D. Mallory	July 11	July 13	12,160	(²)
Hague Maru	Osaka Shosen Kaisha	July 11	July 12	487	(²)
Coppename	United Fruit Co.	July 12	July 12	2½	439
Santa Rita	Grace Line	July 12	July 12	174	116
Nora B.	H. Blackwood	July 12	July 12	(¹)	5
Itauri	Hamburg-American Line	July 12	July 12	22	36
Oroya	Pacific Steam Nav. Co.	July 12	July 12	65	(²)
E. Salvador	Panama Mail S. S. Co.	July 12	July 13	533	146
Esparta	United Fruit Co.	July 12	July 13	969	145
Anapala	Standard Fruit & S. S. Co.	July 12	July 13	177	459
Venezuela	Royal Neth. S. S. Co.	July 12	July 13	(¹)	255
Annie Johnson	Johnson Line	July 12	July 13	(¹)	208
Anaehucina	United Fruit Co.	July 12		21	
Inapaquina	United Fruit Co.	July 12		25	
City of San Francisco	Panama Mail S. S. Co.	July 12		1,225	
Nebraska	Royal Mail S. P. Co.	July 12	July 13	33	284
Salvador	Pacific Steam Nav. Co.	July 13		618	
Mayari	United Fruit Co.	July 13	July 13	634	558
Emil Kirdorf	Hamburg-American Line	July 13		41	
Wanka	Standard Fruit & S. S. Co.	July 13		129	
Santa Therese	United Fruit Co.	July 13		2,023	
Georgie	French Line	July 13		236	
Cartago	United Fruit Co.	July 13		289	

¹ No cargo discharged.² No cargo laded.

THE PANAMA CANAL RECORD

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Cargo Through Canal During June, 1929.

On pages 728 and 729 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in June, 1929. This cargo, segregated according to direction, as compared with June, 1928, and the differences, is shown in the following tabulation:

	June, 1929.	June, 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	899,386	765,234	+134,152
Pacific to Atlantic.....	1,524,616	1,374,331	+150,285
Totals.....	2,424,002	2,139,565	+284,437

As shown above, cargo tonnage from the Atlantic to the Pacific increased 134,152 tons over June, 1928, while that in the opposite direction gained 150,285 tons, making an aggregate increase over June, 1928, of 284,437 tons.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-three and six-tenths per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 25.6 per cent in Europe. Cargo originating in the United States was 64,602 tons, or 12.7 per cent, greater than the tonnage from the United States in June, 1928, although the proportion of the total in June, 1928 (66.4 per cent) was slightly higher. Cargo from Europe also increased in actual tonnage as compared with the corresponding month last year (37,081 tons, or 19.2 per cent) while the percentage of the total was approximately the same in June, 1929, as in the corresponding month in 1928.

Destination.—Forty and seven-tenths per cent of the Pacific-bound cargo was destined to the United States; 18 per cent to Asia; 18 per cent to South America; and 15 per cent to Australasia. Tonnage to all of these areas, with the exception of Asia, increased over the amounts destined to these regions in June, 1928. To the United States, the actual increase was 34,038 tons, or 10.2 per cent; to South America, 61,749 tons, or 61.8 per cent; and to Australasia, 20,650 tons, or 18.1 per cent. The percentage of the whole to South America in June, 1929, was also considerably higher than that in June, 1928, while that to the United States was slightly lower in June, 1929. That to Australasia accounted for approximately the same proportion last month as in June, 1928. Tonnage to Asia showed a slight decrease of 3,718 tons under June, 1928, also a decrease with relation to the total cargo. The heavy increase in tonnage to South America was caused primarily by several cargoes of mineral oils destined to Chile.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction 52.8 per cent came from the west coast of the United States; 27.1 per cent from South America; 8.9 per cent from Canada; 6.3 per cent from Asia; and 3.9 per cent from Australasia. Cargo from the United States showed a gain of 39,687 tons, or 5.2 per cent; that from South America a gain of 85,057 tons, or 25.9 per cent; that from Asia, a gain of 30,206 tons, or 45.5 per cent; and that from Australasia, a gain of 20,068 tons, or 51.7 per cent, over June, 1928. Tonnage from South America, Asia, and Australasia, also showed increases with relation to the total cargo transiting in June, 1928, while that from the United States decreased. Cargo tonnage from Canada decreased relatively as well as in actual tonnage—the latter amounting to 32,101 tons, or 19.2 per cent.

Destination.—Segregated according to destination, 63.7 per cent of the cargo in this direction went to the United States and 28.4 per cent to Europe. Tonnage to the United States increased 131,940 tons, or 15.7 per cent, and that to Europe increased 23,625 tons, or 5.7 per cent, over June, 1928. Cargo tonnage destined to the United States also showed an increase in its relation to the total, over June, 1928, while the percentage to Europe last month was slightly lower than in June, 1928.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify 87 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 13 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for June, 1929, or June, 1928, are listed in the following tabulation, showing differences:

Commodity.	June, 1929.	June, 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Automobiles	22,751	13,991	+8,760
Cement	50,649	15,604	+35,045
Coal and coke	16,745	24,602	-7,857
Cotton	13,504	20,456	-6,952
Manufactured goods:			
Iron and steel	200,102	162,282	+37,820
Machinery	17,682	17,085	+597
Railroad material	10,093	13,865	-3,772
Tinplate	23,100	26,101	-3,001
Textiles	12,701	12,187	+514
Miscellaneous	17,489	17,586	-97
Metals, various	14,368	9,466	+4,902
Oils, mineral	92,467	87,330	+5,137
Phosphates	41,402	18,831	+22,571
Slag	11,894	4,651	+7,243
Sugar	17,925	4,737	+13,188
Sulphur	28,743	9,271	+19,472

The above 16 commodity groups comprise 69 per cent of the cargo moving from the Atlantic to the Pacific. Eleven of the items showed increases over June, 1929, while 5 decreased. The heaviest increases were in iron and steel, cement, phosphates, sulphur, and sugar.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 98 per cent of all cargo moving from the Pacific to the Atlantic during the month of June, 1929. Com-

modities which aggregated more than 10,000 tons either during the past month or the corresponding month a year ago are listed below, showing the differences:

Commodity.	June, 1929.	June, 1928.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	11,321	21,734	-10,413
Canned goods (fish, fruit, vegetables, etc.).....	36,844	32,154	+4,690
Coffee.....	10,309	9,252	+1,057
Cold storage (food products) ¹	22,073	19,784	+2,289
Flour.....	7,355	12,700	-5,345
Fruit, dried.....	11,062	12,665	-1,603
Fruit, fresh.....	13,058	5,457	+7,601
Lumber.....	283,568	248,643	-65,075
Metals, principally copper.....	47,603	54,527	-6,924
Nitrates.....	109,146	67,528	+41,618
Oils, mineral.....	466,328	391,596	+74,732
Ores (principally iron).....	177,326	118,715	+58,611
Rice.....	9,486	11,264	-1,778
Sugar.....	101,606	51,399	+50,207
Wheat.....	79,934	110,552	-30,618
Wool.....	9,593	11,897	-2,304

¹ Does not include fresh fruit.

The above 16 commodity groups comprise approximately 91 per cent of the cargo from the Pacific to the Atlantic during June, 1929. As will be noted eight of the items showed increases over June, 1928, while eight showed decreases. Mineral oils, ores, sugar, and nitrates were the items showing the heaviest increases, while lumber and wheat decreased rather heavily.

(Continued on page 728.)

Police Canvass of Population of Canal Zone.

The annual house-to-house canvass of the civil population of the Canal Zone taken by the Police and Fire Division during the month of June, 1929, resulted in a count of 30,300 as the total number of civilian inhabitants. This was an increase of 2,298 over the population of June, 1928. The two districts into which the Zone was divided, Balboa and Cristobal, contributed nearly equally to the increase.

The Balboa district showed an increase of 1,149, due principally to the working force established in the Alhajuela Basin area. La Boca, Pedro Miguel and Ancon showed small increases, but a decrease of 48 was shown for Balboa.

The Cristobal district registered an increase of 1,125, principally in the rural districts of the Gatun Lake area and Silver City.

An increase of 1,260 employees residing in the Canal Zone reflects the increase in the force employed in 1928. The occupants of Canal quarters increased in number by about 400 during the year.

The population, as of June, 1929, was distributed as follows:

	Americans.					All others.					Total.
	Total men.	Em- ployees.	Total women.	Em- ployees.	Child- ren.	Total men.	Em- ployees.	Total women.	Em- ployees.	Child- ren.	
Balboa District.....	1,943	1,760	1,948	359	1,946	4,258	3,333	2,256	92	4,841	17,192
Cristobal District.....	518	459	614	30	686	3,863	2,331	2,413	98	4,839	12,933
Prisoners.....	24				10	108		1		32	175
Total employees.....		2,219		389			5,664		190		8,462
Total inhabitants.....	2,485		2,562		2,642	8,229		4,670		9,712	30,300

¹ Includes 311 civilian employees of the Army and Navy.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, July 20, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Sbhp.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.	
Herman Falk ^{1, 2}	13	19	15	14	6	15	14	12	47	14	14	00	American	Oil Transport Co.	431.0	59.2	20.0	New York, N. Y.	San Francisco, Cal.	Ballast..... 7,862 5,049
Nevada ²	13	20	15	14	6	25	14	13	37	14	14	40	American	The Texas S. S. Co.	434.8	56.2	18.0	Boston, Mass.	Los Angeles, Calif.	Ballast..... 7,425 5,202
Sugilleno ²	13	22	15	14	7	10	14	15	04	14	18	20	American	Transmarine Lines	324.0	46.0	22.0	Mobile, Ala.	Seattle, Wash.	General..... 3,410 3,984 2,612
Tyr ²	14	4	14	14	7	25	14	15	06	14	16	35	Norwegian	W. L. Conyn & Co.	357.0	51.3	22.6	Antwerp, Belgium	Seattle, Wash.	General..... 6,415 4,828 3,489
Canadian Miller	14	1	10	14	7	25	14	15	57	14	17	25	British	Can. Nat. Steamships	400.0	52.0	22.0	Montreal, Canada	Vancouver, B. C.	General..... 5,252 5,892 3,489
Dakota ¹	14	3	10	14	8	20	14	16	22	14	17	35	American	Amer.-Hawaiian Line	407.0	53.7	21.1	Boston, Mass.	Portland, Oreg.	General..... 4,960 7,156 5,094
Queen Maud.	14	5	50	14	8	40	14	17	02	14	18	20	British	Dufont de Nemours Co.	400.2	52.3	18.6	New York, N. Y.	Talcahuano, Chile	General..... 2,204 5,748 3,955
Deebank	14	7	00	14	10	05	14	17	27	14	19	00	British	Andrew Weir & Co.	422.0	56.0	24.0	Philadelphia, Pa.	Chinampo, China	General..... 7,049 7,249 5,106
Canadian Highlander	14	10	05	14	10	15	14	17	46	15	7	10	British	Can. Nat. Steamships	400.0	52.0	19.4	Montreal, Canada	Dunedin, N. Z.	General..... 4,300 6,192 4,402
Cal.	10	21	00	14	12	35	14	19	38	14	21	30	German	Roland Line	216.0	32.0	12.10	Cristobal, C. Z.	Guayaquil, Ecuador	General..... 290 1,105 698
Laguna ²	14	2	10	14	13	25	14	19	55	15	1	54	British	Pacific Steam Nav. Co.	420.5	54.2	19.2	Glasgow, Scotland	Corral, Chile	General..... 3,802 7,139 4,640
Gen. G. W.																				
Getty ³	14	12	25	15	6	15	15	13	42	15	16	20	American	U. S. Army	89.0	22.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast..... 7,847 5,185
Elmore	14	12	25	15	6	15	15	13	09	15	19	30	American	Ore S. S. Corp.	449.1	57.2	19.8	Baltimore, Md.	Cruz Grande, Chile	Ballast..... 7,847 5,185
Haida ¹	14	17	05	15	6	20	15	13	09	15	19	30	American	Max C. Fleischmann.	198.0	30.0	14.0	New York, N. Y.	Los Angeles, Calif.	Ballast..... 7,847 5,185
Willargo	14	17	25	15	6	20	15	14	19	15	15	40	American	Williams S. S. Line	409.5	54.2	20.9	Norfolk, Va.	Puget Sound, Wash.	General..... 5,277 6,510 4,827
Atlantic Sun ¹	14	17	35	15	7	15	15	14	53	15	16	05	American	Sun Oil Co.	429.3	59.2	18.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast..... 7,568 5,283
Point San Pablo	15	1	45	15	7	25	15	15	21	15	17	35	American	Swayne & Hoyt	324.0	46.2	15.6	New Orleans, La.	Seattle, Wash.	General..... 1,910 3,994 2,591
Santa Eulalia	15	5	20	15	7	25	15	15	20	15	22	10	American	Isthmian S. S. Lines	251.0	43.0	21.0	Baltimore, Md.	Honolulu, T. H.	General..... 2,226 2,823 1,730
Santa Cecilia	15	6	35	15	8	35	15	17	48	15	23	15	American	Isthmian S. S. Lines	404.6	53.0	28.0	Baltimore, Md.	Vancouver, B. C.	Steel, general..... 8,461 6,745 4,562
Sawoka ²	15	7	57	15	9	40	15	17	10	15	22	10	American	Roosevelt S. S. Co., S. B.	401.9	54.2	23.0	Philadelphia, Pa.	Freemantle, Aust'lia	General..... 4,001 7,097 5,317
Esparla	15	11	25	15	12	05	15	18	41	15	20	10	American	United Fruit Co.	330.6	44.6	20.6	Port Limon, C. R.	San Francisco, Cal.	Bananas, coffee..... 860 3,683 2,373
Svealand ²	15	12	25	15	13	00	15	20	45	16	4	55	Swedish	Ore S. S. Corp.	550.1	72.0	22.0	Baltimore, Md.	Cruz Grande, Chile	Ballast..... 15,425 4,421
Urbe	6-18	17	20	15	13	50	15	21	30	15	23	15	Colombian	Colombian Mar. Co.	227.0	31.7	12.0	Cristobal, C. Z.	San Francisco, Cal.	General..... 230 1,154 663
Sylvan Arrow ¹	7-15	15	50	15	16	00	15	22	56	16	00	50	American	Standard Transp. Co.	467.6	62.7	18.0	Boston, Mass.	Buenaventura, Cal.	General..... 9,698 6,900
S-17 ⁵	16	6	05	16	6	05	16	13	45	16	21	10	British	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Los Angeles, Calif.	Ballast..... 230 1,154 663
San Claudio ^{1, 6}	16	1	10	16	6	15	16	13	47	16	17	05	Dutch	Anglo-Mexican Pet. Co.	305.0	51.0	10.6	Boston, Mass.	Los Angeles, Calif.	General..... 230 1,154 663
Amsterdam	10	8	25	16	7	05	16	15	18	16	17	05	Dutch	Royal Neth. S. S. Co.	473.0	65.5	25.0	Aruba, D. W. I.	Balboa, C. Z.	Ballast..... 5,279 11,638 7,744
Commercial																				
Traveler	16	9	10	16	9	35	16	16	35	16	17	40	American	Moore & McCormack	380.3	53.1	17.0	Chester, Pa.	Valparaiso, Chile	General..... 2,376 5,657 4,133
Buffalo Bridge	16	14	25	16	14	55	16	22	35	16	23	56	American	Charles Nelson & Co.	324.0	46.2	19.6	Baltimore, Md.	San Francisco, Cal.	General..... 3,120 3,985 2,630
Henry D.	16	21	25	17	6	15	17	13	32	17	14	45	American	Texas Gulf Sulphur Co.	356.0	51.6	25.5	Galveston, Tex.	Anacortes, Wash.	Sulphur..... 3,910 5,367 2,925
Whiton	16	23	15	17	6	30	17	14	25	17	15	40	Norwegian	Isbrandtsen Moller Co.	420.0	54.0	21.0	Chester, Pa.	Manila, P. I.	General..... 6,295 6,979 5,136
Erviken	16	23	15	17	6	30	17	14	25	17	15	40	Norwegian	Isbrandtsen Moller Co.	420.0	54.0	21.0	Chester, Pa.	Manila, P. I.	General..... 6,295 6,979 5,136
Water A.	17	00	50	17	7	20	17	14	44	17	15	40	American	Luckenbach Line	446.5	56.1	23.6	Boston, Mass.	Seattle, Wa. h.	General..... 4,894 8,785 6,567
Luckenbach.	17	00	50	17	7	20	17	14	44	17	15	40	American	Luckenbach Line	446.5	56.1	23.6	Boston, Mass.	Seattle, Wa. h.	General..... 4,894 8,785 6,567
Tanker.																				

Silver sand and rags.

Submarine.

Yacht.

Tug.

Motor ship

Tanker.

Kansas	17	7.12	17	8.10	17	15.15	17	16.20	Amer-Hawaiian Line	404.6	53.9	19.8	New York, N. Y.	Seattle, Wash.	General	3,855	6,779	4,921
Point Breeze	17	10.05	17	10.20	17	17.13	17	18.30	Atlantic Refining Co.	364.9	57.0	21.0	Philadelphia, Pa.	Los Angeles, Calif.	Lubricating oil	2,415	5,113	3,571
Loriza	17	3.40	17	11.20	17	18.55	18	00.18	Pacific Steam Nav. Co.	406.5	54.2	24.7	Hull, England	Corral, Chile	General	6,518	7,331	5,091
Andrian	17	12.55	17	13.15	17	20.00	17	22.00	Pennsylvania Ship. Co.	435.0	56.0	23.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,426	5,073	
Arua	16	8.50	17	13.15	17	21.03	17	22.00	Pacific Steam Nav. Co.	303.4	43.0	16.6	New York, N. Y.	Callao, Peru	General	800	2,851	1,776
Athelduke	17	17.55	18	6.20	18	13.14	18	19.12	British Molasses Co.	475.0	63.0	18.6	New York, N. Y.	Los Angeles, Calif.	Ballast	9,589	6,416	
Ame	18	6.50	18	7.20	18	14.57	18	16.25	Standard Transp. Co.	435.0	56.0	26.0	Beaumont, Texas	Los Angeles, Calif.	Batching oil	8,890	7,165	4,926
Anachucua	18	9.55	18	9.55	19	12.49			United Fruit Co.	105.0	15.3	5.0	Cristobal, C. Z.	Balboa, C. Z.	(10)	69	92	47
Stegness	18	10.15	18	10.30	18	17.43	18	19.12	Reardon-Smith Line	401.6	54.3	24.10	Pt. Arthur, Tex.	Nanking, China	Kerosene	7,642	6,621	4,916
Yankee Arrow	18	10.35	18	11.10	18	18.40	18	20.15	Standard Oil Co.	485.3	62.7	18.0	New York, N. Y.	Los Angeles, Calif.	Ballast		9,841	6,946
Pacific																		
Exporter	17	9.43	18	12.15	18	20.24	18	20.26	Furness, Withy & Co.	450.0	60.0	19.7	Glasgow, Scotland	Vancouver, B. C.	General, bananas	1,503	9,633	6,998
Saint Louis	17	9.40	18	13.25	18	20.50	18	22.12	French Line	414.0	50.0	21.6	Havre, France	Valparaiso, Chile	General	2,608	5,857	4,166
Ebro	18	18.30	19	6.05	19	13.08	19	14.50	Panama-Pacific Line	450.0	57.0	26.8	New York, N. Y.	Talcahuano, Chile	General	4,050	9,291	6,301
Virginia	19	5.45	19	7.05	19	15.13	20	00.14	American	586.4	80.3	26.4	New York, N. Y.	San Francisco, Calif.	General	3,506	25,254	18,170
El Cervo	19	2.50	19	8.35	19	16.07	19	17.15	Anglo-Buenos Aires	406.0	52.2	19.6	Philadelphia, Pa.	La Libertad, Ecu.	Ballast	6,046	4,326	
Castor	19	6.05	19	9.40	19	17.18	19	21.30	Anglo-Saxon Pet. Co.	466.0	61.0	20.6	Hamburg, Germany	Los Angeles, Calif.	Ballast	8,960	6,295	
Silverbelle	19	7.15	19	10.45	19	18.08	19	19.02	Kerr Steamship Co.	425.6	58.3	19.2	New York, N. Y.	Manila, P. I.	General	3,157	8,218	6,037
Marion Otis																		
Chandler	19	7.25	19	10.55	19	18.25	19	19.34	Arrow Line	409.5	54.1	18.6	Baltimore, Md.	Seattle, Wash.	General	3,869	6,653	4,870
Donat	19	6.00	19	12.30	19	20.30	19	21.00	North German Lloyd	524.4	64.0	23.4	Bremen, Germany	Vancouver, B. C.	General	3,045	11,007	7,698
Romera	19	16.40	19	16.55	20	10.15	20	11.40	Can-Amor Ship Co.	402.0	52.0	23.0	Tampa, Fla.	Yokohama, Japan	Phosphate	6,001	5,587	4,205
Cauca	2	17.30	20	6.05	20	14.30	21	00.02	National Navigation Co.	107.0	22.0	9.3	Cristobal, C. Z.	Buenaventura, Col.	General	159	238	163
City of San Francisco	12	19.30	20	6.09	20	13.30	20	15.50	Panama Mail S. S. Co.	296.0	45.0	20.10	Cristobal, C. Z.	San Francisco, Cal.	General	3,043	3,848	2,606
City of Dunkirk	19	14.40	20	6.05	20	13.45	20	14.50	Ellerman-Hall Line	420.0	54.0	24.0	New York, N. Y.	Sydney, Australia	General	4,299	7,108	5,420
Sabotawan	19	21.10	20	7.35	20	14.46	20	16.10	Redwood Line	387.0	52.0	23.0	Mobile, Ala.	San Francisco, Cal.	General	5,753	5,708	4,138
Neposent	20	6.05	20	7.30	20	14.41			Merritt, Chapman, Scott	76.0	19.5	10.8	New York, N. Y.	Los Angeles, Calif.	Ballast	130	60	
Cambrai	19	8.25	20	10.00	20	16.00			U. S. Army	436.0	58.0	24.10	Brooklyn, N. Y.	Balboa, C. Z.	General	464		
William H. Doheny	20	3.20	20	10.22	20	17.04	20	18.33	Huasteca Petroleum Co.	435.0	56.2	23.0	Baltimore, Md.	Los Angeles, Calif.	Ballast	7,406	5,111	
Herkles	20	10.30	20	11.05	20	20.04	20	20.30	Krusenstern	390.0	54.1	24.6	Antwerp, Belgium	Sand, coke, gen.	General	7,000	5,680	4,220
Holland Maru	20	6.25	20	12.05	20	20.05	20	21.43	Kawasaki Kisen Kaisha	385.0	51.0	27.2	Norfolk, Va.	Yawaka, Japan	Scrapiron, gen.	7,055	5,926	4,434
Sutherland	20	12.40	20	14.30	20	22.12	20	23.42	Charles Nelson & Co.	380.0	53.2	23.1	Baltimore, Md.	Seattle, Wash.	Coal steel, gen.	5,838	5,654	4,123
Oregonian	20	17.25	20	18.45	21	9.09	21	10.10	Amer-Hawaiian Line	404.0	54.0	19.6	Boston, Mass.	Portland, Oreg.	General	4,065	6,754	4,800

11 Cases.

10 2,762 stems of bananas.

9 Transport.

8 Motor boat.

1 Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC

Seattle	13	19.40	14	6.05	14	13.50	14	16.15	German	461.6	62.0	27.0	Vancouver, B. C.	Hamburg, Germany	General	7,638	9,267	6,834
Silestad	13	21.55	14	6.53	14	14.30	14	15.35	Norwegian	376.5	53.8	26.6	New West ster, B. C.	New York, N. Y.	Lumber	6,975	6,264	4,706
Helen																		
Whittier	14	6.00	14	7.39	14	16.55	14	16.55	American	409.6	54.2	24.0	Seattle, Wash.	Baltimore, Md.	Lumber	7,350	5,920	4,318
Wearpool	14	9.30	14	10.15	14	19.30	14	22.10	British	390.0	55.5	24.0	Portland, Oreg.	Dublin, Ireland	Wheat, lumber	8,097	6,667	4,949
Benedick	14	1.00	14	10.34	14	18.15	14	19.15	British	430.0	58.2	26.0	Los Angeles, Calif.	Land's End, Eng.	Gasoline	9,618	7,285	4,856
Canadian																		
Explorer	14	12.20	14	13.14	14	20.55	14	22.50	British	400.0	52.3	22.0	Cairns, Australia	Montreal, Canada	Logs, general	5,345	5,853	4,058
Santa Maria	14	14.08	15	6.18	15	13.00	15	16.17	American	466.0	64.0	23.6	Talcahuano, Chile	New York, N. Y.	General	3,860	10,626	6,680
Point Sur	14	16.30	15	6.36	15	14.05	15	14.05	American	324.0	46.2	21.0	Seattle, Wash.	New Orleans, La.	Lumber, general	3,092	3,984	2,612

12 Motor ship

13 For orders.

1 Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Tashmoo.....	14	20 00	15	6 48	15	14 10	15	15 00	American	Neison S. S. Line	324 0	46 2	24 0	San Francisco, Cal.	Baltimore, Md	Lumber, general.	4,865	2,984	2,628
Totuma.....	14	16 35	15	7 05	15	16 00	15	17 30	Norwegian	Grace Line	417 8	54 4	29 4	Magallanes, Chile.	New York, N. Y.	Copper, general.	9,586	7,176	5,219
India Arrow.....	14	18 55	15	7 45	15	16 40	15	16 40	American	Standard Oil Co. of N. Y.	468 3	62 7	27 0	Los Angeles, Calif.	New York, N. Y.	Gasoline	11,246	10,084	7,426
Norwich City.....	15	8 10	15	8 50	15	17 55	15	17 55	British	Sir W. R. Smith & Sons	337 0	53 5	25 8	Kelso, Oreg	Earsdon, England	Lumber	7,350	6,051	4,514
Pennsylvania.....	15	9 45	15	10 36	15	19 25	16	12 10	French	French Line	400 0	52 5	26 0	Valparaiso, Chile.	Le Havre, France.	Nitrates, copper	7,483	5,964	4,384
Amerikaland.....	15	12 50	15	18 50	16	14 00	16	14 00	Swedish	Ore S. S. Corp.	561 0	72 0	33 6	Cruz Grande, Chile	Baltimore, Md	Iron ore	21,600	15,560	4,496
London.....	15	19 35	16	6 16	16	13 30	16	13 30	British	Furness, Withy & Co.	450 4	58 0	29 6	Vancouver, B. C.	Glasgow, Scotland	General	8,558	8,529	5,983
Importer.....	15	16 00	16	6 40	16	14 55	16	21 00	Dutch	Holland-American Line	469 7	58 2	25 6	Vancouver, B. C.	Rotterdam, Holland	General	9,062	8,515	6,060
Kinderdijk.....	15	17 15	16	7 20	16	15 30	16	17 45	Norwegian	Willy Kuson	419 5	54 2	24 3	Vancouver, B. C.	Boston, Mass.	Lumber, general	7,000	6,170	4,439
Santa Rosalia.....	15	20 20	16	7 51	16	16 15	16	17 55	American	Isthmian S. S. Lines	406 0	52 6	24 8	Calella Colosa, Chile	Wilmington, N. C.	Nitrates	8,150	5,900	4,443
Nordward.....	15	21 20	16	8 10	16	16 30	16	17 40	Norwegian	Dollar Line	377 6	54 0	24 3	Manila, P. I.	New York, N. Y.	Sugar	6,500	6,108	4,358
San Manuel.....	15	22 15	16	8 45	16	17 20	16	20 50	British	Anglo-Amer. Pet. Co.	406 3	52 3	25 0	Los Angeles, Calif.	Lizards, Eng.	Gasoline	7,394	6,183	4,343
Almagro.....	16	1 30	16	9 00	16	18 20	17	14 40	British	Pacific Steam Nav. Co.	303 4	43 0	16 0	Cerro Azul, Chile.	New York, N. Y.	General	1,464	2,826	1,770
Canadian.....	16	3 00	16	9 35	16	19 00	17	2 20	British	Can. Nat. Steamships	430 0	56 2	21 0	Sydney, Australia.	Montreal, Canada.	General	2,268	7,680	5,518
Arizona.....	16	9 20	16	10 04	16	19 15	16	19 15	American	Amer.-Hawaiian Line	343 3	57 7	24 6	Portland, Oreg.	Boston, Mass.	Lumber, general	6,569	7,983	5,859
Vanchilite.....	16	11 20	16	12 09	16	20 15	16	20 15	British	Imperial Oil Co.	510 2	68 2	30 6	Lobitos, Peru	Halifax, N. S.	Crude oil	16,200	11,573	7,096
F. J. Luckenbach.....	16	11 20	16	13 00	16	20 35	16	20 35	American	Luckenbach Line	446 0	56 1	26 6	Portland, Oreg.	Boston, Mass.	Lumber, general	5,414	8,508	6,179
Mongolia.....	16	13 10	17	6 13	17	13 35	17	14 40	American	Panama-Pacific Line	600 0	65 3	31 0	San Francisco, Cal.	New York, N. Y.	General	5,200	17,041	11,426
Corvus.....	16	17 30	17	6 47	17	14 35	17	14 35	American	Planet Line, Inc.	410 0	54 2	27 9	Seattle, Wash.	Baltimore, Md	Lumber, general	7,416	6,604	4,655
Liverpool.....	16	19 00	17	7 08	17	15 10	17	15 10	Japanese	Kokusa Kaisha	385 0	51 0	25 0	Hilo, P. I.	Norfolk, Va.	Sugar	7,327	5,919	4,400
Maru.....	16	21 30	17	7 38	17	16 35	17	16 35	American	The Texas Co.	331 8	51 3	23 4	Los Angeles, Calif	Port Arthur, Tex.	Gasoline	7,600	5,552	3,757
Susulanco.....	17	14 41	17	15 37	17	20 30	17	22 30	American	Transmarine Lines	324 0	46 2	23 0	Seattle, Wash.	New York, N. Y.	Lumber	4,100	3,984	2,612
Siesstad.....	17	15 20	17	16 04	18	11 05	18	11 05	Norwegian	Fern Line	377 6	54 0	25 0	Kobischang, Siam	Neuvias, Cuba.	Rice	7,175	6,079	4,534
New Jersey.....	17	20 30	18	6 22	18	14 00	18	14 40	American	The Texas Co.	416 8	56 1	26 0	Los Angeles, Calif.	Port Arthur, Texas	Gasoline	7,507	7,130	5,249
Rapot.....	18	00 15	18	6 36	18	14 00	19	00 01	German	North German Lloyd	393 4	54 3	27 1	Valparaiso, Chile.	Hamburg, Germany	General	8,368	6,583	4,626
Ohuan.....	18	6 50	18	7 44	18	16 25	18	16 25	American	Amer.-Hawaiian Line	407 7	53 7	27 3	Tacoma, Wash.	Boston, Mass.	General	4,482	7,103	4,991
M. F. Elliott.....	18	10 15	18	11 06	18	18 15	18	18 15	American	Standard Ship. Co.	425 0	57 2	27 1	Los Angeles, Calif	New York, N. Y.	Gasoline	9,260	7,481	4,996
Japan Arrow.....	18	11 15	18	11 48	18	19 20	18	19 20	American	Standard Transp. Co.	468 3	62 7	28 0	Los Angeles, Calif	New York, N. Y.	Gasoline	11,460	10,084	7,426
Eldena.....	18	12 30	18	14 05	18	22 55	18	22 55	American	Tampa Intercoastal Co.	409 0	54 0	27 2	Manila, P. I.	Boston, Mass.	Sugar	8,514	7,486	5,747
Julia.....	18	13 15	18	14 48	18	21 35	18	21 35	American	Luckenbach Line	436 6	57 2	31 0	Portland, Oreg	Mobile, Ala.	Sugar, general.	10,023	8,543	6,402
Manhattan.....	18	15 30	18	16 18	19	11 00	19	11 00	American	Redwood Line	386 8	52 2	23 0	San Francisco, Cal.	Mobile, Ala.	Lumber, general.	5,954	5,696	4,125
Saint Jean.....	18	15 35	18	16 51	19	12 55	20	14 10	French	French Line	415 0	50 3	24 6	San Antonio, Chile.	Le Havre, France.	Nitrates, general.	7,177	5,849	4,101
Fort Armstrong.....	18	15 25	19	6 15	19	14 50	19	14 50	American	Charles Nelson & Co.	324 0	46 2	22 0	Los Angeles, Calif	Norfolk, Va.	Lumber, general.	4,500	3,984	2,628

1. Motor ship. 2. For orders.

1. Tanker.

	18	13	00	19	6	23	19	14	55	20	14	35	American	United Fruit Co.	325.2	48.1	19.0	San Francisco, Cal.	Port Limon, C. R.	General	
La Peña																					299 4,033 2,261
Cities Service																					
Empire																					
Thalia	18	19	30	19	7	05	19	16	25	19	16	25	American	Cities Service Trans. Co.	464.7	60	2	27.4	Baltimore, Md.	Gasoline	11,500 8,561 5,997
Barat	18	20	27	19	7	19	19	16	00	19	17	05	Danzig	Waried Tankship Red.	469.5	62	0	26.6	Rotterdam, Holland	Naphtha	11,303 9,018 5,929
Wentworth	19	6	15	19	7	40	19	17	10	21	6	05	Dutch	Royal Neth. S. S. Co.	203.0	33	1	12.6	Cristobal, C. Z.	General	335 1,183 742
Jefferson Myers	19	12	50	19	13	34	19	20	25	19	20	25	British	R. S. Dalgleish.	400.0	52	3	25.9	Queenstown, Irel'd.	Wheat	7,307 5,771 4,058
Darden	19	13	40	19	14	24	19	21	45	20	3	30	American	Quaker Line.	440.0	56	0	28.3	New York, N. Y.	Lumber, copper	8,435 8,300 6,020
W. H. Tifford	19	14	05	19	14	57	19	22	50	19	22	50	American	T. P. Gallagher & Co.	391.9	51	2	25.4	New York, N. Y.	Coconut oil	6,604 5,410 3,627
Anachucua	19	17	15	20	5	58	20	13	40	20	13	40	American	Standard Ship. Co.	411.6	53	4	25.0	Bayonne, N. J.	Gasoline	9,541
Knight	19	12	49	20	6	08	20	13	40	20	13	40	Panama	United Fruit Co.	105.0	11	0		Balboa, C. Z.	Ballast	
Companion.	19	23	45	20	6	50	20	14	50	20	16	45	British	Alfred Holt & Co.	470.4	58	1	23.2	New York, N. Y.	Sugar, hemp	6,302 8,546 6,263
Awinarkeo.	20	3	25	20	7	12	20	16	05	20	16	05	American	Inter. Shipping Corp.	429.3	59	2	30.6	Boston, Mass	Grude oil	10,600 7,506 5,209
Margarethe	20	3	10	20	7	43	20	16	10	20	16	10	American	Transmarine Lines	324.0	46	2	24.0	New York, N. Y.	Lumber	3,983 3,984 2,628
Cordis	20	9	30	20	10	27	20	17	40	20	23	50	German	Colombia Mar. Co.	265.0	42	0	14.6	New York, N. Y.	Coffee, hides	1,200 2,263 1,622

* Tanker. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 14	Tolosa.	United Fruit Co.	Port Limon, Costa Rica.	July 14	Wanks	Standard Fruit & S. S. Co.	San Blas, R. P.
July 15	Linda S. ¹⁶	A. L. Surgeon	Colon, R. P.	July 14	Venezuela	Royal Nether. S. S. Co.	Amsterdam via waypoints.
July 15	Suriname	United Fruit Co.	Puerto Colombia.	July 14	Mayari	United Fruit Co.	New York via Kingston.
July 15	No. 8020 ¹⁷	Pan-American Airways	Buenaventura, Colombia.	July 14	Magdalena	Hamburg-American Line	Hamburg via waypoints.
July 15	No. 9688 ¹⁷	United Fruit Co.	New York via Habana.	July 14	Tolosa	United Fruit Co.	New York via Kingston.
July 15	No. 8044 ¹⁷	Pan-American Airways	Managua via David.	July 15	Cartago	United Fruit Co.	New Orleans via waypoints.
July 15	Aneon	Panama R. S. S. Line	Guayaquil via waypoints.	July 15	Suriname	United Fruit Co.	Bocas, R. P.
July 17	Cavina	Elders & Fyffes	New York via Haiti.	July 15	Linda S. ¹⁶	A. L. Surgeon.	Bluefields, Nicaragua.
July 17	Novian	Elders & Fyffes	Avonmouth via waypoints.	July 16	St. Therese	United Fruit Co.	Cartagena, Colombia.
July 17	Metapan	Leyland S. S. Line	Tarafa, Cuba.	July 16	No. 9685 ¹⁷	Pan-American Airways	Managua via David.
July 17	United Fruit Co.	Scadta Airplane Co.	New York via Kingston.	July 16	No. 9776 ¹⁷	Pan-American Airways	Curacao via waypoints.
July 17	Manuel Armas.	Spanish Line	Barranquilla, Colombia.	July 16	No. 8020 ¹⁷	Pan-American Airways	Guayaquil via waypoints.
July 17	Anachucua ¹⁸	United Fruit Co.	Baredonia via waypoints.	July 17	Calamares	United Fruit Co.	Port Limon, Costa Rica.
July 18	Inapaquina ¹⁸	United Fruit Co.	Colon, R. P.	July 17	Anachucua ¹⁸	United Fruit Co.	Colon, R. P.
July 18	Eugenia D. ¹⁹	Spencer Davis	Colon, R. P.	July 17	Cavina.	Elders & Fyffes	Avonmouth via waypoints.
July 18	No. 9685 ¹⁷	Pan-American Airways	Managua via David.	July 18	Inapaquina ¹⁸	United Fruit Co.	Colon, R. P.
July 18	Dorelan	Leyland S. S. Line	Liverpool via waypoints.	July 18	Isle of Pines ¹⁸	Colon Import & Export Co.	Colon, R. P.
July 18	No. 9776 ¹⁷	Pan-American Airways	Curacao via waypoints.	July 18	No. 9688 ¹⁷	Pan-American Airways	Managua via David.
July 18	No. 8020 ¹⁷	Pan-American Airways	Guayaquil via waypoints.	July 18	Darien C-35 ¹⁷	Scadta Airplane Co.	Barranquilla, Colombia.
July 19	Suriname	United Fruit Co.	Bocas, R. P.	July 18	Novian	Leyland S. S. Line	Liverpool via waypoints.
July 19	Saramacca	United Fruit Co.	New Orleans.	July 18	Metapan	United Fruit Co.	New York via waypoints.
July 19	Atlantida	Standard Fruit & S. S. Co.	New Orleans and Habana.	July 19	Eugenia D. ¹⁹	Spencer Davis	Bluefields, Nicaragua
July 19	William M. ¹⁹	G. I. Bryan	Colon, R. P.	July 19	William M. ¹⁹	G. I. Bryan	Bluefields, Nicaragua.
July 19	Wanks	Standard Fruit & S. S. Co	San Blas, R. P.	July 19	Suriname	United Fruit Co	New Orleans, La.
July 19	Macabi	United Fruit Co	New York via waypoints.	July 19	Manuel Armas	Spanish Line	Baredonia and waypoints.
				July 19	Manuel Armas	Spanish Line	Port Limon via Bocas.
				July 19	United Fruit Co.	United Fruit Co.	

¹⁶ Motor schooner. ¹⁷ Air mail carrier. ¹⁸ Motor boat. ¹⁹ Schooner.

* Other than ships passing through the Canal.

¹⁶ Motor schooner. ¹⁷ Air mail carrier. ¹⁸ Motor boat. ¹⁹ Schooner. * Other than ships passing through the Canal.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 20	Parimima	United Fruit Co.	New Orleans via Habana.	July 20	Atlantida	Standard Fruit & S. Co.	New Orleans and way'ts.
July 20	No. 9688 ²⁰	Pan-American Airways.	Managua via David.	July 20	Dorelin	Leyland S. S. Line.	Port Limon, Costa Rica.
July 20	Inapaquina ²¹	United Fruit Co.	Colon, R. P.	July 20	No. 9685 ²⁰	Pan-American Airways	Managua via David.
.....	.....	.....	.....	July 20	Macabi	United Fruit Co.	New York via Kingston.
* Air mail carrier. ²¹ Motor boat.							
July 17	Ginyo Maru	Nippon Yusen Kaisha	Hongkong, China.	July 17	Ginyo Maru	Nippon Yusen Kaisha	Valparaiso, Chile
July 17	Swiftsure	C. D. Mallory	Los Angeles, Calif.	July 18	Frost ²⁴	West India Oil Co.	Talara, Peru
July 17	H. M. Storey	Standard Oil Co. of Calif.	Los Angeles, Calif.	July 19	Swiftsure	C. D. Mallory	Los Angeles, Calif.
July 17	Mary Pinchot	Gifford Pinchot	Galapagos, Peru.	July 19	H. M. Storey	Standard Oil Co. of Calif.	Los Angeles, Calif.
July 19	San Luis ²¹	Chiriqui Land Co.	Pto. Armuelles, R. P.	July 20	R-1 ²⁵	Peruvian Government	Callao, Peru.
July 19	A. B. De Obarrio ²³	Pacific Fruit Co.	Bayano River, R. P.	July 20	R-2 ²⁵	Peruvian Government	Callao, Peru.
July 19	Dos Hermanos ²³	A. Valdez	Bayano River, R. P.	July 20	R-3 ²⁵	Peruvian Government	Callao, Peru.
July 19	Sambu ²³	Hans Elliot	Bayano River, R. P.	July 20	R-4 ²⁵	Peruvian Government	Callao, Peru.
July 19	Nya Gunnebo ²³	Hans Elliot	Bayano River, R. P.	July 19	A. B. De Obarrio ²³	Pacific Fruit Co.	Panama Bay, R. P.
.....	.....	.....	.....	July 19	Dos Hermanos ²³	A. Valdez	Panama Bay, R. P.
.....	.....	.....	.....	July 20	San Luis ²³	Chiriqui Land Co.	Pto. Armuelles, R. P.
.....	.....	.....	.....	July 20	Sambu ²³	Hans Elliot	Panama Bay, R. P.

PORT OF BALBOA.

²² Yacht. ²³ Motor schooner. ²⁴ Motor ship. ²⁵ Submarine. * Other than ships passing through the Canal.

Supplement No. 10—Departmental Tariff "F."

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., *July 18, 1929.*

Item 3.—RENTAL OF GARAGES.

(Effective August 1, 1929.)

Change to read:

1. Stall in regular garage:

- (a) With concrete or wood floor.....per month..... \$4.00
(b) Without concrete or wood floor.....per month..... 3.50

Item 25.—FUEL AND DIESEL OILS.**Fuel Oil.**

(Effective July 15, 1929.)

At Balboa and Cristobal:

- | | |
|--|---------------------------------|
| | Per barrel
of 42
gallons. |
| 1. To departments and divisions of The Panama Canal, Panama Railroad Company, and departments of the U. S. Army and Navy stationed at the Isthmus..... | \$1.00 |
| 2. Vessels of the U. S. Army and Navy not stationed at the Isthmus..... | Commercial
Tariff |

H. BURGESS,
*Governor, The Panama Canal,
President, Panama Railroad Company.*

Notice to Mariners.

THE PANAMA CANAL EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., *July 20, 1929.*

No. 564.

PACIFIC ENTRANCE.

The following was received by the Hydrographic Office from the Lighthouse Sub-division, The Panama Canal:

Obstruction Spar Buoy, marking 30 ft. spot, 2,275 yards from San Jose Rock, bearing 105° is missing. Will be replaced as soon as equipment for handling is available.

(Signed) F. KARIGER, *Pilot in Charge.*

H. BURGESS,
Governor.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at the prices which are in effect for employees, no surcharge being added. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, June, 1929.—Continued from page 721
(Figures represent tons of 2,240 pounds.)

From—	SOUTH AMERICA.					NORTH AMERICA.							ASIA.					AUSTRALASIA.			Per cent of total cargo.					
	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	West coast of United States.	West coast of Canada.	West coast of Central America.	West coast of North America. ¹	Balboa, C. Z. ²	Hawaii.	Total, North America.	Japan.	China.	Philippines.	Far East. ¹	Total, Asia.	Australia.	New Zealand.		Australasia. ¹	Total, Australasia.			
NORTH AMERICA:																										
UNITED STATES—																										
North Atlantic ports.....	16,167	2,641	920	6,536	8,702	34,966	234,698		1,155		15,16	142,252	010,20	924,22	754,15	222,15	5,506	83,436	25,067	12,518			37,555	407,997	45.3	
South Atlantic ports.....							1,878						1,873	1,654	660		4,513	6,827					8,705	1.0		
Gulf ports.....	13,969	204	300	395	79	14,947	37,498	4,730	1,263	10,212	437	54,140	40,322	15,217	3,930	4,205	64,274	13,604				8,710	22,314	155,675	17.3	
Totals, U. S.....	30,136	2,845	1,220	6,931	8,781	49,913	274,074	4,730	2,418	10,227	16,579	308,028	72,500	38,661	19,152	24,224	154,537	38,671	12,518	8,710		59,899	572,377	63.6		
Cristobal, C. Z. *																										
East coast of Canada.....	238	1,697	740	679	2,242	5,596	4,071		7,397	72		11,540											17,136	1.9		
West Indies.....							4,340	2,010		6,330													15,009	21,359	2.4	
East coast of Mexico and Central America.....	16,893			50		16,943	4,075	6,001		10,076												7,450	34,469	3.8		
Totals, N. America.....	2,482					2,482	1,860					1,860											4,342	0.5		
Totals, N. America.....	49,749	4,542	1,960	7,660	11,023	74,934	288,420	12,741	9,815	10,209	16,579	337,834	72,500	38,661	19,152	24,224	154,537	49,027	22,621	8,710		82,358	649,683	72.2		
Europe:																										
British Isles.....	14,192	129	561	1,478	5,407	21,767	7,261	8,317	347	68		15,993											36,452	74,213	8.3	
Belgium.....	2,970	205	598	170	2,284	6,227	26,457	3,033		30,040													6,929	43,246	4.8	
Denmark.....							3,178	106	40	1,516													6,925	4,840	0.5	
France.....	89						571	660	4,791	528												2,210	8,189	0.9		
Germany.....	3,648	177	752	919	3,435	8,931	11,012	821		353													21,117	24	2.4	
Holland.....	1,911		450	2,261	1,853	6,475	6,561	312		6,873													13,348	1.5		
Italy.....	20			17	2,679	2,743	1,751	63	722	2,536													5,279	0.6		
Norway and Sweden.....	7,080			8	4,693	11,781	10,318	163	2,042	1,678													25,682	2.9		
Spain and Portugal.....				15	126	145																	145	0.0		
Europe.....	1,186	201	674	422	2,491	24,594	3,917	4	5,020	8,941													33,535	3.7		
Totals, Europe.....	31,096	712	3,036	4,910	46,717	86,501	72,174	13,881	9,647	2,099		97,801										43,382	2,210	45,592	229,894	25.6
East coast of S. America.....																										
Africa.....																										
Grand totals.....	80,845	5,387	5,026	12,570	57,740	161,568	305,933	26,659	19,462	12,398	16,579	441,031	80,000	38,661	19,152	24,224	162,037	49,027	74,803	10,920	134,750	899,386	100.0			
Per cent of total cargo:																										
June, 1929.....	9.0	0.6	0.6	1.4	6.4	18.0	40.7	3.6	2.1	1.4		1.8	49.0	8.9	4.3	2.1	2.7	18.0	5.5	8.3	1.2	15.0	100.0	.....		
June, 1928.....	5.2	1.3	0.3	1.8	4.5	13.1	43.4	4.4	1.9	0.1		0.5	50.3	10.4	4.1	1.5	5.7	21.7	5.7	7.4	1.8	14.9	100.0	.....		
June, 1927.....	4.7	1.6	0.1	1.7	8.2	16.3	43.7	2.7	1.1	1.3	0.4	0.7	49.9	8.1	5.2	0.6	5.1	19.0	7.1	7.3	0.4	14.8	100.0	.....		

¹ General cargo not routed so as to allow segregation between definite ports.
² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, June, 1929.
(Figures represent tons of 2,240 pounds.)

From —	North America.										Europe.												Grand totals.	Per cent of total cargo.			
	United States.					Central America.					Cristobal, C. Z. ²	Total, North America.	British Isles.	Europe.						Total, Europe.	East coast of South America.	Egypt.			Africa.		
	East coast of		West Indies.	East coast of	Central America.	Belgium.	Denmark.	France.	Germany.	Holland.				Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ¹										
	South Atlan- tic ports.	Gulf ports.																Total, United States.									
SOUTH AMERICA:																											
Chile.....	177,074	14,900	11,068	203,042	.....	1,323	.....	66	204,431	25,886	15,114	.....	5,119	5,612	6,539	820	.....	.....	27,550	86,640	14,475	.....	.....	.....	.....	305,546	20.1
Colombia.....	2,161	.....	.....	2,161	.....	.....	.....	4,758	6,919	.....	4	.....	.....	8	.....	.....	.....	.....	12	.....	.....	.....	.....	.....	.....	6,931	0.7
Ecuador.....	8,261	.....	.....	8,261	.....	.....	.....	1,735	9,996	.....	.....	.....	1,786	5	131	152	.....	50	180	518	69	.....	.....	.....	10,583	0.7	
Peru.....	13,141	3,000	.....	16,141	31,774	.....	.....	130	48,045	13,804	2,477	.....	1,786	1,045	.....	26	8,380	.....	11,953	39,471	.....	.....	.....	.....	.....	87,516	5.7
West coast of South America.....	.....	.....	.....	.....	.....	.....	.....	203	203	3	1,768	.....	7	.....	.....	15	.....	.....	3	1,796	.....	.....	.....	.....	.....	1,989	0.1
Totals, S. Amer. ²	200,637	17,900	11,068	229,605	31,774	1,323	.....	6,802	269,594	39,693	19,363	.....	6,912	6,670	6,670	1,013	8,380	50,39	686	128,437	14,544	.....	.....	.....	.....	412,575	27.1
NORTH AMERICA:																											
West coast of Canada	38,729	.....	.....	38,729	18,805	6,726	388	.....	64,648	44,375	229	.....	1,701	7,006	3,029	.....	4,663	.....	8,302	69,405	892	.....	.....	.....	.....	134,945	8.9
W. coast, Cen. Amer.	69	.....	.....	69	.....	.....	.....	3,550	3,619	.....	.....	.....	.....	.....	.....	.....	.....	.....	119	.....	.....	.....	.....	.....	.....	3,738	0.2
West coast of U. S.	548,595	2,211	31,824	582,630	.....	21,609	1,384	2,775	608,308	131,111	.....	1,111	16,695	17,884	2,335	.....	1,737	7,068	18,812	196,753	360	.....	.....	.....	.....	805,511	52.8
Hawaii.....	12,257	.....	150	12,407	.....	.....	.....	.....	12,407	56	9	.....	.....	.....	.....	.....	.....	.....	65	.....	.....	.....	.....	.....	.....	12,472	0.8
Totals, N. America ²	599,650	2,211	31,974	633,835	18,805	28,335	1,772	6,325	689,072	175,542	238	1,211	18,396	24,800	5,364	.....	6,400	7,068	27,233	206,342	1,252	.....	.....	.....	.....	956,666	62.7
ASIA:																											
China.....	4,026	.....	.....	4,026	.....	.....	.....	500	4,526	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,526	4.3
Japan.....	2,770	.....	.....	2,770	.....	.....	.....	48	2,818	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,818	0.2
Philippines.....	71,277	.....	9,871	81,148	.....	.....	.....	.....	81,148	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	81,148	5.3
Far East.....	574	.....	.....	574	.....	7,450	.....	.....	8,024	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,024	0.5
Totals, Asia.....	78,617	.....	9,871	88,518	.....	7,450	.....	548	96,516	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	96,516	6.3
AUSTRALASIA:																											
Australia.....	9,408	.....	.....	9,408	2,025	.....	.....	.....	11,433	270	.....	.....	.....	.....	622	.....	.....	.....	.....	270	.....	.....	.....	.....	.....	11,703	0.8
New Zealand.....	2,587	.....	.....	2,587	133	.....	.....	.....	2,720	30,314	.....	.....	.....	.....	.....	.....	.....	.....	.....	30,936	.....	.....	.....	.....	.....	33,656	2.2
Australia.....	6,500	.....	.....	6,500	.....	.....	.....	.....	6,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,000	7,000	.....	.....	.....	.....	13,500	0.9
Totals, Australasia	18,495	.....	.....	18,495	2,158	.....	.....	.....	20,653	30,584	.....	.....	.....	.....	622	.....	.....	.....	.....	7,000	38,206	.....	.....	.....	.....	58,859	3.9
Grand totals.....	897,429	20,111	52,913	970,453	52,737	37,108	1,772	13,765	1,075,835	245,819	19,601	1,211	25,308	31,560	12,656	1,013	14,780	7,118	73,919	432,985	15,796	.....	.....	.....	1,524,616	100.0	
Per cent of total cargo:																											
June, 1929.....	58.9	1.3	3.5	63.7	3.5	2.4	0.1	0.9	70.6	16.1	1.3	0.1	1.7	2.1	0.8	0.1	0.9	0.5	4.8	28.4	1.0	.....	.....	.....	.....	100.0	.....
June, 1928.....	56.8	0.8	3.5	61.1	2.1	2.8	0.2	2.8	69.0	16.8	1.5	0.2	0.8	2.3	3.2	1.3	0.6	0.7	2.4	29.8	0.1	0.6	0.5	.....	.....	100.0	.....
June, 1927.....	59.4	0.1	2.5	62.0	2.5	3.9	0.3	4.4	73.1	15.0	0.5	0.1	1.0	1.9	1.0	0.2	0.4	.....	4.4	24.5	2.4	.....	.....	.....	100.0	.....	

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

¹ Includes both local and transit cargo.² General cargo not routed so as to allow segregation between definite ports.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending July 20, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Calif.	North German Lloyd		July 14.		290
Wanks.	Standard Fruit S. S. Co.		July 14.		58
Georgie.	French Line.		July 14.		150
Magdalena.	Hamburg-American Line.		July 14.		756½
Tolosa.	United Fruit Co.	July 14.	July 14.	15	394
Laguna.	Pacific Steam Nav. Co.	July 14.	July 14.	3	236
Cartago.	United Fruit Co.		July 15.		224
Uribe.	Estrada G. Hermanos.		July 15.		335
Linda S.	R. Feuillebois.	July 15.	July 15.	(¹)	30½
Santa Maria.	Grace Line.	July 15.	July 15.	11	60
Suriname.	United Fruit Co.	July 15.	July 15.	(¹)	57½
Pensylvanie.	French Line.	July 15.	July 16.	51	174
Calamares.	United Fruit Co.	July 15.	July 17.	674	75
Amsterdam.	Royal Neth. S. S. Co.		July 16.		456
Santa Therese.	United Fruit Co.		July 16.		43
Kinderdijk.	Holland-American Line.	July 16.	July 16.	(¹)	39
Almagro.	Pacific Steam Nav. Co.	July 16.	July 17.	305	74
Arana.	Pacific Steam Nav. Co.	July 16.	July 17.	53	176
Canadian Cruiser.	Can. Nat. Steamships.	July 16.	July 17.	17	(¹)
Loriga.	Pacific Steam Nav. Co.	July 17.	July 17.	96	42
Novian.	Leyland Line.	July 17.	July 18.	(¹)	139
Pacific Exporter.	Furness, Withy & Co.	July 17.	July 18.	(¹)	375
Saint Louis.	French Line.	July 17.	July 18.	335	65
Metapan.	United Fruit Co.	July 17.	July 18.	359	284
Manuel Arnus.	Spanish Line.	July 17.	July 19.	143	59
Inapaquina.	United Fruit Co.	July 17.	July 19.	48	(¹)
Ancon.	Panama R. R. S. S. Line.	July 17.	July 17.	3,728	
Eugenia D.	H. Blackwood.	July 18.	July 18.	(¹)	2½
Rapot.	North German Lloyd	July 18.	July 19.	323	52
Ebro.	Pacific Steam Nav. Co.	July 18.	July 19.	93	7
Dorelian.	Leyland Line.	July 18.	July 20.	801	(¹)
Atlantida.	Standard Fruit S. S. Co.	July 19.	July 20.	231	394
Wanks.	Standard Fruit S. S. Co.	July 19.	July 19.	112	
Donau.	North German Lloyd.	July 19.	July 19.	(¹)	131
William M.	R. Feuillebois.	July 19.	July 19.	(¹)	33
Suriname.	United Fruit Co.	July 19.	July 19.	116	268
Saramacca.	United Fruit Co.	July 19.	July 19.	454	82
Macabi.	United Fruit Co.	July 19.	July 20.	365	388
Saint Jean.	French Line.	July 19.	July 20.	72½	66
La Perla.	United Fruit Co.	July 19.	July 20.	432	30
Baralt.	Royal Neth. S. S. Co.	July 19.	July 19.	337	
Margarethe Cords.	Colombian Maritime Co.	July 20.	July 20.	446	(¹)
Knute Nelson.	Norway-Pacific Line.	July 20.	July 20.	343	
Murla.	North German Lloyd.	July 20.	July 20.	82	
Inapaquina.	United Fruit Co.	July 20.	July 20.	33	
Parismina.	United Fruit Co.	July 20.	July 20.	859	
City of San Francisco.	Panama Mail S. S. Co.		July 20.		2,950
Cauca.	National Navigation Co.		July 20.		158

¹ No cargo discharged.

² No cargo laded.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Diesel oil is sold by The Panama Canal at Cristobal at \$1.80 per barrel.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel at Balboa and \$1.25 at Cristobal. Diesel oil, Balboa only, \$1.80 per barrel.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers at \$8.00 per ton of 2,240 pounds at Cristobal, and \$11.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, \$8.00 per ton at Balboa. When coal is delivered from lighters in quantities of 50

tons or more, the price is \$9.00 per ton at Cristobal, \$12.00 at Balboa. If less than 50 tons is taken from lighters, prices are \$11.00 per ton at Cristobal and \$14.00 per ton at Balboa with minimum charge for 20 tons and maximum charge not to exceed that for 50 tons at \$9.00 Cristobal and \$12.00 Balboa. For furnishing lump coal for galley use, or run of mine coal, in sacks, \$6.00 additional per ton; but if vessel furnishes sacks \$3.00 additional per ton.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

For trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, when requested, an additional charge of 90 cents per ton will be made for extra handling.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXII. Balboa Heights, C. Z., July 31, 1929. No. 52.

CANAL WORK IN JUNE, 1929.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of June, 1929.

BALBOA HEIGHTS, C. Z., July 20, 1929.

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

SIR: I have the honor to submit the following report of The Panama Canal for the month of June, 1929, which closed the fiscal year ended June 30, 1929:

CANAL TRAFFIC FOR FISCAL YEAR.

The fiscal year 1929 was the fifteenth fiscal year of Canal operation. The number of vessels transiting the Canal, and the revenues collected in tolls for the year are as follows:

	No. of transits.	Tolls collected.
Commercial vessels.....	6,413	\$27,127,376.91
Launches (under 20 tons).....	167	1,512.39
Noncommercial vessels:		
United States Government.....	553	
Panaman Government.....	21	
Colombian Government.....	2	
Transiting for repairs.....	40	
Totals.....	7,196	27,128,889.30

If the 616 noncommercial vessels that transited the Canal during the year had paid tolls at commercial rates, the revenue would have been increased approximately as follows:

United States Government vessels.....	\$1,031,272.17
All other.....	48,024.77
Total.....	1,079,296.94

The 6,413 commercial vessels carried 30,663,006 long tons of cargo, and the 783 noncommercial vessels and launches carried 119,369 long tons, making the total cargo through the Canal for the year of 30,782,375 long tons, or an average of 2,565,198 per month.

The fiscal year 1929 established new high records for ship tonnage (with the exception of United States net), tolls collected, and tons of cargo carried. The number of transits was 43 fewer than the number passing through during the fiscal year 1928, which is the record year for the number of commercial ships passing through the Canal. The peak month for the fiscal year 1929 was January with 603 transits. This was also the month of the greatest traffic since the opening of the Canal.

No appreciable differences occurred in the amount of traffic over the principal routes of trade as compared with the fiscal year 1928. A slight decline was noted in the United States intercoastal trade and the trade between Europe and North America, which was offset by small gains in the United States-South America, Europe-South America, and the United States-Far East routes.

The following tabulation gives a comparison of the traffic for the fiscal year 1929, as compared with the two previous fiscal years:

	Fiscal year, 1929.	Fiscal year, 1928.	Fiscal year, 1927.
Number of transits	6,413	6,456	5,475
Panama Canal net tonnage	29,837,794	29,458,634	26,227,815
United States net tonnage	22,793,847	22,863,796	20,565,596
Registered gross tonnage	37,464,792	37,202,874	33,555,817
Registered net tonnage	22,900,317	22,847,689	20,518,253
Tolls	\$27,127,379 91	\$26,944,499 77	\$24,228,830 11
Tons of cargo	30,663,006	29,630,709	27,748,215

COMMERCIAL TRAFFIC ¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the fiscal year 1929, to the end of June, 1929, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1927-8	1928-9	1927-8.	1928-9.	1927-8.	1928-9.	1927-8.	1928-9.
July	509	509	2,406,955	2,318,365	2,450,408	2,291,955	\$2,215,515 99	\$2,109,083.19
August	543	526	2,513,614	2,437,246	2,429,947	2,425,336	2,274,040 55	2,199,069.31
September	540	487	2,532,942	2,395,053	2,397,753	2,313,011	2,294,432.34	2,111,230.56
October	567	557	2,585,752	2,515,380	2,717,646	2,582,477	2,380,115 97	2,274,945 30
November	559	527	2,591,717	2,468,297	2,488,882	2,501,630	2,369,267.99	2,225,937.48
December	589	579	2,616,728	2,698,140	2,573,828	2,714,987	2,393,459.75	2,443,029.39
January	510	603	2,422,770	2,771,280	2,372,061	2,358,835	2,212,752.50	2,502,815.12
February	547	522	2,460,111	2,428,530	2,660,425	2,550,498	2,253,755.37	2,211,961.20
March	542	536	2,441,077	2,567,961	2,428,662	2,743,768	2,223,370.57	2,343,865.55
April	531	540	2,384,491	2,488,176	2,473,884	2,719,668	2,187,607.82	2,281,087.27
May	508	524	2,274,612	2,496,905	2,497,588	2,536,839	2,118,969.83	2,296,546.57
June	481	503	2,227,865	2,352,431	2,139,565	2,424,002	2,016,211.09	2,127,805.97
Totals	6,456	6,413	29,458,634	29,837,794	29,630,709	30,663,006	26,944,499.77	27,127,376.91

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panama, and Colombian Governments, including merchant vessels chartered by these Governments, and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

CANAL TRAFFIC FOR JUNE, 1929.

NUMBER OF TRANSITS.

During the month of June, 1929, 503 commercial vessels and 10 small launches transited the Canal. In addition to these there were 30 vessels belonging to the United States Government, two vessels of the Panaman Government, and two vessels transiting solely for repairs, on which no tolls were collected, making a total of 547 transits for the month, or a daily average of 18.23.

Tolls on the 503 commercial vessels amounted to \$2,127,805.97, and on the launches to \$45.87, a total of \$2,127,851.84, or a daily average on all traffic of \$70,928.39.

The total numbers of craft of all kinds transiting the Canal during the month of June, 1929, as compared with the same month in 1928 and 1927, are shown in the following tabulation:

	June, 1929.	June, 1928.	June, 1927.
Commercial vessels	503	481	455
Launches (under 20 tons)	10	10	15
Noncommercial vessels:			
United States Government	30	39	84
Panaman Government	2	3	2
Vessels for repairs	2	6	1
Totals	547	539	557

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, launches, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Totals.
Gatun	8	7	15
Pedro Miguel	48	37	85
Miraflores	40	36	76
Totals	96	80	176

COMMERCIAL TRAFFIC.

The following is a summary of the commercial traffic for June, 1929, as compared with the corresponding month in 1928 and 1927, and the monthly averages for the fiscal year ended June 30, 1929:

	June, 1929.	June, 1928.	June, 1927.	Average per month for fiscal year 1929.
Number of vessels.....	503	481	455	534
Panama Canal net tonnage.....	2,352,431	2,227,865	2,152,926	2,486,483
United States net tonnage.....	1,787,779	1,697,605	1,673,821	1,899,487
Registered gross tonnage.....	2,946,181	2,777,506	2,745,346	3,122,066
Registered net tonnage.....	1,797,003	1,709,156	1,680,513	1,908,360
Tolls.....	\$2,127,805.97	\$2,016,211.09	\$1,970,377.97	\$2,260,614.74
Tons of cargo.....	2,424,002	2,139,565	2,229,097	2,555,251

The average daily number of transits, tonnage, tolls, and cargo are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per per day for fis- cal year 1929.
	June, 1929.	June, 1928.	June, 1927.	
Number of transits.....	16.76	16.03	15.16	17.57
Panama Canal net tonnage.....	78,414	74,265	71,764	81,747
Tolls.....	\$70,926.87	\$67,206.43	\$65,679.26	\$74,321.58
Tons of cargo carried.....	80,800	71,318	74,303	84,008

¹ Does not include \$18 collected on supplemental bill.

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of June, 1929, as compared with June, 1928, and 1927, are shown in the following tabulation:

	Average per vessel.		
	June, 1929.	June, 1928.	June, 1927.
Panama Canal net tonnage.....	4,677	4,631	4,731
United States net tonnage.....	3,554	3,529	3,678
Registered gross tonnage.....	5,857	5,774	6,033
Registered net tonnage.....	3,572	3,534	3,693
Tolls.....	\$4,230.23	\$4,191.67	\$4,330.50
Tons of cargo (including vessels in ballast).....	4,819	4,448	4,899
Tons of cargo (laden vessels only).....	5,598	5,349	5,960

¹ Does not include \$18 collected on supplemental bill.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provisions that tolls shall not exceed \$1.25 per ton nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.935 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.723 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of June, 1929, the following tabulation shows a comparison of tolls actually collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1.00 laden and \$0.60 ballast. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$5,177.50	\$4,792.00		\$385.50
British.....	579,900.55	619,845.80	\$39,945.25	
Chilean.....	8,623.75	9,377.00	753.25	
Colombian.....	1,961.80	1,663.00		293.80
Danish.....	35,118.75	37,187.00	2,068.25	
Danzig.....	10,996.44	9,803.20		1,193.24
Dutch.....	49,066.80	59,607.00	10,540.20	
Finnish.....	2,202.00	1,835.00		367.00
French.....	35,075.00	35,146.00	71.00	
German.....	104,588.66	117,950.80	13,362.14	
Greek.....	6,426.25	8,001.00	1,574.75	
Italian.....	36,471.25	40,686.00	4,214.75	
Japanese.....	55,744.82	53,260.60		2,484.22
Norwegian.....	79,799.01	83,587.80	3,788.79	
Panaman.....	1,856.25	2,711.00	854.75	
Peruvian.....	2,056.05	1,734.80		351.25
Swedish.....	44,670.24	48,190.20	3,519.96	
United States.....	1,056,787.10	1,070,482.60	13,695.50	
Yugoslav.....	11,253.75	11,533.00	284.25	
Totals.....	2,127,805.97	2,217,403.80	94,672.84	5,075.01
Net increase for all traffic.....			89,597.83	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$15,236.98
United States foreign trade.....	90.25
United States—Canal Zone trade.....	1,631.73
Net increase.....	\$13,695.50

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement of vessels transiting the Panama Canal in June, 1929, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals
Belgian.....	1.38		1.38
British.....	.90	1.20	1.04
Chilean.....	.62	.64	.63
Colombian.....	1.46	1.05	1.23
Danish.....	1.36	1.70	1.53
Danzig.....		1.86	1.86
Dutch.....	.86	1.37	1.13
Finnish.....		1.74	1.74
French.....	.84	1.66	1.17
German.....	.93	1.36	1.14
Greek.....		1.90	1.90
Italian.....	.21	.86	.49
Japanese.....	1.38	1.27	1.33
Norwegian.....	1.07	1.80	1.48
Panaman.....	1.34		1.34
Peruvian.....	1.27		1.27
Swedish.....	1.10	2.54	2.01
United States.....	.95	1.49	1.25
Yugoslav.....	1.60	1.86	1.76
Averages, June, 1929.....	.94	1.44	1.20
Averages, June, 1928.....	.87	1.43	1.16
Averages, June, 1927.....	.91	1.63	1.12

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of June, is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	6	38,438	\$38,759.35	47	255,980	\$261,993.75
Ballast.....	46	246,230	177,450.69			
General cargo ships:						
Laden.....	201	917,584	839,834.50	179	802,861	743,408.15
Ballast.....	18	85,091	61,857.97	4	6,098	4,390.56
Noncargo-carrying ships:						
Yachts.....	1	50	37.50	1	99	73.50
Totals.....	272	1,287,393	1,117,940.01	231	1,065,038	1,009,865.96
Method of propulsion:						
Steam.....	200	943,072	836,987.29	184	843,997	802,931.03
Motor.....	70	342,332	278,726.27	46	219,206	204,732.93
Sail.....	1	343	251.25			
Sail (auxiliary).....	1	1,646	1,975.20	1	1,835	2,202.00
Totals.....	272	1,287,393	1,117,940.01	231	1,065,038	1,009,865.96

Of the 384 steam-driven vessels, 268 were oil-burning, 111 coal burning, and 5 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of June, 1929. If tolls had been assessed against these vessels at commercial rates, the amount would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Battleships.....	1	3,415	\$4,268.75	1	27,000	\$13,500.00
Cargo ships.....	2	12,100	6,050.00	4	25,700	12,850.00
Cruisers.....	3	2,850	1,425.00	3	2,850	1,425.00
Minesweepers.....	1	10	7.50			
Motor sailers.....	2	1,730	865.00	2	1,730	865.00
Submarines.....	1	2,600	1,300.00	1	2,600	1,300.00
Survey ships.....						
U. S. Army vessels:						
Transports.....	4	14,724	18,405.00	3	11,270	14,087.50
Tugs.....	1	46	34.50	1	46	34.50
Totals, U. S. Government.....	15		32,355.75	15		44,062.00
Panaman Government vessels:						
Transports.....	1	101	72.72	1	101	72.72
Vessels for repairs:						
Tankers.....	1	1,636	1,227.00	1	1,636	1,227.00
Grand totals.....	17		33,655.47	17		45,361.72

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of June, 1929, carried cargo as follows: Atlantic to Pacific, 9,721 tons; Pacific to Atlantic, 1,700 tons; total, 11,421 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement transiting the Canal during the month of June, 1929. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Atlantic to Pacific.....	4	19	\$19.02	
Pacific to Atlantic.....	6	28	26.85	1
Totals.....	10	47	45.87	1

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of June, 1929, are shown in the following tabulation:

		Cristobal.	Balboa.	Total.
Local cargo arriving.....	tons..	97,139	37,202	134,341
Local cargo shipped.....	tons..	8,840	1,155	9,995
Transit cargo arriving.....	tons..	2,451,283	2,443,935	4,895,218
Transit cargo clearing.....	tons..	2,462,641	2,426,723	4,889,364
Cargo received for transshipment.....	tons..	33,560	271	33,831
Cargo transshipped.....	tons..	35,735	269	36,004
"Canal Zone for Orders" cargo:				
Number of receipts issued.....		95	32	127
Number of withdrawals.....		457	172	629
Tons received.....		3,264	207	3,471
Tons withdrawn.....		2,112	218	2,330
Packages received.....		10,006	2,304	12,310
Packages withdrawn.....		6,290	2,686	8,976
Vessels supplied with bunker coal:				
Commercial, other than Panama Railroad Company.....		61		61
Coal supplied to above vessels:				
Commercial, other than Panama Railroad Company.....	tons..	16,984		16,984
Coal issued miscellaneous:				
Panama Canal departments.....	tons..	90	27	117
U. S. Army, including vessels.....	tons..	159	11	170
Individuals and companies.....	tons..	126		126
Transferred to Navy.....	tons..	38		38
Total sales and issues.....	tons..	17,397	38	17,435
Coal on hand June 1, 1929.....	tons..	68,374		68,374
Coal on hand July 1, 1929.....	tons..	82,277		82,277
Coal received during month.....	tons..	31,300		31,300
Coal received from Navy.....	tons..		38	38
Fuel oil issued from Panama Canal tanks:				
Panama Canal departments.....	bbls..	5,777.67	22,588.93	28,366.60
Panama Railroad Company.....	bbls..	272.42		272.42
U. S. Army and Navy.....	bbls..		539.85	539.85
Individuals and companies.....	bbls..		300.37	300.37
Total sales and issues.....	bbls..	6,050.09	23,429.15	29,479.24
Fuel oil on hand, July 1, 1929.....	bbls..	13,281.80	8,211.77	21,493.57
Diesel oil received from Union Oil Company.....	bbls..		3,259.24	3,259.24
Diesel oil issued during June.....	bbls..	121.31	3,259.24	3,380.15
Diesel oil on hand, July 1, 1929.....	bbls..	16,451.49	493.25	16,944.74
Miscellaneous transfers.....	bbls..	461.56	665.26	1,126.82
Gasoline and kerosene pumped for the Panama Canal:				
Gasoline pumped for individuals and companies.....	bbls..	4,415.97	11,887.01	16,302.98
Oil pumped for individuals and companies.....	bbls..	4,148.72	42,544.30	46,693.02
Oil pumped for U. S. Shipping Board.....	bbls..	596,139.90	375,458.19	971,598.09
Oil pumped for U. S. Navy.....	bbls..		3,507.69	3,507.69
Total fuel oil, gasoline, and kerosene handled.....	bbls..	614,947.75	479,031.60	1,093,979.35
Admeasurement of vessels:				
U. S. equivalent certificates issued.....		27	4	31
Measured for Panama Canal net tonnage.....		10	1	11
Re-measured for Panama Canal net tonnage.....		23	2	25
Panama Canal net tonnage corrected.....			3	3
U. S. equivalent tonnage corrected.....		14	6	20
Services of harbor equipment:				
Tugs, total operating hours.....		489	378	867
Launches, total operating hours.....		1,359	1,695½	3,054½
Revenue from tug service, pilotage, etc.:				
Tug revenue.....		\$15,217.50	\$11,052.50	\$26,270.00
Pilotage.....		19,502.00	7,896.00	27,398.00
Seamen.....		12,658.00	10,740.00	23,398.00
Launch service.....		1,995.50	3,003.00	4,998.50
Wharfage.....		16,949.32	5,104.68	22,054.00
Ships measured.....		315.00	5.00	320.00
Miscellaneous.....		969.40	261.00	1,230.40
Ships repaired at Panama Canal shops:				
Commercial.....		55	10	65
U. S. Army and Navy.....		5	4	9
Panama Canal equipment.....		8	10	18
Totals.....		68	24	92

* 121.31 barrels handled by The Panama Canal.

	Cristobal.	Balboa.	Total.
Vessels dry docked:			
Commercial	3	3	6
U. S. Army and Navy	1	2	3
Panama Canal equipment	1	3	4
Totals	5	8	13
Clearances issued	299	280	579
Bills of health issued	300	281	581

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.	604	3,373,946	2,084,153	530	3,103,039	1,924,704
Vessels entering port but not transiting Canal.	79	365,119	222,073	4	33,261	21,289
Vessels transiting Canal and handling passengers and cargo at terminal ports	111	673,369	401,875	102	563,410	340,164
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.	611	3,395,854	2,097,907	527	3,095,473	1,917,221
Vessels clearing port, but not transiting Canal.	78	357,971	217,555	4	33,261	21,289
Vessels transiting Canal and handling passengers and cargo at terminal ports	115	677,402	404,810	102	563,646	340,282

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports	1,420	822	2,242	141	137	278
From Pacific ports	212	205	417	268	178	446
Total disembarking	1,632	1,027	2,659	409	315	724
Embarking:						
For Atlantic ports	1,651	990	2,641	99	192	291
For Pacific ports	303	211	514	311	352	663
Total embarking	1,954	1,201	3,155	410	544	954
Remaining on board:						
From Atlantic to Pacific ports	1,433	2,408	3,841	1,595	2,482	4,077
From Pacific to Atlantic ports	1,475	1,556	3,031	1,588	1,569	3,157
From Atlantic to Atlantic ports	789	248	1,037			
From Pacific to Pacific ports				46	624	670
Total remaining on board	3,697	4,212	7,909	3,229	4,675	7,904
Total arriving	5,329	5,239	10,568	3,638	4,990	8,628
Total departing	5,651	5,413	11,064	3,639	5,219	8,858

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific	272	54	19.9
Pacific to Atlantic	231	55	23.8
Totals	503	109	21.6

In addition to the aforesaid, 79 passenger-carrying vessels called at the port of Cristobal and 2 at Balboa without transiting the Canal, making a total of 190 passenger-carrying vessels calling at Canal ports during the month.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of June, 1929:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Totals.
Sales at Cristobal to:						
Commercial vessels	\$2,433.00	\$10,145.54	\$27,429.02	\$347.62	\$4,146.17	\$44,501.35
Government vessels	79.20	901.47	8,414.57	43.19	801.18	10,239.61
P. R. R. vessels	9.45	103.18	1,605.63	649.23	369.00	2,736.49
Total sales, June, 1929.	2,521.65	11,150.19	37,449.22	1,040.04	5,316.35	57,477.45
Total sales, June, 1928.	1,924.66	9,061.12	28,958.14	842.89	5,848.02	46,634.83
Total sales, June, 1927.	2,419.47	11,296.79	33,964.81	1,031.10	10,111.31	58,823.48
Sales at Balboa to:						
Commercial vessels	616.13	8,523.53	12,497.84	325.78	2,855.22	24,818.50
Government vessels	451.35	2,499.09	10,830.85	568.22	765.76	15,115.27
P. R. R. vessels				30.96		30.96
Total sales, June, 1929.	1,067.48	11,022.62	23,328.69	924.96	3,620.98	39,964.73
Total sales, June, 1928.	1,605.62	12,586.38	30,195.92	952.02	4,100.16	49,440.10
Total sales, June, 1927.	2,248.59	11,795.32	25,613.13	898.36	4,877.53	45,432.93

The aggregate sales to Government vessels during the month was \$25,354.88; to Panama Railroad vessels, \$2,767.45; and to other commercial vessels, \$69,319.85; making the total sales to all vessels, \$97,422.18.

LOCK OPERATIONS.

The overhaul of the Pacific locks was completed on June 13th, and normal operation of all locks resumed on June 14th. The overhaul of the Pacific locks began on January 3, 1929, and required 5 months and 10 days to complete, which is considerably longer than the previous overhaul periods. This was due to additional items of complete installation of 60 new cylindrical valves, and the unhinging, inspection, and repair of a pair of miter gates.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of June, 1929, as compared with the corresponding month in 1928 and 1927:

Locks. *	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. †					
	North.	South.	Total.	North.	South.	Total.	June, 1929.	June, 1928.	June, 1927.
Gatun	225	251	476	10	10	20	496	473	483
Pedro Miguel	222	256	478	23	22	45	523	497	505
Miraflores	221	258	479	24	17	41	520	496	497
Number of vessels put through locks.									
Gatun	231	272	503	37	32	69	572	553	597
Pedro Miguel	231	272	503	75	62	137	640	589	626
Miraflores	231	272	503	67	61	128	631	592	625

* Includes tolls-paying launches under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels	38	39	39
Panama Canal equipment	15	85	76
Launches under 20 tons	12	9	9
Panaman Government vessels	2	2	2
Vessels for repairs	2	2	2

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in June, 1929, as compared with the preceding month and the corresponding month in 1928:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages	1,905,760,000	1,572,570,000	1,529,620,000
Leakage	30,000,000	273,000,000	20,000,000
Maintenance			3,320,000
Totals, June, 1929	1,935,760,000	1,845,570,000	1,552,940,000
Totals, May, 1929	1,579,000,000	1,327,630,000	1,395,420,000
Totals, June, 1928	1,962,830,000	1,669,670,000	1,507,340,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of June, 1929, are shown in comparative form in the following tabulation:

	June.		June—Years of record.		
	1929.	1928.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela	2,146	2,771	4,870	1,363	2,540
Maximum momentary discharge for the month	15,391	21,038	63,900		
Gatun Lake watershed, total yield	5,268	7,159	10,391	4,670	6,589
Gatun Lake watershed, net yield	4,715	6,674	9,863	4,081	6,024
Draft on Gatun Lake for lockages and power	2,947	2,829	2,947	2,138	2,178

^a June 14, 1909.

^a June, 1914, not included.

The total yield of the Gatun Lake watershed was 20 per cent below the 16-year June average, or 5,268 c. f. s., compared with an average of 6,589 c. f. s., and is one of the low June yields since the formation of Gatun Lake. Maximum and minimum total yields of record for June are 10,391 c. f. s. in 1927 and 4,670 c. f. s. in 1920, respectively. The lake varied from the minimum elevation of 83.12 feet on the 1st to the maximum of 84.08 feet on the 30th, averaged 83.61 feet, and ended at elevation 84.05 feet. Miraflores Lake varied from elevation 53.06 feet on the 15th to 54.30 feet on the 24th, averaged 53.72 feet, and ended at elevation 53.79 feet.

SEISMOLOGY.

Seismic disturbances were recorded during the month on the 16th, 20th, 27th and 28th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,478,700 kilowatt hours, and the computed water consumption was 4,159,731,535 cubic feet. Continuous service was maintained at this station throughout the month. The Miraflores Diesel-electric station had a gross generator output of 3,800 kilowatt hours, and the fuel oil consumption was 14.03 barrels.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were completed on 31 vessels during the month. There were 385 work orders issued during the month, as compared with 349 for the previous month.

MECHANICAL DIVISION.

During the month miscellaneous repairs were made on 68 vessels at Cristobal and 24 at Balboa. Five vessels were dry docked at Cristobal and 8 at Balboa. The Panama Canal tugs *Engineer* and *Favorite* were given a general overhaul. Work was carried forward on the United States Navy's submarine *S-14* and tug *Sciota*. Work was completed on the Army mine planters *Graham* and *Getty*.

MUNICIPAL ENGINEERING DIVISION.

Work was carried forward on several improvement projects in the cities of Colon and Panama, and in the Canal Zone. On the new Madden Road leading to the site of the Madden Dam, 22,000 cubic yards of material were moved in connection with the grading, and a 20-foot bridge was completed over Quebrado Roque. At the site of the Madden Dam the operation of diamond drills was continued through the month.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 699,289,250 gallons.

DREDGING DIVISION.

On June 21st, a slide occurred in Gaillard Cut between stations 1755 and 1760, east bank (East Barge Repair Slide), in which a total of approximately 250,000 cubic yards were involved. The toe of this slide reached a point 20 feet west of the center line at station 1757-50, leaving a depth of 38 feet on the center line on a frontage of 100 feet. One dipper dredge was brought to bear on this slide the same day and a second dredge started work on the following day. By 6.30 a. m. on the 22d, the slide was cleared back to the center line, giving a navigable channel of 40 feet in depth for half the channel, which depth was maintained for the rest of the month. Two dipper dredges worked 16 days, excavating 82,700 cubic yards during the remainder of the month. On July 1st, a navigable channel of 40 feet in depth and 200 feet in width was available past the slide.

On June 30th, a bank break occurred in Gaillard Cut between stations 1819 and 1822-50, west bank (Signal Station Slide). Material in this slide pushed out 70 feet east of the west prism line on a frontage of approximately 300 feet. A total of approximately 30,000 cubic yards was involved, consisting of large pieces of rock. A dredge was despatched to this point and worked one day, excavating 5,200 cubic yards from the slide.

West Lirio slide showed a slight general movement during the month. A dipper dredge worked two days on this slide, excavating 8,250 cubic yards of material.

South Cucaracha slide showed a general surface movement during the month.

A perceptible movement along the water front occurred at West Culebra slide between stations 1794-00 and 1780-00. A maximum movement of 16 feet was recorded at station 1791-00 with an average movement of 4.3 feet toward the Canal between the above stations. These movements were recorded on West Culebra baselines. The back portions showed no movement.

There was a slight general movement toward the Canal over East Culebra slide during the month.

There were no other slides and no delays to shipping during the month.

The total excavation during June, 1929, was 569,692 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gaillard Cut—			
Project No. 2		8,650	8,650
Project No. 9	5,900	39,000	44,900
Lirio slide	1,250	7,000	8,250
East Barge slide	9,100	73,600	82,700
Maintenance	10,450	8,000	18,450
Signal Station slide	500	4,700	5,200
Canal prism, Pacific entrance—			
Project No. 1 (extension)	100,000		100,000
Project No. 1	44,000		44,000
Maintenance	9,000		9,000
Balboa inner harbor—			
Project No. 1		41,500	41,500
Maintenance	4,000	11,800	15,800
Plant excavation:			
Albrook Field	189,600		189,600
Dredging sand at Chame	1,642		1,642
Totals	375,442	194,250	569,692

The ferry crossing at the north end of Pedro Miguel locks operated 30 days during the month. Five hundred and sixteen trips were made, and 53 Panama Canal, 53 U. S. Army, and 3,104 other vehicles, a total of 3,210 were ferried across the Canal.

SCHOOLS.

The school year terminated June 30, 1929. There were 95 graduates from the high schools—61 at Balboa and 34 at Cristobal. Of the 98 American teachers, 13 resigned at the close of the school year, and the remaining teachers were granted 99 days' leave without pay.

The following brief summary shows the enrollment, average attendance, etc., in the white and colored schools of the Canal Zone for the year ended June, 1929, as compared with June, 1928:

	White.		Colored.		Totals.	
	1929.	1928.	1929.	1928.	1929.	1928.
Net enrollment	2,762	2,585	3,103	3,030	5,865	5,615
Average daily attendance	2,355.4	2,262.5	2,581.2	2,592.7	4,936.6	4,855.2
Number of teachers	98	87	61	60	159	147

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on June 30, 1929, totaled 21,819, composed of 7,554 Americans, 2,705 of whom were men, 2,257 women, and 2,592 children; 238 Europeans, 95 of whom were men, 37 women, and 106 children; and 14,027 West Indians, 4,189 of whom were men, 2,620 women, and 7,218 children. The total number of persons in quarters on June 30, 1928, was 21,403.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of June 19, 1929, with a comparison of the working force for the preceding month and for June, 1928:

	As of June 19, 1929.			Total employees.	
	Gold.	Silver.	Total.	May, 1929.	June, 1928.
Operation and Maintenance:					
Office.....	45	61	106	107	80
Electrical.....	154	158	312	321	336
Municipal Engineering.....	108	1,604	1,712	1,885	777
Lock Operation.....	253	751	1,004	1,279	933
Dredging.....	194	1,010	1,204	1,183	1,061
Mechanical.....	446	881	1,327	1,275	1,250
Marine.....	213	643	856	911	912
Fortifications.....	28	337	365	559	301
Totals.....	1,441	5,445	6,886	7,520	5,650
Supply Department:					
Quartermaster.....	205	1,940	2,145	2,135	1,941
Subsistence.....	8	103	111	112	113
Commissary.....	230	1,281	1,511	1,501	1,349
Cattle Industry.....	4	157	161	155	136
Hotel Washington.....	8	99	107	114	102
Transportation.....	66	223	289	294	262
Totals.....	521	3,803	4,324	4,311	3,903
Accounting Department.....	203	7	210	206	201
Health Department.....	277	859	1,136	1,097	1,145
Executive Department.....	522	297	819	812	794
Totals.....	1,002	1,163	2,165	2,115	2,140
Panama Railroad Company:					
Superintendent.....	49	279	328	328	344
Transportation.....	66	122	188	194	186
Receiving and Forwarding Agency.....	97	1,440	1,537	1,608	1,411
Coaling Stations.....	49	235	284	327	288
Totals.....	261	2,076	2,337	2,457	2,229
Grand totals, June, 1929.....	3,225	12,487	15,712	.....	.....
Grand totals, May, 1929.....	3,254	13,149	.....	16,403	.....
Grand totals, June, 1928.....	3,038	10,884	.....	.....	13,922

Additions to the gold force on the Isthmus in June were as follows: Employed in the United States, 11; reemployed in the United States, 2; employed on the Isthmus, 39; reemployed on the Isthmus, 15; total, 67. Separations from the gold force totaled 48, as follows: Resigned, 34, discharged, 11; retired, 1; died, 2. At the end of the month there were on file 284 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 185 deaths occurred during the month of June, 1929, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 17.14 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 27; pneumonia (broncho and lobar), 22; nephritis (acute and chronic), 18; diarrhea and enteritis, 15; and organic diseases of the heart, 13. There were 6 deaths from cancer, 5 from apoplexy, and 1 each from dysentery, measles, leprosy, and meningococcus meningitis. There were 19 deaths among non-residents. These are not included in the above statistics.

There were 261 live births, and 16 stillbirths, reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 25.67 per 1,000 population. Deaths among children under 1 year of age numbered 38, giving an infant mortality rate based on the number of live births reported, of 149.43.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during June was 227, of whom 32 were employees (6 white and 26 colored), 22 were families of employees (2 white and 20 colored), 10 were Canal Zone agriculturists, 29 were other civilian nonemployees, and 134 were Army and Navy personnel.

There was 1 death from malaria, a colored civilian employee of the Army.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions and received on the Isthmus during the month totaled \$304,550.58, of which \$267,475.56 was for the Department of Operation and Maintenance and \$37,075.02 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap and obsolete and second-hand material amounted to \$37,739.83.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of May, 1929, as compared with May, 1928, together with the figures for the first 11 months of the fiscal year 1929, as compared with the same period in the fiscal year 1928.

It is impossible to submit the figures for the month of June at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	May, 1929.	May, 1928.	To end of May.	
			This year.	Last year.
Tolls.....	\$2,296,679 18	\$2,119,060 28	\$24,995,682 49	\$24,927,235 77
Other receipts	365,232 86	312,579 05	3,666,130 75	3,263,699 07
Total transit revenues	2,661,912 04	2,431,639 33	28,661,813 24	28,190,934 84
Total transit expenses	1,161,631 49	1,091,719 76	12,213,878 36	11,214,897 54
Net transit revenues	1,500,280 55	1,339,919 57	16,447,934 88	16,976,037 30
Three per cent capital charge	615,491 05	613,650 27	6,773,085 55	6,729,552 81
Transit surplus	884,789 50	726,269 30	9,674,849 33	10,246,484 49
Business revenues	1,423,458 25	1,495,486 86	15,722,727 25	15,363,349 97
Business expenses	1,331,195 44	1,441,546 83	14,737,242 14	14,567,759 17
Net business revenues	92,262 81	53,940 03	985,485 11	795,590 80
Three per cent capital charge	62,670 92	59,950 23	712,236 14	707,520 90
Business surplus	29,591 89	6,010 20	273,198 97	88,069 90
Combined revenues	4,085,370 29	3,927,126 19	44,384,540 49	43,554,284 81
Combined expenses	2,492,826 93	2,533,266 59	26,951,120 50	25,782,656 71
Net revenues	1,592,543 36	1,393,859 60	17,433,419 99	17,771,628 10
Three per cent capital charge	678,161 97	673,600 50	7,485,371 69	7,437,073 71
Combined surplus	914,381 39	720,259 10	9,948,048 30	10,334,554 39

¹ Indicates deficit.

Respectfully,

H. BURGESS,
Governor.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 13 years of operation.

Pan American Airways Traffic for June.

A total distance of 25,051 miles flown with 257 hours in the air was recorded by the Cristobal Division of the Pan-American Airways, Inc., for the month of June, 1929. The route over which this flying was done covers the distance between Cristobal and Managua, Nicaragua, stops being made at Panama City and David. The organization states that all flights were made on schedule time, and no mishaps of any nature were experienced.

At present the company is accepting passengers between Cristobal (and Panama City) and David. The total number of passengers carried between these points during the month totaled 351, and the company reports that the business in July will likely more than double the figures for June.

Notice to Mariners.

Radio Beacon, Cristobal Mole, Cristobal, C. Z.

(Correction to N. M., 570 of July 26, 1929.)

THE PANAMA CANAL EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 27, 1929.

No. 570 (a).

(Revised)

A radio beacon was established near the west end of the Cristobal Mole, July 20, 1929.

Position of center line of towers:

East Tower: Latitude 9° 21' 23.23"
Longitude 79° 55' 01.34"

West Tower: Latitude 9° 21' 23.76"
Longitude 79° 55' 3.75"

Azimuth of aerial.....102° 16' 30" from the true north.
Period of operation.....First ten minutes of each whole half hour.
Frequency.....305 kilocycles.
Characteristics.....76 long dashes per minute.

The two towers (whose heights are each 80 feet above the ground, at approximate elevation 92 feet above the sea) are each surmounted by a fixed red light, consisting of a cluster of three 50-watt electric lamps; the towers are painted horizontally in successive colors of yellow, black, and white.

H. BURGESS,
Governor.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Balboa, C. Z., for Two Weeks Ending July 27, 1929.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Martha	Chr. Hannevig	July 13	July 14		249
Santa Maria	Grace Line	July 14	July 15		3
Swiftsure	Farmers Loan & Trust Co.	July 17	July 18	11,000	
Ginyo Maru	Nippon Yusen Kaisha	July 17	July 17	226	
Loriga	Pacific Steam Nav. Co.	July 17	July 17		50
H. M. Storey	Standard Oil Co.	July 18	July 19	15,000	
Virginia	Panama-Pacific Line	July 19	July 19		169
City of San Francisco	Panama Mail S. S. Co.	July 20	July 20		1
Cambrai	U. S. Army	July 20	July 23	464	80
Cauca	National Navigation Co.	July 20	July 20		34
Martha	Chr. Hannevig	July 21	July 22	30	
Knute Nelson	Fred Olsen & Co.	July 21	July 22	1,191	
Venezuela	Panama Mail S. S. Co.	July 22	July 23	200	
Santa Cruz	Grace Line	July 22	July 22		1
Colombia	Panama Mail S. S. Co.	July 22	July 23	590	2
Australien	East Asiatic Co.	July 24	July 24	257	
Breda	Royal Neth. S. S. Co.	July 25	July 26	115	
Santa Teresa	Grace Line	July 25	July 25	1	
President Garfield	Dollar Line	July 26	July 26		6

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, July 27, 1929.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.							
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.						
Baratl	19	17	21	6	05	21	14	12	21	15	20	Dutch	Royal Neth. S. S. Co.	260	0	33	1	12	6	Cristobal, C. Z.	Guayaquil, Ecuador.	103	1,183	742	
Pacific Fir	20	21	21	6	15	21	13	12	21	14	20	American	Dimon S. S. Corp.	410	5	51	0	19	0	New York, N. Y.	Tacoma, Wash.	4,848	6,024	4,883	
El Aleto	20	22	30	21	6	25	21	14	12	21	18	15	British	Imperial Oil Co.	440	8	57	5	21	0	Halifax, N. S.	Talara, Peru	7,555	5,049	
K. R. Kingsbury	21	2	45	21	7	20	21	14	55	21	15	58	American	Standard Oil Co.	440	0	58	2	21	0	Baltimore, Md.	Los Angeles, Calif.		9,033	5,935
Lena	21	2	55	21	7	45	21	15	51	21	17	10	American	Luckenbach Line	425	0	53	8	20	0	New Orleans, La.	Tacoma, Wash.	2,907	7,217	5,295
Malayan	21	6	00	21	8	55	21	16	44	21	17	45	British	Prince Line, Ltd.	441	6	60	0	24	0	New York, N. Y.	Yokohama, Japan	5,500	9,209	6,245
Princes	21	10	30	21	10	35	21	17	47				Venezuelan	Venezuela Gulf Oil Co.	280	4	47	3	3		Halifax, C. Z.	Halifax, C. Z.	7,267	9,624	6,732
Toos	20	12	02	21	12	15	21	19	06	21	20	00	German	Hamburg-American Line	468	8	58	3	25	6	Vancouver, B. C.	Vancouver, B. C.	4,914	8,016	5,354
Knute Nelson	20	18	30	21	13	25	21	19	55	23	1	40	Norwegian	Fred Olsen & Co.	436	0	56	0	21	0	Oslo, Norway	General	6,495	7,756	5,378
Munira	20	6	47	21	13	15	21	21	53	22	1	05	German	Roland Line	449	0	58	0	25	0	Hamburg, Germany	General	7,974	6,715	5,058
Bronxville	21	13	55	21	16	50	22	9	40	22	13	15	Norwegian	A. F. Klavens & Co.	386	3	51	2	24	10	Antwerp, Belgium	Los Angeles, Calif.		6,717	4,778
Watertown	21	17	25	22	6	15	22	12	40	22	17	05	American	Cities Service Trans. Co.	416	9	56	2	18	0	New York, N. Y.	Callao, Peru	1,779	5,534	3,868
Santa Cruz	21	18	35	22	6	20	22	13	28	22	16	25	American	Grace Line	384	0	50	2	19	6	New York, N. Y.	General	1,779	5,534	3,868
El Lobo	21	22	25	22	7	15	22	14	04	22	15	10	British	Atlantic Refining Co.	385	2	51	0	18	6	Philadelphia, Pa.	General	5,726	5,577	4,325
Munares	22	3	25	22	7	23	22	15	04	22	16	20	American	Munson S. S. Line.	370	0	53	0	22	6	Baltimore, Md.	General	5,726	5,577	4,325
Gargoyles	22	6	47	22	8	25	22	15	55	23	16	35	American	Vacuum Oil Co.	425	0	57	0	23	6	Philadelphia, Pa.	General	570	4,033	2,261
La Perla	22	8	00	22	9	30	22	15	26	23	3	07	American	United Fruit Co.	325	0	43	0	18	0	Port Limon, C. R.	Bananas, coffee.	9,020	7,946	5,698
Greylock	22	5	45	22	10	15	22	17	16	22	18	30	American	Island S. S. Line	430	7	54	3	28	0	Tacoma, Wash.	General, steel	6,000	8,500	6,140
Port Curtis	22	5	45	22	11	05	22	18	37	23	20	15	British	Com'lth & Dom. Line.	450	0	58	0	27	0	New York, N. Y.	General	1,909	6,015	4,281
Colombia	22	17	30	22	12	05	22	19	25	23	17	45	American	Panama Mail S. S. Co.	380	0	43	2	22	0	New York, N. Y.	Coffee, general.			
Raranga	22	00	15	22	13	40	22	21	15	22	23	30	British	Shaw, Savill & Albion.	478	0	63	2	29	2	Glasgow, Scotland	General	8,441	11,070	7,431
McKelvey	22	15	40	22	15	50	22	22	22	22	23	30	American	Tide-water Oil Co.	430	0	59	2	20	0	New York, N. Y.	Ballast	7,629	5,325	
Swan	22	15	40	22	6	35	22	13	33				American	U. S. Navy	180	0	35	6			Halifax, C. Z.	Ballast			
Gen. G. W. Gentry	22	18	15	22	16	40	22	22	22	22	23	30	American	U. S. Army	89	0	22	0			Cristobal, C. Z.	Ballast			
West Montop	22	19	15	22	19	05	22	23	15	23	10	27	American	Quaker Line	410	0	54	4	25	0	Philadelphia, Pa.	Ballast	7,521	6,484	4,675
Rimulaka	22	19	15	22	19	05	22	23	15	23	10	27	American	N. Z. Shipping Co.	457	7	58	0	29	6	Seattle, Wash.	General	7,040	9,201	6,961
Tola Maru	23	7	00	23	7	15	23	14	38	23	13	45	Japanese	Nippon Yusen Kaisha.	445	0	58	0	25	0	Wellington, N. Z.	General	8,262	8,038	5,743
Marsotak	23	7	25	23	8	30	23	15	32	23	16	45	American	Neilon Line	324	0	46	0	19	0	Kobe, Japan	General	3,156	3,984	2,628
Texas	22	16	35	23	11	04	23	17	22	23	19	10	French	French Line	409	0	52	2	24	0	Seattle, Wash.	(⁹)	3,522	6,824	4,885
Australien	23	13	35	24	6	05	24	13	53	25	00	60	Danish	East Asiatic S. S. Co.	410	0	55	0	26	3	Havre, France	General, steel	7,852	7,031	5,338
Neosierang	23	16	45	24	6	25	24	14	37	25	16	00	British	Andrew Weir & Co.	350	0	51	0	26	2	Vancouver, B. C.	General	6,000	4,892	3,647
Texan	23	21	35	24	7	10	24	15	31	25	16	45	American	Amer-Hawaiian Line	471	0	57	2	21	0	Port Kembla, Aust.	Sulphur	5,507	9,154	6,966
Syvalfield	23	22	45	24	7	20	24	16	13	24	17	45	British	Desmaries Freres	395	0	52	5	18	0	Seattle, Wash.	Ballast	5,900	3,993	
Tanker.																				Cette, France.	General, steel, and pipe.				
																				Los Angeles, Calif.	General, steel, and pipe.				

Dry docking.

Motor ship.

Tanker.

Mine sweeper.

Tug.

General, steel, and pipe.

[illegible]

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Urdaneta ¹ & 14.	10	22	30	21	9	54	21	17	50	Venezuelan	Venezuela Gulf Oil Co.	305	0	11	8	Ballast	10,300	7,446
Dorhylene ¹	21	5	00	21	11	17	21	19	00	American	Texas S. S. Co.	435	0	56	0	Crude oil	9,700	7,494
Larry Dobney ¹	21	11	45	21	12	37	21	20	35	American	Richfield Oil Co.	430	0	59	2	Gasoline	6,016	5,208
Hazel Branch.	21	12	30	21	13	17	21	21	10	British	F. & W. Ritson	400	4	51	2	General	7,500	5,526
Chastine	21	13	00	21	14	12	21	22	05	Danish	A. P. Moller	367	1	48	3	Sugar	2,620	6,672
Maersk ¹ & 15.	21	13	00	21	14	12	21	22	05	Danish	A. P. Moller	367	1	48	3	Sugar	7,250	7,999
Gen. G. W.	21	13	00	21	14	12	21	22	05	Danish	A. P. Moller	367	1	48	3	Sugar	2,620	6,672
Getty	21	18	15	22	8	28	22	12	45	American	U. S. Army	98	0	55	2	Tug	7,250	7,999
Santa Cecilia	21	18	15	22	8	28	22	12	45	American	U. S. Army	98	0	55	2	Tug	2,620	6,672
Glenworth ¹	21	22	30	22	6	55	22	14	30	British	Grace Line	408	0	52	0	Lumber	8,028	8,583
Martha ¹ & 16.	21	22	30	22	6	55	22	14	30	British	Canadian Transp. Co.	430	0	55	0	Ballast	6,600	5,719
Esequibo	22	6	05	22	7	44	22	15	50	Norwegian	Chr. Hannevig, Sr.	181	0	30	0	General	8,028	8,583
Loreto ¹ & 17.	22	6	05	22	7	44	22	15	50	Norwegian	Chr. Hannevig, Sr.	181	0	30	0	General	2,807	7,334
Georgian	22	17	30	22	8	33	22	17	10	British	Pacific Steam Nav. Co.	450	0	57	8	Nitrates, general	6,600	5,719
Bradelyde	22	10	45	22	11	35	22	18	35	American	Quaker Line	386	5	52	2	Wheat	8,028	8,583
Venezuela	22	14	15	22	14	53	22	23	20	British	Sir W. R. Smith & Sons	400	0	53	0	General	2,714	6,033
New York ¹	22	7	55	23	6	15	23	13	20	American	Panama Mail S. S. Co.	380	0	48	7	Gasoline	8,621	6,807
Ani	22	15	45	23	6	15	23	14	00	American	The Texas Co.	416	8	56	1	Nitrates	8,160	6,617
Eurana	22	19	40	23	7	33	23	15	45	Belgian	Ops. Inter. D'Comm. & D'Armement	400	5	52	0	Nitrates	8,566	7,381
Theodore	22	20	00	23	8	01	23	16	00	American	Isthmian S. S. Lines	399	7	56	2	General	8,728	7,593
Roosevelt ¹ & 23.	23	3	30	23	9	08	23	16	45	Norwegian	Fred Olsen & Co.	425	5	55	2	General	9,950	6,778
Bosworth ¹	23	8	20	23	9	17	23	17	45	British	Henry M. Thomson	412	0	55	5	Lumber, wheat	12,105	9,405
Delaware Sun ¹	23	8	20	23	9	17	23	17	45	American	Sun Oil Co.	480	5	66	0	Gasoline	5,381	7,150
Cambrai	20	16	00	23	10	18	23	17	35	American	U. S. Army	448	0	58	0	General	3,149	9,079
Minnesota	23	13	00	23	13	28	23	20	30	British	Amer.-Hawaiian Line	407	7	53	7	Frozen, general	9,400	7,012
Ruapelu ¹ & 23.	23	14	00	23	15	00	23	22	50	British	N. Z. Shipping Co.	457	3	58	2	Gasoline	9,540	6,783
Seminole ¹ & 23.	23	3	50	24	6	09	24	14	20	British	Anglo-Amer. Oil Co.	424	5	57	0	Gasoline	8,891	7,060
George W.	23	9	30	24	6	39	24	14	40	American	Husteca Petroleum Co.	416	8	56	1	Gasoline	7,200	6,555
Barnes ¹	23	9	30	24	6	39	24	14	40	American	Husteca Petroleum Co.	416	8	56	1	Gasoline	8,712	8,695
Solana ¹	23	20	24	7	24	15	24	16	15	American	Associated Oil Co.	419	5	56	5	Gasoline	96	1,633
Islewich	23	19	15	24	7	49	24	16	25	American	Argonaut S. S. Co.	400	7	54	2	Sugar	65	1,132
Atlantic City	23	19	30	24	8	19	24	16	55	British	Sir W. R. Smith & Sons	411	7	54	5	General	7,665	5,983
Robert	23	19	30	24	8	19	24	16	55	British	Sir W. R. Smith & Sons	411	7	54	5	General	7,665	5,983
Luckenbach	23	23	16	24	8	57	24	17	40	American	Lukenbach Line	445	0	58	0	Lumber, general	8,712	8,695
Durazzo	24	3	00	24	9	10	24	18	17	American	Hamburg-American Line	227	0	45	5	Coffee	65	1,132
Manizales	24	4	15	24	9	15	24	18	15	German	North German Lloyd	216	6	32	9	Coffee	65	1,132
Stella	24	4	25	24	9	40	24	18	45	Norwegian	Panama Mail S. S. Co.	195	1	32	9	Ballast	7,665	5,983
Nyanza	24	6	00	24	9	43	24	18	50	British	Wesad, Duval & Co.	402	7	52	2	Iron ore	7,665	5,983

¹ Tanker.¹⁴ South July 10th for dry docking only.¹⁵ Motor ship.¹⁶ Copper lead, general.¹⁷ Lumber, ore, general.¹⁸ Cocoa, rice, coffee.

Texmar	24	5 20	24	10 11	24	19 15	24	19 15	24	19 15	American	Calmar S. S. Corp.	410 5	54 3	25 3	Tacoma, Wash.	Baltimore, Md.	Lumber	7 132 6 567	4 909
England Maru	24	6 20	24	10 23	24	19 51	24	19 51	24	19 51	Japanese	Kokumi Kisen Kaisha.	385 0	51 0	27 0	Iloilo, P. I.	East coast, U. S.	Sugar	7 908 6 214	4 665
Dinteldijk ¹⁵	24	11 05	24	12 20	24	21 00	25	00 15	24	00 15	Dutch	Holland-America Line.	485 0	52 0	29 3	Vancouver, B. C.	Rotterdam, Holland	General	9 333 10 786	7 551
Asuka Maru ¹⁵	24	11 00	24	13 41	24	22 10	24	22 10	24	22 10	Japanese	Nippon Yusen Kaisha.	440 4	57 0	27 0	Cebu, P. I.	Boston, Mass.	Bulk oil, general	11 243 8 139	5 389
Sidney M.	24	13 15	24	15 04	24	22 55	24	22 55	24	22 55	American	McCormick S. S. Co.	401 5	53 2	26 6	Seattle, Wash.	Baltimore, Md.	Lumber, general	7 699 7 082	5 167
Hauptman	24	15 09	24	16 24	24	23 10	25	00 00	24	23 10	American	U. S. Navy	292 0	44 0	23 0	Balboa, C. Z.	Cristobal, C. Z.	Cruiser		
Denver ¹⁵	24	13 47	25	6 18	25	13 45	24	13 45	24	13 45	American	Eagle Oil Transp. Co.	305 0	51 0	10 2	Balboa, C. Z.	Aruba, D. W. I.	Ballast	8 745 7 195	6 041
San Claudio ²⁰	24	17 30	25	6 49	25	15 30	25	21 20	24	15 30	British	Nav. Libera-Tristina	430 0	53 0	27 2	Vancouver, B. C.	Trieste, Italy	General	236 lbs	211
Feltre ¹⁵	24	17 15	25	6 55	25	15 48	27	6 05	24	15 48	Colombian	Cia. Nac. de Nav. Co.	116 0	31 1	8 0	Buenaventura, Col.	Cristobal, C. Z.	(²⁷)		
Caldas ¹⁵	24	17 15	25	6 55	25	15 48	27	6 05	24	15 48	Colombian	Cia. Nac. de Nav. Co.	116 0	31 1	8 0	Buenaventura, Col.	Cristobal, C. Z.	(²⁷)		
Sciota ¹⁵	24	17 15	25	6 55	25	15 48	27	6 05	24	15 48	Colombian	Cia. Nac. de Nav. Co.	116 0	31 1	8 0	Buenaventura, Col.	Cristobal, C. Z.	(²⁷)		
Chetopa	25	9 30	25	10 55	25	18 25	27	13 57	24	10 55	American	Chas. Nelson & Co.	324 0	45 2	23 0	San Francisco, Cal.	New York, N. Y.	Tug	4 700 3 984	2 628
Phoebe ¹⁵	25	12 10	25	12 58	25	19 55	24	19 55	24	12 58	Dutch	Anglo-Saxon Pet. Co.	440 2	59 4	26 7	San Francisco, Cal.	Curacao, D. W. I.	Fuel oil	9 245 7 983	5 065
San Jose	25	9 13	25	11 25	25	18 40	27	14 15	24	11 25	Dutch	United Fruit Co.	330 0	44 5	18 6	San Francisco, Cal.	Port Limon, C. R.	Gasoline, general	597 3 675	2 359
Isparanza ¹⁵	25	12 45	25	14 37	25	20 50	25	4 05	24	14 37	Norwegian	Lars Thorsen	339 7	44 0	23 0	Cedras Is., Mexico.	Sandefjord, Norw'y	Whale oil	1 102 4 446	2 890
Centaurs	25	14 45	25	15 51	26	12 00	25	12 00	24	15 51	American	Isthmian S. S. Lines	409 8	54 2	24 0	Seattle, Wash.	New York, N. Y.	Lumber	7 000 6 581	4 795
Pacific	25	16 30	25	17 22	26	12 47	26	12 47	24	17 22	American	Dimon S. S. Corp.	409 8	54 2	24 4	Seattle, Wash.	Baltimore, Md.	Lumber	6 799 6 630	4 916
Hemlock	25	16 30	25	17 22	26	12 47	26	12 47	24	17 22	American	Dimon S. S. Corp.	409 8	54 2	24 4	Seattle, Wash.	Baltimore, Md.	Lumber	6 799 6 630	4 916
I-10 ¹⁵	25	8 30	25	8 30	25	16 16	13 05	16 16	13 05	16 16	American	U. S. Army	231 0	20 0	20 0	Balboa, C. Z.	Cristobal, C. Z.			
Breckinridge ¹⁵	25	8 30	25	8 30	25	16 16	13 05	16 16	13 05	16 16	American	U. S. Army	231 0	20 0	20 0	Balboa, C. Z.	Cristobal, C. Z.			
S-16	25	8 30	25	8 30	25	16 16	13 05	16 16	13 05	16 16	American	U. S. Navy	231 0	20 0	20 0	Balboa, C. Z.	Cristobal, C. Z.			
S-17 ¹⁵	25	8 30	25	8 30	25	16 16	13 05	16 16	13 05	16 16	American	U. S. Navy	231 0	20 0	20 0	Balboa, C. Z.	Cristobal, C. Z.			
Swan ¹⁵	25	8 30	25	8 30	25	16 16	13 05	16 16	13 05	16 16	American	U. S. Navy	231 0	20 0	20 0	Balboa, C. Z.	Cristobal, C. Z.			
Alisco	24	11 45	26	6 47	26	17 45	26	17 45	24	6 47	Mexican	National Navigation Co.	385 0	45 0	11 0	Balboa, C. Z.	Progreso, Mexico	Rice, sugar	1 140 3 021	2 159
Oreona	26	5 20	26	8 09	26	16 45	27	00 10	24	8 09	British	Pacific Steam Nav. Co.	511 6	62 2	27 0	Tacama, Wash.	Liverpool, England	Nitrates, general	3 717 12 417	8 305
Havel ¹⁵	26	6 30	26	8 07	26	18 50	27	00 45	24	8 07	German	North German Lloyd	469 2	61 1	28 0	Seattle, Wash.	Hamburg, Germany	Lumber, general	5 352 9 305	6 790
Invela	26	8 30	26	10 00	26	19 35	26	20 10	24	10 00	British	Inter. Freight Lines	400 1	52 2	25 0	Toesilla, Chile	Jacksonville, Fla.	Nitrates	7 670 5 665	3 956
Breda	25	21 55	26	10 00	26	19 35	26	20 10	24	10 00	Dutch	Royal Neth. S. S. Co.	402 6	53 3	27 8	San Antonio, Chile	Hamburg, Germany	General	8 622 7 384	4 769
Orazio ¹⁵	26	8 15	26	14 50	26	21 45	28	15 18	24	14 50	Italian	Nav. Gen. Italiana	506 6	61 8	24 2	Valparaiso, Chile	Genoa, Italy	General	2 453 12 977	9 373
Skagerak ¹⁵	26	12 15	27	6 26	27	13 30	27	13 30	24	6 26	German	Atlantic Tank Rhederl.	423 0	55 0	25 4	San Francisco, Cal.	Land's End, Engl'd	Gasoline	8 519 6 412	4 186
Virginian	26	13 05	27	6 46	27	14 00	27	14 00	24	6 46	American	Amer-Hawaiian Line	491 5	58 2	26 6	Seattle, Wash.	Boston, Mass.	General	7 662 10 491	7 601
California	26	21 25	27	6 58	27	15 05	27	21 25	24	6 58	American	Standard Oil Co. of Cal.	513 5	68 2	28 6	Los Angeles, Calif	London, England	Gasoline	16 032 11 719	8 619
Standard ¹⁵	26	21 25	27	6 58	27	15 05	27	21 25	24	6 58	American	Standard Oil Co. of Cal.	513 5	68 2	28 6	Los Angeles, Calif	London, England	Gasoline	16 032 11 719	8 619
S-11 ¹⁵	27	7 52	27	16 35	27	16 35	27	16 35	24	7 52	American	U. S. Navy	231 0	20 0	20 0	Balboa, C. Z.	Cristobal, C. Z.			
S-12 ¹⁵	27	7 52	27	16 35	27	16 35	27	16 35	24	7 52	American	U. S. Navy	231 0	20 0	20 0	Balboa, C. Z.	Cristobal, C. Z.			
S-13 ¹⁵	27	7 52	27	16 35	27	16 35	27	16 35	24	7 52	American	U. S. Navy	231 0	20 0	20 0	Balboa, C. Z.	Cristobal, C. Z.			
S-14 ¹⁵	27	7 52	27	16 35	27	16 35	27	16 35	24	7 52	American	U. S. Navy	231 0	20 0	20 0	Balboa, C. Z.	Cristobal, C. Z.			
Mallard ¹⁵	27	7 58	27	16 35	27	16 35	27	16 35	24	7 58	American	U. S. Navy	231 0	20 0	20 0	Balboa, C. Z.	Cristobal, C. Z.			
S-20 ¹⁵	27	7 58	27	16 35	27	16 35	27	16 35	24	7 58	American	U. S. Navy	231 0	20 0	20 0	Balboa, C. Z.	Cristobal, C. Z.			
S-20 ¹⁵	27	7 58	27	16 35	27	16 35	27	16 35	24	7 58	American	U. S. Navy	231 0	20 0	20 0	Balboa, C. Z.	Cristobal, C. Z.			
Buenaventura	27	3 20	27	8 45	27	19 03	28	11 20	24	8 45	American	Panama R. S. S. Line	251 0	43 0	16 0	Guayaquil, Ecuador	New York, N. Y.	(²⁸)	1 122 2 873	1 776
Soledad ¹⁵	26	23 45	27	8 00	27	17 53	27	17 53	24	8 00	Norwegian	A. F. Klaveness & Co.	391 0	53 7	26 0	Lcs Angeles, Calif	Hamburg, Germany	Gasoline	7 942	3 476
Berlinnes	27	6 00	27	9 12	27	19 40	27	21 05	24	9 12	British	Ben Line Steamers	405 0	51 5	23 0	Chennais, B. C.	Belfast, Ireland	Lumber	5 365 5 097	3 476
Chateau	26	7 00	27	11 12	27	17 30	27	17 30	24	11 12	American	U. S. Army	448 0	56 0	25 0	Honolulu, T. H.	New York, N. Y.	Army supplies	299	
Toss ¹⁵	26	17 47	27	13 15	27	19 50	27	19 50	24	13 15	Venezuelan	Venezuela Gulf Oil Co.	280 4	47 3	13 6	Balboa, C. Z.	Maracaibo, Venez	Bull. st		
El Cervo	27	13 00	27	13 55	27	21 50	28	00 55	24	13 55	British	G. T. Bowring & Co.	407 4	52 4	25 6	La Libertad, Ecua	Philadelphia, Pa.	Crude oil	7 920 6 016	4 356
Aden Maru	27	14 15	27	15 03	27	22 20	28	00 05	24	15 03	Japanese	Kokumi Kisen Kaisha	385 0	51 0	27 5	Iloilo, P. I.	New York, N. Y.	Sugar	7 550 6 262	4 672

Transport.

Tender.

Submarine.

Launch.

Whale tanker.

Tug.

South for dry docking.

Cruiser.

Tanker.

Platinum, gold, precious stones.

Coffee, tagua, general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridiae.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 21	Lalla	Gulf-Caribbean S. S. Line.	Houston, Texas.	July 21	Wauks	Standard Fruit & S. S. Co.	San Blas, R. P.
July 21	Calumares	United Fruit Co.	Port Limon, Costa Rica.	July 21	Calumares	United Fruit Co.	New York via Habana.
July 22	Canden	United Fruit Co.	Curacao, D. W. I.	July 21	Ancon	Panama R. R. S. S. Line.	New York via Haiti
July 22	Pastores	United Fruit Co.	New York via Habana.	July 21	Lalla	Gulf-Caribbean S. S. Line.	Port Limon via wayports.
July 22	Peron	French Line	St. Nazaire via wayports.	July 22	Parissima	United Fruit Co.	New Orleans via wayports.
July 22	No. 9685 ²⁹	Pan-American Airways	Managua via wayports.	July 23	Canden	United Fruit Co.	Port Limon, Costa Rica.
July 23	Van Rensselaer	Royal Neth. S. S. Co.	Amsterdam via wayports.	July 23	No. 9776 ²⁹	Pan-American Airways	Willensadt via wayports.
July 23	Maxan	Gulf-Caribbean S. S. Line.	Tampa via wayports.	July 23	No. 9683 ²⁹	Pan-American Airways	Managua via David.
July 23	Linda S. ³⁰	A. L. S. Argon	Colombia, D. W. I.	July 23	No. 8020 ²⁹	Pan-American Airways	Guayaquil via wayports.
July 24	Norman Bridge	America in Pet. Transp. Co.	Barranquilla, Colombia.	July 23	Linda S. ³⁰	French Line	Blue fields, Nicaragua.
July 24	Colombia C-28 ²⁹	Seacla Airplane Co.	New York via Kingston.	July 24	Peron	Royal Neth. S. S. Co.	Barva via wayports.
July 24	Skada	United Fruit Co.	Colombia, D. W. I.	July 24	Van Rensselaer	Port Limon, Costa Rica.	Port Limon, Costa Rica.
July 25	Inapachuma ³¹	United Fruit Co.	Colombia, D. W. I.	July 24	May in	United Fruit Co.	Port Limon, Costa Rica
July 25	Coppename	United Fruit Co.	Colombia, D. W. I.	July 25	Pastores	America in Pet. Transp. Co	Aruba, D. W. I.
July 25	Median	Leyland S. S. Line	New Orleans and waypts.	July 25	Norman Bridge	Pan-American Airways	Managua via David.
July 25	No. 9776 ²⁹	Pan-American Airways	Liverpool via wayports.	July 25	No. 9035 ²⁹	Seacla Airplane Co	Barranquilla, Colombia.
July 25	No. 9688 ²⁹	Pan-American Airways	Managua via wayports.	July 25	Colombia C-28 ²⁹	United Fruit Co	New York via wayports
July 25	No. 8020 ²⁹	Pan-American Airways	Guayaquil via wayports.	July 25	Skada	United Fruit Co	Colon, R. P.
July 25	Calgarolite	Imperial Oil Co.	South Shields, England.	July 25	Inapachuma ³¹	United Fruit Co	Colon, R. P.
July 26	Saramacca	United Fruit Co.	Port Limon, Costa Rica.	July 25	Coppename	United Fruit Co	Puerto Colombia.
July 26	Amapala	Standard Fruit & S. S. Co	New Orleans via Habana.	July 26	Median	Leyland S. S. Line	Port Limon, Costa Rica.
July 26	Van Rensselaer	Royal Neth. S. S. Co	Port Limon, Costa Rica	July 26	Saramacca	United Fruit Co	New Orleans, La.
July 26	Wauks	United Fruit Co	Colombia, R. P.	July 26	Anapachuma ³¹	United Fruit Co	Colon, R. P.
July 27	Ruzin	United Fruit Co.	San Blas, R. P.	July 27	Amapala	Standard Fruit & S. S. Co	New Orleans and waypts.
July 27	Heredia	Hamburg-American Line.	Tampico via wayports.	July 27	No. 9683 ²⁹	Pan-American Airways	Managua via David.
July 27	No. 9685 ²⁹	United Fruit Co.	New Orleans via Habana.	July 27	Van Rensselaer	Royal Neth. S. S. Co	Amsterdam via wayports.
July 27		Pan-American Airways	Managua via David.	July 27	Manaquí	United Fruit Co	New York via Kingston.

PORT OF BALBOA.

July 26	A. B. de Obarrio ³²	Pacific Fruit Co.	Bayamo River, R. P.	July 26	A. B. de Obarrio ³²	Pacific Fruit Co.	Panama Bay, R. P.
July 26	Sambu ³²	Hans Elliot.	Bayamo River, R. P.	July 26	Sambu ³²	Hans Elliot	Panama Bay, R. P.
July 26	Doa Hermanos ³²	A. Valdez	Bayamo River, R. P.	July 26	Doa Hermanos ³²	A. Valdez	Panama Bay, R. P.
July 26	San Luis ³²	Chiriqui Land Co.	Pto. Armeles, R. P.	July 27	San Luis ³²	Chiriqui Land Co.	Pto. Armeles, R. P.
July 26	Guardian ³³	All America Cables	Callao, Peru.	July 27	Guardian ³³	All America Cables	High seas.

* Other than ships passing through the Canal.

³² Motor schooner.³³ Cable ship.²⁹ Air mail carrier. ³⁰ Motor schooner. ³¹ Motor boat.Panama Bay, R. P.
Panama Bay, R. P.
Panama Bay, R. P.
Pto. Armeles, R. P.
High seas.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending July 27, 1929.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon	Panama R. R. S. S. Line		July 21		895
Wanks	Standard Fruit & S. S. Co.		July 21		2
Baralt	Royal Neth. S. S. Co.		July 21		103
Sachsen	Hamburg-American Line		July 21		223
Knute Nelson	Norway-Pacific Line		July 21		203
Murla	North German Lloyd		July 21		554
Calamares	United Fruit Co.	July 21	July 21	21	54
Laila	Gulf-Caribbean S. S. Line	July 21	July 21	317	8
Santa Cruz	Grace Line	July 21	July 22	(¹)	21
Colombia	Panama Mail S. S. Co.	July 21	July 22	600	101
Acajutla	Pacific Steam Nav. Co.	July 21		644	
Parismina	United Fruit Co.		July 22		101
Santa Cecilia	Grace Line	July 22	July 22	68	42
Camden	United Fruit Co.	July 22	July 22	4,602	(²)
Essequibo	Pacific Steam Nav. Co.	July 22	July 22	7	32
Texas	French Line	July 22	July 23	46	20
Pastores	United Fruit Co.	July 22	July 24	402	48
Perou	French Line	July 22	July 24	143	795
Martha	H. C. Stevenson	July 22	July 27	(¹)	480
Linda S.	R. Feuillebois	July 23	July 23	(¹)	40
Mayan	Gulf-Caribbean S. S. Line	July 23	July 24	364	(²)
Nosa Queen	N. O. & S. A. S. S. Co.	July 23	July 24	87	775
Venezuela	Panama Mail S. S. Co.	July 23	July 24	296	74
Theodore Roosevelt	Norway-Pacific Line	July 23	July 24	(¹)	189
Van Rensselaer	Royal Neth. S. S. Co.	July 23	July 24	58½	19
Australien	Danish East Asiatic Line	July 23	July 24	36	(²)
Boskoop	Royal Neth. S. S. Co.	July 24	July 25	399	330
Asuka Maru	Nippon Yusen Kaisha	July 24	July 25	259	(²)
Sixaola	United Fruit Co.	July 24	July 25	626	131
Santa Teresa	Grace Line	July 24	July 25	2	5
Durazzo	Hamburg-American Line	July 24		96	
Manizales	North German Lloyd	July 24		477	
Inapaquina	United Fruit Co.	July 24		19	
Norman Bridge	Pan-American Pet. & Tr. Co.	July 24	July 25	6,128	(³)
Coppename	United Fruit Co.	July 25	July 25	735	108
San Jose	United Fruit Co.	July 25	July 27	802	314
Guayaquil	Panama R. R. S. S. Line	July 25	July 27	660	105
Chetopa	Nelson S. S. Line	July 25	July 27	224	(²)
Anachucuna	United Fruit Co.	July 25	July 25	36	(²)
Narenta	Royal Mail S. P. Co.	July 25	July 26	14	359
Median	Leyland S. S. Line	July 25	July 26	674	(²)
Orduna	Pacific Steam Nav. Co.	July 25	July 26	109	21
Caldas	National Navigation Co.	July 25	July 27	(¹)	198
Saramacca	United Fruit Co.	July 26	July 26	6	214
Salvador	Pacific Steam Nav. Co.		July 26		1,132
Van Rensselaer	Royal Neth. S. S. Co.	July 26	July 27	(¹)	448
Amapala	Standard Fruit & S. S. Co.	July 26	July 27	115	417
Havel	North German Lloyd	July 26	July 27	(¹)	170
Anachucuna	United Fruit Co.	July 26		29	
Waunta	Standard Fruit & S. S. Co.	July 26		491	
Orazio	Italian Line	July 26		42	
Oklahoma	French Line	July 26	July 27	178	18
Oreoma	Pacific Steam Nav. Co.	July 26	July 27	20	3
Heredia	United Fruit Co.	July 27		429	
Buenaventura	Panama R. R. S. S. Line	July 27		31	
Wanks	Standard Fruit & S. S. Co.	July 27		90	
Managui	United Fruit Co.	July 27	July 27	4	330
Frankenwald	Hamburg-American Line	July 27		69	
Rugia	Hamburg-American Line	July 27	July 27	14	304

¹ No cargo discharged.² No cargo laded.³ 6 cases.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, White male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat....	Tuesdays, Thursdays, and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m.; Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Section "B:"	
Ward 5, Male, private rooms, American boys.....	Daily, 9.30 to 11 a. m.; 2.00 to 4.30 p. m.;
Ward 6, Foreign, male and female, private rooms, American girls.....	6.30 to 8.00 p. m.
Ward 7, White female, private rooms.....	(No visitors permitted in nursery.)
Ward 8, Obstetrical department, white females (Nursery).....	
Section "C:"	
Ward 9, White foreign, male.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p. m.
Ward 11, Colored, male, surgical.....	
Ward 12, Colored, male, medical, eye and ear.....	
Ward 13, Colored, male, G. U.....	
Ward 14, American, male, G. U.....	
Section "D:"	
Ward 15, American, male, surgical.....	{ Tuesdays, Thursdays, and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m.
Ward 16, American, male, medical, eye and ear.....	{ Sundays and holidays, 9.30 to 11 a. m.; 2.00 to 4.00 p. m.
Ward 17, Colored children.....	{ Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p. m.
Ward 18, White children.....	Daily, 9.30 to 11 a. m.; 2 to 4 p. m.
Ward 19, Colored, female, medical.....	{ Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3 p. m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation.....	No visitors permitted except to visit tuberculosis patients, Thursdays, Sundays, and holidays, 1.30 to 3 p. m.

Permission to visit outside of visiting hours will be granted upon application to the Superintendent's Office.

Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

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