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MONTHLY CONSULAR *and* TRADE REPORTS

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AGRICULTURE.

BANANA INDUSTRY OF COLOMBIA.

DEVELOPMENT MAKES ACTIVE BUSINESS AT SANTA MARTA.

As a result of a visit to the great banana-producing district of Santa Marta, so largely developed by American capital, Vice-Consul Albro L. Burnell, of Barranquilla, furnishes the following report:

The town of Santa Marta is situated east of Santa Marta Bay on the Caribbean coast. The bay affords a safe anchorage under all conditions of weather. Two steel piers put ships and railroad in easy communication for handling cargo. No less than 3 steamers a week sail to New York, New Orleans, Mobile, and Philadelphia; others occasionally for Colon and Liverpool. The port is the northern terminus of the Santa Marta Railway, which runs southward for 58 miles over a coastal plain, or the great banana-raising region of Colombia. During the year 1908 this road carried 51,397 tons of bananas alone. At present the commercial importance of Santa Marta depends almost entirely on its large and increasing shipments of bananas to the United States. Its other exports are coffee, cacao, rawhides, and alligator skins. It has an estimated population of 6,000 inhabitants, and is the capital of the Department of Santa Marta. Americans have installed and now operate the telephone and electric-lighting systems, and ice-making plant, and have developed one of the largest and best coffee plantations in Colombia. Santa Marta has telegraphic communication with all parts of the country, is within eighteen hours' journey by rail and steamer from Barranquilla, and should the railway be extended, according to a recently made survey, it will have direct communication with the Magdalena River, the main artery of commerce of Colombia.

INCREASE OF EXPORT TRADE—CURRENT PRICES.

An American and an Englishman were the first to raise bananas here for export. Their first shipment was made in 1891, and for thirteen years the amount exported by them and others never reached 500,000 bunches in any one year. In 1904, 787,244 bunches were exported, and in 1908, 2,241,580 bunches. It is estimated that within four or five years not less than 5,000,000 bunches of bananas will be exported annually.

The current prices in gold for first-class fruit per bunch are as follows: August–February, 20 cents; March and July, 25 cents; April, May, and June, 35 cents. One-half the foregoing prices is paid for fruit of the second class. Many of the producers have assured themselves of a market for their fruit at the above prices for

a period of five years by having entered into a contract with the United Fruit Company. Payments may be made by check or in local currency at the current rate of exchange. [Information concerning the prices and acquisition of land in the Santa Marta district is on file in the Bureau of Manufactures.]

COCOA TRADE.

MEXICO.

STATE OF TABASCO HIGHLY SUITABLE FOR EXTENSION OF INDUSTRY.

Among the numerous tropical products cultivated in the Mexican State of Tabasco, Consul A. J. Lespinasse, of Frontera, states that the cacao tree is by far the most important crop at present, which leads him to write concerning it:

It might justly be claimed that Tabasco, of all the Mexican States, is the one which combines all the requisites to grow the cacao tree in its greatest perfection, as it possesses an alluvial soil of remarkable fertility peculiarly adapted to the cacao tree and its cultivation, which requires a soil rich in humus, near river banks, well shaded, and moist. However, swampy or improperly drained localities are fatal to its growth.

As a rule, the cacao plantations are located in the northwestern part of the State, in the Rio Seco (Dry River) section, which is an exceedingly fertile region, being the bed of a dry river which years ago was diverted from its course through natural causes and now flows in another direction.

The cacao tree will only thrive between latitude 17° S. and 17° N. Although it will grow at an elevation of 1,500 feet, it will, however, produce the most satisfactory results in the lowlands where the daily temperature does not go below 75° F.

The Tabasco cacao has a world-wide reputation, being highly prized by connoisseurs for its rich flavor and nourishing qualities. Three crops of cacao or cocoa beans are gathered during the year, and it is estimated that 1,000 trees have an average production of 600 pounds, which sells for 25 to 30 cents gold in this market at wholesale. The local demand absorbs the entire crop, which, according to the most reliable information obtainable, amounts to 2,000,000 pounds.

The cacao tree, when fully developed, attains a height of 16 to 18 feet. Its fruit resembles a cucumber, the outer surface being glossy and corrugated; the interior section contains the seeds or cacao nuts, which range in number from 10 to 50. The cacao tree will produce consecutive crops for 25 years, and while its cultivation during the first years of its growth requires constant and intelligent care, after it reaches the producing period, which will be in five years, it needs little attention. It is estimated that the outlay for a small plantation, including cost of land and 1,000 trees, will be $350 gold until it reaches its period of production.

NICARAGUA.

GOVERNMENT PREMIUM OFFERED FOR CACAO PLANTING.

Although cacao ranks in importance after both coffee and sugar among the cultivated resources of western Nicaragua, Consul José

de Olivares, of Managua, says that it is recognized as the surest and most remunerative product that can be grown in the districts to which it is adapted. The consul also writes:

The most favored localities for the cultivation of the cacao tree are found in the Departments of Rivas, Granada, and Chinandega, which are situated in a long, hill-sheltered valley between lakes Nicaragua and Managua and the Pacific Ocean. Lands suitable for cacao growing may be purchased at $5 to $50 gold per acre, according to location and facilities for the transportation of crops.

In the more outlying districts it is possible to secure such lands from the Government, the cost of which, with title, amounts to about $3 gold per hectare (2½ acres). The average cost of clearing, planting, and maintaining cacao land for the first five years is $200 to $250 gold per acre, according to the size of the plantation. The cost for care and maintenance after the trees come into bearing is from $2.50 to $5 gold per acre.

Two varieties of cacao trees are cultivated in Nicaragua, one of which is indigenous to the country and bears within six to eight years; the other, a foreign variety, bears within four years from the time of planting.

To encourage the industry the Nicaraguan Government offers on every planted tree a premium equivalent to 2 cents gold, payable upon its coming into bearing. The average yield of cacao from a tree in full bearing is 2 pounds, or about 600 pounds to the acre. At present practically no cacao is exported from Nicaragua, almost the entire production being consumed in this country, where it readily commands the equivalent of 20 to 25 cents gold per pound.

Shade is provided for the cacao plantation from a tree known as "Madero negro," which produces a very hard wood extensively used in this country for construction purposes. Land adapted to the cultivation of cacao is also suitable for the growing of bananas, which fruit, although having no export value in western Nicaragua, is a staple article of diet among the laboring classes.

SAN THOME AND PRINCIPE.

LARGE EXPORTS OF COCOA FROM LISBON TO THE UNITED STATES.

The following information concerning San Thome and Principe cocoa, and the large trade therein conducted in Lisbon, is furnished by Vice-Consul-General Charles F. La Serre, of that Portuguese port under date of February 16:

The exportation of cocoa from Lisbon—the product of the Portuguese islands, San Thome and Principe—is becoming more important each year. These islands produce only one variety, fine African or superior Thome. In regard to quality and price, it runs between fair Bahia and fine Bahia. Last year it sold as high as 28 cents per pound, and in the same year went as low as 10 cents; at present it is selling at 11½ cents. For a cocoa of medium fine quality, manufactures claim that San Thome is perhaps the most even and reliable on the market. It is graded according to quality. The second grade is called Paiol, and is the poorly cured cocoa raised by the small negro farmers. This grade sells for one-half to four-fifths of a cent per pound less than the fine African. The third grade is called Escolha

and consists of the broken beans and beans of poor quality, sorted from the good cocoa, and sells at from $2\frac{1}{10}$ to $2\frac{2}{3}$ cents per pound less than the fine African. These two grades only amount to about 15 per cent of the whole crop, and neither are exported to the United States. The receipts of cocoa at Lisbon from the colonies in 1908 amounted to 477,175 bags, against 402,221 bags in 1907, of 132 pounds per bag. Stock on hand January 1, 1909, 126,136 bags, which is all sold for early delivery. All the transactions in this market are under the old Portuguese measure, the arroba, 33 pounds.

At least one-fifth of the crop of San Thome and Principe is exported to the United States through this port. The value of the declared exports to the United States during the years 1906, 1907, and 1908 was $1,251,780 $1,571,851, and $1,717,708, respectively. The quantity exported to the United States in 1908 amounted to 91,869 bags, or about 12,127,000 pounds.

[A list of the names of firms who export cocoa to the United States and a history of the cocoa industry and conditions in San Thome are on file in the Bureau of Manufactures.]

UNITED STATES.

LEADS WORLD IN CONSUMPTION OF COCOA.

The imports of crude cocoa into the United States in the calendar year 1908 amounted to 97,419,700 pounds, valued at $12,999,836. The imports the year previous were 912,147 pounds less, but the total value was $2,165,743 greater. In other words, the market value of the cocoa imports dropped from $17\frac{1}{2}$ cents per pound in 1907 to $13\frac{1}{3}$ cents in 1908. The United States is the largest consumer of cocoa, the world output of which is about 340,000,000 pounds. The leading countries supplying the American markets are the British West Indies, which sent 27,945,871 pounds in 1908, while 17,026,116 pounds came from elsewhere in the West Indies and Bermuda; Brazil furnished 15,301,524 pounds, while 18,773,986 pounds came from elsewhere in South America. Crude cocoa ranks as twenty-fifth in importance as to value among the imports of merchandise into the United States.

The exportation of prepared cocoa and chocolate from the United States is making some headway, the amount having reached $403,509 in the fiscal year 1908, against $376,467 in 1907, and $279,819 in 1905. Great Britain has an export trade of about $250,000 a year in prepared cocoa and chocolate, but makes considerably more money out of handling the raw cocoa, of which 66,981,882 pounds were imported in 1908 and only 46,411,625 pounds retained for home consumption. A large portion of the surplus cocoa is sold to the United States. Great Britain also purchased for consumption in 1908 from the Continent 10,255,238 pounds of prepared cocoa and chocolate, valued at $4,365,382.

France imports annually over 50,000,000 pounds of raw cocoa, and Germany a little more than 70,000,000 pounds. The Netherlands imports 25,000,000 pounds per year, and in its manufacture there are 2,000 people employed in Amsterdam alone. The prepared Dutch cocoa is shipped to every country in the world. Switzerland imports

about $15,000,000 worth of raw cocoa yearly, and manufactures for export nearly $6,000,000 worth, about one-tenth being sent to the United States. Shipments to this country, however, are decreasing because of the erection of an American factory by one of the largest Swiss chocolate makers.

COLOMBIAN ORCHIDS.

LARGE EXPORTS TO EUROPE AND THE UNITED STATES.

Consul-General Jay White, of Bogota, reports as follows concerning the orchids of Colombia:

The Odontoglossum crispum, one of the most notable of all orchids, is to be found in Colombia on the temperate-climate mountain ridges, in the district between Facatativa and Velez. For many years past thousands of these plants have been sent out of the country, chiefly to London. This orchid is also found on the mountain slopes above the town of Fusagasuga, but the plants gathered in that district are not purchased by European collectors, being considered inferior to those from the other Colombian districts, such as Pacho, which is the headquarters of the trade.

Contracts are made with natives, who spend weeks at a time in the woods. When a native finds a tree with enough orchids to warrant his work he fells and then strips it of all the plants it bears. This system has naturally caused the wholesale destruction of all orchid-bearing trees in the forests near settlements. The collection continues all the year round. Attempts have been made by legislation to stop this destruction.

VARIETIES COLLECTED.

The rare varieties of Odontoglossum crispum which have obtained such fabulous prices in London and elsewhere all came from the Pacho district.

In many parts of Colombia various kinds of masdevallias are plentifully found, but of late years little interest has been shown in this variety of the orchid family, and the export has fallen accordingly.

Next in importance to the Odontoglossum crispum comes the trade in the many kinds of cattleyas. The best cattleya trianae are collected in the Natogaima district of Tolima; cattleya bogotensis are found near the headwaters of the Saldana River and in the forests about Villeta, near Bogota; large exports of these plants are periodically made. Cattleya schrœderc are found in the mountains near the headwaters of the Meta; also near Sogamoso; cattleya mendellic near Santander; cattleya gigas in Antioquia and Santander; and cattleyas mossiac and libiata are obtained in Venezuela.

The cattleya aurea are chiefly to be found about Yaramul, in Antioquia. This splendid orchid is almost unknown in other parts of Colombia.

The Odontoglossum vexillarium, sometimes called "Miltonia vexillaria," a plant with a large flower, found in Antioquia, is generally taken personally by the shipper when he returns to Europe.

In former years many of these cattleyas were sent to Bogota for shipment by the ordinary route down the Magdalena River, but now

many are sent down the Orinoco to Trinidad, whence reshipment to London can be effected with little loss of time.

PACKING AND PRICES.

Orchids should be free from all moisture before being packed. Odontoglossums should be well cleaned, their leaves and roots cut off, and only young shoots left on the plants. All of them require to be packed with dried bracken in well-ventilated crates. No delay should take place on the journey. The crates should be kept in cool places on board ship and well away from boilers and furnaces. To insure their arrival at destination in perfect condition, the leaves of all cattleyas should be carefully packed with dried bracken. As much as $300 has been paid by shippers in Colombia for a single plant of a certain variety of crispum.

Of late years the exportation of orchids to the United States has been on the increase, though London still continues to be the headquarters of the trade.

Orchids are exported in quantities to the following countries in the order named: United States, Germany, France, and England, the values not being given in the official returns.

[Photographs of Colombian orchids and natives who collect them, also the addresses of orchid exporters, are on file for public use at the Bureau of Manufactures.]

FOREIGN CROP REPORTS.

CHINA.

TIME HARVESTED AND SHIPPED—AMERICAN PURCHASES.

Consul-General Charles Denby, in the following report from Shanghai, summarizes the harvesting and moving of some of the crops of China:

There are three crops of tea. The first or spring crop is gathered about April 20, the second or summer crop about May 20, and the third or "even flower" crop about June 30. The bulk of the yield is moved to the seaports promptly after gathering, and export to the United States and other countries continues throughout the year, the movement being heaviest during the last 6 months of the year. The total value of tea exported from Shanghai to the United States in 1908 was $1,954,891, of which 88 per cent went forward between July 1 and December 31.

In the country adjacent to Shanghai the farmers begin to gather the silk cocoons about June 1, and movement of raw silk to the ports begins almost immediately. Export continues throughout the year and is heaviest in the last 6 months. The value of raw silk, cultivated and wild, exported from Shanghai to the United States in 1908 was $5,250,216, of which 86 per cent was shipped between July 1 and December 31.

Three crops of rice are harvested in each year, but its export is prohibited by the Chinese officials.

Cotton is harvested in the late summer and is exported throughout the year. During 1908 shipments were made for the first time in any quantity to the United States. The value was small, the total being only $66,900. About 90 per cent of the cotton exported from China is bought by Japan.

The export of skins and furs is another important item in China's trade. These know no seasons, and throughout the year are marketed and sent to the various countries of the world. The total exported to the United States from Shanghai in 1908 amounted to $575,000. In addition the United States imported $410,000 of wool from Shanghai, more than half of which was marketed in the December quarter, the balance being distributed almost equally over the remainder of the year.

The manufacture of straw braid is one of China's greatest industries, though only a small proportion of the cargoes destined for the United States are shipped from this port. Returns show that $407,000 worth left Shanghai during 1908 for the several ports in the United States. This product is also marketed throughout the year.

The foregoing are China's principal articles of export and represent 83 per cent of the trade from this port to the United States, the remaining 17 per cent being divided among about 75 other items. The total value of cargoes shipped from Shanghai to the United States in 1908 was $10,545,423 of which $1,029,070 was shipped during the March quarter, $819,203 during the June quarter, $4,034,603 during the September quarter, and $4,662,547 during the December quarter.

CUBA.

GOOD SUGAR-GRINDING SEASON—GENERAL BUSINESS POOR.

Consul-General James L. Rodgers reports from Habana that careful estimates of the amount of sugar produced in Cuba during the present grinding season and to May 1 show a total of about 1,150,000 tons. His letter bearing that date reads:

Many mills have stopped grinding and others will discontinue immediately, but the large mills will keep hard at work as long as the good weather lasts, and, as usual, taking advantage of the secondary season, will prolong the production of sugar into late June and early July. As a consequence, it is safe to assume that unless an extraordinary wet season commences soon there will be a further production of at least 200,000 tons, and, perhaps, under very good luck, of 250,000 tons.

For this output of sugar a good price is being obtained, and yet the almost universal report is that general business conditions in Cuba remain very slack, and in some lines decidedly poor, that purchasing is in small volume, and that the merchants seem to lack confidence and at the same time assert that the people have little money.

The banks of Habana report ample deposits, but practically no demand for money. The tobacco buyers state that the crop is not of a very good quality, and that the prices to be paid for it will be favorable to the manufacturers. The volume of importation is undoubtedly about on a par with that of the similar period of last year, when so great a loss occurred.

Taking all these things into account and considering that the so-called "dead season" is opening, it can not be seen how 1909 can promise much. The sugar men will undoubtedly make money, the new and efficient mills getting the greater proportion of it, but apparently the benefit is not flowing into the channels of Cuban trade.

ITALY.

EFFECTS OF THE EARTHQUAKE—LEMONS AND ORANGES—BERGAMOT OIL—FILBERTS.

In his annual review of the trade of Catania, Italy, Consul Stuart K. Lupton reports that practically no damage was done to the fruit groves of the Catania district by the earthquake of December 28, 1908. In relation to the fruit and nut crops the consul reports:

The orange and lemon crop for 1908 was very large, and as a consequence low prices ruled. The same may be said of wines, which were abundant, cheap, and good. The loss of orange and lemon trees as a result of the earthquake was very small, and as the season for oil starts in December the stocks on hand, and consequently the losses, were small. A great portion of the fruit was left on the trees until it was overripe, so that the yield of oil per unit was not favorable. Very few factories were destroyed and a very small number of the employees were killed.

BERGAMOT OIL AND FILBERTS.

With regard to bergamot, while the groves were not harmed, many factories were ruined and the mortality among the laborers was great. In addition to this, owing to the fact that the bergamot season starts in November, the stocks of oil on hand were large and the consequent losses were greater. The first fruit yields an oil of poorer quality, which is generally mixed with the better grades later in the season, bringing the whole to a normal grade. All of the poorer grade was lost, and the dealers are confronted with the necessity of filling their contracts with oil of a much higher quality than their contracts demand. The market requirements are 36 to 38 per cent ester, and the oil on hand is about 40 to 41 per cent, reaching even 45 per cent in some cases. The yield was smaller than it would otherwise have been, owing to the fact that the fruit was left too long on the trees, as was the case with the oranges and lemons.

Citrate of lime was over produced, and as a consequence the Camera Agrumaria has about 13,000 pipes on hand with no demand therefor.

About 100,000 bags of filberts, of 220 pounds each, were produced, against 70,000 for 1907 and 58,000 in 1906, and between 80,000 and 100,000 bags of almonds. Both of these were of good quality. Prices were low until November, when they increased about 20 per cent, owing to heavy demands from Germany and England.

The olive crop was a total failure.

THE FUTURE OF MESSINA.

While nothing has been done to reestablish the city, there can be no doubt that it will regain its old place, if for no other reason than because of its geographical position. It has the second best harbor of Italy, is situated on one of the great highways of commerce, and is the natural center for the products of eastern Sicily and Calabria. It has often been devastated by war and pestilence, and has more than once been shaken by violent earthquakes, but its natural advantages are too many to be disregarded, and it is probable there will be a city of Messina as long as there is any Sicily. The town will be rebuilt, but its reconstruction will be slow unless substantial aid is re-

ceived from the Government. After the great disaster of 1783 it was made a free port and rapidly recovered from its losses on that account.

Owing to the destruction of all records in Messina, in both the consulate and the custom-house, it is impossible for me to give any statement of the imports and exports for the year.

TOBACCO INDUSTRY.

AUSTRALIA.

STEADY INCREASE IN ITS CULTURE IN VICTORIA.

Consul John F. Jewell, of Melbourne, states that according to a report made by the tobacco expert to the government of Victoria, tobacco growing in that Australian State has made a marked advance since 1901.

In 1901 there were 103 acres under tobacco, and the product amounted to 345 cwt. of dried leaf. By the season 1907–8 the area under cultivation had increased to 345 acres and the product to 1,767 cwt. During the same period the number of growers rose from 17 to 49. This year there will be a further increase in the area cultivated. The expert points out that it has been proved that Victoria can produce a good quality of cigar leaf, in spite of the belief of a number of manufacturers that it would be impossible to do so in the State, owing to climatic conditions. There has also been an improvement in the quality of the leaf and, consequently, an increase in prices. Pipe tobacco now sells at 14 to 18 cents per pound, while for cigar leaf 24 to 36 cents has been obtained, and in one instance 48 cents. Crops of 1,000 to 1,500 pounds of cured leaf per acre have been made, the value at present prices being £30 ($145.99) to £40 ($194.66) per acre for pipe tobacco and as high as £100 ($486.65) per acre for cigar leaf.

GERMANY.

SALES OF AMERICAN LEAF CENTERED AT BREMEN.

The following interesting report, explaining in detail the conditions governing the tobacco trade in Germany, is furnished by Consul-General Robert P. Skinner, of Hamburg, in reply to inquiries from Kentucky, Pennsylvania, and Virginia:

Although the value of American tobacco imported at Hamburg reached $1,166,200 in 1907, while the value of miscellaneous tobaccos exported to the United States during the same year reached $1,339,940, the dealings of local merchants in this article were comparatively unimportant. The imported shipments included large quantities of Cuban, Mexican, and West Indian tobaccos, transshipped at New York for Hamburg, and large consignments of American tobacco, which merely passed through Hamburg, having been actually bought by the Austro-Hungarian tobacco monopoly. Similarly, the exports from Hamburg to the United States consisted chiefly of Turkish and Greek tobaccos, bought for the United States at Dresden, the principal German market for these special products. At Dresden the American Tobacco Company controls the Georg A. Jasmatzi cigarette

factory, and there manufactures for German trade, and procures Turkish and Greek tobaccos for the American factories.

Thus the Hamburg statistical tables convey an erroneous impression of the position of tobacco in the trade of this city, which is not a tobacco market, but only a great transshipping port. The German tobacco trade with the United States is absolutely centralized at Bremen, in which the special knowledge coming from long experience has given the importers great advantages in the business, and which being a smaller place than Hamburg, provides the extensive storage facilities necessary, on much lower terms than would be possible here. Bremen, the leading tobacco market of Europe, not only imports for German consumption, but in the past has had a certain hold on the French Regie.

HAMBURG AND BREMEN TRADE.

There is no disposition on the part of any strong German firms to interfere with this time-honored arrangement, and with the exception of small quantities of seed leaf imported directly from the United States, the few Hamburg manufacturers look to Bremen for their American supplies. In this manner, also, Hamburg dealers take up about 13,000 packages per annum of American tobacco, which is chiefly reexported in its original form to northern, western, and southern Africa, where the leaves are chewed by the native population. The shipments for Africa are removed from the large American casks and repacked in small cases, the barrels being too large to be handled in the surf boats in which cargoes are lightered along the Atlantic coast of Africa. In Australia these same American leaves, bought in Bremen, are worked over into chewing and smoking tobacco.

There is a similar reexport trade in American tobacco from Bremen, but the absorbing markets are chiefly the Scandinavian peninsula and Switzerland. The principal business of the Bremen importers, however, is with German interior buyers of tobacco for snuff, chewing, and smoking. It may be said that the entire German consumption is satisfied from Bremen. So firmly rooted is the German habit of procuring tobacco supplies in Bremen, and so skilled are the Bremen importers in meeting the demand satisfactorily, that it is doubtful whether efforts of American exporters to sell directly to German manufacturers could succeed, certainly not without the capital necessary to place themselves on the same footing as the Bremen importers.

The manufacturer in this country wishes to see the tobacco itself, and to obtain guaranties as to quality, which American growers do not seem to be so organized as to give. If the latter could establish themselves abroad, with large stocks on hand of every class of tobacco, doubtless they could control a portion of the business, but at present this is not the case, and the German merchant seems to be occupying the field not only effectively but satisfactorily to his American sources of supply and to the German trade.

AMERICAN STANDARD TYPES.

The various grades of American tobaccos sold in Germany bear names indicative of standard types which do not necessarily suggest their geographical origin, although the most usual designations are: Ohio, Ohio bay, Maryland, Maryland bay, Maryland scrubs (Sand leaves), Kentucky, Mason County, burley, "Virginny," and Cincinnati. It is said that these names have come to represent types rather than places of growth, owing to the methods of American packers

in sorting and packing to certain standards. A Hamburg importer of seed-leaf tobacco, one of the few classes which comes directly to this city from the United States, says that he is only sure to obtain Connecticut stock when he buys it in Hartford. Thus the German consumer has only the most vague notions respecting the actual origin of his tobacco, and is only interested to know whether or not it is the brand to which he is accustomed.

PURCHASES AND TERMS.

As to imports from the United States very few lots represent consigned goods. The tobaccos received are purchased on firm orders based upon type samples, previously submitted by large American shippers, who guarantee fair average quality. Differences of opinion are judged by experts in Bremen, whose judgment is final. The terms of payment are usually cash against documents. Purchases are made at seaboard, or in the more important tobacco centers, such as Louisville or Cincinnati, and very rarely in the growing districts of the actual producers. As tobaccos develop advantageously during a sea voyage, goods shipped by sailing vessel from New Orleans, for example, are worth more on arrival than similar goods forwarded by steamer from New York to Baltimore.

The German importer of American tobaccos rarely seeks to market his stock by direct intercourse with manufacturers. The latter usually procure their supplies through special brokers of whom there are many, in both Bremen and Hamburg. This brokerage habit being different from the ordinary methods of American business, especially in the interior States, throws another obstacle in the way of organizing direct American trade. The broker gets the order from the consumer and takes it to the importer. Should the broker undertake to place the order directly in the United States he would cease to be a broker and would become a commission merchant.

TOBACCO IMPORTS AND EXPORTS BY COUNTRIES.

The following statement shows the imports into Germany in 1905, 1907, and 1908, and the imports by sea into Hamburg in 1906 and 1907:

Countries.	Into Germany.			Into Hamburg by sea.	
	1905.	1907.	1908.	1906.	1907.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Netherlands	6,987	1,183	834	3,173	3,918
East India	27,593	34,287	38,449	204	175
Turkey	2,562	2,796	3,096	1,231	1,060
Asia Minor	1,943	1,723	2,112	1,532	923
Brazil	16,232	11,936	11,934	13,141	15,886
Colombia	2,154	2,102	3,442	280	148
Cuba	2,193	721	628	564	332
Dominican Republic	4,412	4,562	4,890	5,480	7,256
United States	11,359	7,258	8,918	3,718	4,079
Mexico	1,101	788	840	1,062	1,426
All other countries	2,600	1,660	99	7,077	10,023
Total	79,136	69,016	75,242	37,462	45,226

The imports from the Netherlands are composed chiefly of Netherlands East Indian tobacco.

The exports of raw tobacco from Germany in 1905, 1906, 1907, and 1908 amounted to 1,775, 1,304, 891, and 2,517 tons, respectively. The

principal countries to which tobacco is exported from Germany are: France, Denmark, Spain, the United States, West Africa, the Netherlands, Italy, Algeria, the Argentine Republic, Sweden, Portugal, Belgium, Russia, and Great Britain.

KOREA.

AN EXTENSIVE TOBACCO MARKET.

Consul-General Thomas Sammons, at Seoul, quotes the financial bureau of the Korean government estimates that of Korea's native population of 9,583,346, a total of 3,876,033 are tobacco smokers, consuming annually 49,478,997 pounds of tobacco at an estimated cost of 80 cents for each smoker. The tobacco used is mostly of native production, and probably 20 per cent of the Korean women are smokers. Approximately $600,000 worth of foreign cigarettes are sold each year in Korea. Japan contributes about 50 per cent of these imports and American and British interests the bulk of the balance.

EXPOSITIONS AND CONVENTIONS.

INTERNATIONAL MEETINGS.

ARGENTINA.

AMERICAN EXHIBITS ARE DESIRED AT RAILWAY EXPOSITION.

Chargé d'Affaires Charles S. Wilson, of the American legation at Buenos Aires, has received a note from the commission appointed by the Argentine Government to organize the International Railway and Transportation Exposition, to be held in Buenos Aires in 1910. Representation of American railways is desired. Copies of the rules, programmes, and application forms, all in Spanish, forwarded by Mr. Wilson, may be seen at the Bureau of Manufactures.

PLANS FOR THE INTERNATIONAL RAILWAY EXPOSITION.

The following statement by the London Financial Times supplements preliminary information already published in Consular and Trade Reports concerning the proposed railway exposition at Buenos Aires:

To celebrate the first centenary of Argentine independence, an International Exhibition of Railway and Land Transport is to be held at Buenos Aires from May to November, 1910. The exhibits will be divided into 16 sections, most of which are further subdivided into groups, the principal divisions including railways and tramways operated otherwise than by electrical traction, electric railways and tramways, automobilism, aeronautics, military transport, and sanitation in the transport of sick and wounded, and hygiene and sanitation in land transport. The executive committee, which is presided over by Señor Alberto Schneidewind, the director-general for railways, with the Minister of Public Works as honorary president, includes the general managers of the Buenos Aires Great Southern, Buenos Aires and Pacific, Buenos Aires Western, and Central Argentine Railways, together with directors of the Central, Great Southern, and Pacific lines.

The following are among the chief exhibits in the different sections and groups: Locomotives, carriages, wagons, and rolling stock of all kinds, brakes, couplings, and safety appliances, including methods of communication between passengers and the train staff, transporters, weighbridges, and elevating and handling appliances, carriage heating, lighting, and ventilating systems, raw and semiworked materials, steam engines and boilers, turbines, dynamos, electric motors, etc., for electric railway and tramway power houses, electrical rolling stock and accessories, permanent way and signaling systems for electric railways, wireless telegraph apparatus, railway telegraphic appliances, and appliances used in working the railway mail services, hospital carriages and sanitary trains, motor cars, bicycles, tires, and accessories, etc.

CANADA.

PROVINCIAL AGRICULTURAL FAIRS DURING THE PRESENT YEAR.

Consul-General John Edward Jones, of Winnipeg, reports that 47 agricultural societies of Manitoba have arranged for agricultural fairs this year, at the following places and on the dates given:

Miami, July 6; Morris, July 6; St. Pierre, July 7; Emerson, July 8; Springfield, July 8; Morden, July 9; Cartwright, July 23; Hart-

ney, July 28; Melita, July 29; Deloraine, July 30; Reston, July 30; Hamiota, July 28; Rapid City, July 29; Harding, July 30; Dauphin, August 3; Roblin, August 4; Gilbert Plains, August 5; Oak Lake, August 3; Carberry, August 4; Virden, August 6; Pilot Mound, August 3; Cypress River, August 3; Swan Lake, August 4; Treherne, August 6; Sanford, August 7; Elkhorn, August 3; Miniota, August 4; Oak River, August 5; Holland, August 5; Boissevain, August 4; Manitou, August 5; Gladstone, August 3; Minedosa, August 5; Russell, August 10; Shoal Lake, August 11; Strathclair, August 12; Birtle, August 13; Ste. Rose, September 14; Headingly, September 15; Kildonan, September 23; Woodlands, September 29; Beausejour, September 30; Stonewall, October 1; St. Jean, October 5; Kellwood, October 6; Meadowlea, October 7; Plumas, October 8.

FRANCE.

AVIATION CONTEST AT RHEIMS IN AUGUST.

Consul William Bardel, of Rheims, makes a report on an aviation meeting to be held from August 22 to 29 at that French city, in which the following is noted:

The meeting will be under the technical supervision of the Aero-Club of France, which in turn is controlled by the Aerian Mixed Commission. A total of 197,000 francs ($38,021) in prizes is offered. Aeroplanes of any type, including those of the Wright Brothers' system, may be entered in the contest. The management especially wishes to correct a misapprehension on this point through publication by American newspapers that machines of the Wright type would not be permitted to participate. The housing and guarding of the aeroplanes will be furnished gratuitously, so that there will be no expense for the participants in the contest beyond that of transporting their apparatus. There will also be contests for ordinary balloons and for kites. Applications for entry should be made to the Comité d'Organisation des Epreuves de' Aviation de Rheims, France.

RUSSIA.

THE IRBYT FAIR IN THE GOVERNMENT OF PERM.

Consul-General Hunter Sharp, of Moscow, reports as follows concerning the fair held in the town of Irbyt, located in that part of the Government of Perm which lies east of the Urals:

Since 1643 there has been held annually in Irbyt a fair similar in character to that at Nizhni-Novgorod, but less known. As in other fairs, European manufactured goods are exchanged for Asiatic raw materials. Furs represent the article of most importance for foreign markets.

The Irbyt fair is held from February 26 to March 26, but most of the business this year was done in the first 2 or 3 weeks. Raw materials, the principal articles at the fair, were fewer than last year, owing to previous buying. The prices were fairly high, but later dropped to 10 per cent lower than those of last year.

Soon after the Russo-Japanese war business depression had begun to be felt in far Siberia, and this is the second year that it is almost

at a standstill. This is due to the miscalculation of business men, who lost sight of the fact that as the army was withdrawn there would cease to be so large a demand as heretofore. As a result, many firms in the government of Irkutsk and in the Trans-Baikal region suspended payment.

The Viatka manufacturers were detained in St. Petersburg on business and were therefore not buying. An uncertain harvest in Siberia and other local and industrial conditions were the causes of the small demand for the products of Europe at the fair.

The iron works did not limit their output, but placed their wares on the market, accepting low prices and giving long credits. There were instances in which manufactured goods were sold with payments deferred for as long as 2½ years.

NETHERLANDS EAST INDIES.

FIBER CONGRESS AND EXHIBITION TO BE HELD IN JAVA.

Notice has been received from the Netherlands East Indian Agricultural Syndicate, at Sourabaya, Java, that a Fiber Congress and Exhibition will be held there in October, 1910. Various medals, diplomas, and money prizes will be offered for machinery exhibits. It is intended to demonstrate the extraction, preparation for market, and packing of all kinds of fibers, as well as their proper cultivation. The expenses of the congress and exhibition will be defrayed by the syndicate, which is enabled to do so by a liberal grant from the Netherlands India Government and substantial contributions from commercial houses and private persons. In conjunction with the Director of Agriculture, a committee has been formed to carry out the scheme, while a number of gentlemen in Holland have been requested to form a subcommittee there.

SIAM.

THE NATIONAL RICE AND PADDY EXHIBITION.

Vice-Consul-General Carl C. Hansen, of Bangkok, gives the following account of the Siamese rice exhibition, at which were displayed some American farming machinery:

The first national exhibition of Siam rice was opened on March 11, 1909, by the Crown Prince of Siam, in the Temple of Siddharta, one of the best specimens of Siamese ecclesiastical architecture. The main features of the structure are two large quadrangles inclosing a central building which contains the chief image of the Buddha. The inner quadrangle is cloistered, and in these cloisters is a large collection of Buddha figures seated in attitude of meditation. The rice exhibitions were arranged in tiers at the foot of these vast rows of more than life-size figures of the Buddha. There were nearly 3,000 separate exhibits from the various parts of Siam. Each district's exhibits were put together, the exhibitor placing his rice in a neat little bamboo basket, sack, or glass jar, according to his taste, the whole making a pleasing variety and showing much skill and ingenuity in make-up. Each receptacle was plainly and neatly labeled as to its owner, district, kind of rice, etc. The prizes for the best rice in each district were: Best, 400 ticals (1 tical equals about

36 cents); second best, 200 ticals; third best, 100 ticals. The first prize and a silver vase will be awarded to the exhibitor of the best rice in the show. The trophy remains in the custody of the high commissioner of the district of the winning cultivator, and is held for one year. Won three times it becomes the absolute property of the winner. The judges award a maximum of 90 marks, made up as follows: Long grain, 10; size of grain, 10; clearness, 10; whiteness of grain, 10; thinness of husk, 10; thinness of case under husk, 10; luster, 10; regular size, 10; and weight, 10.

IMPORTANCE OF CROP—CULTURAL METHODS.

The rice crop is of enormous importance to Siam, as rice and fish form the principal staples of food among the people. Up to the middle of the nineteenth century little rice was grown for sale or export, but it has been found that the Siamese rice is of an excellent quality, and wherever introduced it has found a ready market. Fifty years ago the export was below 100,000 tons, but now it reaches 700,000 to 900,000 tons yearly. It is estimated that about 2,000,000 people are engaged in cultivating it and many thousand more in getting it ready for the market. Generally, rice cultivation is carried on in a primitive way. The rice is sprouted and then sown as thick as it will grow, in little beds that can be easily watched and watered. When it is about a foot high it is pulled up, tied in bundles, and taken to the field, which has been plowed and harrowed and is covered with six to eight inches of water. In such fields the rice is planted by thrusting the stalks, with hands and feet, into the soft mud beneath the water. The planting may last from June to October.

As the rice is cultivated in large tracts it would be difficult to harvest the crop in time if all the rice were to ripen at the same period. Three or four varieties of rice, which take from 2 to 6 months to ripen are, therefore, cultivated, and the harvest consequently lasts from October to February, as one variety ripens after the other. The reaping of the rice is mostly done by sickle, the thrashing by the treading of cattle and buffaloes, and the cleaning by winnowing in the wind. Lately, however, machinery has been introduced for plowing, harvesting, and thrashing of the rice, and it is rapidly gaining favor among the farmers. There were only two firms showing such machinery at this exhibition, and the apparatus was mostly of German and English manufacture. Of American manufacture were seen plows from Baltimore, and a harvester from Chicago. This exhibition will be repeated yearly, and would afford an excellent opportunity for exhibiting American machinery to the rice-cultivating and rice-milling public of Siam.

FINANCE AND ECONOMICS.

BRITISH COLUMBIA LEGISLATION.

IMPORTANT LAWS ENACTED BY THE RECENT LEGISLATURE.

In transmitting printed copies of the laws enacted during the recent session of the legislature of British Columbia, Consul Abraham E. Smith, of Victoria, writes as follows:

One of the most noteworthy events of the session was the announcement of the Finance Minister that at the close of the fiscal year 1908 the assets of the Province were $5,979,055, against an expenditure of $4,541,278, showing a surplus, the first in its history, of $1,437,777; also, that during the year $686,000 had been paid for redemption of bonds of the Province, not due, and $168,927 paid into sinking funds. As a consequence, large amounts were voted for construction of bridges, public buildings, roads and trails, etc., throughout the Province.

TIMBER LICENSES AND RAILWAY CHARTERS.

It may be stated that much of the increase in the revenue was due to the sale of timber licenses and royalties to American capitalists, and perhaps one of the most important results of the meeting of the legislature was the announcement by the premier that next year the government will pass a law making the timber licenses of the Province (in which Americans have invested millions) perpetual, under certain restrictions, instead of expiring in 21 years, as at present. This is very important, as it means a large increase in the value of all timber licenses issued. There is no doubt of the passage of such a law when introduced by the government.

A law was passed extending the time for the renewal of lapsed timber leases; the law is made retroactive as far back as November 1, 1907, but must be taken advantage of within 60 days. Under the law hand loggers are no longer barred from any crown land, but may receive licenses, provided applicants are voters or Indians.

Charters were granted to incorporate railroads from Prince Rupert to Port Simpson, on Graham Island; the Pacific Northern and Omineca Railroad, the Portland Canal Short Line Railroad, the Vancouver and Northern Railway, the Hardy Bay and Quatsino Sound Railway, and the Banfield and Beechy Bay Railway. This latter is intended to connect with car ferry to Port Angeles, Wash.

WATER PRIVILEGES AND LIQUOR SELLING.

A law was also passed relating to water. It is very lengthy, and modeled principally after laws of the arid sections of the United States, but regarded as merely temporary in many respects, the government regarding the problem of irrigation in this new country and the proper utilization of water for domestic, mining, municipal,

and power purposes as both difficult and perplexing. The expectation is that the bill will be amended in several essential points next year.

Another noteworthy step taken by the legislature was the passage of a resolution providing for the appointment of a commission to investigate the working of the Gothenburg system of liquor selling. This resolution was the result of a large delegation calling on the government to pass a local-option bill. The premier has announced that the local-option question will be referred direct to the people, and a plebiscite thereon will be taken the present year.

GAME AND MEDICAL LAWS.

A stringent game-protection law was passed. Under its provisions no bear can be trapped in the Province south of the Canadian Pacific Railway line. The act applies to all persons except Indians and resident farmers, and makes it illegal to export parts as well as the whole of game animals or birds; forbids the hunting of game imported for purposes of acclimatization; and prohibits the dealing in, or offering to buy or sell, the heads of mountain sheep, elk, moose, or caribou, or the teeth of elk or wapiti. All nonresidents who desire to hunt or fish must take out licenses.

A new medical law was passed which states that after January 1, 1912, no person shall practice as a physician or surgeon in the Province who can not produce a diploma from a college of medicine which requires at least five years' course of study, and who is not satisfactory to the board of examiners of the Province; also providing for the revocation of license to practice when any practitioner registered shall have been adjudged guilty of unprofessional conduct in any respect. [Printed copies of laws enacted are on file in the Bureau of Manufactures.]

CENSUS OF CHINA.

ENUMERATION WILL BE BY FAMILIES AND BY INDIVIDUALS.

Minister W. W. Rockhill, of Peking, transmits a translation of the regulations issued by the board of the interior for taking the census of the Chinese Empire. The following extracts will be of interest:

Under the provisions of the programme of administrative reform in preparation for constitutional government, the ministry of the interior of the Chinese Empire has issued regulations governing the taking of a census of all Chinese both at home and abroad. There will be a census of families and also of individuals. The former is to be completed in 1910 and the latter not later than 1912. In making the enumeration, data on the following heads shall be taken: Names, ages, occupations, places of birth, residence; and for a supplementary report the enumerators must note (1) whether members of a family have been imprisoned or suffered other equally severe punishment; (2) whether the head of the family has a regular occupation; (3) whether many people live promiscuously in one family.

All Chinese living in foreign lands, whether as students, merchants, or laborers are to be enumerated. The census in foreign countries will be under the supervision of the Chinese ministers and consuls.

OLD METHODS RELEGATED—CENSUS KEPT UP TO DATE.

Article 39 of the regulations says: "After the issuance of these regulations the former tithing system will at once be abolished and the methods formerly employed in taking the census shall be changed to conform with these regulations." Under the methods now to be adopted no fees are collected. However, the expense of taking the census must be borne by local census districts.

After the completion of this census all births, deaths, marriages, and adoptions must be reported by the head of the family to the local census office or police station; the records of families must be revised every two months, and records of individuals every six months, and reports must be made annually to the board of the interior by the directors general of the census from the various provinces. Under these provisions the census figures will be brought up to date annually.

Before these regulations become operative they must receive imperial sanction, which will probably be given at an early date. [The full text of the regulations is on file in the Bureau of Manufactures.]

FIRE INSURANCE.

CHILE.

ROOM FOR AGENCIES OF AMERICAN COMPANIES.

In reporting that there should be a good opening in Chile for American fire-insurance companies, Consul Alfred A. Winslow, of Valparaiso, presents the following facts:

The foreign companies now in the field, which number 16, carry total risks at present of $70,574,922 United States gold, on which a premium of $1,303,390 was collected for the quarter ending September 30, 1908. All foreign insurance companies are required to deposit with the Chilean Government an amount varying from $40,000 to $60,000 United States gold, according to the size of the company, as a guaranty that all claims will be duly adjusted, and that the laws of the land will be complied with. A 2 per cent tax is charged on all premiums collected, and quarterly statements must be made to the Chilean Government.

The fire-insurance companies doing business in Chile are divided into two classes. Those in the first class have a capital stock of ₱500,000 Chilean gold, or $182,500 United States gold, or more, and those with a smaller capital are in the second class. All of the foreign insurance companies are in the first class, also 9 of the 22 Chilean companies. There are several strong fire-insurance agencies in Valparaiso, but there is room for more. A list of the foreign fire-insurance companies doing business in Chile is forwarded [and may be secured from the Bureau of Manufactures].

URUGUAY.

GOVERNMENT REGULATIONS FOR INSURANCE BUSINESS.

Consul Frederick W. Goding, of Montevideo, supplies the following facts regarding fire insurance in Uruguay:

A law by which insurance companies working in this country were required to give guaranties and pay a tax on the premium was sanc-

tioned by the Uruguayan Government on January 18, 1908, to take effect six months later. The law provides that foreign fire-insurance companies shall deposit $30,000 ($31,020 American currency); foreign marine-insurance companies, $20,000 ($20,680); and if working in both fire and marine insurance, a deposit of $35,000 ($36,190) in gold. The premium tax on foreign companies is 5 per cent for fire and 4 per cent for marine insurance, while the "national" companies must deposit one-half the sums mentioned, and are taxed 2 per cent on both fire and marine insurance premiums. Any foreign insurance company may qualify as a "national" one by investing $150,000 ($155,100) in local real estate, bonds, or making a permanent local bank deposit.

The Montevideo branches of three British insurance companies have made the necessary deposit and have become "national" institutions.

GERMAN AIRSHIP LINES.

FIVE ROUTES PROJECTED BY AN AERIAL NAVIGATION COMPANY.

Consul T. J. Albert, of Brunswick, in reporting that the German Aerial Navigation Company, of Frankfort-on-Main, has established the first permanent airship lines in Germany, gives the following details:

It is the purpose of the company at the start to connect fully 30 cities. It has already received patents for its turn halls for motor balloons, and it will erect the first halls in Berlin, Munich, and Strassburg in Alsace. The extensive plans of the company have aroused the liveliest interest on all sides, and their execution appears to be financially assured.

The first line of connection planned is Munich to Dresden by way of Nuremberg, Plauen, and Chemnitz. The second line is from Munich to Cassel by way of Ulm, Stuttgart, Mannheim, Mayence, Coblenz, Cologne, Düsseldorf, Elberfeld, and Paderborn. The third line is from Berlin to Lübeck by way of Bremen and Hamburg. The fourth line is from Berlin to Königsberg by way of Stettin and Danzig. The fifth line is from Strassburg to Berlin by way of Metz, Trier, Mayence, Frankfurt, Erfurt, Leipzig, Halle, and Magdeburg. [The consul also sends a map showing the routes of the airship lines, which may be seen at the Bureau of Manufactures.]

MUNICIPAL PUBLIC SERVICE.

NATAL.

THE MUNICIPAL PUBLIC SERVICE OF DURBAN.

Consul Edwin S. Cunningham furnishes the following information concerning the ratable value, improvements, indebtedness, and public service of the municipality of Durban:

The ratable value of the property contained in the municipality, exclusive of improved and unimproved government real estate, in 1908 was $47,154,244, as against $24,270,841 ten years ago. During those years the revenue has increased from $562,931 to $1,791,480, exclusive of loan funds and land sales, while the indebtedness has grown from $3,280,021 to $12,360,910; but it should be remembered

that during this period all the remunerative public improvements have been acquired, and the increase of the bonded indebtedness represents improvements which are, for the most part, remunerative and realizable. The municipality's bonded indebtedness of $12,360,910 bears interest ranging from 3½ per cent to 6 per cent, but against this stands the credit of various sinking funds, amounting to $1,164,825, and the assets in the possession of the council, which are valued at $20,711,030. This estimate omits from the assets expenditures on street hardening and other public improvements which are of an unrealizable though reproductive character. This debt represents 26.5 per cent of the ratable value, or $202 per capita.

The strong financial basis of the borough can be further realized when it is understood that trade profit from the remunerative undertakings for last year, capitalized at 4 per cent, would liquidate the whole net debt.

INCOME AND EXPENDITURES—PUBLIC BUILDINGS.

The total income during the year, exclusive of loan funds and land sales, amounted to $1,791,470, while the expenditures, other than that of capital investments, were $1,862,443, a deficit of $67,877, accounted for in the amounts spent on unremunerative, though permanent, improvements, such as streets and a new town hall.

The rate of taxes, inclusive of a 1-cent water rate, is 5 cents per £1 ($4.87).

The public buildings are models, and have been built with an idea of adding to the beauty of the town. The telephone exchange, fire departments, and police stations are all modern and substantial buildings and add much to the appearance of Durban, and nearing completion is a handsome stone and stucco town hall, costing, without extras, $1,157,958. All public franchises are well managed, and the scrupulous cleanliness of the city deserves much praise.

INCOME FROM MUNICIPAL SERVICE.

The town of Durban has a population of 61,000, and is one of the most beautiful towns in the subcontinent. No other municipality in South Africa has gone to the extent that Durban has in acquiring the various franchises for public improvements, such as are generally developed under private ownership. It is the second seaport in size in South Africa, and one of the most important for the transshipment of goods for the Transvaal and interior of British South Africa.

The corporation is the owner of a number of undertakings, some of which are indicated in the following statement, which shows the capital invested therein, and the receipts and profits therefrom for the year ended June 30, 1908:

Description.	Capital invested.	Receipts.	Profits.
Waterworks	$2,509,557	$245,198	$178,887
Street car line	1,996,369	437,396	125,365
Electric light plant	1,356,727	354,256	136,398
Market house	206,413	23,081	7,991
Telephone system and exchange	444,029	60,636	17,417
Public baths	112,873	20,809	1,411
Total	6,625,968	1,141,376	467,469

The beach improvements, undertaken in 1907, promise to be the source of considerable income from baths, rents, etc. A return of $17,568 therefrom was received last year.

A high degree of excellence has been attained by the municipality in the management of the franchises owned by it, it being free from many objections which have been apparent elsewhere. Scarcely an objection can be urged against public ownership as conducted here, but the rate of charges in some instances for the services rendered is very high.

ELECTRIC LIGHT AND ELECTRIC STREET CARS.

The electric-light plant represents a total investment of $1,356,626, which, during 11 years, after paying interest charges on bonds, all working expenses, and placing the sum of $458,667 to depreciation allowance, has been able to transfer to the borough fund a net profit of $413,082. The charge made for current for lighting purposes is 16 cents per unit; for power the charge is a graduated one, from 1.824 cents to 5.27 cents. It was the idea to run the street car service on a purely business principle and in the same manner as a private concern would conduct it, and acting upon these instructions the efficient general manager has been able to make a very good showing and has given the borough one of the best street car services possible.

The municipality acquired the street railway lines from private ownership in 1901. The horse car system was converted to an electric line at once, and the system has been extended to 30 miles of track, of which 17.6 miles is line track. The electric power is not owned by the main line, the current being purchased from the electric-light plant. The street car lines, equipments, and rolling stock represent an investment to the corporation of $1,996,369. The system is equipped with 64 modern cars, mostly double deck, only 6 of which were purchased outright in the United States, though all, except 11, contain equipments from the General Electric Company, of Schenectady. The desire to construct locally every possible article that is consumed has led to the system of importing the cars by parts and putting them together, or partially building them, in Durban.

ROUTES OF STREET CARS AND CAR FARES.

All cars leave one common center, and for the purpose of fares each line is divided into 2-mile stages, the first stage being 2 miles from the common center. The next usually falls short of 2 miles, but the fare is the same for each, 4 cents cash or 3 cents by ticket.

The fare seems to an American to be very high, but in time conditions may permit of a reduction; besides, it must be understood that the conditions here are very different from those in Europe, and the wage paid motormen and conductors is $17.50 per week, and the population is smaller than is found in many towns in Europe whose fare is practically the same. During the year ended June 30, 1908, 12,688,800 passengers were carried, or 9.77 per car-mile, who paid an average fare of 3.42 cents each.

The total income for the year was $437,396, of which amount $256,682, or 58.68 per cent, was paid for operating expenses; $80,686 to pay interest on bonded indebtedness; $12,847 was added to the sinking fund; $53,344 to depreciation account; $2,710 to accident, insurance, and other funds, leaving a balance to be transferred to the gen-

eral account of $31,127 as a net income. During the past 3 years, after payment of operating expenses, interest on investment fund, and setting aside $241,616 to sinking and other permanent funds, there has been transferred to the borough's permanent fund the net profit of $47,506 from the street car lines.

STREET CAR PARCELS DELIVERY—WASTE LAND.

A very convenient system has been established of carrying parcels on the regular passenger cars on all business days. Parcels not exceeding 28 pounds, nor more than 18 inches square, of practically all characters, are carried to any part of the system at a charge of 2 cents when the weight does not exceed 14 pounds, and 4 cents when it exceeds 14 pounds but does not exceed 28 pounds.

With the idea of utilizing some waste land, as well as giving employment to the unemployed, the municipality inaugurated an experiment during the past year by planting various agricultural grasses on low-lying, wet, swampy, sand soil on the beach, which had previously been unused and was covered with rank grass and sedges. The land was reclaimed from the ocean beach hills, and the experiment has proven so successful in the growth of lucerne that it has been decided to place a greater amount of land at the disposal of those desiring it during the present year, but only for the purpose of planting lucerne. This seems best adapted for such soil, and the results have been eminently satisfactory.

PATENTS AND TRADE-MARKS.

CHINA.

LACK OF REGISTRATION CAUSES INFRINGEMENT ON AMERICAN GOODS.

Consul-General Charles Denby, of Shanghai, under date of February 26, 1909, notified the Department of State that a suit has just been decided in favor of an American company in the mixed court in that Chinese commercial metropolis.

This case should be of great interest in showing the necessity of having trade-marks lawfully registered in all the principal countries in the Far East. The company in question has for over twenty years been engaged in trade in China. Owing to the uniform superiority of its article of manufacture and the efforts of its representatives, its name and trade-mark are sufficient guarantee and advertisement.

A European company exported to China a similar article of inferior quality, with the trade-mark and boxing of exact pattern and size, except one or two minor changes, so that it was possible only after minute examination to discover the difference. This copy was placed only in the native shops where the small difference in the label would not be discovered and the general appearance would vouch for the sameness of the article. The court fined the Chinese handling the goods and made him give security that he would not sell the bogus brand in the future, and all the articles in his possession were confiscated by the police.

The court had, of course, no jurisdiction over the European company which manufactured the imitation, but if the American merchant had had his trade-mark registered abroad he could no doubt

secure full satisfaction for the infringement and in all probability the foreign manufacturer would not have attempted to use the trade-mark in this fraudulent manner.

MEXICO.

INFRINGEMENTS CAN BE ANNULLED ONLY BY THE COURTS.

Consul Clarence A. Miller, of Matamoros, quotes from the Mexican Herald the following statement by Ing. Manuel S. Carmona, director of the Mexican Patent and Trade-mark Office, to which the consul adds a comment:

The Patent and Trade-mark Office has only the attributes of a public registry, with no legislative power whatever. In cases of infringements on patents or trade-marks which have been registered in this office, I can but submit the records to the civil court in whose docket a suit may be filed, it not being in my power to grant decisions or annul marks registered in this office.

I realize that there are a great many infringements practiced here in Mexico, these being frequently called to my notice by parties who represent themselves as affected prejudicially by the alleged illegalities. Notwithstanding this, and the fact that the law provided penalties for infringements of trade-marks, the majority of complainants refuse to have recourse to the courts by which they could obtain damages.

I am willing and anxious to assist by every means in my power owners of infringed or imitated trade-marks to recover damages from their unworthy competitors. I have almost begged several firms, which I know to have suffered considerable loss in this way, to take legal action, being in a position to have almost guaranteed a favorable decision without great loss of time or expense. Yet at every hand I meet with fear of litigation, which ties my hands completely.

The most efficient remedy for the existing state of affairs, according to Mr. Carmona, would be for all owners of trade-marks to prosecute imitators of designs. Marks or names which are protected in other countries should be registered in the Mexican office, which charges only 5 pesos (about $2.50 United States currency) for registration during 20 years.

UNITED KINGDOM.

COURTS UPHOLD RULING OF THE GOVERNMENT COMMISSIONER.

Consul Albert Halstead forwards the following extract from the Birmingham Daily Post on the revocation of a patent in the United Kingdom, as passed on by the courts:

In the chancery division, on March 26, Mr. Justice Parker gave an important decision in the first (court) case that has arisen under Mr. Lloyd George's new patent act of 1907. His lordship said it was clear that since the act became law the owner of a patent could not be sure of retaining his rights unless the patent was worked in England, or he gave satisfactory reasons why this was not the case. Section 27, considered as a whole, though quite simple, was exceedingly drastic, and no foreigner could retain his rights in a patent unless he could satisfy the authorities that there had been no forfeiture or abuse of his monopoly, and the information might be laid at the instance of a common informer.

It had been argued, said his lordship, that the policy of section 27 was not only to secure fair play for trades in the United Kingdom, but to give them a preference. This argument asserted that the policy of the act was protection and was not a free-trade policy. His lordship dissented from that view. If that were the meaning of the section, clear words would have been used. The policy was to secure fair play and not protection, which the legislature could always secure whenever it thought fit.

In the present case the patent was granted in 1900 for the manufacture of stone tiles or slabs. The important point, said Mr. Justice Parker, was that, although worked in France, Germany, and Belgium, it had never been worked in this country. Had the patentee given a satisfactory reason for this state of things? When he obtained his patent rights he devoted himself to establishing the industry abroad, using his patent, not for the purpose of establishing his monopoly here, but to give licenses to foreigners to import and sell the articles. In his lordship's opinion a new British industry might have arisen if the patent rights had been fairly used between this country and foreign countries. There was no evidence that there were economic conditions or other causes which precluded the new industry being started here, or that the profits would have been too small, or that the demand would not have been greater if the monopoly had been properly exercised. It was not surprising that nobody here now desired to take up a license after the start given to the foreigner. The revocation of the patent by the Comptroller was justified, and the present appeal from that decision must be dismissed with costs. His lordship added that he thought the procedure under the patent rules should be altered. At present if anyone made an application under the section the patentee was bound to disclose perhaps to a competitor or an intending competitor particulars of his business, and to give evidence in defense of his conduct before any case arising, the presumption against him was made out. The common informer ought to be compelled first to make out a case requiring an answer before the patentee was called upon to defend himself.

TAXES AND LOANS.

BAVARIA.

COMPARATIVE RATES OF TAXES PAID IN TOWNS AND VILLAGES.

The following details concerning the payment of taxes throughout Bavaria are furnished by Consul-General Thomas Willing Peters, of Munich:

Income tax.—The number of persons in Bavaria paying income tax and the amount of tax collected were as follows: In towns, 446,575, or 54.8 per cent of the population, paid $896,809, or 73 per cent; in villages, 367,102, or 45.2 per cent, paid $323,479, or 37 per cent; total, 813,677 persons, who paid $1,220,288.

Tax on interest of capital.—The number of persons paying tax on the interest of capital and the amount paid were as follows: In towns, 75,743, or 40 per cent, paid $1,249,977, or 71.8 per cent; in villages, 113,698, or 60 per cent, paid $489,858, or 28.2 per cent; total number of persons, 189,441, who paid $1,739,835.

Business tax.—The total number of persons paying business tax and the amounts paid were as follows: In towns, 115,260, or 31 per cent, paid $2,404,211, or 73 per cent; in villages, 251,479, or 69 per cent, paid $896,068, or 27 per cent; total, 366,739 paid $3,300,279.

Recapitulation.—Total taxes paid in towns and villages: Towns, $4,550,997; villages, $1,709,405; grand total paid, $6,260,405.

GERMANY.

OPERATION OF THE INCOME TAX IN THE STATE OF PRUSSIA.

Vice-Consul-General Charles A. Risdorf, of Frankfort, writes that, as compared with the preceding year, the number of taxpayers in Prussia increased in 1908 by 492,850, or over 9 per cent of the total number. The increase in the amount of assessed income during the same time was $279,640,480, or 9½ per cent of the total, and the increase in the amount of taxes assessed amounted to $5,712,000, or

9.6 per cent of the total assessed in 1907. The number of personal-tax payers increased from one-twelfth of the entire population in 1892 to nearly one-sixth in 1908. The average income of the personal-tax payers has been gradually growing less on account of the increase from the lower grades.

NICARAGUA.

EXCESSIVE COST OF FOREIGN MONEY PARALYZES BUSINESS.

Consul José de Olivares writes from Managua, under date of April 17, concerning the financial situation in western Nicaragua, that exchange has increased to 1,100 per cent, which is 550 points above the normal rate. The consul comments:

The foregoing rate of exchange, however, is merely nominal, as even at that high figure foreign currency and drafts are not available. Business is completely paralyzed in all branches of commerce, and the seriousness of the situation, which has been steadily growing from bad to worse, can not be overestimated. Practically no orders for foreign merchandise are being placed by local importers, a majority of whom are experiencing difficulty in meeting their financial obligations.

PERU.

DEBTS REFUNDED THROUGH A LONDON SYNDICATE.

From Callao Consul-General Samuel M. Taylor reports that the Peruvian Government, acting on the authorization of the Parliament, has consummated a loan of £400,000 ($1,946,600), the following being the details:

The loan is placed through the Banco del Peru y Londres of Lima at an annual interest of 6 per cent and a commission of 1½ per cent. It is said that the money will be furnished by a London syndicate formed by the following parties: J. S. Morgan & Co., Baring Brothers Company, Grace Bros. & Co., Banque Française pour le Commerce et l'Industrie, and the London Bank of Mexico and South America. The payments to the Peruvian Government are to be made in four £100,000 installments, as follows: On April 1, May 1, June 1, and July 1. The loan is guaranteed by a mortgage upon the present internal-revenue tax on alcohols, which is collected by the Sociedad Nacional de Recaudacion. The proceeds are to be devoted in the main to canceling present debts. Unfortunately, these debts are largely due abroad, thus taking the money out of the country.

FISHERIES.

FOREIGN INDUSTRY.

CANADA.

PRESERVATION OF THE LOBSTER FISHERIES.

The importation of lobsters into the United States in 1908 amounted to 8,212,945 pounds, valued at $1,401,449. Except unimportant quantities from other countries, they came from Canada. The largest exporter of canned lobsters to the United States has been making statements in regard to the preservation of the industry on Prince Edward Island, the following extracts of which are forwarded by Consul Franklin D. Hale, of Charlottetown:

The annual catch of lobsters in Prince Edward Island is 20,000,000; 3 per cent of these, or 600,000, are spawn lobsters; the average number of eggs per lobster is 20,000, a total of 12,000,000,000 eggs. This means that what would go to reproduce 12,000,000,000 young lobsters yearly is ruthlessly boiled up and destroyed. It is a wanton destruction, unequaled by the savage and entirely discreditable to both fishermen and canners. Preserve the spawn lobster and we need have no fear for the future of the industry. The present regulations are a close season, a size limit of 8 inches, and that all spawn or "berried" lobsters, so called, shall, when caught, be returned to the sea alive.

LIVE LOBSTERS SHIPPED.

EFFORT TO PROPAGATE ON PACIFIC COAST.

Consul-General David F. Wilber writes that a consignment of 2,000 live lobsters left Halifax for Vancouver the first week in May, concerning which he says:

They were shipped by the marine and fisheries department for the purpose of propagating the lobster on the Pacific coast: An attempt was made last year to ship lobsters west, but owing to their pugnacious tendencies they arrived at their destination in a mangled condition. A later attempt was made, plugs being placed between the claws to prevent disastrous fighting. The plugs were not removed when the lobsters were planted in the Pacific waters, and consequently the second attempt also proved a failure.

Every precaution has been taken by the authorities in preparing this last consignment for transit. The several dozen crates were placed in a special baggage car in charge of two men. Each crate is fitted with separate compartments, each of which will accommodate one large lobster. Salt water, ice, and seaweed were placed in the crates, the temperature of which can be regulated. The top of the crate is fitted with an ice pack and a percolating salt-water tank.

Where two small lobsters were packed into one berth, they were so placed that they can not bite each other.

The lobster industry has never flourished on the Pacific coast as it has in the maritime provinces, and the successful propagation of lobsters there is still an experiment. Upon reaching Vancouver this consignment of lobsters will be placed in a pound for a short time before being liberated.

SIBERIA.

STURGEON FISHING ON THE LOWER AMUR RIVER.

The following more detailed report on sturgeon fishing on the lower Amur River in Siberia is furnished by Consul Lester Maynard, of Vladivostok:

A concern in Seattle, Wash., desired to purchase 100,000 pounds of sturgeon, but on careful inquiry I find that this is not possible. Smaller shipments might be made in cold storage, provided vessels were loading other cargo at Nicolaevsk on the Amur for America, for it would not pay to send a cold-storage boat for a small shipment. The prices of sturgeon quoted in the following report are those at Habarofsk and Nicolaevsk. The price greatly advances when the fish are shipped to Vladivostok, due largely to the fact that it is difficult to preserve them. The same might be said of the caviar, which spoils very quickly.

That part of the Amur River from the mouth to Habarofsk, a distance of about 670 miles, is known as the Lower Amur, and it is in this part of the river that the sturgeon is found. The country along the banks of this portion of the river is divided officially into two subdistricts, known as the Habarofsk and Oudsky subdistricts. Within the limits of the former there are 20 Russian settlements, consisting of 338 families and 2,300 inhabitants. In addition to these settlements there are 113 small native villages with 3,650 inhabitants. The Oudsky subdistrict consists of 27 Russian settlements with 463 families and 2,235 inhabitants, and 63 native villages with 1,530 inhabitants.

GENERAL MEANS OF LIVELIHOOD.

Of the 20 Russian settlements in the Habarofsk subdistrict, 15 are engaged in sturgeon fishing, and in 23 of the 27 settlements of the Oudsky subdistrict sturgeon fishing is also the principal industry. The majority of these settlements were established about 1850, and the early settlers were agriculturists, but tilling of the soil was practically abandoned about 1880, not, however, because of bad crops or conditions of soil, but owing to the fact that it was easier to make a living in other ways, and a portion of each year was devoted to fishing for sturgeon and salmon. At other seasons of the year hay is harvested, road houses and post horses are kept for the winter traffic on the Amur, and at other times firewood is gathered and sold. In this way the inhabitants live comfortably without great effort.

The following figures, taken from the statistics of 1908, illustrate the sources of revenue of these 47 settlements: Sale of hay, $1,440; sturgeon and salmon, $50,340; firewood, $35,900; income from keeping post horses, $36,690, a total of $124,370, which makes $155 per family, and averages over $28 per capita.

There are two varieties of sturgeon found in the lower Amur River. Formerly sturgeon weighing from 100 to 160 pounds were frequently caught, but at present large specimens are scarce, and the average weight is now only 36 to 40 pounds. Government regulations limit the fishing season from June 15 until the opening of navigation, but it is not possible to enforce these laws, with the result that fishing takes place throughout the year. In summer, however, fishing for sturgeon is not good, and the inhabitants devote their attention to other pursuits, but in the winter when the river is frozen the serious sturgeon fishing takes place. The fall movement of ice frightens the fish, which take refuge in deep places, forming excellent fishing pools.

In summer the fish are caught by hooks fastened to strong ropes and cast in the deep channel of the river, or by means of a drag net, locally known as a "dgikharka." The latter system was introduced about 10 or 12 years ago, since which time the number of the fish in the river has greatly diminished. As fishing continues, contrary to law, throughout the spawning period, it can readily be understood that this, in addition to the use of a drag net, will soon exterminate the sturgeon. Regulations have been introduced to prohibit the use of the "dgikharka," but like the closed season regulations, it has not been possible to enforce them. In winter the fish are caught principally with hooks, which are cast in the deep pools, and as most of these places are well known to the local inhabitants, the hooks and drag nets soon gather in almost all the fish in the pools.

DISPOSAL OF FISH.

In summer sturgeon are sold fresh to steamers and in the towns of Habarofsk and Nicolaevsk, and in winter they are supplied frozen. Very small quantities are salted or smoked, and then only for local consumption. Little attention is paid to the by-products, with the exception of caviar, which in summer is sold locally fresh or slightly salted. In winter caviar is sold fresh in Habarofsk and Nicolaevsk, but as it deteriorates rapidly, due to the frost, only about 25 per cent remains unspoiled.

The absence of adequate control renders the available statistics of the annual catch rather unreliable. The quantity of fish consumed locally and sold to steamers can not be accounted for, nor can its value be accurately stated. The official figures for 1908 give the catch in the Habarofsk subdistrict at 164,628 pounds, value $9,853, and in Oudsky subdistrict 188,172 pounds, value $6,207. A conservative estimate would place the entire season's catch at about 500,000 pounds.

The Government receives a tax of 5 kopecks per Russian pood, or about three-fourths of 1 cent per English pound.

The principal market for the Amur sturgeon is Habarofsk and Nicolaevsk, and the former ships sturgeon and caviar to Vladivostok. During 1908 the average price in Habarofsk for sturgeon was 5.9 cents per pound, whereas the price at Nicolaevsk was only 3.3 cents. This difference in price is accounted for by the fact that the demand in Nicolaevsk is much smaller and the inferior variety of sturgeon is caught at the mouth of the river near Nicolaevsk in large quantities. Small sturgeon and salmon, weighing from 3 to 6 pounds, are usually sold for 7 to 15 cents each.

THE SPONGE INDUSTRY.

EXTENSIVE FISHERIES OF TRIPOLI—QUALITIES AND PRICES.

Consul William Coffin, writing from Tripoli-in-Barbary, says that the sponge fisheries of that North African country, which first began to be worked systematically about 1890, have become one of its most important industries. His description of the trade and methods employed follow:

The take in 1890 was valued at $58,398; it now averages over $200,000 a year. The exports for 1904 were $337,750; 1905, $226,196; 1906, $232,565; and 1907, $212,300. The figures for the season ending in October, 1908, are not yet available, but an estimate gives the take as 56,600 pounds, of which goods valued at $115,800 have been shipped and about $60,000 worth are still unsold on account of the low prices ruling. The bulk of the fishing is done by Greeks from the islands of Ægina and Hydra and from the Turkish islands of Symi, Kalimnos, and Khalki. These islands are the center of the Mediterranean sponge industry, and their boats not only fish the Tripolitan grounds, but cover almost all of the extensive Mediterranean fisheries.

METHODS OF FISHING—QUALITY AND PRICES.

The fishing season proper is from April to October, although some boats stay on the Tripoli grounds all winter. The methods of fishing employed are machine boats, trawlers, harpoon boats, and naked divers with line and stone. The machine boats, whose men are equipped with diving suits, make the largest takes, and, with the naked diver, bring up the best sponges. Trawling and harpooning tend to damage the sponges. The machine boats are all Greek. Many of the trawlers are Italians from Torre del Greco, and a large number of the harpooners are natives from the Tunis coast. Until recently fishing with machines in Turkish waters was prohibited, although it was carried on outside the 3-mile limit. It is now legal, and the number of machines will probably increase.

An average take for a machine boat, with 12 to 14 divers, is $6,000 to $7,000 a season. A boat with 4 or 5 line and stone men will average about $1,200 a season. The machine boats pay an annual license of $140.80; trawlers of 5 tons or under pay $13.20; over 5 tons, $26.40; harpooners pay $17.60; and boats with line and stone men pay $44.40. A great deal of the fishing is very deep and diver's paralysis is common among the men. It is not to be wondered at, if it be true, as is frequently stated, that even the naked divers fish at depths of 30 to 35 fathoms.

The Tripolitan sponges are almost all of the honeycomb quality. They are known as "rock," "shingle," and "grass" honeycombs, according to the bottoms on which they are found. The sponge boats sell them to buyers ashore by weight, and this year the prices per oke (2.83 pounds) have been as follows: Rock, from $10.03 to $7.72; shingle, from $8.68 to $5.79; grass, from $6.75 to $5.40. These prices are for cleaned goods; that is, the men have removed all animal matter from the sponges and have washed them. On shore they are again washed, thoroughly wetted to ascertain their size and shape, dried, sorted, and baled. There is little, if any, bleaching done here.

Bleached sponges are first put through a solution of permanganate of potassium, then into a solution of sulphuric acid and hyposulphite of soda, after which they are rinsed and passed through a solution of limewater. This gives sponges the familiar straw color.

PACKING AND MARKETING.

The custom of the trade here is to pack sponges in bales of about 36 assorted sizes of the same quality. They are sold, as they are bought, by weight. The European trader bleaches and trims the sponges and resells them by the piece. The largest exports go to England. France, Italy, and Austria also buy largely. The Italian purchases are increasing, and a good deal of the European trade is supplied through Genoa.

A certain proportion of the take, averaging perhaps 20 per cent, is never landed at Tripoli, but is taken back to the home ports of the boats. This is influenced by the sponge market. When prices are down, the sponge captains hold on to their catch if their finances make it possible. In Tripoli, and also throughout the Mediterranean fisheries, it is the practice of the captains of the sponge boats to borrow enough money to cover their expenses for the season. The boats are not insured, and as few of the captains have capital they have to pay from 11 to 25 per cent for the money. The moral hazard of these loans appears to be excellent, and it is said that seldom or never does a bank or money lender lose by a captain defaulting.

The trade in Tripoli is controlled by sponge buyers, who purchase direct from the boats and sell to the importers in Europe. Efforts of the latter to buy direct from the boats have always been met with resistance, as the trade is more or less a close corporation.

NUMEROUS GRADES—RELATIVE VALUES.

The Mediterranean honeycomb sponge is found in about six qualities. Those of the Tripoli fisheries are graded from the third to the sixth quality. They are a good strong sponge outside, but are apt to be weak around the roots and in the inside of the sponge. The different grades of Mediterranean sponges are classed as "fine Turkey cups," "fine Turkey," "honeycomb," "zymoka" (or "brown Turkey"), and "elephant ears." The fisheries extend along the whole of the Greek and Turkish coasts and islands, including Cyprus and Crete; the Syrian coast from north of the Gulf of Iskanderoom down to Tripoli, Syria; from Port Said along the North African coast as far as Cape Bon, in Tunisia. There are also grounds off the islands of Malta, Pantellaria, Limosa, Lampedusa, Sardinia, and Corsica; and in Italian waters in the Gulf of Gioja, the Lipari Islands, the Aegades, Ustica, Cape Boco, Cape del Faro, and the Gulf of Taranto; and in the western Mediterranean, off the Balearic and Columbretes islands. The largest producing section, which includes also the grounds furnishing the best sponges, is that of the north African coast from Cape Bon to Port Said.

The best sponges, both in fine Turkey and honeycomb, are those fished in the waters of Bomba, Mandruka, and Benghazi, from Mandruka, in Egypt, along the coast westward to the bottom of the Gulf of Sidra, where the Tripoli fisheries proper begin. They are the finest in texture and shape of all the Mediterranean sponges and are

sold by the piece. For purposes of comparison with the prices of Tripoli sponges as quoted, the honeycombs of this section bring up to $17.50 the oke of 2.83 pounds, and the fine Turkey, $23.15 the oke. Exceptional fine Turkey cups have sold for more than 200 francs ($38.60) the oke. The value of the entire take of the Mediterranean fisheries is estimated by merchants here at from $700,000 to $750,000 per season.

The United States in the fiscal year 1908 imported $391,208 worth of sponges, $302,000 worth of which came from the West Indies and Cuba. The American sponge is inferior to the Mediterranean product, except a certain quality known as "Florida wool sponges," which compares favorably with the second and third qualities of Mediterranean honeycombs. A number of Greeks went from Aegina to the United States a few years ago, built boats, and are now fishing these "Florida wools." In 1908 the United States exported $129,320 worth of sponges to Europe, against an import from there of $87,329, while in previous years the trade balance in this article had been in favor of Europe.

FOODS AND DRINKS.

FOOD PRODUCTS IN CHINA.

LIMITATIONS OF SOUTHERN MARKETS FOR STARCH COMESTIBLES, ETC.

Consul-General Amos P. Wilder, of Hongkong, has lately investigated the south China market with reference to such American manufactures as starches, glucose, sirups, etc., whether corn products or otherwise; gluten food, corn-oil cakes and meal, also dextrines, gums, and oils, whether corn products or articles derived otherwise. The following are Mr. Wilder's conclusions:

Manufacturers in the United States of starches, glucose, sirups, gluten food, corn-oil cakes and meal, dextrines, gums, and oils of vegetable origin from time to time address this consulate-general with reference to the market for their products in south China. There are many varieties of these articles, comestible and otherwise, and foreign trade in them, especially corn products, has been markedly successful. Perhaps in no other line can the difference between conditions in China and in more advanced countries be better studied. One skilled in the market goes so far as to state unqualifiedly of the above articles that they "can not as yet be considered in any way adapted to the people of China."

This will likely be considered pessimistic by people in the United States unacquainted with economic conditions in China and the conservatism of its people. A review of the situation may prove helpful.

DIET OF PEOPLE.

The dietary of the natives in southern China is limited. It carries vegetables and "green stuff," some pork and salted eggs, but sifts down to rice and fish as the substantials. When times are bad the sweet potato is even substituted for the rice. Cornstarch so much in use at home for blanc manges and thickenings for gravies, etc., is not in demand, as the natives use for such purposes the water in which they have boiled their rice—congee water. This liquid when cold sets into a thick, viscous, and transparent jelly which is colored, sweetened, and eaten as we eat blanc mange. There is a small demand in Hongkong and in the ports of China for cornstarch by the foreign population as a light article of diet in the hot weather. The wealthier class of Chinese have been taught to know it in their homes and hotels by native cooks trained by foreigners, and Chinese returned from America and Australia have adopted this as other foreign articles.

It should never be forgotten that there are but 40,000 foreigners in all China, of whom 16,000 are Japanese. When it is remembered that a 1-pound package of cornstarch costs as much in China as the average Chinaman earns in 4 days—a sum of money for which

he can purchase about 10 pounds of rice, sufficient to sustain life for 5 days or more—it can readily be understood that the 400,000,000 people of China of whom so much is expected are not ready for corn-starch as they are for kerosene oil, flour, and piece goods. The use of flour is being extended. It is worked up into cakes which sell for 5 or 10 cash each (from one-fourth to one-half cent United States currency). This sale is extending not only in the ports, but also in the interior.

SACCHARINE SUBSTANCES—OIL CAKES.

Considering glucose, corn sirups, sugars, etc., for use in the manufacture of preserved and cooked foods and fruits:

Ginger and chowchow, the latter composed of melon rind, small oranges, and berries of different kinds, are the chief articles preserved by the Chinese. These two articles are preserved in a primitive manner, first being pickled in brine tubs and then boiled and immersed in sugar sirup made of the common raw Java sugar. A body is sometimes given to this sirup by the addition of rice jelly. These preserves are put up in the earthenware jars that everyone associates with Canton ginger. China may later enter into competition in the western market with these articles, but the time is not yet.

South China is not a cattle-raising country and oil cakes and meals for feeding stock are not in demand. American alfalfa seed has lately been successfully planted in this colony, and when this popular nutritious grass is in common cultivation, and when the Chinese use milk—which they do not as yet—the thousand hills of southern China will be covered with herds and flocks. But this remote condition is of more interest to the prophet and the lecturer than to the present-day manufacturer of stock feeds. China is a large grower of beans containing albuminous and flesh-forming qualities, and thousands of tons of bean cake have for centuries been shipped from northern China to southern districts, especially in the Shanghai region, for redistribution to agricultural centers. Its main use is as a fertilizer, but to some extent it is a stock food. The more lucrative industries of tea, silk, etc., and the production of rice, millet, vegetables, fruit, and cotton for feeding and clothing the population, have the right of way at present over the utilizing of plains and hillsides for the cattle industry.

SOAPS, SIZINGS, AND DEXTRINES.

Coming to another line, noncomestible, namely, dextrines, gums used in the manufacture of oilcloth, linoleum, rubber substitutes, soaps, and for sizing and sticking purposes:

Apart from cotton goods, silk, and paper, China manufactures little with machinery, and has little or no use for dextrines, gums, etc., so familiar in the United States in such industries. Oilcloth and the like have no place in a Chinese home, barred by the cost, the climatic conditions, and cheap substitutes. Straw and other mattings are used as coverings for floors in the better class of Chinese houses, but the masses content themselves with bare ground or at the best home-made clay tile floors. China exports quantities of straw, reed, and bamboo mattings to both America and Europe, but these require no sizing. The commoner qualities of raw silks and waste silk products requiring a body are exported in the raw state for treatment and man-

ufacture in Europe and the United States. The sizing and sticking employed in the native manufacture of paper and envelope making are derived from rice and fish. China depends almost wholly upon importations for her soap, though there are a few soap works in China, one in Hongkong, operated by Germans, and others in north China. The article is of low grade, Australian, German, and native fats being used.

These considerations are not to deter American manufacturers from a belief that this people will learn to know the above-named products, so universal at home and in all manufacturing countries. The market of the future will be for those who get in early. The Chinese must be taught these things, and practical demonstration on the ground, which has been so useful elsewhere, might well be employed here. American manufacturers spend great sums in exhibiting their goods and teaching their uses at international expositions. They can not hope that merely to display their packaged articles in China will be sufficient when the Chinese do not even know the uses for which the articles are proposed. China is a self-contained nation, which produces almost all the commodities it needs. Such articles as starch, glucose, corn sirups, oil cakes, dextrines, etc., achievements of advanced civilization, can only be introduced among the Chinese by the kindling of new wants and desires and the formation of new tastes. If they be considered substitutes they must be either cheaper or better. If they be new items of consumption a desire for them must be developed. In other words, starch will stand on the Chinaman's counter indefinitely until some starch manufacturer is willing to demonstrate its uses to the Chinese and prove to him that he should use it. He does not need it, but he may be educated to it as a new want.

OLEAGINOUS PRODUCTS.

AUSTRIA.

PEANUT TRADE AND MANUFACTURE OF PEANUT OIL AND CAKES.

Consul George M. Hotschick, of Trieste, responds to requests from Louisiana by presenting the following report on the utilization of the peanut in Austria:

In the Empire of Austria there are only three factories which work up shelled and unshelled peanuts—two in Trieste and one at Aussig, Bohemia. Unshelled peanuts are imported from the west coast of Africa, and shelled from the Coromandel coast, Bombay, Spain, and the United States. The shelled peanuts suffer during transportation and storage, becoming a prey to insects, and are very often rancid and moldy. The poorer quality of oil extracted was used in the manufacture of soap.

Lately small lots of American shelled peanuts, from Tennessee and Georgia, have been sold in the Austrian market. The oil yield of the shelled nuts from Tennessee is 41 per cent, and that from Georgia 29 to 30 per cent. The result from shelled peanuts from Bombay or from the Coromandel coast is 40 to 41 per cent, while the Rufisque nuts yield 3 to 4 per cent higher. Unshelled Spanish peanuts yield only about 24 per cent. The factory at Aussig, Bohemia, extracts oil

from only shelled peanuts, which is used in the manufacture of soap by the Schicht Werke.

To extract good oil it is necessary to remove the shell, the red bitter skin of the seed, and the very bitter germ. Machines in use in Trieste perform this work perfectly. The oil from low-grade peanuts has until recently been used in the manufacture of soap, but this inferior quality has been so improved through refining that it can be mixed with the best oil. Special machines in Trieste factories remove the shell, skin, and germ and refine the lower-grade oil.

The market prices at Trieste of the three best qualities of peanut oil during the month of February per 100 kilos (220.46 pounds) were: Edible oil, extra fine, 92 crowns ($18.68); fine, 84 crowns ($17.01); technical oil, 62 crowns ($12.59).

Carefully shelled and pressed Rufisque peanuts yield cakes of great purity of about 60 per cent protein, plus fat. The shelled Coromandel and Bombay peanuts yield an inferior quality of cake, containing less protein and fat, yet much in demand as fodder.

The market price at Trieste of the best brands of peanut cake, including the product gained from the Rufisque peanut, during the month of February was 17½ crowns per 100 kilos ($3.35 per 220.46 pounds). Peanut cake manufactured from the Coromandel product was sold at 15 crowns ($3.05) per 100 kilos.

The following rates of duty cover the importation of the foregoing articles into Austria-Hungary and are per 100 kilos (220.46 pounds): There is no duty on peanut cakes. The duty on peanuts is 8 crowns ($1.62), but if it is proved that the imported peanuts are to be worked up into oil and cakes no duty is charged. Peanut oil for technical purposes pays 2 crowns ($0.41). This oil, however, is denaturalized under the supervision of the custom officials by mixing it with rosemary oil. The duty on peanut oil is 24 crowns ($4.87), on gross weight, while most-favored nations pay a duty of only 15 crowns ($3.05). The duty on peanut oil imported in bottles, etc., is 36 crowns ($7.21).

BRAZIL.

NUT TRADE CONDUCTED THROUGH PARA CONSULAR DISTRICT.

For the information of American importers, who make inquiries regarding the Brazil nut at nearly all the consulates in the Republic, Consul-General George E. Anderson, of Rio de Janeiro, furnishes the following report:

The whole trade in these nuts is in the Amazon valley, in the Para consular district. The nuts are practically unknown in Rio de Janeiro not only to commercial houses as an article of export, but to Brazilian markets for Brazilian consumption, notwithstanding which inquiries for quotations are quite common at this consulate-general.

None of the Amazon country products, such as these nuts, is handled in Rio de Janeiro. Freight rates between the Amazon country and Rio de Janeiro, for example, are higher than rates between the Amazon points and Europe and the United States, so that to send such goods to the principal export points in Brazil, other than Para, would involve heavy and useless freight charges. If such goods could be profitably handled by the export houses in Rio de Janeiro,

their distribution over the world would be more direct and the trade would probably greatly increase.

The exports of Brazil nuts from Para, Manaos, and Itacoatiara in 1908 amounted to 480,602 bushels, valued at $1,121,278, of which about 54 per cent went to the United States, the balance going to England and the Continent. The trade to the United States is increasing.

DENMARK.

MARKET CONDITIONS IN SEED CAKES.

An importer of cotton-seed products in Aarhus, Denmark, under date April 5, furnishes information in regard to market conditions in Denmark for the sale of those products:

Speculation and, perhaps, a short crop have raised the prices for cotton-seed cakes to a level unexpected some months ago, the consumption in Denmark having been smaller than usual. Millers in the United States evidently now expect to commence the new season with the same prices as those quoted for summer shipments. It should be remembered, however, that Danish farmers never change their combination of food in the middle of a season, but with the beginning of a new one make a fresh start on the basis of what can be bought cheapest at that time, and what they decide upon they will probably continue to use for the following 12 months. It is not at all certain that the article asked for one season will be the favorite in the next. For instance, we used to buy enormous quantities of American corn, but this season we have taken next to nothing, the prices in the United States being too high and sufficient corn being offered from Argentina and the Danube at cheaper prices.

THE SOYA BEAN.

Up to the present time sunflower cakes have been the strongest competitor of cotton-seed cakes, but they have not been offered in larger quantities than our market has been able to absorb. A new competitor is now appearing in the market in enormous quantities, and it looks to be a most dangerous one.

English oil mills have for several months been offering cakes made of soya beans. They have a prime quality which is almost white, and a lower grade a little darker than the middle. The price for the middle quality is about 127 shillings ($30.76) c. i. f. Denmark, shipment during the summer months. The cake contains about 6 per cent oil and about 40 per cent albuminoids, and this article is offered in large quantities. Although importation began but recently, nearly 200,000 tons are said to have been shipped already. The beans are shipped from Dalny and Vladivostok, and, having found a market in Europe, it is said that the Japanese will extend their cultivation in Manchuria. The beans are said to contain but little oil, and the sale of the cake must cover most of the cost. Danish oil mills are already out for buying these beans, and some cargoes of cake from England have been bought. A cargo has been worked at 128 shillings ($31), 48 per cent protein and fat guaranteed. Of this cake only about 5 per cent is oil, which is an advantage, as consumers prefer the higher proportion of protein.

FRANCE.

OILS AND OIL SEEDS AT MARSEILLES.

Consul-General Horace Lee Washington, of Marseilles, reports that unofficial figures from a conservative and well-informed oil merchant place the supplies of edible oil for the season at that French port at the following amounts:

The estimated quantity is 1,020,000 metric tons (2,204.6 pounds each) of oils, divided as follows: Olive, 330,000; ground nut, 67,000; sesame, 88,000; cotton seed (American), 535,000. There is thus a deficit in the supplies for 1908–9 of 155,000 tons of oil, equal to about 860,000 barrels of 180 kilos (396.83 pounds) each.

In all consideration of the oil question at this time it must be borne in mind that the disaster to the general olive crop (this does not apply to the crop in Provence) has been even greater than was anticipated, and conservative business men do not believe that the enormous shortage has as yet been fully realized or its sure effects appreciated by the trade. This will be borne in mind when the present supplies begin to diminish.

The shortage has naturally created a demand for substitutes, and this has affected the demand not only for sesame and ground-nut oils, but in a marked degree for the American cotton-seed oil. A usually well-informed French dealer estimates that the probable total exports of American cotton-seed oil to all countries will amount to 1,150,000 barrels, as against 750,000 barrels in 1907–8. It is reported here that the American cotton-seed oil, ground-nut, and sesame crops are in excess of the previous season, and that this will relieve the situation. A recognized expert has expressed the following opinion:

> The situation which confronts the consumer of oil is indeed extraordinary and embarrassing. In 1907–8, notwithstanding the American panic and its effect upon trade throughout Europe, the 1,175,000 tons of the four named edible oils were consumed; and now, in 1908–9, with an increased consumption consequent on the revival of trade, the world is face to face with a deficit of 155,000 tons of oil, whereas an excess of like amount would not be burdensome. This deficit, however, would cause less inconvenience if the copra production approached nearly that of 1908; but the supplies of this commodity promise to be relatively small in 1909 and will not, it is estimated, exceed 220,000 tons. In ordinary times, when the supplies of other oils are ample to meet the requirements of trade, about 25 per cent of the copra oil produced is used for edible purposes and 75 per cent for the soap industry. The 220,000 tons of copra will yield, at 60 per cent, 132,000 tons of oil, and if it were possible to use the whole quantity for edible purposes it would not be sufficient to make good the deficit to which reference has been made.

IMPORTS OF OIL SEEDS.

The total importations of oil seeds at Marseille during the first 2 months of 1909 amounted to 94,782 tons, against 88,274 tons in the same period of 1908. Sesame seed imports advanced from 9,583 to 13,075 tons, shelled peanuts from 12,856 to 17,904 tons, unshelled peanuts from 19,503 to 23,340 tons, cotton seed from 5,291 to 5,419 tons, and poppy seed from nothing in the 1908 period to 170 tons in 1909, while linseed decreased from 2,187 to 1,613 tons, colza seed from 146 to 100 tons, castor seed from 1,880 to 1,335 tons. The receipts of copra dropped from 32,431 to 28,156 tons, mowrah seeds from 1,943 to 722 tons, while palm kernels advanced from 114 to 532 tons.

The arrivals of oil seeds and cotton-seed oil at Marseilles during the years 1905–1908 were as follows for the years named, the highest and lowest prices for 1908 being indicated:

Oil seeds.	1908.	1907.	1906.	1905.	Prices, 1908.	
					Highest.	Lowest.
Sesame:	*Tons.*	*Tons.*	*Tons.*	*Tons.*		
Levant	324	3,846	6,665	3,696	$10.61	$7.38
India—						
Coromandel	318	5,350	1,080	6,391	7.38	7.38
Karachi	533	2,097	1,345	2,610	8.30	6.63
Bombay	16,619	52,825	29,193	30,659	8.92	6.03
Cawnpore	.....	284	.....	.....	.....	.....
China	21,818	2,616	20,444	2,400	9.00	6.26
Bassorah	732	346	1,281	10	7.77	6.26
Africa	1,405	1,472	1,408	830	8.30	6.65
Total sesame	41,749	68,836	61,416	46,506	.....	.....
Peanuts:						
Shelled	85,653	113,219	111,158	96,649	8.10	5.54
Unshelled	102,188	123,304	78,677	56,031	6.26	4.05
Linseed	17,085	21,202	19,634	12,294	6.03	5.02
Colza and rape	2,202	5,082	3,191	1,556	6.56	6.56
Cotton	14,497	15,884	18,391	14,149	.....	.....
Poppy	2,334	4,106	3,925	3,795	7.77	6.94
Castor	18,111	16,370	13,554	13,805	5.07	4.05
Pulghery	709	520	.....	.....	4.05	3.96
Niger and Kapok	3,701	6,351	2,735	1,321	3.08	2.82
Concrete grains:						
Copra	163,999	109,744	109,914	104,506	8.77	7.23
Palm kernels	1,675	4,412	4,170	3,552	6.12	5.59
Mowrah, Illippe, and others	11,146	12,781	6,431	5,802	4.44	3.86
Total oil seeds	465,049	501,811	433,196	359,966	.....	.....

Cotton-seed oil.	1908.	1907.	1906.	1905.	Average price, 1908.	
					Winter quality.	Prime summer yellow.
	Tons.	*Tons.*	*Tons.*	*Tons.*		
American	24,086	15,095	17,325	32,282	$13.77	$12.40
English	2,756	7,092	5,074	80	11.88½	.....
Other	43	178	436	85	.....	.....
Total	26,885	22,365	22,835	32,447	.....	.....

GERMANY.

GROWTH OF THE COCOA-BUTTER INDUSTRY.

In stating that Germany has now become the greatest producer of cocoa butter in the world, and second only to Holland as an exporter of the article, Consul-General Robert P. Skinner, of Hamburg, describes the trade competition in this article, which is made from the cacao bean, the same source as cocoa and chocolate, and not from the cocoanut, which also furnishes an edible and soap stock oil:

The chief consuming countries are the United States, Switzerland, France, Great Britain, Belgium, Scandinavia, Italy, and Spain. Prior to 1898 Germany bought large quantities of Dutch cocoa butter, but since 1901 Dutch exports into Germany have decreased, and German exports reached the notable figure of 2,588 tons in 1906, declining somewhat since then. The recent decline in German exports is attributed to an increasing domestic demand for cocoa-butter

products. The total annual German production of cocoa butter is now estimated to be 7,000 tons, as against a total Dutch production of 3,500 tons.

Holland always has been and still is the country which has the greatest surplus of cocoa butter for export, and by means of the monthly Van Houten auction sales in Amsterdam it practically rules all other markets. Trials have been made to establish auction sales in Hamburg, but thus far without success. German prices have sometimes been from $2.38 to $4.75 above par, and during recent months were as much less. These variations are largely in consequence of speculation. Indeed, speculation sometimes compels low prices, as in 1898, when the beans were high. The average price of cocoa beans at Hamburg during 1908 was about $27.37 per 100 kilos (220 pounds), against $39.98 in 1907 and $26.76 in 1906. The Amsterdam public sales of Van Houten's cocoa butter realized, per 100 kilos, an average of $63.75 in 1908, $78.16 in 1907, and $58.65 in 1906. The Van Houten sales aggregated 900,000 kilos last year, 860,000 in 1907, and 855,000 in 1906.

There are about 40 manufacturers of cocoa butter in Holland, who exported 2,631 tons in 1906, 2,975 tons in 1907, and 2,977 tons in 1908.

England is third in importance as a cocoa-butter manufacturing country, but as the domestic consumption is increasing, there is no regular surplus for export.

In 1908 the United States imported of cocoa butter 900 tons from Holland and 282 tons from Germany, against 828 and 230 tons, respectively, in 1907, and 1,007 and 657 tons in 1906. It is rather extraordinary that with 20 or more countries growing cocoa beans the United States should still find it necessary to import such immense quantities of cocoa butter. It is all the more extraordinary, as cocoa butter is dutiable at 3½ cents per pound, while cocoa beans are free. These facts should tempt American manufacturers to develop the industry.

[The names of Hamburg brokers in cocoa supplies and manufacturers of cocoa may be secured from the Bureau of Manufactures.]

HOLLAND.

ENACTMENT OF A SEVERE LAW TO PREVENT ADULTERATION OF BUTTER.

The Dutch Parliament has recently passed an act for the prevention of the adulteration of butter in Holland, and Consul Henry H. Morgan, of Amsterdam, forwards comments thereon by a local newspaper, from which the following points are given:

To exclude every possibility of fraud, the act provides for permanent government supervision, at the expense of the makers, in places where both butter and margarine are made. Not only are butter and margarine defined, but the act provides that butter shall contain a minimum amount of butter fat, which will prevent the sale of butter with an excess of water, and also makes it impossible to use any other adulterant. This provision is considered very important, as no analyst will henceforth have any difficulty in estimating the exact amount of volatile fatty acids present in a sample of butter or margarine.

No foreign fats are allowed wherever butter is made, the act providing that from time to time a list shall be published giving the names of all substances considered adulterants, and which must not be present in places where butter is made.

The punishment for the violation of the law is imprisonment for not more than a year, no fines being provided for, while the judge, in certain cases, as

additional punishment, is allowed to order the publication, at the offender's expense, of the material portion of the judgment.

The Dutch journal from which the foregoing is taken believes that this law will surely put a stop to all manufacture of fraudulent butter in Holland.

JAPAN.

GOVERNMENT MAY IMPOSE IMPORT DUTY ON BEAN CAKE.

A report from Vice-Consul-General E. G. Babbitt, at Yokohama, says that the importation of bean cake into Japan from Manchuria in recent years has been on the increase. He furnishes the following newspaper article on this trade:

This commodity, which is used as a fertilizer, is admitted duty free at present, but it is reported that the authorities are contemplating the imposition of an import duty for the protection of the rape-seed oil industry in Japan. A remarkable increase is noticeable in the amount of rape-seed oil exported during the last few years. In 1906, 351,400 kin (kin = 1⅓ pounds) of oil, valued at $31,000 gold, was exported, and in 1907 it had increased to 3,176,800 kin, valued at $229,000. The exact amount of oil exported last year is not yet known, but the returns for Kobe, which is the principal port of export of this merchandise, gives 5,867,600 kin, valued at $430,000. This noteworthy increase of the export of rape-seed oil has led the authorities to make investigations as to the condition of the industry, and incidentally have discovered the fact, that despite the increased amount of export in late years, the production of oil has been yearly on the decrease. The reason for this is that the price of oil obtained from a given quantity of rape seed is actually less than that which is obtainable from the sale of the refuse, which is sold as oil cake. Owing to the wholesale importation of bean cake from Manchuria of late at a low cost, Japanese oil cake is being driven out of the market, and the production of rape-seed oil is decreasing. In such circumstances, the authorities have a proposal in contemplation to impose a duty on imported bean cake for the protection of the rape-seed oil industry. Below we give the returns of bean cake imported during the last seven years (picul = 133⅓ pounds):

Year.	Piculs.	Value.	Year.	Piculs.	Value.
1902	1,085,000	$1,629,000	1906	4,336,000	$6,458,500
1903	3,239,000	3,807,500	1907	5,501,000	8,715,500
1904	3,654,000	4,001,500	1908	7,761,000	10,823,000
1905	3,073,000	4,575,000			

RUSSIA.

PROBABLE INCREASE OF BUTTER EXPORTS OVER LAST YEAR.

Consul Hernando de Soto writes from Riga as follows in regard to the butter shipments from Asiatic Russia:

The total quantity of butter which it was expected to export from Siberia during the year 1908 was figured at 4,000,000 poods (pood = 36 pounds). Owing, however, to unfavorable conditions of weather, and especially to the suspension of traffic on the Siberian railway during the floods in April, 1908, only 3,441,960 poods (57,366 tons) were actually exported west, or 4.3 per cent less than in 1907. The export to the east is insignificant, representing about 0.45 per cent of the total. At a recent meeting of the Russian butter exporters the estimate for the current year 1909 was placed at 3,800,000 poods (63,000 tons), or 10 per cent more than during 1908. One-half of the shipments go via Riga and Windau and the other half via St. Petersburg. The butter is consumed chiefly in Denmark, Germany, and England.

TEA AND COFFEE.

INDIA.

LOCAL SALES AND EXPORTS ABOUT THE SAME AS LAST SEASON.

The following particulars concerning the tea trade of India for the season of 1908–9 are furnished by Consul-General William H. Michael, of Calcutta:

All further operations on the Calcutta tea market are now suspended until the incoming of the new season's teas. The last sale was unimportant, and only about 5,000 chests changed hands. The sale included some second-hand teas. The total quantity sold on the local market during the 1908–9 season very nearly equals the previous season's record, the amount to the beginning of March being 68,500,000 pounds against 69,000,000 pounds in the previous season. The increased quantity offered locally during the latter part of the season had a beneficial effect on direct trade with foreign countries, which totaled, approximately, 51,000,000 pounds in both seasons. Australia and Russia both closed the season with 2,000,000 pounds each deficit in takings from India, as compared with the preceding season, but this loss was offset by the excess taken by America, Bombay, Persia, etc. The situation therefore remains practically unchanged.

JAPAN.

SUBSIDY FOR EXPORT TEA SOUGHT.

Vice-Consul-General E. G. Babbitt sends from Yokohama the following note, dated April 6, in regard to the Japanese tea trade:

According to the Jiji Shimpo, of Tokyo, it is said that the Guild of Tea Merchants in Shidzuoka-Ken has decided to ask the Government for a subsidy for 10 years of $105,000 gold per year, in order to compete with Indian and other teas in the United States and Canada. This is due to the general falling off in exports and to the fear that the new United States tariff will impose a duty on teas. This year's crop is reported to be excellent, and will be placed on the market about April 14—a week later than in 1908.

JAVA.

NEW ROBUSTA VARIETY IS PROVING HIGHLY SUCCESSFUL.

Writing from Batavia, Consul B. S. Rairden gives the following description of a new variety of coffee being grown in Java, known as "Robusta," which was discovered some years ago growing wild in the Kongo States of Africa:

No satisfactory results being obtained from this plant in the Kongo region, some were sent to the Jardin Botanique at Brussels, and from there many plants were sent in Ward cases to Java in 1902. The results of the cultivation of this coffee in Java have been wonderful, and it is reported that in many cases the success of this cultivation has saved old estates from ruin. It thrives on ground where coffee

Arabica and Liberia have ceased to yield any product, and also on ground upon which other plants will not grow, while the yield is also prolific.

Ordinarily Arabica coffee yields its first crop at four years, such yield being about 4 piculs (1 picul=136 pounds) per bouw (1 bouw=1¾ acres). The Robusta coffee planted in East Java yields at three years from 10 to 12 piculs per bouw, and on some estates during the past year five-year-old trees have produced from 20 to 25 piculs per bouw, this being a record yield. Robusta coffee trees are planted about 6 feet apart and topped at about 5½ feet high. The young plants require shade trees. The bean is very small and, for the first two crops, rather lacking the aroma usually found in coffee. The later crops, however, appear to improve in taste and aroma.

The Netherlands Indian government is now beginning to encourage the cultivation of Robusta coffee by establishing nurseries in the different districts and distributing young plants free to the natives for planting. The manager of one company informs me that seeds of the Robusta coffee have been sent to its estates in Brazil for experimental purposes, results of which are not yet known.

The output of Robusta coffee for the year 1908 is given as about 1,600 piculs, or 217,600 pounds. The price quoted for this article at close of the year was 35 florins ($14.07) per picul of 136 pounds. Although small quantities of the Robusta coffee have been exported from Java, none as yet has been exported to the United States.

UNITED KINGDOM.

LIVERPOOL IS RECOVERING ITS FORMER TRAFFIC.

According to Consul John L. Griffiths, one of the gratifying features of the commerce of Liverpool has been the increase in late years of the cargoes of tea coming to that British port, which the consul describes as follows:

For nearly 40 years this trade was lost to Liverpool through inability to secure the necessary advance of money to carry it through the banks. With the removal of this obstacle an impetus was at once given to the trade. The importation of Indian tea, which is the most important feature of the trade, increased from 517,000 pounds in 1904–5 to 2,048,947 pounds in 1905–6. There was a decided falling off in 1906–7, which was attributed to the Russian demand at Calcutta, but in 1908 there was a slight increase, and it is expected that there will be a further substantial gain in the current year.

The importations into Liverpool are very slight in comparison with the cargoes landed at London, but this port is the nearest and most convenient for the Lancashire, Yorkshire, and midland districts, in which the consumption of tea is said to be greatly in excess of the consumption in and about London. The cost of the tea to the near-by consumers is appreciably reduced when it comes through Liverpool by the saving of the railroad carriage from London. The lines of steamers trading from the East give optional bills of lading, so that tea or any other cargo can be landed without difficulty at either London or Liverpool. Large quantities of Indian tea are being

carried by freight to Liverpool for transshipment to America. When it is remembered that tea is the national English beverage and is used more generally even than coffee in America, the importance of this trade will be appreciated. Tea in this country is regarded specially by the laboring classes as one of the prime necessaries of life. Earnest efforts are being made in Liverpool to enable this port to secure the full advantages of its strategic position with reference to the tea trade.

[Notwithstanding the depressed trade conditions last year, the British imports of tea increased, the amount having been 317,127,058 pounds, worth $52,293,400.—B. of M.]

WHEAT TRADE.

INDIA.

ESTIMATE OF THE WHEAT CROP.

Consul-General William H. Michael, of Calcutta, writes, under date of March 25, as follows in regard to the last memorandum of the government on the 1908–9 wheat crop in India, which deals with 99.7 per cent of the total wheat area:

The report discusses mainly acreage, as the estimates of yield have not yet been made up. The total area sown is now reported to be 25,985,200 acres compared with the 21,675,800 acres of last year and with the 27,063,900 acres forming the average of the five years ending 1906–7. As compared with last year, there is therefore an increase of 4,309,400 acres, or 19.9 per cent, whereas the acreage still falls short of the older average by 1,078,700 acres. On the whole, the condition of the crop is reported to be satisfactory, but the unirrigated crop in the United Provinces is said to be poor, and in many places more rainfall was greatly needed at the time of making the report.

JAPAN.

GROWING DEMAND CAUSES RISE IN FLOUR.

Vice-Consul-General E. G. Babbitt, of Yokohama, advises that, under date of April 1, the Japan Advertiser says:

Quotations of flour are now showing an upward tendency on the Japanese market. The three large flour mills in this country, namely, the Nippon, Toikoku, and To-a flour-manufacturing companies, recently raised their prices 5 to 8 sen (2½ to 4 cents) per bag, and it is reported that quotations will be raised still further. This state of things was doubtless owing to the scarcity of stock, both American and Japanese. Quotations on the American market are also high, and for this reason the import of American flour is now temporarily suspended. The annual yield of wheat in Japan amounts to about 4,000,000 koku (koku=4.962 bushels), the greater portion of which is used as material for the manufacture of soy and "miso." There is therefore no alternative but to import American flour to meet the growing demand in the domestic market.

The import of flour into Japan in 1908 amounted to only 518,229 piculs (picul=133⅓ pounds), valued at $1,414,500 gold, against 1,232,803 piculs, valued at $3,106,000, in 1907. The United States supplies the largest portion, the value in 1908 being $1,319,000. British America supplied $86,300 worth.

UNITED KINGDOM.

RISE IN PRICE—INDIAN CORN AS SUBSTITUTE.

From Birmingham Consul Albert Halstead reports that the abnormal rise in the price of American wheat is naturally attracting anxious attention in the United Kingdom. He writes in detail:

It has already disturbed the bakers here very considerably. They have determined to raise the price of bread by one half-penny (1 cent) for 4-pound loaves, which will from April 19 cost from sixpence (12 cents) to 7½d. (15 cents) each, according to quantity. In England there is practically no home baking of bread. British households almost without exception depend upon the bakers for their daily bread. It is practically impossible to obtain a cook who can make bread at home. The dough for bread making is mixed to a very large extent by machines, which are adaptations, it is stated, of mixing machines of American origin, and this use of machinery has considerably lessened the cost of bread making.

It is not surprising that the increased cost of wheat has caused attention to be devoted to the fact that the United Kingdom depends to such a great extent upon wheat from abroad. The Birmingham Post says editorially:

> Even assuming that the whole of the home crop of wheat were actually available for food—which, in view of the requirements for seed and other purposes, is not the case—at least four-fifths of the wheat consumed in this country is supplied from abroad. During the last generation the land that has passed out of wheat cultivation in this country is considerably greater than the total present wheat area of the United Kingdom. In the same period the population has greatly increased, and it has had to rely upon produce from abroad.
>
> We can not control foreign speculators, but we can put it practically beyond their power to gamble with our food by encouraging British farmers to lay down a greater wheat area, and also by stimulating agriculture within the Empire. That is the strong moral of the present crisis.

British newspapers have also indicated that Indian corn, which is here called maize, may be used as a substitute for wheat. This recalls the efforts made 10 or 20 years ago by the American Department of Agriculture to popularize corn products abroad, and suggests that the present time is quite ripe for a movement to instruct the peoples of Europe in the use of corn products as a diet, particularly in the use of corn meal for bread making. To the American who comes to live in England the fact that corn bread is so seldom obtainable is always surprising, and perhaps new efforts to popularize corn meal as a substitute for wheat flour for bread making might have some success. Because of the absence of home bread making, however, this would have to be done by instructing bakers in the art of corn-bread making and by showing what a delectable food properly made corn bread really is.

HIGHER PRICES IN LONDON.

Consul-General Robert J. Wynne reports that from April 19 the price of the quartern loaf (four pounds) in London was raised by 1 cent, increasing the 12-cent quality to 13 cents and the 13-cent grade to 14 cents. The decision which brings about this change is the result of a resolution of the bakery companies of the metropolis

of London. Individual bakers will follow the lead of the companies, and the rise in the price of bread will become general throughout Great Britain. In Scotland 14 cents is already being uniformly charged for the cheapest quartern loaf.

LIVERPOOL WHEAT MARKET.

THE AMERICAN PRODUCT NOT IMPORTED AS LARGELY AS FORMERLY.

Vice-Consul G. B. Stephenson says that the importance of Liverpool in the wheat and flour trade is evident from the fact that it is the third city in the world in the manufacture of flour, being exceeded by only Minneapolis and Budapest. Concerning the wheat trade of this port, especially in relation to American supplies, he writes:

During the fortnight ended May 5 the following amounts were imported into the United Kingdom, of which Liverpool is the chief wheat port, from the countries named, the amount being in quarters of 480 pounds (8 bushels): Russia, 618,000; Argentina, 614,000; United States and Canada, 305,000; Australasia, 243,000; Balkan States, 123,000; India, 107,000; other countries, 38,000; total, 2,048,000 quarters (16,384,000 bushels).

The total imports of wheat into the United Kingdom during the last five years were as follows, in quarters: United States, 30,652,000; Argentina, 27,435,000; India, 19,167,000; Russia, 18,377,000; Canada, 14,103,000; Australasia, 10,048,000; other countries, 11,954,000; total, 131,736,000 quarters (1,053,888,000 bushels).

While the imports of both American wheat and flour into the United Kingdom show marked increases in 1908 as compared with 1907, they do not approach the imports of former years, and, according to one of the largest dealers in wheat and flour in Great Britain, they will not reach former proportions, mainly for the reason that the grain shippers of Argentina guarantee in their contracts with Liverpool merchants to deliver their wheat sound, under the following conditions, which do not appear in the contracts made with American shippers:

> Any deficiency on bill-of-lading weight will be refunded by seller, and any excess over bill-of-lading weight to be paid by buyer. Slight dry warmth not injuring the grain not to be objected to, but grain damaged by sea water or otherwise to be taken by buyer with an allowance for deterioration based on contract price to be fixed by arbitration in Liverpool. Samples to be taken and sealed by buyers' and sellers' agents at port of discharge.

It is claimed by the buyers that, on account of the quality of wheat received here, in many cases, from the United States, it is absolutely necessary that American shippers should guarantee the condition of the wheat as it arrives in Liverpool, as is done in regard to Argentina wheat. The class of wheat wanted here is what is known as "Kansas Hard Winter."

FOREIGN COMMERCE.

BRITISH INDIA.

AMERICA'S OPPORTUNITY.

IMPORTANCE OF KARACHI AS AN IMPORTING AND TRADING CENTER.

An American consulate was opened at Karachi, India, in June, 1908, owing to that port's growing commercial importance. The following report from Consul Wallace Bond on the opportunity for trade extension there will be of interest:

In order that the American manufacturers who are seeking opportunities for the extension of their businesses abroad may understand the importance of Karachi and northwestern India as fields for their operations, it is only necessary to quote figures. As the statistics for the year 1908–9 are not yet available, the ones given are for the preceding year. During that period the total imports of merchandise and treasure at this port amounted to 114,000,556 rupees or, roughly, $37,000,000. Of this amount 74,565,232 rupees ($24,190,447), or about two-thirds of the entire imports, came from the United Kingdom. Of the balance the United States supplied merchandise valued at 2,423,245 rupees, or about $800,000.

A good idea of the character of the imports received at Karachi may be gained from the following table, which lists the ten principal classes of articles:

Articles.	Amount.	Articles.	Amount.
Food and drink	$7,975,724	Arms and ammunition	$550,000
Railway equipment, rolling stock, etc.	4,398,632	Raw materials and unmanufactured goods	500,000
Metals, and manufactures thereof	4,096,042	Glass	270,000
Oils	1,227,598	Matches	268,000
Chemicals, drugs, etc	800,000		
Yarns, fabrics, cloths, piece goods, etc.	600,000		

HOW THE IMPORTS ARE MADE.

It will be seen that the value of the ten principal classes of imports at Karachi amounts to over $20,000,000. The share of the United States in this amazing total was very small. Karachi presents possibly a good market for American goods, but before sales can be made it is necessary for American exporters to understand several things, the most important being that under the present system nearly all of the large importers at Karachi are really branches of English or German firms, established here for the sole purpose of building up trade with their respective countries. Practically the only importing firms with headquarters in Karachi are native concerns—Parsee or Indian.

If American firms wish to do business in northwestern India they must send representatives here who will study the customs and the

needs of the land. Some firms, such, for instance, as the Standard Oil Company and Parke, Davis & Co., both of which corporations have branches in India, are already reaping the benefit of their enterprise and are doing a large business.

The American merchant must realize that caste and peculiar customs practically constitute the law of this land, and religious prejudices and scruples enter largely into business; for instance, no Mohammedan firm will think of selling intoxicating liquors of any sort, or lard, bacon, ham, etc. On the other hand, a Parsee merchant is not prohibited by his religion from engaging in such trade.

In view of the fact that future trade between the United States and India must be largely through the medium of native merchants, it is imperative that firms in the United States proposing to do business in India should send representatives here to study conditions. At present Europe has almost a monopoly of Indian trade and will keep it until America makes an intelligent effort to obtain a share.

KARACHI'S MACHINERY IMPORTS.

Although the figures for the British fiscal year, 1908–9, for the Province of Sind, of which Karachi is the capital and principal seaport, are not yet available, American firms may take the statistics of the twelve months preceding as a gauge with which to calculate the demands of the coming season. During the year 1907–8 machinery as listed in the following table was imported into Karachi:

Description.	Value.
Agricultural machinery, not steam	$5,548
Steam engines and parts, other than railway	209,276
Textile machinery	25,542
Miscellaneous machinery	235,762
Total	476,128

Inquiries have been sent from the United States to the Karachi consulate regarding the importation of steam pumps. It has been found impossible to obtain the figures, but it is certain that steam pumps constitute a fair proportion of the item, "miscellaneous machinery."

Of the imports shown in the preceding table, machinery valued at $16,724 was imported from the United States. Practically 80 per cent of all the machinery shipped into Karachi came from Great Britain.

At present northwestern India presents a most attractive outlook as a future market for American machinery, particularly for such articles as gasoline engines, small pumps, windmills, and agricultural implements. There is every reason to believe that, owing to the demand for increased wages by the coolies employed in constructing the Indus River irrigation system, which is to water large areas of productive land in the Province of Sind, it will be necessary to install steam shovels and ditching machinery.

The British Indian Government is making a determined effort, and one which in all probability will be successful, to introduce reaping machinery into the Punjab wheat district, which is tributary to Karachi. When the idea once takes and the Indian agriculturist

overcomes his prejudice against new methods the demand for modern farm machinery will be very great.

While the immediate results of an industrial campaign in this district by American firms might not be particularly encouraging, such an attempt would be the proper and necessary preliminary for building up a great future trade. The situation here warrants the earnest attention of the American manufacturer. It is recommended that firms interested correspond with some of the leading Karachi firms, a list of which has been filed with the Bureau of Manufactures.

ITALY.

TRADE STATISTICS.

BOTH IMPORTS AND EXPORTS SHOW CONSIDERABLE INCREASES.

In stating that the total value of Italy's foreign trade for the first two months of the present calendar year was $157,526,600, Consul-General James A. Smith, of Genoa, gives the following details:

The imports were valued at $100,746,000 and exports at $56,780,600. Compared with the corresponding period of 1908, imports show an increase of $12,236,000, while exports also advanced by $1,544,000. The following table gives the principal articles of importation and their value during the two months under review:

Cotton, raw	$11, 136, 000	Lumber	$3, 570, 000
Cereals	9, 418, 000	Machinery and railroad cars	6, 755, 000
Coal	8, 395, 000	Nitrate sodium	656, 000
Cocoons	1, 679, 000	Oils, mineral	1, 196, 000
Codfish	1, 544, 000	Precious stones	772, 000
Copper	926, 000	Phosphates, mineral	694, 000
Colors and varnishes	829, 000	Rubber, raw	656, 000
Coffee	772, 000	Silk, raw	5, 268, 000
Greases	772, 000	Seeds	1, 100, 000
Hides, raw	1, 968, 000	Wool and hair	3, 860, 000
Horses	1, 119, 000	Wood pulp	675, 000
Iron, scrap and pig	2, 123, 000		

INCREASES AND DECREASES.

Imports of the following articles advanced: Cereals, raw silk, live stock, coal, horses, hides, cotton-seed oil, wool, lumber, scrap iron, pig iron, and olive oil. A decline in imports was shown in the following articles: Machinery and boilers, raw copper, raw cotton, worked copper, brass, and bronze, metallic minerals, wool tissues, worked steel and iron, railroad car wheels, and sulphate of copper.

The following exports show an increase in value over the corresponding period of the previous year: Raw silk, hemp, cotton tissues, hides (raw), dried fruits, cotton yarns, and hay. Exports of the following articles showed a shrinkage: Olive oil, sulphur, flour and semola, fresh fruits, essential oils, citrate of calcium, and dried vegetables.

The encouraging feature about the foregoing figures is that exports for the first time in over a year show a tendency to advance, and this leads to the conclusion that the opinions recently expressed that the maximum period of depression in Italy's export trade and industrial situation had been passed, were well founded.

DECLARED VALUE OF EXPORTS FOR LAST CALENDAR YEAR.

The following table, furnished by Consul-General Smith, gives the declared value of exports to the United States from the several con-

sular districts (agencies included) in Italy during the calendar years 1907 and 1908:

Consular district.	1907.	1908.	Gain (+) or loss (−).
Genoa	$1,747,014	$1,331,449	− $415,565
Florence	3,992,640	2,398,563	−1,594,077
Leghorn	3,910,033	3,399,851	− 510,182
Messina	3,884,811	[a] 3,500,000	− 384,811
Milan	19,255,196	17,155,345	−2,099,851
Naples	4,213,257	5,927,498	+1,714,241
Palermo	6,218,403	4,999,105	−1,219,298
Rome	1,283,083	1,591,274	+ 308,191
Turin	1,674,361	1,712,538	+ 38,177
Venice	507,506	299,115	− 208,391
Total	46,686,304	42,314,738	−4,371,566

[a] Estimated. The record books of the Messina office were destroyed by the earthquake, but Consul Lupton states that he was informed by the late Consul Cheney that the shipments from Messina during 1908 would be somewhat less than in 1907.

From the foregoing table it will be noted that, with the exception of Naples, Rome, and Turin, the shipments to the United States from every consular district in Italy show a falling off. The latest official statistics of the Italian Ministry of Finance give the value of exports to the United States for 1907 as $45,468,099, and for 1908, $43,127,008. In the figures published at the close of 1907, however, the exports for that year were given as only $42,670,756. It is believed that the latest figures are the more correct, because based upon revised values, and that the official figures for 1908 will doubtless be modified later when the values for that year have also been revised. At present they are, it is thought, based on 1907 values.

URUGUAY.

EXPORTS OF ANIMAL PRODUCTS.

Consul Frederic W. Goding, of Montevideo, furnishes the following comparative figures, showing the exports of hides, tallow, sheepskins, and hair from Uruguay during the first six months of the season beginning October 1, 1908:

Description.	1908–9.	1907–8.	1906–7.
Salt ox hides	258,398	183,586	257,183
Dry ox hides	742,260	421,565	499,031
Tallow (pipes)	7,243	6,064	2,744
Tallow (hogsheads)	2,058	5,165	674
Sheepskins (bales)	9,692	6,794	6,716
Hair (bales)	549	594	787

FOREIGN TARIFFS.

CUSTOMS DUTIES AND REGULATIONS.

BRAZIL.

EXPORT DUTIES IN BRAZILIAN STATES.

Consul-General Anderson, writing under date of March 25, gives the following description of the system of export duties levied by the separate States of Brazil:

During the greater portion of the history of Brazil export taxes—i. e., taxes imposed upon products leaving the country—have constituted one of the most important sources of revenue for governmental purposes, especially for municipal, provincial, and state purposes. Under the empire there was more or less interchange of the proceeds from such taxes between the municipal, state, and federal or national governments. In the negotiations between state and other interests which led to the drafting of the present constitution of Brazil as a republic it was agreed that under the new régime all import taxes should be levied and collected by the federal or national government for its use, while to the States and municipal bodies under the States should be reserved the right to levy all taxes on exports, the proceeds of which should belong to the government thus levying them. This agreement was incorporated in the constitution of the country. It was provided at the same time that States in Brazil should not levy taxes on goods exported to other States in Brazil, nor should any State of Brazil charge any impost in the nature of an import tariff on any products of any other State of the country. Some of the States of the country, however, have found it impossible to forego the collection of taxes upon all products exported from their territory, whether such goods went abroad or to some other Brazilian State. The taxes upon exported products levied by the several state governments in accordance with the constitutional arrangement vary not only with respect to the product but among the several States as well. Such taxes also are both ad valorem and specific. Specific duties as a rule require no explanation.

AD VALOREM COMPUTATION.

Ad valorem duties are almost exclusively fixed upon the basis of an official value for goods exported, called the "pauta." This "pauta" is arbitrary and may have no connection whatever with the market price of the product to which it applies. Often it is established on the basis of the market price of the commodity during a fixed period. For example, in the coffee States it is the custom to fix the official value of coffee each Saturday night. Each week a commission appointed by the state government, generally the treasury officials of the State, meets and averages the prices coffee has sold at

in the markets of the State during the week then closing. On the basis of this average price an official value of coffee is fixed for the week following, on the basis of which export taxes are paid. Formerly, when the price of coffee varied considerably during a week, it was the custom to fix the "pauta" or official value high enough to cover probable variations in the week to follow. This custom has led to the general practice of fixing the official value always from 15 to 20 per cent higher than the actual value. The result is that in São Paulo, for example, where the ordinary export tax on coffee is 9 per cent of its value, the official value is so fixed that the actual taxes to be paid are generally at least 10½ per cent, and in Minas Geraes and Rio de Janeiro, where the theoretical rate of taxes on coffee is 8½ per cent, the actual rate is about 10 per cent and is sometimes higher. The same principle applies in practically all official values for export taxes in all of the several States of Brazil. Where a rate of export tax on a product is given ad valorem, the actual rate to be paid will probably be from a sixth to a fourth more and perhaps even higher.

SCHEDULE OF EXPORT TAXES.

While the export taxes of all the several States of Brazil upon all items can not be given in a report of this sort, and indeed vary to such an extent that a list prepared at present would be of little value in the future, the taxes imposed upon the principal items of export in the several States, and which vary comparatively little, will give a fair idea of the situation. With due appreciation of the fact that the effective rate in almost every case is considerably higher than the theoretical rate given, the following outline of taxes on products exported from the several States named may be noted, the States not named in any case imposing no specific tax upon the commodity in question (kilo being 2.2 pounds):

Cotton.—Alagoas, 9 per cent; Bahia, 5 per cent; Ceara, not ginned, 6 per cent, ginned, 10 per cent; Goyaz, 6 per cent; Maranhao, 10 and 30 per cent; Matto Grosso, 5 per cent; Minas Geraes, 4 per cent; Parahyba, 6 per cent; Pernambuco, 10 per cent; Piauhy, 12 per cent; Rio Grande do Norte, 8 per cent; Rio Grande do Sul, 3 per cent; Rio de Janeiro, 4 per cent; Sergipe, 8 per cent. Amazonas, the Federal District, Espirito Santo, Para, Parana, and Santa Catharina tax cotton the rate charged on all products not specified, as indicated below:

Sugar.—Alagoas, 6 per cent; Amazonas, 20 per cent; Bahia, 1 per cent; Ceara, 4 per cent; Federal District, one-half of 1 per cent; Espirito Santo, same as unspecified; Goyaz, 6 per cent; Maranhao, 7 per cent; Minas Geraes, 2 per cent; Para, 2½ per cent; Parahyba, 3 per cent; Parana, 10 per cent; Pernambuco, 9 per cent to markets in the country and 2 per cent to foreign markets; Piauhy, 10 per cent; Rio Grande do Norte, 8 per cent; Rio Grande do Sul, 3 per cent; Rio de Janeiro, 2½ per cent; Santa Catharina, 5 per cent; Sergipe, 7 per cent.

Rubber.—Alagoas, 8 per cent; Amazonas, 7 and 20 per cent; Bahia, 9 per cent; Ceara, 300 reis per kilo; Goyaz, 250 reis per kilo; Matto Grosso, 20 per cent, except that rubber exported by rivers to the north through Para pays 23 per cent; Minas Geraes, 3½ per cent; Para, fine or cleaned, 25 per cent, seranamby or entrafina, 22 per cent; all other 15 per cent, these rates also being modified by special legislation designed to aid Brazilians as against foreigners; Parahyba, 6 per cent; Parana, 10 per cent; Pernambuco, 2 per cent; Piauhy, 12 per cent; Rio Grande do Norte, 8 per cent; Rio Grande do Sul, 3 per cent; Rio de Janeiro, 100 reis per kilo; Santa Catharina, 30 per cent; Sergipe, same as unspecified products.

Cacao.—Alagoas, 30 per cent; Amazonas, 5 per cent; Bahia, 15 per cent; Ceara, 10 per cent; Federal District, one-half of 1 per cent; Goyaz, 10 per cent; Maranhao, 80 reis per kilo; Matto Grosso, 12 per cent; Minas Geraes, 2 per

cent; Para, 6 per cent; Parahyba, 5 per cent; Parana, 10 per cent; Pernambuco, 10 per cent; Piauhy, 12 per cent; Rio Grande do Norte, 10 per cent; Rio Grande do Sul, same as unspecified products; Rio de Janeiro, 2½ per cent.

Coffee.—Alagoas, 10 per cent; Bahia, 9 per cent; Ceara, 2 per cent; Goyaz, 6 per cent; Maranhao, 120 reis per kilo; Matto Grosso, 5 per cent; Minas Geraes, 8½ per cent; Para, 2½ per cent; Parahyba, 5 per cent; Parana, 10 per cent; Pernambuco, 2 per cent; Rio Grande do Sul, 3 per cent; Rio de Janeiro, 8½ per cent; Santa Catharina, cleaned coffee, 8 per cent, in the shell, 10 per cent; Sao Paulo, 9 per cent for ordinary coffee and 20 per cent on inferior grades or waste coffee; also a surtax of 5 francs in Sao Paulo and 3 francs in Rio de Janeiro and Minas Geraes and 20 per cent in Sao Paulo on all coffee over 9,000,000 bags in current season.

Cotton seed.—Alagoas, 10 per cent; Amazonas, 20 per cent; Bahia, 5 per cent; Ceara, 6 per cent; Goyaz, 300 reis per kilo; Maranhao, 10 per cent; Matto Grosso, 5 per cent; Minas Geraes, 10 per cent; Para, 2½ per cent; Parahyba, 10 per cent; Parana, 10 per cent; Pernambuco, 9 per cent; Piauhy, 12 per cent; Rio Grande do Norte, 8 per cent; Sao Paulo, 10 per cent.

Tobacco.—Alagoas, 10 per cent; Amazonas, 10 per cent; Bahia, 15 per cent; Ceara, 3 and 6 per cent; Federal District, one-half of 1 per cent; Goyaz, 120 reis per kilo; Maranhao, 250 to 360 reis per kilo, depending on progress of manufacture; Matto Grosso, 5 per cent; Minas Geraes, 8½ per cent; Para, 50 reis per kilo; Parahyba, 10 per cent; Parana, 1 milreis per 15 kilos; Pernambuco, 2 per cent; Piauhy, 12 per cent; Rio Grande do Norte, 5 per cent; Rio Grande do Sul, 6 per cent; Rio de Janeiro, 9 per cent; Santa Catharina, 2 to 8 per cent; Sao Paulo, 10 per cent.

Lumber.—Alagoas, 25 per cent; Amazonas, 10 per cent; Bahia, 22 per cent; Ceara, 10 per cent; Goyaz, 10 per cent; Maranhao, specific by the piece at about 10 per cent; Matto Grosso, 5 per cent; Minas Geraes, 9 per cent; Para, 6 per cent; Parahyba, 7 to 20 per cent; Parana, 4 per cent; Pernambuco, 10 per cent; Piauhy, 10 per cent; Rio Grande do Norte, 8 per cent; Rio Grande do Sul, 3 per cent; Rio de Janeiro, 7 per cent; Santa Catharina, 6 to 12 per cent; Sao Paulo, 10 per cent.

Hides.—Alagoas, 15 per cent; Amazonas, 20 per cent; Bahia, 14 per cent; Ceara, Rs. 1$500 each; Federal District, Rs. 3$000 each; Goyaz, 300 reis each; Maranhao, Rs. 1$100 each; Matto Grosso, 12 per cent; Minas Geraes, 11 per cent; Para, 17 per cent; Parahyba, 10 per cent; Parana, 10 per cent; Pernambuco, green hides 25 per cent, cured and salted 20 per cent; Piauhy, 12 per cent; Rio Grande do Norte, Rs. 1$000 each; Rio Grande do Sul, 2 per cent; Rio de Janeiro, 9 per cent; Santa Catharina, 10 per cent; Sergipe, 12 per cent.

Skins.—Alagoas, 10 per cent; Amazonas, 20 per cent; Bahia, 14 per cent; Ceara, 500 reis each; Goyaz, 300 reis each; Maranhao, 600 reis each; Matto Grosso, 12 per cent; Minas Geraes, 3 per cent; Para, 10 per cent; Parahyba, 10 per cent; Parana, 10 per cent; Pernambuco, 500 reis each; Piauhy, 12 per cent; Rio Grande do Norte, 500 reis each; Rio Grande do Sul, 3 per cent; Santa Catharina, 5 per cent; Sergipe, 12 per cent.

Herva matte.—Matto Grosso, 800 reis per 15 kilos; Parana, 4 per cent; Rio Grande do Sul, 2 per cent; Santa Catharina, 30 and 100 reis per kilo, prepared and unprepared.

The taxes above outlined cover about 95 per cent of the exports of Brazil. Other products not mentioned pay similar taxes, products not specified paying, in Alagoas, 30 per cent; in Amazonas, 20 per cent; Ceara, 5 per cent; Goyaz, 10 per cent; Maranhao, 15 per cent; Minas Geraes, 10 per cent; Para, 2½ per cent; Parahyba, 20 per cent; Parana, 10 per cent; Pernambuco, 10 per cent; Piauhy, 10 per cent; Rio Grande do Norte, 10 per cent; Santa Catharina, 30 per cent; Sao Paulo, 10 per cent. The taxes are collected by fiscal authorities at ports of embarkation when shipped by sea. Shipments by railroad inland are regulated by arrangement with the railway companies, the tax being paid at embarkation in connection with the freight papers.

OTHER TAXES.

These taxes are in addition to certain taxes collected by municipalities upon products shipped out of their limits, such municipal taxes

being in the nature of export taxes, but smaller in amount and being used solely for municipal purposes. The export taxes, as above indicated, are fixed annually in the several state budgets and are subject to yearly change. Most of them are permanent, commodities like coffee, rubber, cacao, herva matte, sugar, and the like being the foundation upon which all financial considerations in the several States are based. Some of the most important state loans are based directly or indirectly upon such taxes, and the least interference with them—as, for example, the material reduction in the revenue derived from the export of rubber from the States of Para and Amazonas, due to the low price of the past year and a half—materially affects their finances. In the case of coffee, the other great staple product of Brazil, a special export tax of 5 francs is pledged for the payment of interest and the amortization of the loan of £15,000,000 placed for the consolidation of the debt growing out of the valorization of coffee. This export tax can not be removed for at least 10 years, except by refunding the loan. In other States special export taxes are pledged for other loans.

It should be understood that the export taxes noted are, as a rule, taxes in lieu of land taxes. Real estate taxes in cities of Brazil generally are based on rentals. For example, in the down-town district of Rio de Janeiro 12 per cent of all rent paid by property is paid to the municipality, and where property is occupied by the owners a tax equal to 12 per cent of what the property would rent for is paid. In the rest of the city the tax is 10 per cent; in Sao Paulo, 10 per cent; in Petropolis, 12 per cent; in Bahia, 10 and 12 per cent; and in like proportion elsewhere. In the rural districts, however, the produce of the land is taxed instead of the land. Products are taxed municipally when shipped out of the municipality or district corresponding to a township in the United States. They are taxed for the benefit of the State when they are shipped out of the State. The result of this system is that vast tracts of land are held by wealthy owners without tax. The lands are not productive, but are held for speculative purposes. As soon as the lands are improved and commence to produce they are taxed through their products.

EFFECT ON UNITED STATES.

The matter of export taxes in Brazil is of especial interest to the United States in that the products which the United States takes from Brazil in such immense quantities—coffee and rubber—are those upon which export taxes are imposed in greatest amounts. The total of such export taxes imposed upon products shipped to the United States may be appreciated by the fact that an estimate based upon the rates above outlined and the exports of various commodities from Brazil to the United States fixes the amount collected upon such products by the several Brazilian States concerned as exceeding $16,000,000 in 1908, as follows:

Coffee, an average of $1.50 per bag	$8,931,000
Rubber, an average of 23 per cent, actual rate	6,440,000
Cacao	350,000
Hides and skins	300,000
Various	200,000
Total estimated tax	16,221,000

The rates of export taxes given in the table above, and herein in general, are taken from the special bulletin of the Brazilian Bureau

of Statistics issued to commemorate the Brazilian National Exposition of 1908.

WORK OF THE TARIFF COMMISSION.

Consul-General George E. Anderson reports from Rio de Janeiro on the work of the Brazilian tariff commission as follows:

The commission appointed by the Brazilian minister of state for finance for the purpose of considering the details in connection with the revision of the Brazilian tariff system to be taken up by the Brazilian Congress which meets in May of the current year, has begun its work. The commission is holding sessions for the reception of complaints and suggestions each Thursday in the custom-house in Rio de Janeiro, and quite a number of local business interests are presenting statements outlining their ideas as to the changes needed in the present law. The commission plans to hold these meetings weekly and even more often, if necessary, until all suggestions and complaints have been heard.

The complaints and suggestions so far made refer largely to the administration of the tariff rather than to the rates, most of the complaints as to administration referring to those features of the present Brazilian law which have had their beginning in the tariff system of a hundred years ago. Complaints as to rates also refer largely to rates which have been rendered inconsistent through the development of modern industrial and commercial conditions, and especially where old classifications have been affected by later customs rulings. An illustration of this line of inconsistencies which have caused formal presentation before the commission has been furnished by the Diario do Commercio, a newspaper of Rio de Janeiro, in a table it has recently published, referring to actual shipments of goods admitted at the Rio de Janeiro custom-house and the amount of duty actually paid upon such shipments. One of the greatest causes of complaint against the Brazilian tariff has been in relation to its treatment of hardware. The authority above referred to, in treating of this schedule, gives the following as actual importations, custom charges, and ad valorem duties (1,000 reis or 1$000=1 milreis=30 cents American currency):

Article.	Invoice price.	Duty paid.	Equivalent ad valorem rates.
	Reis.	*Reis.*	*Per cent.*
Key rings	67$200	428$000	629
Iron chains for keys	140$000	773$000	553
School chalk	208$000	1,160$000	552
Yellow and red ocher, per kilo	$040	$220	550
Iron bits	307$000	1,616$000	526
Prussian blue	1,032$000	4,886$000	475
Iron racks	158$800	688$400	430
Porcelain doorknobs	267$000	910$000	335
Screws, per kilo	$267	$893	334
Iron padlocks, per dozen	9$900	29$100	295
Penknives	1,144$000	3,353$000	291
Iron locks	160$200	432$000	270
Bridles	782$000	1,783$000	229
Tailors' scissors	314$000	665$000	212

While this list represents the extremes in some cases, yet it was not regarded as sufficiently exceptional to lead to any particular action as to any of the rates in the past. Nearly every item above named, however, is admitted under rates which have come down from a time

when the cost of such goods was much higher than it now is, and the rate of duty therefore was not excessive. It is in the correction of such rates as the above that it is expected the work of the commission and the resulting action of congress will be most important.

An effort will be made to secure reductions on many articles of common consumption. The newspaper above quoted gives a table of such rates based upon actual importations by merchants, among which may be noted the following:

Article.	Invoice price.	Duty paid.	Rate of duty to cost.
	Reis.	*Reis.*	*Per cent.*
Wines (up to 14 per cent alcohol)	102$400	268$000	262
Jams, per case	16$000	34$330	215
Canned vegetables	18$000	62$850	349
American canned fruit, per case	6$600	30$000	415
Champagne, per case	60$000	53$740	89
Liqueurs, per case	26$800	51$270	191
Whisky, per case	15$000	33$000	220
Onions, per load	220$000	1,356$000	616
Biscuits	104$000	219$000	210

These rates for goods of common consumption are not all exceptional, some of them, indeed, are comparatively low. Hams pay about 120 per cent, cheese 131 per cent, cocoa 161 per cent, chocolate 221 per cent, and so on. Inasmuch as some of the goods on which such high rates are charged are manufactured to some extent in Brazil, it is probable that there will be no great change in the duty on them, in spite of the efforts of consumers to secure a reduction.

One feature of the present Brazilian tariff which has been brought to notice is its treatment of parts of machinery. The duty on some parts of machinery is often almost as great as on an entire machine. The result is that the breaking of a small part of a machine made abroad is a very serious matter. Not only does the heavy duty on such parts bear unfavorably upon the owner, but it also prevents dealers from carrying in stock extra parts for many machines, so that a broken part often means months of uselessness for the machine.

Another feature of the present system to which objection is being made is the system of official values of certain imports subject to ad valorem rates of duty. The high rates in the schedule, including many of those above noted, are often due to an excessive official valuation of such imports, such official valuation going back to the days when it represented the value of such articles in Brazil. It is considered probable that the entire system of official valuations will be done away with in the new tariff system, and that new rates will be fixed upon the basis of present actual values, and with the exchange value of the milreis at 15 pence (30 cents), the present actual rate, instead of 12 pence (24 cents), the present official rate for customs purposes.

CUBA.

SUSPENSION OF EXPORT DUTIES AUTHORIZED.

Minister Edwin V. Morgan transmits from Habana a translation of a Cuban decree dated April 21, which reads as follows:

ARTICLE I. The Executive is authorized to suspend the collection of taxes, created by the law of the 25th of January, 1904, upon sugar, cigars, cigarettes, cut tobacco, and liquors for export.

ART. II. The Executive shall have the power to order the collection of the taxes authorized if the receipts from those already established should not suffice to cover the obligations for which they were created. (Security of a loan raised in the United States.)

ART. III. The Executive shall notify Congress as early in advance as possible, in case it should be necessary to put into force the collection of the taxes the suspension of which is authorized by the present law.

JAPAN.

SANITARY REGULATIONS CONCERNING CANNED GOODS.

Vice-Consul-General E. G. Babbitt, of Yokohama, transmits, under date of March 20, the following analysis of the Japanese regulations concerning canned goods, which is of vital interest to packers:

Law No. 15, promulgated in February, 1900, has for its object the prevention of danger to the public health, and deals with beverages and foodstuffs in general, and the receptacles in which they are contained, saccharine and similar substances, aerated waters, milk, ice, and injurious coloring matter. According to Article 1 of this law the authorities are empowered to prohibit or restrict the manufacture, sale, etc., of beverages and foodstuffs, the receptacles in which they are contained, or cooking utensils, if any danger to the public health is apprehended. The owners of the goods may be compelled to destroy them, or the authorities may destroy them, or take such action as they deem proper.

Article 2 empowers the officials to take, free of charge, as much as is necessary for the purpose of analysis, so that an examination of the goods in question can be made.

Article 3 states that persons who, having received instructions from the proper official, fail to carry out the provisions of the law within the specified time shall be liable to a fine not exceeding 20 yen ($9.96), while persons who hinder an official in the execution of his duty shall be liable to imprisonment for a period not exceeding one month and a fine not exceeding 10 yen ($4.98). Penalties are provided for persons who do not carry out their duties, and also in connection with bribery.

The following are the principal points in the regulations concerning receptacles for beverages and foods:

Receptacles for beverages or foods must not contain lead or an alloy containing more than 10 per cent of lead. (Art. 2.)

No alloy must be used which contains more than 20 per cent of lead for that part of the solder which touches the contents of the tins, nor may the receptacles be lined with an alloy which contains more than 5 per cent of lead.

In soldering the outer portions of tins which contain, or are intended to contain, beverages or foods, persons engaged in this business may not use an alloy which contains more than 50 per cent of lead. (Art. 3.)

The manufacture or repair of enameled receptacles from which arsenic or lead will come out if water containing 4 per cent of acetic acid is boiled in them for half an hour is prohibited. (Art. 4.)

The manufacture of children's feeding bottles from rubber containing lead or zinc is prohibited. (Art. 5.)

Receptacles containing beverages or foods, or intending to contain them, which have been manufactured or repaired in contravention of

the provisions of article 2 and article 5, may neither be sold, nor stored, nor exhibited for the purposes of sale, nor used for the purposes of business. (Art. 6.)

Receptacles for beverages and foods in which the part coming in contact with the contents is made of or repaired with copper or an alloy of copper the plating of which has worn off or which has lost its inherent brightness may not be used in this business. (Art. 7.)

Persons violating these provisions are liable to a fine not exceeding 25 yen ($12.45).

A large proportion of the canned fruits and vegetables imported into Japan comes from the United States, and it will be necessary to closely observe these regulations if the trade is to be retained.

DRAWBACK OF SUGAR TAX ON EXPORTED CONFECTIONERY.

Vice-Consul-General E. G. Babbitt also transmits the original text and a translation of a decree promulgated in the Official Gazette on March 30, and providing for the granting of a drawback on and after April 1, 1909, of the sugar-consumption tax on sugar used in manufacturing confectioneries or sweetmeats, when such confectioneries or sweetmeats are exported to a foreign country in shipments of not less than 396.88 pounds avoirdupois (300 kin). The rebate is to be at the rate of 5 yen per 100 kin, or $2.49 per 132.29 pounds avoirdupois, and must be applied for within one year from the date of exportation.

NICARAGUA.

REDUCTION OF DUTY ON KEROSENE.

Consul José de Olivares transmits from Managua the Spanish text and translation of a Nicaraguan decree dated March 31, reducing the recently increased tariff on kerosene from 0.8 cent to 0.3 cent in American currency per kilo (2.2046 pounds). The report is accompanied by the following explanation:

Under the existing law 75 per cent of the amount of duty is payable at the rate of $5 in Nicaraguan currency for $1 in American gold, the remaining 25 per cent being payable in gold importation bonds, which are purchasable at a shade lower than the current rate of exchange, which is at present $10.20 in Nicaraguan currency for $1 in American gold.

Prior to the establishment of the revised tariff, which took effect on January 28 last, the duty on kerosene amounted to .10 centavo in Nicaraguan currency per kilo. Hence, notwithstanding the reduction of 0.5 cent gold per kilo, as provided by the new decree, the present duty of 0.3 cent gold, which is equivalent to 0.18¾ centavo in Nicaraguan currency, still represents an increase of more than 83 per cent over the former rate.

RUSSIA.

CLOSING OF VLADIVOSTOK AS A FREE PORT.

In transmitting a translation of a letter received from the inspector of customs advising him of the closing of Vladivostok as a free port on March 14, 1909, Consul Lester Maynard writes as follows:

The proposed introduction of a customs tariff (in Vladivostok) has had a tendency to upset the business equilibrium. Many firms

have been heavy importers during the past few months and have now stocks of foreign goods sufficient to carry them for two or three years. On the other hand, a number of the leading firms of Vladivostok have decided to either partially or entirely withdraw from business.

It has been stated that the introduction of this customs tariff would be in effect a Japanese subsidy, and this is proving true even before the tariff is enforced, as business is flourishing in Dalny, and shipments which formerly came to this port are being diverted to the Japanese port where no delays and customs formalities interfere with immediate shipments to Harbin and interior districts of Manchuria.

A great danger in shipping to a northern port during the winter is the risk of freezing, and unless cargo can be promptly removed to warmed "godowns" it may prove a total loss. As the custom-house is not sufficiently supplied with warmed "godowns" there will probably be considerable damage done to the cargo in vessels lying in the harbor, if all wish to clear before midnight on March 13, 1909. That and other inducements have led merchants to ship via Dalny.

Travelers will also use the Dalny route to Europe, as it means a gain of one day and about $15 over the Vladivostok route. It is doubtful if the Russian merchants will profit by the closing of this district for, as before stated, the market is overstocked with foreign goods, and the business depression which is sure to follow will injure the Russian manufacturer.

SALVADOR.

OBLIGATORY ANALYSIS OF IMPORTED LIQUORS AND CANNED GOODS.

Supplementing the information published in Daily Consular and Trade Reports of April 21, the Bureau of Manufactures is in receipt of the official text of the decree of March 29, 1909, which provides for obligatory analysis of all imported alcoholic beverages, wines, and canned goods, the same rule applying to such articles of domestic manufacture by a previous decree. The following fees, in silver pesos (silver peso=$0.375), are charged to cover the cost of analysis: Alcoholic beverages, 0.50 peso per bottle of 24 ounces of the alcoholic strength permitted by law; heavy and white wines, 0.25 peso; table wines, 0.05 peso per bottle; and for each grade above the alcoholic strength permitted by law, 0.03 peso. Canned goods, such as meats, fish, vegetables, etc., will pay 0.10 peso per kilo (kilo=2.2 pounds). All of the above-mentioned articles found to be detrimental to public health will be destroyed. According to a telegram received from the American chargé d'affaires at San Salvador, a decree was promulgated by the Salvadorean Government on May 4, adding beer to the list of articles subject to analysis upon importation, and imposing an analysis fee of 0.03 peso per pint bottle.

VENEZUELA.

EXPORT DUTIES ABOLISHED.

Minister William W. Russell reports, under date of May 21, that an executive decree of May 19 abolished the extraordinary war tax decreed February 16, 1903, on coffee, cocoa, and hides exported from Venezuela. By the decree of 1903 exportation of coffee was subject to a duty of 2 bolivars (bolivar=19.3 cents) per 50 kilos; sweetened cocoa of first quality, 16 bolivars per 50 kilos, and other kinds of cocoa 6 bolivars per 50 kilos; ox hides, 4 bolivars per 46 kilos; deer and buck skins, 5 bolivars per 46 kilos.

The decree abolishing these duties will probably result in increased exportation. Last year exporters of the articles affected had to pay about $800,000 in this tax.

IMPORTATION OF DYNAMITE AND OTHER EXPLOSIVES PERMITTED.

Consul Isaac A. Manning reports that the Government of Venezuela issued a decree, dated May 6 last, revoking the prohibition of the importation of dynamite, nitroglycerin, and other similar explosives.

The regulations covering the deposit of these materials, and the manner of withdrawing them for specific purpose, will be prepared by the minister of finance.

FREE ADMISSION OF APPARATUS FOR BURNING ALCOHOL.

Consul Manning further reports, from La Guaira, under date of April 28, that by resolution of the Federal Government of Venezuela the free importation of apparatus for the burning of alcohol, including motors, lamps, especially for the use of alcohol in the production of light, and not adapted to other fuel, and the necessary parts of such lamps, including wicks, burners, mantles, etc., has been extended for one year from April 18, 1909.

FOREST PRODUCTS.

CORK-WASTE TRADE.

ALGERIA.

ONLY SMALL SUPPLIES ARE AVAILABLE.

Consul James Johnston, of Algiers, sends the following information in regard to cork waste in Algeria:

There are no manufactories of corks in Algeria of sufficient importance to make the exportation of the waste worth while. A considerable quantity of waste is produced in preparation of the bark for exportation, some 3,000 tons per annum. This waste is a little coarser than that produced in the manufacture of corks. The present price is 6 francs per 100 kilos ($1.16 per 220 pounds) delivered on quay at Algiers. The freight to New York in sacks is 40 francs ($7.72) per ton of 1,000 kilos. In compressed bales it would probably be 10 francs less, depending on the quantity.

No cork for packing grapes is at present produced here, but for a quantity sufficiently important the house at the head of the trade in Algiers would be willing to install the necessary plant and ship the article at the rate of 14 francs per 100 kilos, quay Algiers, sacks at the cost of the buyer.

It does not appear probable that there will be any important difference in price during the next 5 years, say, 20 per cent at the outside, one way or other. The opinion of most people interested is that the probabilities are in favor of a slight fall. [The addresses of dealers in cork refuse in Spain and of the firm alluded to in Algiers may be secured from the Bureau of Manufactures.]

SPAIN.

HANDLING METHODS AT CENTERS OF INDUSTRY.

Replying to a Kansas inquiry relative to refuse cork in Spain, Consul-General Frank D. Hill, of Barcelona, submits the following:

Refuse cork (shavings and useless pieces) is not graded. The only market requirements are that it be not too damp nor too dirty. Loose cork waste from factories is sold at 5 pesetas ($0.87) per 100 kilos (220 pounds). It is usually sold compressed into bales, the average price being $15.82 to $17.03 per ton of 1,015 kilos (2,233 pounds) f. o. b. at San Feliu de Guixols or Palamos, the centers of the cork industry in Spain. Ground cork for packing fruit is quoted at 35.5 pesetas ($6.14) per 100 kilos (220 pounds) f. o. b. San Feliu.

Prices are steady, and unless demand should increase unexpectedly it is not anticipated that they will rise during the next few years.

Present stocks of refuse cork are not very large, supply being subject to fluctuations. Contracts are generally made for future delivery.

Cork refuse is not shipped to the United States in bags, which are used only for ground cork. Freight rates on cork waste compressed into bales vary from 19s. to 21s. per ton ($4.62 to $5.11), according to quantity shipped.

CROW'S-FOOT ELM.

PROBABLE AUSTRALIAN SUBSTITUTE FOR AMERICAN HICKORY.

In response to inquiries made by American wagon manufacturers, Consular Agent Asbury Caldwell, of Brisbane, furnishes the following information concerning the crow's-foot elm of Queensland and its use as a probable substitute for hickory:

In a previous report attention was called to the fact that the director of forests in Queensland had urged upon carriage manufacturers the value of crow's-foot elm as a timber for use in that trade as a substitute for the rapidly disappearing American hickory. In response to a request made through the Department of Commerce and Labor for further information, it may be stated that crow's-foot elm is a perfect substitute for American hickory for use in wheels, shafts, poles, and spokes. The chief engineer for railways in Queensland reports that exhaustive tests of the timber are being made by his department, the result of which will be placed at my disposal at a later date. The director of forests, Mr. P. MacManon, supplies the following statistics:

Crow's-foot elm is Tarrietia argyrodendron (Bentham). There are two varieties. One is dark in color and the other is light. The latter is found in the southern part of Queensland, where it is often called hickory, to which wood it bears a decided resemblance. The darker variety is found chiefly in North Queensland, where it occurs in great abundance, attaining a height of over 100 feet, with a long clean barrel having a diameter of from 3 to 5 feet and sometimes more. The dark variety is also found in South Queensland, where, though quite a large tree, it does not attain the same size nor is it so plentiful as in the north.

The wood of the darker variety is very beautiful when cut in the radial direction, being of a light golden ground mottled with flakes of bright brown. The color changes as the wood is held at different angles to the light. It is now being used by the government railways for railway carriage fittings, on account of the beautiful color and grain. It is extremely elastic. I have had it made into trout rods and have tested it in several ways. A carriage woodware company at Nundah is using it for spokes, and it is being made into ax and hammer handles in a factory in Cairnes, North Queensland. I have had it tested at the physical laboratory of Melbourne University, when pieces 36 inches span by 1.96 inches breadth by 1.92 inches depth having a breaking load of 2,350 pounds, the modulus of rupture being 17,560 pounds. The weight per cubic foot is about 46 pounds. A piece 2 by 2 inches has held its form, after bending into a semicircle, for two years. The ends were free. There does not seem very much to choose between the light and dark varieties, but the light is preferred by many as bearing a resemblance to hickory. I have known it to be used in a buggy pole in exceedingly rough country for eight years, replacing a pole of American hickory which broke.

It is necessary to state that great care is required in preparing this timber. It should be felled only in winter, cut up at once, and carefully stacked with access of air to each piece. The price of the dark variety is about $6 per 100 superficial feet sawn f. o. b. Cairnes, and the light kind about $5.35 f. o. b. Brisbane. I could procure exact quotations if I knew about quantities, conditions, etc.

The quotation for steamer freight rates from Brisbane to San Francisco is $15.81 per 1,000 superficial feet with a minimum of $5.84

for smallest shipment. From Brisbane to New York City the lowest quotation at this writing is $3.65 per 100 superficial feet. The supply of this timber is said by the director of forests to be such as can scarcely be exhausted by any demands which may be made upon it for at least a generation to come.

Further replies to my inquiries have come to hand in regard to this timber to the following effect:

The government railway construction works has steamed and bent some of this timber for roof sticks for carriages, but reports that it cracked in the bending.

The timber is procurable in the Cairnes district in large quantities, and logs are obtainable from which planks up to 36 inches in width may be cut. The lowest quotation at Cairnes, f. o. b., is about $2 per 100 feet in the log, and $2.50 per 100 superficial feet in the wagon at the sawmill, if sawn. The district engineer for railways states that "this timber does not possess the oily nature of the spotted gum, but loses its nature when dry, and becomes brittle." A large timber merchant sent a quantity to a boat builder in Melbourne for boat ribs, and when steamed for that purpose it kept its shape well. A cabinetmaker uses it for making chairs, and finds it very good for that purpose; he has had logs up to 87 inches in girth.

ROOFING FOR PARAGUAY.

OLD SPANISH STYLE OF TILING IS STILL IN GENERAL FAVOR.

Consul Edward J. Norton, of Asuncion, sends the following report on the prospects of introducing prepared roofing in Paraguay:

Paraguay is not a promising market for prepared or finished roofing. Following the customs of centuries, house owners and constructors believe in putting weighty and solid material in all buildings. It is only in the past year or two that steel has been used in the construction of large buildings, replacing the large and excessively heavy hard-wood beams that have been regarded for years as the only safe material.

In the office of public works the register shows that only 1,132 new buildings of all kinds have been erected in Asuncion during the period from January 1, 1900, to December 31, 1907. The cost of the buildings constructed in this seven-year period is estimated at $1,500,000 gold.

The walls of the older houses in Asuncion are very thick, frequently a yard through, but the newer buildings are being constructed in a less bulky manner. The older buildings are preferred for residence purposes, as their thick walls tend to keep out the heat of summer. The ceiling joists are of hewn hard wood, about as durable as steel. On these joists a rough covering of split bamboo and plaster is laid, and finally the curved tile roof.

The majority of the buildings in Asuncion have pitched roofs. The curved tiling produced by local factories is used generally for the outer covering. The tiles are worth about $10 gold per 1,000.

OBSTACLES ENCOUNTERED—CORRUGATED IRON AND RUBBER ROOFING.

In order to use the light, prepared roofing material, such as rubber or waterproofed material, it would be necessary to construct the inner

roof of boards, in order to properly lay the prepared roofing. Boards, or timber of any kind, are more expensive than tiling, and this is an additional obstacle to the introduction of finished roofing material.

Roofing material, with the exception of corrugated iron, is subject to a duty of 55 per cent ad valorem. Corrugated-iron roofing is rated at 20 per cent ad valorem.

Corrugated iron is used for sheds, warehouses, and to a limited extent for houses. It is relatively cheap, easily laid, and the demand for it is growing. Iron roofing is about the only kind of covering which American manufacturers can sell to Paraguay. Imports of American corrugated iron are steadily increasing.

Two kinds of rubber roofing are now represented in Asuncion, but sales are very light.

[Addresses of Asuncion firms (Spanish) handling roofing material are on file in the Bureau of Manufactures.]

TURPENTINE IN DOMINICAN REPUBLIC.

FORESTS CONTAIN MANY TREES PRODUCING GUMS AND RESINS.

Responding to an inquiry concerning timber lands in the Dominican Republic for the manufacture of resins and resin oils, Consul Ralph J. Totten writes from Puerto Plata:

There are thousands of acres of uncut pine lands in the interior. This pine is very rich in resin. One of the varieties, which goes by the local name of suaba, is so saturated with resin that it is used by the country people as torches. Pieces of the wood may be lighted with an ordinary match and burn freely.

Other gums and resins are found in fairly large quantities, some of which produce a good grade of rubber, although not the commonly known rubber tree. The Guayacan resin is found in certain districts in the interior, and also a gum which burns, producing a smoke similar to incense.

Undoubtedly other resins of commercial value could be found if intelligent research were made, and good returns could be secured from capital invested. Already one company is in the field engaged in the manufacture of turpentine. Its object is to tap the pines for about two years and then to fell the trees and saw them into building lumber for local consumption. The company is producing a good grade of turpentine, which it is selling for $1 per gallon, locally. [The names of people with whom the consul suggests that correspondence may be carried on with reference to the pine forests of the Dominican Republic may be obtained from the Bureau of Manufactures.]

INDUSTRY AND LABOR.

CHINESE NAVY PLANS.

ORGANIZATION OF A GOVERNMENT BOARD TO DEVISE PROPOSALS.

Minister W. W. Rockhill transmits from Peking the following translated copy of an Imperial Chinese edict issued on February 19, 1909, ordering the formation of a board for the purpose of devising a plan for the creation of a navy:

Shan-ch'i, Prince of Su, has submitted to us a memorial requesting that preliminary steps toward the creation of a navy be taken. The substance of the memorial reveals foresight. The creation of a navy is important in the government of the country. Let Shan-ch'i, Prince of Su; Tsai-tse, Imperial Duke of the First Degree; T'ieh-liang, President of the Board of War, and Admiral SaChen-ping make these first preparations as outlined in the memorial referred to. Let I-k'uang, Prince of Ch'ing, constantly examine into what they do, so that they may exercise due caution. When the essentials of the course of action to be followed have been settled, let further instructions be requested.

Inasmuch as the duties of T'ieh-liang are many and important, let him be relieved from his post of commissioner to train a palace guard, so that he may with undivided attention attend to these preparations and the nation thereby be strengthened.

CONSTRUCTION ENTERPRISES.

BRAZIL.

PLANS FOR LARGE COFFEE WAREHOUSES AND EXPORTING FACILITIES.

Deputy Consul Dirk P. De Young, of Santos, makes the following report upon the proposals for the erection of warehouses, etc., for the better movement of the coffee crop in that Brazilian State:

The Brazilian Warrants Company, with a capital of $1,458,000, has recently been organized in London, under the laws of the United Kingdom, to take over the two organizations, the Companhia Paulista de Armezems Geras and the Companhia Registrada de Santos. The company proposes to build large warehouses and establish better banking, commission, and exporting facilities for the coffee trade of the State of Sao Paulo. In addition to the extension of storage accommodations for Santos, it will build warehouses in the interior for the benefit of the planters, where coffee can be stored at a lower rate than in the railroad sheds heretofore used. The promoters are guaranteed 6 per cent on this investment by the government of the State of Sao Paulo.

The Paulista Railway Company has recently made a 10 per cent reduction in freight rates on all its lines, which extend largely into

the coffee-growing districts of this State. This reduction was made without any special outside pressure and is supplemental to an equal reduction made by it in the year 1907. This concession, it is calculated, will mean a saving of about 1,500 contos (about $450,000) to the planters, provided the amount of coffee shipped over the company's lines is the same next year as it was during the last. As this line carries the coffee only as far as the city of Sao Paulo, and the St. Paulo Railway Company from there to Santos, with rates higher than the rates from here to New York, for a distance of only 45 kilometers (kilometer = 0.62 of a mile), the need of a reduction at this end of the freight service is quite apparent.

CANADA.

HARBOR FRONTAGE OF PRINCE RUPERT.

Consul Abraham E. Smith, of Victoria, reports that final agreement has been made between the provincial government of British Columbia and the Grand Trunk Pacific Railway Company in regard to the water frontage at Prince Rupert. The total frontage of the town site upon the harbor at Prince Rupert is 28,000 feet, or about 5.3 miles. This is divided into 10 parts, of which the Government retains 5, alternating, and having an aggregate frontage of 8,500 feet, the remaining 5, with a total frontage of 19,500 feet, going to the railway company. This is expected to secure free access to the water at all times, and permit erection of public and private wharves. After a recent survey of the entrance and harbor, engineers of a British ship pronounced it the finest in Canada. The harbor is formed by a protected curved inlet 16 miles long, a mile broad, and 26 fathoms deep on an average. The bottom has good holding for anchors, and there is 30 feet of water at the lowest tide.

NORTHWEST DEVELOPMENT.

MORE SETTLERS FROM THE UNITED STATES—AVAILABLE HOMESTEADS.

Consul Franklin D. Hale, of Charlottetown, sends the following information in regard to immigration into the Canadian northwest, and its agricultural development:

It is conservatively estimated that from 75,000 to 100,000 people will leave the United States during the year 1909 to settle in Canada, mostly in the western provinces. A very large per cent are well-to-do farmers, and the total amount of wealth which they will bring will be many millions of dollars. It is reported that the many thousands of immigrants who came from the States in the past years at once established their strong personality, and allied themselves with the best and highest interests of the locality and country to which they had emigrated.

Since 1903 over 200,000 homesteads have been granted to settlers; the population of the Dominion has increased over 1,000,000; the total trade has increased $178,000,000; the revenue has increased $30,000,000; the product of grain in the three great western agricultural provinces has shown an increase of nearly 100,000,000 bushels.

The minister of the interior has submitted figures showing that there are still available for homesteads in the province of Manitoba 17,825,000 acres; in Saskatchewan 104,878,000 acres, and in Alberta

117,369,000 acres. There have already been disposed of to settlers in the three provinces, in homestead and preemption rights, 37,963,150 acres, while the railroad lands disposed of in the provinces amount to 31,864,014 acres.

JAMAICA.

REBUILDING AT KINGSTON MAKES OPENING FOR SUPPLIES.

Consul Frederick Van Dyne reports that with the extensive rebuilding operations now going on in Kingston and the increasing popularity of concrete construction throughout Jamaica, a promising field for American cement has been opening up, as the following indicates:

This condition is favored by the action of the legislative council in amending the local tariff law so as to place Portland cement on the free list. During the fiscal year 1906 there were only 81 barrels of cement exported from the United States to Jamaica. In 1907 the American exports aggregated 7,742 barrels. The total imports of cement for the fiscal year 1908 were 72,849 barrels.

The great bulk of this trade is with England, but with the much shorter distance and consequently lower freight charges the advantage is greatly in favor of the United States. The rapid increase in sales of this product has induced British companies to send their agents to Jamaica to endeavor to retain the trade, and in at least one case the manufacturer himself has come to Jamaica.

Excellent pioneer work has been done here in the way of introducing American cement, and the trade has been successfully initiated. Unless it is followed up, however, by sending experienced American agents to Jamaica to advertise and push sales, the advantages gained will be lost.

SHORT POSTAGE.

In this connection it seems proper to call attention to the failure of American manufacturers to place sufficient postage on letters to this country. There seems to be a very general impression that the 2-cent rate which applies to Great Britain is applicable also to Jamaica. This is not the case, and as the double penalty for short postage is in vogue here, if a 2-cent stamp is placed upon a letter addressed to Jamaica the recipient is required to pay 6 cents thereon—3 cents to make up the deficiency and a second 3 cents as penalty. This may appear to be a small matter, but it is the cause of a great deal of dissatisfaction among the business classes here.

ROUMANIA.

ARRANGING FOR A LOAN TO CARRY OUT BUCHAREST MUNICIPAL WORKS.

Consul-General Norman Hutchinson, of Bucharest, sends the following translated copy of a preliminary announcement in regard to the expenditure of over $2,000,000 for public improvements in the Roumanian capital:

The Minister of Interior, on March 24, submitted to the Chamber of Deputies the draft of a law authorizing the commune of Bucharest

to contract a loan with a nominal value of 10,500,000 francs ($2,026,500) for the execution of different municipal works, as follows:

1. The installations for the production of motor power necessary for the different communal services, as tramways, lift pumps, workshops, etc.; also the first participation of the municipality for the foundation of the new tramway association, with a competition open up to 3,000,000 francs ($579,000).

2. The continuation of the sewers, with a competition open up to 2,500,000 francs ($482,500).

3. Constructions and transformations of the refuse department, the water reservoirs of Bacu, primary schools, markets, and the completion of slaughterhouses, with a competition open up to 3,000,000 francs.

4. The pavements and the new works in the streets and the arteries of the city, the parceling out of the public gardens, and the continuation of the works for the distribution of water, with a competition open up to 2,000,000 francs.

SIAM.

PUBLIC WATERWORKS FOR THE CITY OF BANGKOK.

Minister Hamilton King, of Bangkok, sends the following information in regard to the plans for waterworks for the Siamese capital:

The Siamese Government has decided to put in a system of waterworks for the city of Bangkok in the immediate future. It is estimated that the cost will be about 3,000,000 ticals, or a little more than $1,000,000 gold, with the gold tical at 36¼ cents, for which the appropriation has already been arranged. The plans are in the hands of two of the government engineers, and will soon be completed. The work will be done by the Government, under the supervision of the Public Works Department, and it is expected the work will be completed inside of three years.

The system in general will consist of an open canal, which will tap the Menam River about 25 miles above the city, with filter beds and pumping station in the city. It is understood that the specifications will be issued in a few months, and that the supplies will be purchased through tenders.

ERFURT SHOE INDUSTRY.

GERMAN MANUFACTURERS WILL SEEK AMERICAN TRADE.

Consul Will L. Lowrie writes that three of the largest German shoe-manufacturing establishments in Erfurt are now in charge of experts from the United States. He also tells of their industrial operations:

All these factories are producing American-shaped shoes, which are meeting with ready sale in Germany. Certainly one, and perhaps all, of these concerns will make a display at the forthcoming Shoe Exposition in Boston (in September, 1909) and will try to secure a foothold in the American market.

The average wages paid are shown in the following table:

Class of employees.	Average weekly wages.	Class of employees.	Average weekly wages.
Females:		Machine hands:	
Apprentices	$1.42 to $1.90	Edge trimmers	$6.42 to $7.14
Closers on	3.33 to 3.57	Heel trimmers	6.42 to 7.14
Sewers	[a] 4.28	Edge finishers	6.42 to 7.14
Males:		Bottom finishers	4.28 to 4.76
Apprentices	1.42 to 2.85	Die cutters	[a] 5.71
Upper cutters (hand)	5.23 to 6.42	Eyeleting hands	[a] 7.14
Upper cutters (machine)	6.42 to 7.14	Heel builders	4.76 to 5.71

[a] Average.

GERMAN WATERWAYS.

THE EMPIRE IMPROVING AND EXTENDING WATER ROUTES.

In reply to a communication from Chicago concerning the extent and importance of the inland waterways of Germany, Consul Robert J. Thompson, of Hanover, furnishes the following information:

An eminent German economist writes as follows concerning German waterways and canals:

> Many circumstances which, in former times, gave superiority to certain countries, such as the greater skill of their workmen, superior machinery, cheaper wages, greater natural fertility of the soil, etc., are gradually being leveled down by time and progress. What will remain is the advantage of a well-planned system of transportation which makes the best possible use of local resources and local advantages. Any means whereby the distances which separate the economic centers of the country can be diminished must be welcomed and considered as progress, for it increases strength in industrial competition with foreign countries. Every one who desires to send or receive goods wishes for cheap freights. Hence the aim of a healthy transport policy should be to diminish, as far as possible, the economically unproductive cost of transport. A country such as Germany, which produces on her own soil a large part of the raw material and food which it requires, occupies the most independent and most favorable position if, owing to cheap inland transportation, its economic centers are placed as near as possible to one another. When this has been achieved Germany will be able to dispense with many foreign products and will occupy a position of superiority in comparison with those States which do not possess similarly perfect means of transport.

WHY GERMANY HAS BUILT CANALS.

It is with this policy that Germany has built up and is continually improving and extending her inland waterways. During the past twenty years it has expended $150,000,000 on her waterways, and it has now, in navigable rivers, canalized rivers, and inland canals, over 8,278 miles of navigable waterways. The German-Austrian and the Rhine-Elbe canals, already begun, contemplate the expenditure of nearly $350,000,000.

Regardless of the fact that the railroads are owned by the Government, more properly perhaps on account of that fact, it is held an economic principle by Germany that means of transport should be open alike to all, and while the development of the railroads, contrary to the expectation of their early projectors, has made the owners of such roads the only carriers, the Government of Germany, in competition with itself as a railroad carrier, is spending hundreds of

millions of dollars on its canals that means of transport may be as free and open as they are upon its country roads and highways.

DORTMUND-EMS CANAL AND THE RHINE TRAFFIC.

The Dortmund-Ems Canal, intended to divert some of the enormous Rhine traffic at Cologne, from Rotterdam to a German port at Emden, cost Germany $16,000,000. It is 116 miles long and 8 feet 3 inches deep. German commerce during the past thirty years has been the chief force in the remarkable prosperity of Rotterdam, Amsterdam, and Antwerp.

A prominent German economic and political authority, speaking on this subject, says:

> In our time our dependence on foreign countries has frequently been felt by the circumstance that the mouth of the Rhine is in the hands of a foreign country, and that that country in consequence draws away the chief profit of our export industry. This state of dependence will be ended by the Dortmund-Ems Canal, which gives to the Rhine, at least for the province of Westphalia, a German outlet at Emden.

Rotterdam has taken extraordinary measures to meet this departure on the part of Germany, and has, during the past few years, increased her dock area from 96 to over 309 acres and deepened its harbor from 15 to 29½ feet.

The importance of the Rhine freight transport (an example of several equally intensively utilized improved waterways of Germany) may be seen in the fact that for the years given the through traffic of goods passing the Holland-German frontier has amounted to the following rapidly increasing figures:

Year.	Upstream.	Downstream.	Year.	Upstream.	Downstream.
	Tons.	*Tons.*		*Tons.*	*Tons.*
1889	2,799,800	2,593,000	1900	9,036,400	4,129,700
1894	4,771,500	3,142,000	1903	10,027,900	7,211,900
1897	6,929,100	3,480,200	1906	13,402,400	7,678,300

Freight transportation on the Rhine costs an average of $\frac{3}{16}$ of a cent per mile per ton, a rate which if applied to the shipment of materials such as steel, grain, or machinery from Chicago to St. Louis, under like conditions, would cost for the entire distance 50 cents per ton of 2,000 pounds.

The cost of carrying coal by railroad from the mines to the several industrial centers of Germany ranges from 50 to 115 per cent higher than by canal, and this with an exceedingly low freight rate.

WATERWAY AND RAILWAY TRAFFIC.

Germany's inland fleet numbered in 1902, 24,127 boats, with tonnage of 4,870,509 tons. The traffic per kilometer on Germany's waterways is something like 50 per cent greater than per kilometer of railroad, the figures in 1895 being: Water transport, 750,000 tons per kilometer; railroads, 590,000 tons per kilometer (kilometer=0.62 mile).

The relative cost of moving freight by land and water may be seen by the following: A horse can pull at a speed of 3 miles per hour on level road, 2 tons; on railroad, 15 tons; on canal, 80 tons.

Canals under ordinary circumstances (the Panama mountain cutting being an unusual and extraordinary exception) can be built considerably cheaper than railroads. Boats and barges cost one-fifth as much as freight cars per tonnage capacity. The waterways and boats

may be maintained at an insignificant comparative expense, and a steam-towed cargo of freight on a good, broad canal or waterway will travel 1,000 miles in less time than the railroads require to deliver the same amount of freight; a fact due to crowded rails, congested terminals, and car shortage.

CANALS VERSUS RAILWAYS.

An English political economist, after a thorough study of Germany's inland waterways, says:

> If the German waterways should be blocked for a year the whole of Germany would probably be ruined, for Germany can not live without her waterways. A further circumstance in favor of water traffic lies in this: That far more traffic can pass over a broad canal than can be sent over a railway. It is, therefore, clear that transport by water is and must always remain, owing to its very nature, so very much cheaper than land transport, be it by road or rail; that railroads can not possibly compete with properly organized, properly managed, properly planned, and properly equipped waterways. Hence it is economically wasteful not to extend and develop the natural and artificial waterways which a country possesses, and it is absolutely suicidal and criminal to let them fall into neglect and decay.

The United States could, perhaps, reach no more practical result nor one of possibly greater advantage to its enormous producing interests than by turning its attention in the direction of the improvement and development of its waterways. The mileage of the inland waterways of Germany, if possessed by the United States in proportion to our area as compared to that of Germany, would be equivalent in lineal measurement to 40 parallel waterways east and west from the Atlantic to the Pacific, and 20 parallel waterways north and south from Canada to the Gulf; and that would mean a network of canals for a State like Ohio, say running east and west and north and south, which would be something like 40 miles apart from boundary to boundary in all four directions. With this in view, the importance of Germany's waterways may be properly appreciated by the American student of this subject.

SAXONY.

TRANSPORTATION RATES BY RAIL AND WATER.

Deputy Consul-General Ulysses J. Bywater, of Dresden, says that transportation in Saxony is principally by the state railroads, the few existing canals being principally cuts across the bend of rivers. His report continues:

There is, however, a large traffic on the River Elbe, the Saxon part of which is navigable practically all the year. This river traffic is in the hands of a private company. A fair average of transportation distance in Saxony is from Schandau, on the Bohemian frontier, to Dresden, the distance by rail being 40 kilometers (25 miles) and by water 45 kilometers (28 miles). The rates for transportation of general merchandise for this distance (28 miles) on the River Elbe are 7 marks ($1.66) per metric ton (2,204.6 pounds) for small shipments, and 6 marks ($1.42) per metric ton for shipments over one-half ton. The rate by rail (25 miles) is 6.2 marks ($1.47) per metric ton.

These rates are therefore $0.0599 per metric ton per mile for small shipments, and $0.0507 for shipments over one-half ton by water, and $0.0588 by rail.

POPULATION AND TRADE.

EFFECTS OF INDUSTRIAL DEPRESSION ON GERMAN CITIES.

Consul George Nicolas Ifft, of Nuremberg, supplies the following statistics showing the effect of a year of industrial depression on the populations of the leading German cities:

Few German cities show any marked increase in population during the year 1908. Nuremberg was more prosperous than most of them, but must thank its birth-rate excess for practically all of its increase in population. Some of the leading industrial and trade centers show actual losses during the year. Berlin, the capital of the Empire, and a city which for years grew at a rate only exceeded by that of some of the boom cities of the United States, is one of the latter. The population of Berlin at the close of the year 1907 was 2,111,361; at the close of the year 1908 it was only 2,106,942, a net loss in population of 4,419. The vital statistics of the city show an excess of births over deaths of 16,415, but this was more than overbalanced by a net loss by emigration of 20,834. In the month of March, 1908, a month of great industrial activity and good demand for labor, no less than 30,208 residents of Berlin left that city for new fields.

The population of Nuremberg at the close of the year 1907 was 311,651; at the close of the year 1908 it was 316,176, an increase of 4,525. During the year there were 10,044 births and 5,600 deaths, which gives a natural increase of 4,444—practically the entire increase in population. This increase, 1.45 per cent, was much below 3.34 per cent, the average for the last thirty years of the city's history. The wage-earning portion of the population (number of persons subject to assessment for sick-benefit insurance, less those reported unfit for work) at the end of the year 1907 was 106,300, and at the close of 1908, 101,863—a loss of $4,437 for the year.

The year 1909 has started with still further losses in this part of Nuremberg's population, the wage-earners numbering on March 1, 1909, 101,080 (65,934 males and 35,146 females) as compared with 102,227 (68,269 males and 34,008 females) on March 1, 1908. These figures do not indicate that any industrial revival has as yet set in. Figures from other industrial centers indicate similar, or even still less satisfactory, conditions.

MEDICAL TOPICS.

DENTISTS AND DENTAL SUPPLIES.

BRAZIL.

HOW AMERICAN AND EUROPEAN GOODS ARE REGARDED IN BRAZIL.

Consul-General George E. Anderson, of Rio de Janeiro, reports as follows concerning the trade in dental and surgical instruments and supplies in Brazil and the conditions under which the trade is conducted:

While there was a decrease in the imports of dental and surgical instruments and apparatus into Brazil in 1908, in keeping with the general decrease in imports for that year, there was a large increase in dental and surgical supplies, due to a great extent to government purchases for the hospitals, as will be seen by the following statement:

Articles.	Imports from all countries.		Imports from the United States.	
	1907.	1908.	1907.	1908.
Instruments and apparatus	$395,198	$230,116	$163,797	$47,372
Supplies	33,736	129,180	358	98,239
Total	428,934	359,296	164,155	145,611

In instruments and apparatus about three-fourths the total decrease was at the expense of the United States, while more than all the increase in supplies was in favor of the United States. The general trade has been with Europe in surgical instruments and with the United States in dental instruments and apparatus, and the trade in supplies and accessories has generally followed that in instruments and apparatus. The use of American dental instruments and apparatus, as well as supplies and accessories, in Brazil, depends not only upon their general high merit, which is universally admitted, but upon the favor in which American dentistry in general is held, due to the dominance of American practitioners. [A previous report from Mr. Anderson described the practice of dentistry at Rio de Janeiro.]

In the line of surgery Europe has a similar advantage for similar reasons. Brazilian physicians and surgeons are generally European trained, either through the medium of Brazilian schools dominated by European thought and medical and surgical methods, or through

actual training in Europe. The American manufacturers of such goods have not done as much in this field as they might, particularly in some lines. In hospital fittings, for example, few Brazilian hospital authorities know what Americans are doing. About 3 years ago an American official made a gift to the largest hospital in Rio de Janeiro of certain surgical apparatus. The gift was followed by an order from this hospital for a complete outfit of the apparatus. The incident is suggestive. Since that time considerable has been done by American manufacturers, and the reputation of American goods in such lines is constantly improving.

PECULIAR TRADE CONDITIONS.

One great drawback to trade in both dental and surgical instruments and apparatus in Brazil is the heavy duty charged upon most of such articles. This operates in a general way more to the disadvantage of American apparatus than of that of any other country, for American goods are more elaborate, more expensive, and often come under custom classifications less favorably treated than goods of less elaborateness from other countries. Customs charges on such goods can be avoided in sales direct to hospitals, but such sales require more thorough agency arrangements in Brazil than most American houses now possess.

One feature of this trade in Brazil, which merits more careful attention on the part of American exporters of such goods, is that of agencies. Contracts for hospital work and for governmental and other equipment in large amounts are let only to local bidders. This is not only a policy of the Brazilian authorities concerned in the trade, but it is actually necessary under Brazilian law in most cases. American concerns can not get in touch with this trade at all, except through local agents, and not only should such local agents be furnished with proper catalogues, discounts for goods sold in large quantities, and all similar data, but as far as possible they should be compelled to carry a considerable stock of the goods to be sold. So far as ascertainable, every contract let by public or hospital authorities in this portion of Brazil in recent years, in which American goods have been concerned, has been let for goods actually shown at the time the bids were made.

THE HYGIENE EXPOSITION.

In this connection attention should be called to the International Hygiene Exposition to held in Rio de Janeiro in August of the current year in connection with the International Sanitary Congress. [See report in Daily Consular Reports for March 3, 1909, No. 3420.] The indications are that this will offer an exceptional opportunity for the introduction of all kinds of surgical and dental instruments, apparatus, supplies, and accessories, and that an opportunity will be had not only to introduce American goods into Brazil but to exhibit them to prominent hospital and sanitary authorities from all Central and South America. The United States will have a prominent part in the deliberations of the congress, and the opportunity for the advancement of the American interests in the trade in all varieties of surgical, dental, and sanitary products seems exceptional.

DENMARK.

AMERICAN MANUFACTURES SHOULD COMMAND THE MARKET.

Consul-General Frank R. Mowrer, of Copenhagen, furnishes the following information concerning the regulations governing the practice of dentistry in Denmark and the sale of dental goods in that market:

The population of Denmark proper may be estimated at 2,500,000, and the number of dentists is 310. Among the practitioners it is not known that there are any American citizens, but the American system of dentistry is employed by many, and several of the more important dentists are graduates of American dental colleges or have learned their profession in the United States. There is a school of dentistry in connection with the University of Copenhagen, where instruction is given by graduates of American and other dental colleges. Clinics are conducted and practical work performed.

Permission to engage in the practice of dentistry is granted under the following general regulations: The applicant must be a graduate of the dental school connected with the University of Copenhagen, or have passed its examinations, and been an assistant to a dentist for at least one year. A license to practice dentistry is issued for each city or town separately.

Dental goods, instruments, and apparatus are sold by surgical-instrument and hospital-supply houses, and at special depots, which represent exclusive agencies, usually of English or German firms. Complete outfits are not carried in stock, and it is often necessary to specially order chairs, motors, lathes, etc. With the progress of the science of dentistry and invention, equipments of dental offices are becoming more modern and up to date. In this respect American apparatus and appliances can claim special efficiency and popularity and should command the market. [Addresses of leading importers of dental goods and of those who might become interested therein are on file in the Bureau of Manufactures.]

FRANCE.

METHODS NECESSARY TO OBTAIN A MARKET FOR AMERICAN GOODS.

Consul William Bardel, of Rheims, reports as follows in regard to the possible increase in the sales of American dental supplies in France:

The dental laws passed by France in 1892 have been much felt since 1900, since which time a number of first-class French dentists have commenced to practice in a field which before that time was almost exclusively held by American and English dentists. This movement is still progressing. The number of dealers in and manufacturers of dental goods has also greatly increased. One English manufacturer has enlarged his Paris branch and opened branches at Lyons and Marseille, and German and Swiss houses have also opened salesrooms in Paris.

While such efforts to gain a foothold for their wares in France were made by the European houses, American manufacturers, who are credited with making by far the best dental goods, have made no such

movement to extend their trade. As it is, most of the leading dentists here use chairs and engines of English, German, and Swiss make.

SOME OBSTACLES TO BE OVERCOME.

Although the dentists state that while the dental goods they use are inferior to those of American production, a great drawback to the use of the latter, particularly American engines, is that if an engine gets out of order the only means of getting it repaired is to send to the United States for the needed parts or, in aggravated cases, the whole engine. This entails loss of time and great expense, and this fact is used by representatives of other importing houses as a forceful argument against American engines. The higher prices of American chairs also prove a disadvantage, even though they are recognized as being the best.

If the sale of American dental goods were pushed here with the same efficiency as those of other makes they would be bound to sell. A dentist who never sees a representative selling American goods or who, when he goes to a depot, rarely has such goods commended to his notice is not likely to buy simply on receipt of a catalogue.

With the fact in view that American dentists practicing here will gradually be superseded by French dentists, in order to increase sales it is advisable to make the same effort to do business here as in the United States, by opening a branch house and by sending out from it salesmen who are in every way capable of selling goods. All American manufacturers making goods suitable for export who have adopted this course have had no reason to regret it.

ST. ETIENNE.

SUPPLIES OBTAINED IN LYONS AND PARIS.

Consul William H. Hunt furnishes the following information concerning dental goods in St. Etienne:

In answer to a communication from New York it may be stated that St. Etienne, a French city of about 150,000 inhabitants, has 10 dentists, all of whom have American dental chairs, engines, and lathes installed in their offices. In St. Etienne there are no dealers in this class of goods. All such agencies are in Paris or Lyons. Dentists here purchase their supplies through Lyons. These agencies have traveling salesmen who pass through this section about once a month.

In view of the fact that the outlook for doing business direct with St. Etienne is not favorable at present, making some connection or establishing an agency at Lyons or Paris would be the best means of securing trade. [Lists of the names of the dentists in St. Etienne to whom catalogues in French may be sent and of the Lyons houses from which the St. Etienne dentists receive their goods are on file in the Bureau of Manufactures.]

GERMANY.

BETTER CARE OF TEETH INCREASES DEMAND FOR DENTAL SUPPLIES.

Consul-General A. M. Thackara, of Berlin, reports that the German people during the last decade or more have experienced quite an awakening concerning the greater necessity of caring for the teeth. The feeling which prevailed only a generation ago against having the serv-

ices of a dentist does not now obtain. The effect of this attitude upon the sale of dental goods is outlined by the consul-general as follows:

This movement for the better preservation of the teeth is asserting itself in the public schools. For several years past instruction has been given to school children regarding the manner in which they should care for their teeth. In certain cities the teeth of all school children under 14 years of age were examined for the purpose of ascertaining what percentage among them received dental treatment. The result of this examination showed a strikingly small part who had ever received any dental care. To remedy this condition among the children, free dental treatment has been provided, the school children being given certificates which they present to certain specified practicing dentists. These certificates are in turn collected by the dentist and returned to the proper official for payment.

In Berlin there are approximately 1,500 practicing dentists. It is estimated that the number of people receiving actual dental treatment, other than merely for the extraction of the teeth, represents between 10 and 15 per cent of the total population. Dentists state that this percentage is larger than it formerly was and is gradually increasing.

GERMAN-MADE SUPPLIES REPLACING AMERICAN GOODS.

The greater attention given to the preservation of the teeth has demanded a much larger number of dentists. Likewise many dental-supply manufacturing companies have been established. The manufactured articles produced by these companies, while at first distinctly inferior in quality to the dental supplies manufactured in the United States, have steadily improved in quality and design, and at present, on account of their cheapness, compete strongly with the American goods. The German companies have not only been able to maintain themselves in their own markets, but are also annually exporting considerable quantities to foreign countries.

It is generally recognized in Germany that American dental goods are the best that are made; particularly is this true in regard to hand instruments. The cost, however, of the German product is so much lower than the American article that the advantage of quality, in the opinion of many, is more than overbalanced. For instance, American-made steel burs sell for 7.14 cents each, while the homemade product retails for 2.6 cents. Most German companies have American-made machinery for the manufacture of dentist's burs. Pliers may be purchased for 50 cents similar to an article American houses sell for $2. This disparity of prices exists throughout.

BUSINESS METHODS AND TRADE CONDITIONS.

In developing the dental trade German manufacturers have followed closely the leadership of American houses. Upon examining catalogues one can detect little difference between the designs and patterns of articles manufactured in the respective countries. Outwardly, the German-made articles appear just as good as the American made, the inferiority of the one being noticed only after use.

Last year a German manufacturer purchased a dental motor, one of the best American makes, for about 250 marks ($59.50). Recently the same firm issued a catalogue showing a dental motor similar in every detail to the one which they purchased, the price of their motor being 175 marks ($41.50). Until the present time no

manufacturer in this country has been able to put a good dental engine on the market. Several firms, however, have been improving their old makes, and it is expected that a new engine will soon appear.

Conditions in regard to the manufacture of dental supplies in Germany require that one expecting to enter this field consider all these phases. The mere recognition of the superiority of American goods is not sufficient to secure this market.

SUGGESTIONS TO AMERICAN MANUFACTURERS.

One American concern which bears a high reputation in this country and throughout Europe has had a supply store established in Berlin since 1895, and has during this time built up a large business. From this one center all the firm's affairs in Europe are transacted. Many representatives are sent out, who make regular weekly visits to patrons in different cities. German firms likewise employ agents who make frequent visits to dentists to take orders for supplies.

Only one firm that I know of makes any pretention of doing a strictly mail-order business. The convenience of ordering supplies from these representatives, who often carry samples with them, will be readily appreciated. Any new firm expecting to compete with the firms already established here must adopt similar methods for the sale of their goods. It is inadvisable to act through retail stores. Several American firms whose products are handled by different dealers have never been able to extend their trade to any extent. Such retail stores usually handle the goods of several firms, and in making sales give the preference to the cheaper German article, from which they derive the larger profit. If a supply house should be established in this country by an American firm and a carefully organized campaign of building up an extensive business entered upon, the American exports of dental supplies should increase. The present recognition of the superiority of American dental goods would in time prove of great advantage to the importer. This business, however, can not be had by spasmodic attempts. It will be secured only after well-directed continuous effort, in which the publication of a catalogue in the German language would prove helpful.

HANOVER.

SUGGESTION FOR AN AMERICAN DENTAL COLLEGE IN EUROPE.

Consul Robert J. Thompson, of Hanover, states that practically all of the German universities have courses in dentistry, and makes the following suggestion to American dental interests:

Owing to the widespread reputation of the American dentist and American dental appliances, it is believed that a proposition to establish an American dental college in Europe, perhaps in Berlin, Paris, or Vienna, would not be impracticable. On the contrary, it should be worthy of the earnest consideration of American dental interests, not only from the standpoint of the profession purely, but more especially for the American manufacturer of dental supplies and appliances. Such an institution would serve not only as a permanent European exhibit of American dental appliances and methods, but could be made an effective selling agency for manufactures in that line.

The German people are liberal users of tooth tinctures, preservatives, washes, and similar preparations.

SPAIN.

DENTISTS PURCHASE SUPPLIES THROUGH A COOPERATIVE COMPANY.

Consul Percival Gassett, of Jerez de la Frontera, reports that whereas dentists in Spain formerly purchased their dental supplies from salesmen who represented principally American manufacturers, owing to the length of time it took to get goods from the United States a company was formed in which all leading Spanish dentists are shareholders and from which company alone they now purchase all the dental supplies they need. These supplies still come from the United States. Among those who can afford it there is a growing appreciation of good dental work. This means not so much that more work will be done by dentists in general as that more work will be done by the best dentists, or those who use the latest and most improved dental appliances.

[Name of company referred to, also list of dentists in Jerez de la Frontera, and in many other cities of the world, are on file in the Bureau of Manufactures, where they may be copied by those interested.]

DRUGS AND DRUG TRADE.

ASIATIC TURKEY.

AN AMERICAN GENERAL DRUG AGENCY OPENED IN BEIRUT.

Consul-General G. Bie Ravndal, of Beirut, furnishes the following information concerning the drug trade of Syria and Palestine, and the countries from which their present supplies are drawn:

The annual importation of drugs into Beirut amounts to about $300,000. Germany leads in the exports of drugs to Syria, especially in the matter of fluid extracts, alkaloids, salts, quinine, glassware, bottles, jars, and fixtures. The drugs received from England are epsom salts, tabloids, soaps, and sundries. France leads in special or prepared medicines bearing the makers' names, perfumery, and sundries. Vaccine comes from Switzerland, and sulphur and capsules from Italy. The principal articles coming from the United States are tabloids, quinine, chloroform, fine soaps, etc.

An American drug firm (Parke, Davis & Co.) opened a general agency in Beirut, for Palestine and Syria in 1908. Its sales during the year amounted to about $2,000, largely new business, and subagencies were established in Jerusalem, Damascus, and Aleppo.

There is not a single soda water fountain in Beirut, a city where soft drinks are in great demand.

Perfumery is popular in the Levant, especially if it contains musk and is strong and sweet.

Surgical appliances, thermometers (centigrade), trusses, suspensories, feeding cups, nursing bottles, etc., are ordered from England, France, and Germany.

American alimentary products, malted milk, and children's food, are imported from London. Beef extracts, phospatines, etc., come from continental Europe.

Under the new régime in Turkey, many chemicals formerly excluded by customs restrictions, as, for instance, picric acid, nitric acid, potassium nitrate, potassium chlorate, cocaine, sulphonal, extract

of cannabis indica, etc., are now admitted. A few articles, such as cocaine, nitroglycerin, Indian hemp, etc., still remain on the prohibited list, but may be released at any moment.

Syria's indigenous drugs are scammony, licorice, galls, sesame, anis, fennel, colocynth, castor oil beans, linseed, bitter almonds, turpentine, madder, ecbalium, tragacanth, and soapwort root.

The further importation to Syria of American drugs, chemicals, surgical appliances, patent medicines and druggists' sundries, would be powerfully promoted by a parcels post convention between the two countries. [The addresses of leading houses in Beirut with which American druggists, seeking trade in Syria, should correspond are on file in the Bureau of Manufactures.]

GERMANY.

STATISTICS OF PHYSICIANS' PRESCRIPTIONS.

Consul-General Richard Guenther, of Frankfort, says that a contributor to the Pharmazeutische Journal of Germany has prepared statistics with reference to physicians' prescriptions, a summary of which follows:

He procured 2,000 prescriptions which had been filled at a London pharmacy during last year. They were prescribed by 124 different practitioners not only in England but in Germany, France, and the United States. Two thousand two hundred different remedies, which contained 6,500 different substances, were asked for. About two-thirds of the medicines were mixtures, of which 1,000 contained from 1 to 4 different articles; 223 contained 5, and 137 from 6 to 9, water not being counted.

It is stated that some of the mixtures contained so many substances that some were neutralized by others. One prescription contained no less than 21 elementary substances. Of ready-made medicines prescribed 179 were English, 84 German, 41 American, and only 5 French. This would controvert the popular belief that physicians of this time prescribe ready-made medicines in preference to making out their own prescriptions.

GREECE.

EXTENT OF TRADE IN TOOTH PREPARATIONS—TARIFF RATES.

Consul-General George Horton sends from Athens the following trade information concerning tooth-cleaning preparations and patent medicines:

Various tooth powders and washes are manufactured in Greece, nearly every druggist of any importance making and selling his own brand, which he usually calls by some well-known name. Thus one druggist, who studied in the United States, manufactures and advertises * * * a well-known American make. Tooth preparations are imported in small quantities from France, England, and Germany. I am informed by the leading druggists that there is not a very large consumption of tooth washes, powders, etc., in Greece, as only the upper classes, those living in the cities, and the foreigners, use them at all.

Duties on drug specialties are as follows per oke (2.8 pounds): Liquids in bottles, 2 drachmas (38.6 cents); solids in bottles, 4 drachmas (77.2 cents); solids in boxes, 5 drachmas (96.5 cents). Octroi and other duties amount to about 23 per cent of the custom-house tariff.

Credits are given by the Germans here and frequently extended, and recently French, Italian, and English firms have adopted the system of giving three months' time. [The principal firms handling foreign tooth preparations, also leading druggists and Greek publications, in which advertising such articles would be most effective, are filed for public reference with the Bureau of Manufactures.]

SPAIN.

THE DRUG TRADE AND PRACTICE OF MEDICINE.

In reply to a New York inquiry, Consul Percival Gassett, of Jerez de la Frontera, reports as follows concerning the conditions governing the drug trade and the practice of medicine in that part of Spain:

Wholesale druggists in Jerez de la Frontera sell paints, varnish, perfumery, soaps, and druggists' sundries; retail druggists sell drugs only.

Physicians can not be distinguished from surgeons, as every physician in Jerez is also a surgeon. They have, however, been divided into those who belong to the medical society and those who do not. All are in actual practice, and, as far as can be ascertained, the fact of not belonging to the medical society does not affect a physician's standing.

There is but one hospital in Jerez, the Santa Isabel, all the medicines and supplies for which are purchased by the alcalde (mayor), whose address is forwarded with lists of dealers. As to the best manner of securing new trade, the French, English, and German wholesale druggists have permanent or principal agents in Madrid, Barcelona, or Seville, who have subagents under them who travel through Spain—sometimes the general agents do this traveling. The latter is a better plan to pursue than to have an agent in each town.

The same rule applies in Spain as does in the United States with regard to how to procure the market; viz, before one can sell goods the demand for them must be created. For proprietary medicines this can, perhaps, be done by advertising, but a good salesman can doubtless do a good deal with a general line of goods. He must, of course, speak the language fluently.

The names of four experienced agents for druggists are forwarded; but, as they do not understand English, communications, catalogues, and price lists should be in the Spanish language, weights and measures according to the metric system, and prices f. o. b. unless otherwise stated.

[Lists of wholesale and retail druggists, physicians and surgeons, dentists, and agents for wholesale druggists, forwarded by Consul Gassett, are on file in the Bureau of Manufactures.]

INDIA'S PASTEUR INSTITUTES.

DOING EXCELLENT WORK AND GROWING IN POPULARITY.

Consul-General William H. Michael, of Calcutta, submits the following report concerning the good work being done in India by Pasteur institutes:

The Pasteur institute of southern India, established at Coonor two years ago, has submitted a report which shows that 340 cases have been treated during the last year, of which only 2 resulted unfavorably. The patients were from many localities and were composed of Europeans and natives of high and low degree. The institute is assisted by donations from various local governments and individuals, which aggregated last year about $3,000; it is growing in popularity. There are two Pasteur institutes in India, both doing excellent work.

METAL GOODS.

AGRICULTURAL MACHINERY.

ASIATIC TURKEY.

CUSTOMS DUTY SUSPENDED TO ENCOURAGE IMPORTATION.

Consul Milo A. Jewett, of Trebizond, reports as follows concerning the use of agricultural implements and machines in Asia Minor:

The introduction of agricultural implements into the consular district of Trebizond has been extremely slow. During the year 1908, 600 plows were imported, valued at about $3,600, of which about 500 were from the United States, the product of the Chilled Plow Company, of Syracuse, N. Y., and 100 were from Volo. Although the sale of American agricultural implements may seem very small, it was larger last year than usual, and may be regarded as encouraging. These plows will tend to create a demand for more and prepare the way for other machines. They were nearly all sent into the interior, to Baibourt and Erzinghan. There were imported at Trebizond during the year 15 churns and a few thrashing machines and corn-shellers from France, and 50,000 scythes from Austria. These were also destined for the interior. Practically no other agricultural implements were imported here. In the coast district of Trebizond, where agriculture embraces little except tobacco, hazelnuts, beans, and a little corn, practically all the implements employed are of local manufacture. Very few plows are used, and these are the native wooden plows with small points of iron which scratch rather than plow the soil.

IMPORTS INTO ASIA MINOR.

Turkey encourages the introduction of agricultural machines and implements by suspending the customs duty thereon. The railroads in the western part of Asia Minor have greatly facilitated the transport and export of agricultural products and encouraged and assisted the farmers in that part of the country to purchase modern agricultural machines. The result is evident. Thousands of plows and a number of mowers, reapers, and thrashing machines, mostly of American manufacture, are sold annually in the Smyrna, Aidin, and Adana districts. But in this part of Asia Minor there are no railways and few roads. Transport is slow, difficult, and very expensive. The farmers, if they ever succeed in raising a surplus, have no profitable market for it. They are extremely poor and very conservative; their farms are small; their oxen and horses could scarcely draw a good plow. It is largely due to American missionaries, and to Armenians who have emigrated to America, that the few modern American agricultural implements sold in this part of the country have been introduced. But Turkey is beginning to appreciate the necessity of devel-

oping its agriculture, and ere long this district will contribute its share to increase the sale of American agricultural machines.

A light, cheap plow is the first implement required; other implements and machines—harrows, cultivators, mowers, reapers, and thrashing machines—will gradually follow. American cornshellers ought to sell here. A few French cornshellers have been sold.

BRAZIL.

AGRICULTURAL DEVELOPMENT IN THE STATE OF SAO PAULO.

Deputy-Consul Dirk P. De Young, of Santos, reports as follows concerning the new movement for the development of general agriculture in the State of Sao Paulo, as a result of the overproduction of coffee:

The condition resulting from the overproduction of coffee is turning the attention of the planters to more remunerative products, which will no doubt revolutionize and to a certain extent reform the agricultural condition of the State. It is the opinion of soil experts that many foodstuffs and staples now imported can be much more economically produced here than purchased in foreign markets. Such being the case, the introduction of a more diversified system of agriculture will not only establish a better financial equilibrium but will tend to adjust a very impractical economic system now prevailing, by which the interests of this State are staked on the coffee crop alone.

The State of Sao Paulo is more than half the size of Germany and has scarcely 2,000,000 inhabitants, when, with diversified agriculture fully developed, it would be capable of supporting 15,000,000 inhabitants.

GERMAN AND RUSSIAN COLONIZATION.

One of the most successful movements of the State to bring about diversified agriculture is in the colonization of Germans and Russians in the various agricultural sections thereof. The government is selling lands to these colonists on a credit basis, furnishing them with stock and implements and in some cases even paying their transportation from Europe to get them started on the land. Some of the more advanced colonies already established are Campos Sellos, Nova Odessa, Jorge Tibirica, and Nova Europa. On these small farms may be found small vineyards, hogs, cattle, horses, fields of potatoes, rice, and all kinds of vegetables. The area in which these farms are situated is gradually increasing and as soon as the State begins to realize returns from this diversified system of farming to the extent of home consumption their economic difficulties will be fairly well settled.

The success of the increased growth of crops other than coffee is believed to depend largely upon the following conditions: (1) The continued low price of coffee, (2) the continuation of the valorization law, (3) the high tax imposed by the State upon new coffee trees, (4) the present high duties on foodstuffs, (5) increased knowledge in diversified farming, and (6) the more extended use of improved farm machinery.

DIVERSIFIED AGRICULTURE AND AMERICAN MACHINERY.

This new state of affairs ought to open up a larger field for the sale of American farm machinery. In the culture of coffee very little trade in the machinery connected therewith went to the United States, whereas we purchased their coffee at a figure approaching nearly $50,000,000 a year. The increased production of such articles as rice and maize will necessitate the importation of American harvesting machinery, plows, harrows, engines, and thrashers, a line of goods in which American exporters excel. The fact that very few of the articles of consumption herein referred to are purchased in the United States would have a tendency to equalize the trade between the two countries.

SOUTH AFRICA.

DECLINING AMERICAN SALES—INCREASING SALES OF GERMAN MAKES.

American plows and cultivators have been losing ground in British South Africa. The exports thither were in value $757,483 in the fiscal year 1903, $460,499 in 1904, $284,483 in 1907, and only $221,748 in 1908. Present conditions in the plow trade there are reviewed by Consul-General Julius G. Lay, of Cape Town, as follows:

Recent years have seen a large increase in the number of plows imported into this country. Official statistics do not show separately the value of plows imported into British South Africa, as they are included with other agricultural implements, but importers estimate the importations of plows last year at about $500,000.

In the eastern province of Cape Colony, Natal, Transvaal, Orange River Colony, and the native territory of Basutoland, American single-furrow plows have for a number of years, following the introduction of the low-priced "75" Ames plow years ago, met with no serious competition, but in the grain-growing districts of the western province of Cape Colony the British Howard and Ransome plows, one an imitation of the "75," were introduced before American plows became generally known in the section, and American plows have never been extensively sold there. The German single-furrow Rud Sack Z. N. F. plows with fore carriage have succeeded, however, in sharing the market with those of British manufacture.

TWO-FURROW PLOWS.

Although the American single-furrow plow commands the trade in most of the markets of South Africa, and American two-furrow plows had fair success in Natal some years ago, most of the trade in two or three furrow plows in the western province of Cape Colony is done by the German house of Rud Sack and the British firm of Ransome Sons & Jeffries and Howard, Farrar & Co., but other German plows than the Rud Sack are securing a foothold, apparently dislodging the British plows.

The United States can not compete with the German two and three furrow plows in this district, as the American plow so far placed on this market, designed to do the same work as the German and British, is too heavy and costs more. The American plows are made of better

material, but in districts where oxen and mules are small and weak the German plow can be drawn by fewer animals, and agents here inform me that although farmers have tried our best plows, they return to the German, as it is lighter.

The most popular German plows in this district are the Rud Sack Z. N. F. two furrow, for light soil, price £3 19s. ($19.22) f. o. b. Hamburg; Rud Sack Z. H. 9, two furrow, weight with two spare shares 300 pounds, price £4 13s. ($22.63); Rud Sack D. H. 9, three furrow, price £5 16s. ($28.22), for both medium and light soil. The trade-marks on these plows and those marked T1OMN, Sun, and EH3 have been recently registered in this country.

The other German plows sold here are the single-furrow, loose fore-carriage Tiger No. 7, price to country storekeeper 80s. ($19.47); Tiger No. 2, double-furrow, price £5 15s. ($27.98) to storekeeper; Improved Caledonia, a double or three-furrow interchangeable plow made by Swartz & Sons, of Berlin, price £8 ($38.93) to farmer, a very heavy plow; the H. F. Eckhart Improved Darling, two-furrow plow, made by P. H. Mayforth, of Frankfort, Germany; and another called the Deutchland. The English plows, made more or less on the same lines as the German and selling at about the same price, are the Howard and the Ransome. Illustrations and catalogues of these plows will be found on file at the Bureau of Manufactures.

AMERICAN MAKES.

The only American two-furrow plow on this market that will do the same work as the plows mentioned is one weighing 375 pounds, without rear wheel, and sold to the farmer at £6 15s. ($32.85), and two other much heavier gangs, too heavy and costly for this district, weighing 600 pounds, for £14 ($68.13). This 375-pound American plow, while better adapted to this section of the country than anything Americans have on the market, will not sell against the German or English plow, although it was especially designed for this country.

Eight well-known American plow concerns are represented by importing houses in Cape Town, which is the distributing seaport for the western province of Cape Colony, embracing the districts of Caledon, Malmesbury, Worcester, Ceres, Piquetberg, Clanwilliam, Sutherland, Robertson, Swellendam, and Bredasdorp. Many of these concerns have made faint attempts to enter this market with a double-furrow plow, but without any success whatever. The Cape Town agents seem to have become resigned to what they regard as the inevitable control of this market by the English and German makes, at least so far as the western province is concerned. This is the impression I obtained when attending the Agricultural Show recently at the town of Caledon, which is a center of the most extensive grain-growing district of this colony. At this show were exhibited plows by three German makers and one British, but not one American.

RELATIVE MERITS.

In talking to several farmers I was informed that they were obliged to buy either the German or English plow, as with the exception of the unsuitable American plow mentioned, these were the only ones

offered them by the country storekeepers, and therefore they had no opportunity of judging of the relative merits of American, British, and German plows. Some farmers complained that the German plows were not made of the best material and were in some other respects very unsatisfactory, but they were obliged to take what was offered. An English farmer who had used both British and German plows preferred the German Rud Sack Z. H. 9 plow because of the convenience of the wooden steering pole and its lightness.

Agents for American plows in Cape Town, when asked why greater efforts were not made in this district to push their plows, explain that they have tried to introduce American plows, but they can not compete with the German. The most popular plow in the Caledon district is undoubtedly the Rud Sack double-furrow gang Z. H. 9 that sells to the farmer for about £7 15s. ($37.71). It is a multiple plow, with differential adjustment of the wheels by means of a lever, and is made with a steel frame and body. The weight of this plow, including transport wheel and two spare shares, is 300 pounds.

CHARACTER OF SOIL IN WESTERN PROVINCE.

The soil in the districts mentioned is of a gravelly, sandy, and stony character, and there is no deep plowing done.

As an instance of how the ignorant colored farm laborer of this country handicaps the sale of even so simple an implement as a plow, a dealer here informs me that the colored plowman when putting on a new chilled moldboard neglects to place a cushion of tarred roofing paper or other suitable material between the moldboard and standard to avoid strains, although cautioned to do so by dealers in their catalogues. The result is that chilled moldboards snap more frequently than they should. For this reason the employer usually obtains the best results with farm implements that require the minimum amount of intelligence to operate and repair.

It must not be inferred, however, that the German plow would not be sold here if more intelligent farm labor could be employed. On the contrary, dealers here who handle British, American, and German plows inform me that the German 2-furrow plow is well suited not only to the western districts of this colony, but to other parts of South Africa, and they contend that for lightness, strength, and cheapness, combined with good work, the German double-furrow Rud Sack is superior to American 2-furrow plows, and that they can not sell an American 2-furrow plow any place in Africa where the Germans are represented. It is reported that 1,200 Rud Sack plows have recently been placed in three small villages in the eastern part of this colony where American plows once controlled the trade. The contention of the American manufacturers that South Africans will gradually be won over to the American 2-furrow plow is absurd. Instead of gaining ground in this direction, we are losing it.

STATEMENTS IN AMERICAN CATALOGUES MISLEADING.

The horse or mule in this country is not as large as the American heavy draft animals, and what is understood to be a 1-horse plow in the United States can not be drawn by less than 2 horses or mules in this country; therefore in describing plows in catalogues for South

Africa it would be well for Americans to follow the German custom and describe plows, if based on the American standard, as "Plow for two strong horses," etc.

In the western province 6 mules will draw a 2-furrow plow covering 18 inches in breadth, and in other parts where oxen are used 12 oxen will draw a 3-furrow plow turning over 27 inches at a time.

Firms here who handle American plows complain that the manufacturers should send their designers and representatives to South Africa more frequently. One American firm sent a highly qualified designer here 5 years ago, who took up with both dealers and farmers the question of altering the then standard patterns. He also accompanied the travelers of the dealer to demonstrate to country storekeepers and farmers the advantages of his plow. These trips were very useful and have resulted in an increased trade, but changed conditions and keener and increased competition demand that they should be repeated every 2 or 3 years at least.

REPRESENTATIVES AND AGENCIES.

Four American manufacturers at present either have their representatives visit this country every year or retain one in the country permanently to watch their interests and assist their agents and travelers who, except in rare cases, do not understand the plow business sufficiently to secure their legitimate share of the trade.

It is undoubtedly advisable to give a sole agency to a coast port importer, provided he has subagencies in all the farming centers, as these large importers can carry in stock enough plows and shares to meet emergencies. When a farming center is not properly covered by such importers then the American manufacturer should divide his territory. Many of the large implement houses at Durban, East London, Port Elizabeth, and Cape Town are thoroughly competent, with their branches all over the country, to get all the business to which they are entitled. Some, however, are not equipped to cover more than the immediate district in which they are located.

As an example of how the sole agency plan of representation can sometimes be profitably deviated from, the successful selling arrangement made by the firm of Rud Sack, in this colony, may be cited. This firm, instead of "tieing up" territory by depending entirely on subagents of a Cape Town or Port Elizabeth house, has its agent for the western section of Cape Colony at the inland town of Napier, in the heart of the grain-growing area. This agent is in a position to accept produce instead of cash from the farmer and to give longer credits, and consequently he does the bulk of the trade.

One or two importing houses complain that after they have built up a trade in agricultural machinery, the American manufacturer has taken away some of their territory, but I doubt if this has been done except in cases where they neglected to secure all the increased business which the American manufacturer reasonably demanded.

SOLE AGENCIES—INCREASED DEMAND.

There is another important phase of this question which is worthy of the serious consideration of American manufacturers. Importers in this country are selling both American and German plows. At least one of these firms does a business in American plows large enough to justify the manufacturer demanding the exclusive sale of

his plows. The sole agency for South Africa should be a sufficient concession to demand such an arrangemnt. These are questions that can not be determined by mail, and if American manufacturers wish to make the most advantageous selling connections they must send a competent representative to do so, not once in 4 years, but frequently.

The largely increased production of corn, wheat, oats, alfalfa, and other crops in this country and the good prices received for these crops mean an increased demand for plows during the coming season.

The American manufacturer therefore should direct his efforts to placing on this market a 2-furrow plow as suitable to the conditions of this country as his 1-furrow plow. The market for these plows in South Africa alone may not be large enough to pay for alterations and a new plant to make a plow similar to the German pattern, but from reports from Russia and Austria it would seem that German plows similar to the ones so popular here are also preventing American plows finding a larger market in those countries.

GALVANIZED-IRON TRADE.

UNITED STATES.

STATISTICS OF PRODUCTION SHOW GREAT DECLINES LAST YEAR.

The American Iron and Steel Association, in its review of the various branches of the industry for 1908, gives the following statistics, compared with the previous year, the figures representing gross tons except where otherwise indicated:

	1907.	1908.
Shipments of Lake Superior iron ore	42,266,668	26,014,987
Imports of iron ore	1,229,168	776,898
Exports of iron ore	278,608	309,099
Shipments of Connellsville coke.....net tons.	19,029,058	10,700,022
Shipments of Pocahontas Flat Top coke.....do	2,314,938	1,819,314
Production of pig iron, including spiegel. and ferro	25,781,361	15,936,018
Production of spiegeleisen and ferro-manganese	339,348	152,018
Production of Bessemer steel ingots and castings	11,667,549	6,116,755
Production of open-hearth steel ingots and castings	11,549,736	7,836,729
Production of all kinds of steel ingots and castings	23,362,594	14,023,247
Production of Bessemer steel rails	3,380,025	1,354,236
Production of open-hearth steel rails	252,704	567,304
Production of all kinds of rails	3,633,654	1,921,611
Production of structural shapes, not including plates	1,940,352	1,083,181
Production of iron and steel wire rods	2,017,583	1,816,949
Imports of iron and steel, foreign value	$38,789,851	$19,957,261
Exports of iron and steel, home value	$197,066,781	$151,113,114
Locomotives built, total number	7,098	2,124
Cars built, total number	280,380	69,594
Number of iron and steel vessels built	157	99
Tonnage of iron and steel vessels built	436,183	221,710
Miles of steam railroad built	5,499	3,214

URUGUAY.

A GROWING MARKET—BRITISH PREDOMINANCE.

Consul Frederick W. Goding, of Montevideo, in the following report shows the large and growing demand in Uruguay for galvanized roofing:

A few years ago the buildings in the cities and towns of Uruguay were built wholly of brick, with tile roofs, those in the interior being made of sod and roofed with thatch. As early as 1895 shipments of galvanized iron began to arrive here, the total for 1895–96 being only

7,954 tons. From its inception the trade gradually developed, as the people learned of the superiority of iron over thatch as a roofing material, until at the present time many warehouses, stables, and even cheap dwellings are made of it in this city. The country people, on becoming acquainted with its value, began the use of it as a covering for their buildings, as the thatching rotted away, so that now it is practically the only material used for roofs of the outbuildings on the farms, as well as those of the houses occupied as dwellings by the smaller farmers. One sees these quaint buildings everywhere while passing through the agricultural districts, the sods being neatly laid over each other with the iron roof over all. The use here of galvanized iron as a roofing material has become permanent, and is increasing every year. The following table has been prepared from published statistics covering the period from 1898 to 1905, the latest figures available, all values in this report being in United States currency, being those of the "visteria" and may or may not be the actual market rate. The importation of galvanized iron into Uruguay from 1898 to 1905 aggregated as follows:

Country of origin.	Tons.	Value.
Great Britain	25,320.7	$1,868,034
Germany	654.0	48,124
United States	168.8	13,542
Belgium	350.1	25,751
France	115.1	8,466
Spain	7.3	543
Total	26,634.0	1,964,560

WHY ORDERS ARE NOT SENT TO THE UNITED STATES.

From private sources it is learned that about 100,000 tons were imported into Uruguay in 1908. This trade is rapidly growing, 95 per cent of which is in the hands of the British merchants, for the reason that, having representatives on the spot, the need for the material was foreseen and provided for by them. The first shipment of 50 tons of this iron from the United States was made at the time of the opening of direct communications with Montevideo, which sold well, proving in every way equal to the British product.

The importance of the subject seemed to demand the preparation of this report in order to draw the attention of American manufacturers to this promising territory. All the importers of galvanized iron here were interviewed and expressed themselves unreservedly on the question, mentioning that the French consul has requested similar information, probably in connection with the mission of the French commercial agent, now visiting this country. They agreed that the trade was growing, soon to reach enormous proportions, owing to its rapidly increasing use as a material for roofs, buildings, bath tubs, buckets, etc. The reasons given for not purchasing in the United States were on account of a lack of knowledge of the American article, the 5 to 10 per cent higher prices, the more costly transportation, and the quotations being f. o. b. Montevideo, whereas they should be f. o. b. at the loading port in the United States, allowing the purchaser to obtain the best freight terms. They all called attention to the better communications with Great Britain, stating that that alone encouraged trade, the lack of which lessened the chances of competing nations.

The sizes most commonly used here are 6 by 3 feet, both corrugated and plain, although other sizes are always kept in stock. The duties and charges here are $92.63 per ton of 2,000 pounds, which includes all of the additional minor duties and charges.

HOW GOODS CAN BE SOLD.

Seven-tenths of 1 per cent is the proportion of this trade enjoyed by the United States. The reason for this infinitesimal part is easily understood. English saws were the only ones used in many foreign countries until the Disston tool forced its way into public favor by its superior qualities; the use of the American ax has become world wide for the same reason; none but English-made files were believed to be of any value until the Nicholson Company made its globe-encircling expeditions, introducing its files into every civilized country and many others uncivilized. Many other similar instances might be mentioned showing that success was due to forcing the good qualities of the goods upon the notice of consumers. Everywhere the British claims of superiority of their goods were overthrown when met with a superior article. The Uruguayan market must be worked in the same systematic manner. Otherwise it will remain in other hands.

Many letters have been received at this office in which requests were made to have catalogues distributed. The money expended in printing them might better have been saved for other uses, as no results would follow. Well-trained Spanish-speaking salesmen should be sent to these countries, who will be in a position to supply the much-needed knowledge of American goods and be prepared to offer prices equal to those given by competing firms. Also better shipping facilities are imperatively demanded, with reduced freight charges.

The correction of these faults and an energetic, persistent campaign will cause a large proportion of the galvanized-iron trade of Uruguay to pass into the hands of American exporters.

WELSH TIN-PLATE TRADE.

GREAT ACTIVITY AT SWANSEA—ENLARGING THE MILLS.

Consul Jesse H. Johnson, in stating that the Welsh tin-plate trade at Swansea is in a very flourishing condition, gives the following particulars under date of April 20:

There is a huge demand, although prices are not high. Several large mills are increasing their plants, and the prospects for the immediate future are promising. The new markets in the Far East are receiving careful attention. The cost of raw materials, especially coals, has for many months been favorable. The rates per ton of 2,240 pounds are: Steam coal, large, $3.50; small, $1.50; bituminous, small, $2.20; tin-ingot, $648.46, compared with $704.43 at the same time in 1908.

During the recent quarterly meeting of the tin-plate section of the South Wales Steel Smelters' Society, the question of the 2 per cent waste was again discussed, and it was decided to insist upon its abolition. Another important matter which called for much attention was that there is now no restriction on the output, and that it is evident that driving is on the increase. This method, it was said, had a deteriorating effect on the health of the tin platers, and steps

are being taken to guard against such practice. All the factories will work to their full capacity for the next three months, as large orders have been placed. Prices have just been advanced 6 cents per box. The latest quotations are:

	Per box.
C 18¾ by 14, Bessemer cokes	$2.92
C 19¼ by 14	$2.85 to 2.92
C 20 by 14	2.85
C 28 by 20	5.77
C 20 by 10, Siemens	[a] 4.13
C 20 by 14, charcoal	[a] 4.13
CW 20 by 14	2.70
CW 20 by 10	3.40
CW 18¾ by 14	2.43

WINDMILLS IN SOUTH AFRICA.

AMERICAN APPARATUS EXTENSIVELY USED IN CAPE COLONY.

Consul-General Julius G. Lay, of Cape Town, reports as follows on the use of windmills and the conditions which enforce their use in South Africa:

Cape Colony offers a splendid market for the sale of windmills. Government statistics do not show separately the importations of windmills, but some idea of the magnitude of this trade can be gleaned from the statement of one importer, who informed me that he ordered last year 1,000 American mills, and from the following article from the British and South African Export Gazette:

Not the least important feature of the general agricultural revival which is in progress in so many over-sea markets, and particularly in South Africa and Australia, is the interest thus created in steel windmills as motors for such purposes as pumping and operating small machinery. Some manufacturers, chiefly American, are reaping quite a considerable harvest as a result, and we hear of such orders as 50 for a cooperative organization in one district and even 100 for another. Quite recently a large mill, 40 feet high and with a wheel diameter of 26 feet, was imported for the Kimberley waterworks, and one South African firm alone has indented for no fewer than 115 mills and some dozens of pumps within the last month or two. One manufacturer states, in fact, that he has as many as 200 mills in course of construction for this market at the present time. With buying on this scale in progress, makers of other agricultural plant than windmills and pumps should realize that a rare opportunity is presented to them for pushing their specialties in the markets concerned.

BORING AND RAINFALL.

Some years ago the Cape Colony Government assisted farmers and others to drill wells by paying one-half the cost, and about 5,000 boreholes were put down in this way. This state aid has now been withdrawn, but has left the industry unimpaired, as the farmer has realized that, owing to the conditions of soil and climate, boring is a necessity, and boreholes are sunk now in Cape Colony at the rate of 1,400 per annum.

The government inspector of boring for this colony says in his report for last year: "The farmers are going to bore on a larger scale than hitherto, and what has been done will be insignificant in comparison with what will be acomplished by their enterprise in a few years' time."

The rainfall in most parts of this colony is not sufficient to make farming profitable unless irrigation in some form is employed, and as water can be found at an average depth of 43 feet, and the cost of boring is only about 8 shillings ($1.95) per foot, except for large

irrigation schemes, windmills are being largely employed, and there is little doubt that this source of power, not only for irrigation purposes but for operating farm machinery, will be more extensively utilized.

WIND CONDITIONS—MISLEADING CATALOGUES.

At the Bureau of Manufactures will be found wind tables from the meteorological station at Kenilworth, Kimberly, showing the mean wind velocities in hourly values and the average number of hours per diem during which certain mean wind velocities are attained. These tables are of the utmost importance to manufacturers of windmills.

It is generally assumed that there is much greater wind power in those parts of Cape Colony where windmills are most needed than really exists. The director of irrigation states that the number of hours per day during which a working wind, with an average strength of 8 miles per hour, is available will be as follows: January, 13; February, 11; March, 9; April, 4; May, 7; June, 4; July, 6; August, 8; September, 3; October, 4; November, 4; December, 9; Commenting hereon, the Director says.

> Luckily, most wind is available during the summer months, December to March, when water is most required for irrigation, but the irrigating capacity of a windmill is very small during the winter months. The conclusion therefore to be drawn from these data is that from December 1 to the end of March a mean wind velocity of 8 miles per hour will be available for, say, 10 hours per diem. During the months of May, July, and August an effective wind can be relied upon during only 7 hours per diem, and during the remaining months the mill will work during only 4 hours per diem.

The convenient American windmill catalogues which are sent here have done much to sell American windmills, but American companies base their calculations on American data, and their agents in South Africa erroneously apply these American figures to South African conditions. The average wind movement is apparently greater in the United States than in the Karoo, therefore when agents promise certain results they should first not only readjust the figures as regards average wind movements, but also reduce the capacity of their windmills from American to English gallons. [The American gallon of liquid measure = 231 cubic inches = 8.339 pounds avoirdupois of distilled water; the English standard is the imperial gallon = 277.3 cubic inches = 10 pounds avoirdupois of distilled water.—B. of M.]

WINDMILLS NOW ON THIS MARKET.

The bulk of the trade in this country in windmills is done by the United States, but there is some competition from an English mill and also from one made locally; but the local article can not compete with the American, and so far English mills has secured little foothold in the market, although how long this will last it is impossible to say. Canadian mills have been sold to some extent here, but their rack and pinion construction has not stood the heavy winds in this peninsula. A Canadian catalogue of windmills is forwarded. [On file in the Bureau of Manufactures.]

The customs duty on windmills from the United States is 3 per cent, while those from the United Kingdom and British colonies enter free.

Manufacturers must bear in mind that windmills are not usually oiled and repaired in this country by farm laborers, as they are

in the United States. The native colored man who climbs a mill to oil it finds the oiling device too complicated, and the windmill remains without oil for so long that the bearings become worn much sooner than they would if properly oiled. The consequence is that the windmill gets an undeserved reputation. American manufacturers must not, therefore, ignore the reasonable requests of agents for alterations when they do not involve new plant or standardization.

While many of the large American windmill manufacturers are well represented in this country, still some of the best mills are unknown here, and the manufacturers not already in this market should send capable representatives here to make selling connections and establish a market.

American windmill manufacturers already represented here should instruct their agents to keep in touch with the well-boring contractors mentioned in the list forwarded, who are doing most of the well boring in this colony. Those manufacturers not represented here should send their catalogues to those contractors. While these contractors do not handle windmills, their opinions undoubtedly carry weight with the farmer in his selection of windmills. [Names and addresses of well-boring contractors on file in the Bureau of Manufactures.]

MOTORS AND VEHICLES.

FOREIGN MARKETS.

CANADA.

POPULARITY OF MOTOR BOATS FOR BOTH BUSINESS AND PLEASURE.

Consul-General George N. West is in receipt of inquiries in regard to the possibilities of placing motor boats and their equipment in British Columbia, and the possible demand during the present year, to which he replies from Vancouver:

There is a large number of motor boats used at this port and the nearby vicinity, as the coast line is broken by numerous bays, inlets, and many inhabited islands which are inaccessible except by water communication. The boats are of various classes, many being used for pleasure only and others for passenger and freight purposes, while many small ones are used by the fishermen, who supply the local market from catches made in the adjacent waters of the Gulf of Georgia and Howe Sound.

Quite a number of strong but roughly constructed hulls, with engines from 25 to 60 horsepower, are used in the rivers, inlets, and lakes by persons engaged in the lumber business for towing logs to the temporary booming grounds where the large rafts to be towed to the mills are collected, and also for taking in supplies to the loggers' camps. The hulls of all classes of boats are generally constructed here, the engines and other equipment being imported and installed, except in case of boats intended for pleasure purposes only, when a more highly finished boat is desired.

Manufacturers of engines and other motor-boat equipment would meet with greater success if agents of manufacturers visited sellers and intended purchasers in person. All catalogues, circulars, and other literature received at this office relating to gas and other engines and equipment of all kinds are placed on file. Every inquirer has the same placed before him for examination, and he is advised as much as possible in regard to correspondence with various manufacturers on the subject of proposed purchases. [The addresses of wholesale and retail dealers in gas engines and motor boat equipment are filed for reference at the Bureau of Manufactures.]

The Vancouver Yacht Club, J. J. Banfield, secretary, is rapidly increasing in membership, and constant additions are being made to the fleet of motor boats connected therewith. The use of motor boats is becoming largely a fad at this port, as it enables parties to make week-end trips to the various islands and other nearby points for camping out in the open during the summer and early fall months.

HAMILTON.

AMERICAN MOTOR ENGINES IN HIGH FAVOR.

Concerning the motor-boat industry in the Hamilton district of Canada, Consul James M. Shepard states that the leading builders there anticipate a larger output for 1909, due to the many orders already received and those expected. The consul also says:

The finest craft in the way of a private launch ever built here is now being completed at Alderman Jutten's boat and launch yard. The boat is 55 feet long, planked with cypress wood, and the interior finished in mahogany; it is a 4-cylinder 17-horsepower (American) engine, and is built for salt water. A hunting cabin cruiser is also on the stocks in this yard. The market for boats built here is limited to Ontario and Quebec. A few are sent to Manitoba, but the freight cost prevents competition with American builders there.

American motors and marine engines are considered superior to the Canadian, and more desirable. They are placed in the best boats; but the local manufactures are used in the cheaper varieties. The lowest estimate of this year's output is 100 boats, varying in price from $150 to $6,000. All Canadian builders are familiar with the American makes, machines, prices, etc., and they prefer to install the high-grade standard motors and engines whenever their customers are willing to pay the extra cost. They do not value the cheaper American grades above the Canadian.

CHINA.

MOTOR TRUCKS AND WAGONS VERSUS COOLIE LABOR.

In answer to inquiries, Consul-General Charles Denby furnishes the following information concerning the use of motor vehicles at Shanghai, in competition with Chinese coolie labor:

There are several motor trucks in use here by the electric railway companies and bottling works, but the demand for vehicles of this character is small. Large quantities of foreign goods are annually imported at Shanghai, but this is all handled by coolie labor, drawn on rough, low trucks, carried on crude wheelbarrows, or suspended from bamboo poles carried across their shoulders. These coolies are paid 8 to 10 cents a day. In the same way the delivery of packages by the retail stores is done by coolies at a very small cost. It would not be found profitable to introduce motor trucks and wagons for this work, and there is very little use to which they could otherwise be put. If, however, manufacturers wish to secure representation in this market, they might correspond with any of the American firms mentioned in the list forwarded. [On file in the Bureau of Manufactures.]

GERMANY.

CENSUS STATISTICS OF MOTOR VEHICLES IN THE EMPIRE.

Consul-General Richard Guenther, of Frankfort, reports as follows concerning the census returns of motor vehicles in Germany and the foreign motors temporarily in the Empire:

On January 1, 1909, 41,727 motor vehicles were counted, of which 39,475, or 94.6 per cent, were for the transportation of persons and

2,252, or 5.4 per cent, for that of freight. Of the former, 20,928 were motor cycles, of the latter, only 248. Compared with the preceding year, the increase of motor vehicles was 5,705, of which 5,231 were for passengers and 474 for freight.

Of the 7,913 foreign automobiles which crossed the frontiers for a temporary stay during the year ended September 30, 1908, only 10 were freight vehicles. The percentages from the several countries were as follows: France, 37.3; Austria-Hungary, 20.7; Belgium, 12.6; Switzerland, 7.8; Netherlands, 6.2; United States, 6.1; other countries, 9.3. Compared with the preceding year the number of foreign motors increased 39.2 per cent.

Motor vehicle traffic registered 5,069 accidents during the year ended September 30, 1908, wherein 5,312 of such vehicles were concerned. As compared with 1907, the number of accidents increased 225, but as the number of vehicles increased 15.8 per cent, there was really a relative decrease of accidents to be recorded. There were 2,630 persons injured in these accidents, of whom 188 were chauffeurs, 431 passengers, and 2,011 third persons. The killed numbered 144, of whom 12 were chauffeurs, 22 passengers, and 107 third persons. The money damages amounted to $193,238.

INDIA.

IMPORT OF A ROAD TRAIN FOR TRANSPORT IN BURMA.

Consul E. A. Wakefield, of Rangoon, furnishes the following information concerning the introduction of a road train into Burma as an experiment in road freighting:

A Renard train is being brought to Rangoon to demonstrate the practical utility of this method of transport. The secretary of the Renard Transport Corporation of India is now in Rangoon in the interest of the company, and gives the following details in regard to construction and operation:

Each vehicle of a train is mechanically steered so that it follows in the exact track of the preceding vehicle, and is equally effective when traveling backward. A train can turn a complete circle in a space 30 feet in diameter, backward or forward. A train usually consists of an 80-horsepower motor, with 4 carriages or less, which may be for either passengers or freight, as desired. The train is fitted with 8 different speeds, which enables it to ascend a grade of 18 per cent fully loaded. Each freight carriage has a maximum carrying capacity of 5 tons, and each passenger carriage provides accommodation for 25 to 30 persons. The maximum speed of such a train fully loaded, on a fairly hard level road, is 12 miles per hour. The size of the train may be increased up to six carriages, but the speed will be proportionately less. The trains are built in England and France. The result of the experiment in the province of Burma is awaited with interest.

UNITED KINGDOM.

REDUCTION IN PRICE OF BRITISH CARS—AMERICAN COMPETITION.

Consul-General Robert J. Wynne reports that up-to-date and interesting figures in the London Morning Post of April 16 show the gradually lessening cost of motors cars, coincident with their improvement in England.

These figures will furnish American automobile makers the latest data necessary to determine what margin for profit there may be in the endeavor to place additional American machines abroad in com-

petition with the more-favored homemade article. It appears that in 1901 a 6-horsepower British car without a body cost $1,850, while to-day a two-seated 7-horsepower machine complete can be purchased for $900.

Only firms of wide repute can be considered in discussing competition under existing conditions, it is argued, for it would be folly for any small firm to attempt to compete against the big ones. A comprehensive idea of the manner in which the motor car has developed in England from a small to a powerful and very speedy vehicle in the brief space of eight years may be gathered from the following summary of prices:

Year.	Nominal horsepower.	Price of chasis.	Price of car complete.
1901	6	2-cylinder, $1,950	$2,200.
1903	22	4-cylinder, $4,950	$5,575.
1904	28	4-cylinder	Model K, $5,250.
1905	30–40	4-cylinder	Windsor model, $4,625.
1906	35–40	4-cylinder	Royal model, $6,250.
1907	45	4-cylinder	Bilton phæton, $4,615.
1908	58	4-cylinder, $4,125	Three-fourths landaulette, $5,500.
1909	38	4-cylinder, $2,800	$3,400.
1909	22	Live-axle, $2,375	$2,975.

The Morning Post says:

Whereas the 6-horsepower car of 1901 was to all intents and purposes a machine of no more than 6 horsepower, the nominal 38-horsepower machine of 1909 has an engine capable of developing something nearer 60 horsepower for hour after hour without "fatigue," while the 22-horsepower car is in like proportion powerful far beyond the extent indicated according to Royal Automobile Club rating, so that for $425 more than the cost of the 6-horsepower chasis of 1901 the motorist can buy a machine of at least 37 actual horsepower (nominal 22-horsepower 1909 type), embodying not only all the refinements of latest practice, such as a live-axle drive, but also a two-year guarantee, with the exclusive silent sliding-valve type of motor that has received the seal of success in the severest officially observed engine trial on record in any country. Taking the figure given above for a 6-horsepower car of 1901 as being $2,200 complete, these prices may be quoted for complete cars:

Year.	Horse-power.	Price.	Year.	Horse-power.	Price.
1905	8	$1,025	1905	12	$1,700
1906	8	1,035	1906	10–12	1,335
1907	8–10	995	1907	10–12	1,350
1908	8–10	995	1908	10–12	1,350
1909	7– 9	700	1909	10–12	1,350

The lists illustrates two things: First, how the price of the quite small car has been appreciably reduced from $1,025 in 1905 to $700 in the current year (over 25 per cent); second, it has not been possible to reduce the price of the larger sized machine to an equivalent extent.

UNITED STATES.

UNEXAMPLED GROWTH OF THE AUTOMOBILE INDUSTRY.

A recently published statement of the general manager of the American Motor Car Manufacturers' Association shows that the advance of the automobile industry in a decade has never been equaled by any other industry during a similar period.

The manager of the association selects 1898 as a starting point for the reason that, while cars were built many years previous, all the improvements in this great industry are the results of the last eleven years' work, the modern type being hardly in evidence until 1898.

In 1898 there were 25 concerns making cars in the United States. Now there are 253 concerns, 100 of which turn out cars that are well known and are factors in the market. The capital invested in the industry in 1898 was not more than $2,000,000, while now, with kindred trades, salesrooms, garages, etc., the capital invested is close to $200,000,000. Eleven years ago there were not more than 1,200 cars in the country, while now the figures indicate that there are about 160,000 automobiles in the United States, or twice the number in use in all Europe. As an example, there are 69,000 automobiles registered in New York State alone.

Eleven years ago the production of the factories could not be figured at more than $2,000,000, while the output of automobiles alone this year will be not less than $130,000,000 in value, while the value of accessories and parts will run into many millions more. Eleven years ago there were less than 200 agents of motor cars; now there are 2,500 agents, to say nothing of the hundreds of subagents, all maintaining salesrooms and garages, and employing help numbering many thousands.

EXTENDING USE—EXPORTS AND IMPORTS.

So necessary has the automobile become in the United States that there was little or no falling off in the trade during the recent depression, which was general throughout the commercial world, while the business this year is better than it has ever been, despite the fact that all other industries are doing a considerably smaller trade than at any time during the past six years.

While there is a continually increasing demand for commercial vehicles, there is no indication of any slackening in the call for pleasure cars. The manager notes with satisfaction that farmers are purchasing autos of the buggy type in increasing numbers, and he also refers to the introduction of taxicabs in American cities, 1,100 of these being in operation in the city of New York alone—all of which will greatly increase business for vehicle builders.

The exports of automobiles and parts also held up well last year, their value having been $4,948,594, against $5,756,972 in 1907, and $4,409,186 in 1906. The sales to Mexico, South America, and Australia fell off last year, but the shipments to Europe greatly increased. The imports of automobiles last year amounted to $2,558,819, against $3,157,168 in 1907, and $4,416,048 in 1908, while the imports of automobile parts were $650,563, or practically the same as in 1907.

MOTOR BOATS.

NOVA SCOTIA.

OPENING FOR MARINE MOTORS AND MOTORS FOR FISHING CRAFT.

In reply to an inquiry from Connecticut, Consul John E. Kehl, of Sydney, furnishes the following information:

A company here, which builds hulls and sailing craft, has the agency for a Canadian-made marine motor. It is possible to interest them in motors for fishing vessels, the success of which would open a new and extensive field. Motors for fishing smacks and dories would find a more extensive market in Cape Breton than motors for pleasure boats. Some twenty boats, the greater number with motors of American manufacture, set in local-built hulls, are in use here.

Complete boats, ranging from $300 to $500, would be sold if prospective purchasers could see a boat in actual use.

Very few boats are less than 18 feet long; 21 feet in length, 4 feet 3 inches beam, minimum speed of 10 knots, and such is the boat that would meet the general local requirements. The market would not be limited to Sydney, as North Sydney, Louisburg, and Glace Bay are within a radius of 20 miles and have most excellent boating facilities. The general import duty on complete motor boats is 25 per cent; on marine motors alone 27½ per cent.

One of the parties anxious for an agency closed with an American concern last week. [The name of the company which builds hulls and sailing craft, and the names of three other companies which might be induced to accept American agencies, are on file in the Bureau of Manufactures.]

UNITED KINGDOM.

WATERS OF IRELAND AFFORD FINE MOTOR BOATING.

Consul Alfred K. Moe transmits a Dublin newspaper article concerning marine motoring in Ireland and suggests that American manufacturers investigate that promising market. The Irish journal says:

> Most of our rivers are navigable for motor boats. He would, indeed, be a difficult mortal to please who did not find in the Shannon, the Foyle, the Bann, the Barrow, the Blackwater, or the Suir all that any boatman wants in the matter of a really good waterway. The Shannon offers particularly fine advantages, and during the coming season the motor boat promises to cut a considerable figure amongst the craft to be seen on its waters. The price of these boats ranges from £50 ($243) for a small launch boat of three or four horsepower up to £2,000 ($9,733) for a vessel which is, to all intents and purposes, a fully equipped seagoing pleasure yacht. In Ireland marine motoring is, to a large extent, regarded merely as a delightful amusement.

RAILWAYS.

FOREIGN ENTERPRISES.

BRAZIL.

EXTENSION OF LINES WILL OPEN NEW TRADE ROUTES.

Consul-General George E. Anderson, of Rio de Janeiro, sends the following notes on Brazilian railways:

Within a few months the extension of the Central do Brazil Railway into the State of Minas Geraes will reach the Sao Francisco River, which is navigated from there to the sea by steamers. This will lead to an important change in the course of the exports of the upper portion of Minas Geraes. Goods now coming to Rio de Janeiro by a long railway haul will probably take a short railway haul to the river and thence to the sea by water, much of such products being handled in Bahia rather than in Rio de Janeiro. On the other hand, supplies from abroad which have been entering Minas Geraes solely by way of Rio de Janeiro may in time enter by the Rio Sao Francisco and this railway connection. In line with present development it is quite probable that the next year or so will witness an important change in this line, in goods like agricultural implements and foreign cotton manufactures. The valley of the Sao Francisco River in some respects offers some of the most attractive features of Brazilian agriculture and lumbering.

The Central Railway has just ordered 16 new locomotives from the Baldwin Locomotive Works.

The extension of the Sorocabana Railway through the States of Sao Paulo and Parana has reached within about 25 miles of Itarare. Unless something unforeseen develops, the plans of the Government to enable the passage from Rio de Janeiro to Uruguayan cities by rail within a year and a half will be realized.

CANADA.

EXTENSION OF THE GREAT NORTHERN LINE.

Consul-General John Edward Jones, of Winnipeg, submits the following in regard to railroad building in Manitoba:

Plans have been filed by the Great Northern Railway with the premier of the Province of Manitoba for the building of a railway from the end of the Great Northern tracks at the boundary to Winnipeg. The plans also call for a modern and commodious depot upon land acquired by the company some years ago.

The road will be constructed in almost an air line and, when completed, is expected to reduce the running time materially between Winnipeg and Minneapolis. Its construction will parallel branches of the Canadian Pacific Railway and of the Canadian Northern

Railway. It is expected the road will be completed and in operation by September 1.

It is claimed to be the purpose of the Great Northern to build west through the Province of Manitoba at the earliest possible moment, and there are some who predict that the road will be extended farther westward.

Announcement is made in the Manitoba (official) Gazette that an application will be made to the next legislature of the Province to incorporate the Elkhorn Northern Railway Company for the construction of lines in Manitoba, together with other development privileges.

NEW LINES AND CONNECTIONS WITH THE UNITED STATES.

Local railway men express great interest in the proposed new line of the "Soo" Railroad which is to run from Thief River Falls to Duluth, thereby opening a direct line from Winnipeg to Duluth and Chicago. This is evidently a line projected to meet the plans of the Great Northern Railway Company, which is about to build a line from the international boundary into Winnipeg. Two survey parties have begun work, and the actual construction will follow. It is predicted the direct line between Winnipeg and Chicago will be in operation over the tracks of the Canadian Pacific Railroad by the fall of 1910.

There are two other branches of the "Soo" upon which work will begin during the year. These were made possible by the purchase of the Wisconsin Central by the Canadian Pacific Railroad Company. One of these branches will be a cut-off, which is intended to shorten the distance between Minneapolis and Chicago and put the company in a position to bid for both freight and passenger traffic between the Twin Cities and Chicago. The other branch line will be constructed from Booten, some 80 miles west of St. Paul on the main line of the "Soo," to Duluth, thereby forming a direct connection between the "Soo" line and the Head of the Lakes. The third branch which the "Soo" will have under construction during the year is that from Thief River Falls to Duluth. With the completion of this line, passengers from Winnipeg to eastern Canada over the Canadian Pacific Railroad will have the choice of two routes.

There is considerable speculation over the probability of the "Soo" building a line to Fort William, connecting at that point with the Canadian Pacific. It is the well-known intention of the Canadian Northern Railroad to build into Duluth from Fort William.

These new lines indicate the activity in railroad circles of western Canada, and their operation will mean much in the development of Winnipeg and the prairie provinces.

JAVA.

NEW RAILWAY LINE CONNECTING BATAVIA-SAMARANG-SOERABAYA.

Consul B. S. Rairden, of Batavia, reports that a new line of railway connecting Batavia-Samarang-Soerabaya is to be begun in Java by the Dutch Government within a few months.

By the new line, which will make the distance between Batavia and Soerabaya about 810 kilometers (503 miles), it will take fifteen

hours direct by train, while at the present time it requires thirty-four hours, one night being spent at Maos, and making the actual time on train twenty-two hours. The connection will be about 270 kilometers (168 miles) in length, and will take three and one-half years to complete it. This line will run through a low and level country, and a higher rate of speed can be made. It is also expected that it will open up a productive country.

MEXICO.

RAILROAD ROUTE BEING USED BY EUROPEAN SHIPPERS.

Consul Walter C. Hamm, at Hull, England, reports that a shipping firm in Hull has established a regular line of steamers and is sending freight from that port to San Francisco by the way of the Tehuantepec Isthmus.

The ships touch at Coatzacoalcos, the eastern terminus of the Tehuantepec Isthmus railroad, and the cargo is transferred to the railroad and reshipped from the Pacific terminus to whatever port it is destined on the West Coast of North and South America. Shippers claim that they find this route cheaper and more desirable for bulky goods than by the way of Cape Horn.

One shipper of crude freight, by this route, states that the charge per ton for freight from Hull to San Francisco is 35 shillings ($8.51), while the freight from Hull around Cape Horn, by sailing vessel for the same class of goods, is 25 shillings ($6.08) per ton. But the saving comes in time, interest, and insurance. The time between Hull and San Francisco by the Tehuantepec route is one month, while in a sailing vessel around Cape Horn it is 180 days. The interest and insurance of 5 months are accordingly saved, which makes the route by the way of Tehuantepec certainly as cheap, if not cheaper, and the goods are delivered in about one-sixth the time.

This way of shipping goods to the West Coast of North and South America promises to become popular if the handling of freight at the termini of the Tehuantepec Isthmus railroad is prompt and efficient.

SIBERIA.

MOVEMENT OF FREIGHT—CONSTRUCTION PLANS.

Consul Lester Maynard, of Vladivostok, sends the following information concerning railway matters in western Siberia:

The Trans-Baikal News states that the annual receipts of the Trans-Baikal railroads for the year 1908 were $4,892,500 (United States currency) and the expenditure about $12,875,000, leaving a deficit of about $7,982,500.

As a result of the reduction of railroad freight rates on beans, the export of this article from Manchuria via Vladivostok is growing. At the end of March two steamers were loading beans at Vladivostok and more were expected from Japan to get similar cargoes. Between February 11 and 20, 1,033 carloads of foodstuffs were transported over the Chinese Eastern Railroad to Vladivostok from Pogranetchnaia, Manchuria, of which there were 943 carloads of wheat, 18 of flour, and 72 of bean cakes. On February 20 the following carloads (1 carload weighs 12 tons) was at the port ready

for shipment: Beans, 2,072; bean cakes, 191; bran, 21; kiolan (Chinese grain), 51; oats, 18; maize, 1; assorted, 24.

L. Skidelsky and P. Piankoff, of Vladivostok, have offered to advance to the municipality two-thirds of the necessary capital to build the electric station and tramway in Vladivostok. As a second proposition, in the event of the former not being accepted, they are prepared to enter into partnership with the city in this enterprise. The initial cost of construction of the central station and main line is estimated at over 900,000 rubles ($463,500). An additional 450,000 rubles ($231,750) will be required for secondary lines.

The Dalny Vostok reports that an English syndicate has signed a contract with parties who are working to obtain a concession to build a railroad from Semipolatinsk, via Barnaul, to Tomsk. It is said that the cost of the road will be about 80,000,000 rubles ($41,200,000).

In order to guarantee a good source of coal supply for the Siberian Railway, the railroad department is again considering the construction of the Altai Railroad from Yurga station to the coal mines at Koltchminsky, a distance of about 180 miles.

A number of timbermen have petitioned the Government for permission to construct a light railroad to transport timber from the vicinity of Kisi Lakes to Emperors Harbor. A. K. Wallden is said to be the head of the enterprise.

SOUTH AFRICA.

LAST YEAR'S WORKINGS OF GOVERNMENT LINES.

Consul Edwin S. Cunningham makes the following report from Durban on the operations of the railways in Natal last year:

The railways of the colony are owned by the government and have been constructed under government contract. The mileage operated is 988 miles of open track, completed at a cost of $67,649,148. The track is 3 feet 6 inches, the standard in all South African railways. The railway construction in Natal, where the excessively undulated surface rises so rapidly from the seashore to an altitude of 5,000 feet within 135 miles from the seashore, can be understood to have been done under very great difficulties; besides, the expense of running trains is very much greater than in other parts of the world where the country is less broken.

The gross revenue in 1908 from all sources of the railway was $8,907,183, a decrease of $23,650 from 1907. The gross working expenses were $6,034,653, or 2.19 per cent less than the preceding year, leaving a net revenue of $2,883,610. Deducting $2,825,830 for interest on the capital invested and contributions to sinking fund, there is a surplus to the State of $57,779.

The general manager of the railways comments on the reduced working expenses, notwithstanding an increase of 15¾ miles opened during the year, and the operation of practically the same number of train miles. The train miles operated during the year were 4,844,858, and the receipts from all sources were $1.84 and working expenditures $1.33 per mile.

Beautiful flower garden spots add to the appearance of the station. The offering of prizes for the best kept station gardens has stimu-

lated the station masters to put forth special effort, so that these gardens throughout Natal are most beautiful and furnish examples of excellent landscape gardening and are a pleasure and delight to travelers who pass through the garden colony.

CAPE TO CAIRO.

IMPORTANT EXTENSION—CHANGE IN PLANS.

Consul-General Julius G. Lay, of Cape Town, quotes the following article from the South African Commerce and Manufacturers' Record of March, 1909, regarding the extension of the Cape to Cairo Railway, to which he adds a comment:

Two more steps have recently been taken toward the realization of the late Cecil Rhodes's "substantial dream" of a Cape to Cairo railway. It is announced that this month Messrs. Pauling & Co. will start work on the construction of a 400-mile extension northward from Broken Hill. At the other end of the "gap" is Halfaya, 1,340 miles south of Cairo and only separated from Khartum by the Blue Nile, across which a new railway and road bridge is now in course of construction by the Soudan government. As soon as the Soudan government railway administration is able to utilize this temporary bridge for the passage of its goods trains it intends to make a start with the southward extensions of its system, and rail head will be established at Seunar, a city of the Eastern Soudan on the Blue Nile, 160 miles south-southeast of Khartum, From Seunar it is also intended to construct a branch line in a westerly direction, doubling back at almost a right angle to El Obeid, the capital of Kordofan. This railway will cross the White Nile near the village of Goz Albu Guma, about 192 miles south of Khartum, and the contract for the construction of the road and rail bridge at this point has been awarded to the same firm which built the viaduct over the Zambesi at Victoria Falls, the Cleveland Bridge and Engineering Company. It is a curious coincidence that these distant but connecting links are being built by the same firm of British contractors and the erection supervised and carried out by the same resident engineer.

It was originally intended that the Cape to Cairo Railway line would pass from Broken Hill northeastward through northeast Rhodesia, but the plan has been changed so that it will run almost due north from Broken Hill to the border of the Kongo State, then northwestward to Star of Kongo mine. The 400-mile extension will reach that point and, as stated in the above article, will be commenced at once, and will be of a standard gage.

The construction of the line from Broken Hill to the border of The Kongo State will be carried out by a company known as "Rhodesia Katanga Junction Railway and Mineral Company (Limited);" and the line from the frontier to the Star of the Kongo mine will be built by the Compagnie du Chemin de Fer du Katanga.

TURKEY.

NEW LINE PROPOSED BETWEEN EGYPT AND SYRIA.

Consul-General G. Bie Ravndal, of Beirut, says that the question of linking Egypt and Syria by a railway is certain to be seriously considered, as its advantages are obvious. He writes concerning a project:

Mr. Almagia, a prominent Italian contractor in Alexandria, informs the Egyptian Gazette that he asked the Ottoman and Egyptian Governments to allow him to make plans for a railway line by way of El Arish to Jaffa. The negotiations are in charge of Mr.

Ambron, the engineer of the firm, who is shortly returning to Egypt from Italy. The idea is that the line, after crossing the Suez Canal, should run along the coast to the frontier at El Arish and then on to its terminus at Jaffa, where it would connect with the Jerusalem railway.

WEST AFRICA.

A NEW RAILROAD IN THE GOLD COAST.

Consul Solomon Berliner, of Teneriffe, in reporting that the first sod of the Accra-Akwapim Railway in the Gold Coast, West Africa, was cut on January 7, 1909, also points out what effect it will have in developing that country:

This railway is interesting from a double point of view. It is being built for the purpose of developing the agricultural wealth of the country, especially the cocoa industry. This industry is a native one, worked by the natives themselves, by whom it was started. Notwithstanding the lack of adequate transportation, its progress has been remarkable, the value of cocoa exported having risen in the last ten years from under $50,000 to over $2,500,000. French and German government experts who have visited the cocoa fields have not concealed their admiration at such an example of native capacity and initiative. It is confidently believed that the railroad by effecting an economic revolution in the matter of transportation will greatly increase the output.

The Ashantis have also taken to cocoa growing within recent years, and numerous plantations or farms near the town of Kumasi are now in the producing stage. Although the provisional terminus of the section actually taken in hand would not be farther inland than Mangoase, 40 miles from Accra, it is hoped the line will eventually be extended to Kumasi.

Little interest has been taken in the development of the different countries situated on the West Coast of Africa until quite recently, but lately their growth has been rapid, and their real economic value has been recognized by their mother countries and others. The future of all the colonies on the West Coast of Africa depends upon the opening of the interior by roads and railways, and it is predicted that the progressive developments will be even more important in the next decade than in the last.

RAILWAY TIES IN FRANCE.

OPENING FOR AMERICAN SUPPLIES—TREATMENT WITH CREOSOTE.

In reply to an inquiry from a New York correspondent, Consul A. Gaulin, of Havre, furnishes the following information relative to railway ties in France:

The consumption of railway ties in France averages 400,000 cubic meters (14,126,400 cubic feet) annually. Oak, beech, and pine are the only species of wood used for this purpose, and the supply has been in recent years entirely of domestic origin. France exports considerable quantities of railway ties, as shown by the following figures for the years 1906, 1907, and 1908: 17,438 tons, 20,026 tons, and 23,854 tons, respectively.

The ties used in France are as a general rule treated with creosote or sulphate of copper, but a large proportion are laid without having undergone any special treatment. In most cases the railway companies contract for ties in their natural state, and have them treated under the supervision of their own engineers. The most usual dimensions are the following: Length, 2.60 meters (8.53 feet); width, 24 centimeters (0.787 feet); thickness, 13 centimeters (0.426 feet); but the specifications vary somewhat with the different companies. The standard street railway tie is 1.75 meters by 12 by 18 centimeters (5.74 feet by 0.394 feet by 0.59 feet).

PRICES AND DUTIES—TRADE OPPORTUNITY.

Prices are said to rule exceptionally low at the present time. The editor of the Timber Trades Journal states that the Paris-Lyon-Mediterranean Railway Company purchased their supply for the year on the basis of 4.50 francs (86.8 cents) each for oak ties and 3.50 francs (67.5 cents) each for beech ties.

The French customs duty on ties in their natural state, not having been tarred or otherwise prepared, and imported direct from an American to a French port, is, on condition that they exceed 80 millimeters (3.1496 inches) in diameter, 19.3 cents per 220.46 pounds gross, avoirdupois. If the ties are imported into France via another European port or country, as, for instance, via London, Antwerp, or Rotterdam, the foregoing rates are augmented by a surtax of 3.6 francs (69.5 cents) per 220.46 pounds gross, avoirdupois. Ties treated with tar, creosote, or other substances pay the foregoing rates plus 20 per cent. The surtax, however, remains the same. It is clear that it is to the interest of all concerned that the merchandise should be shipped direct. Railway ties are among the comparatively few articles admitted from the United States into France under the minimum tariff.

In reply to communications from this office to all the French railway companies, and to the leading contractors, inquiring whether they would be disposed at this time to purchase American ties, the following have been received:

The Northern Railway Company (Chemin de Fer du Nord) replied that it would consider offers of unprepared beech and oak ties to be delivered free on cars, duty paid, either at Dunkirk, Calais, Boulogne, or Rouen, but at no other ports. The dimensions required by this company are those above given. The other railway companies also insist on free delivery on cars, duty and other charges paid, at one of the points on their respective lines. The Paris-Lyon-Mediterranean Company stated further that it would not take into consideration quotations exceeding 6 francs ($1.18) per tie.

REQUIREMENTS OF GOVERNMENT LINE.

The French state railways, as a general rule, use only ties of domestic origin; but recently purchases have been made of Baltic redwood and Black Sea beech ties. The management attaches great importance to the place of origin of the species of wood supplied, and it should invariably be stated. Moreover, it will accept only wood which has been cut after the growing season, i. e., from October 15 to March 15. The wood must also be sound and free from all defects. Beech ties which can not be easily injected or have red heartwood will be refused. The ties are usually treated with creosote, and occa-

sionally with a mixture of creosote and chloride of zinc. Unprepared American ties would be acceptable.

Stress is laid on the point that the dimensions of the ties and the species of wood of the present or coming campaign should be accurately described, and the prices quoted free on car at Havre, duty paid. Quotations may be given on a shipment of from 50,000 to 100,000 ties. The approximate age of the trees, the method of cutting the ties (2 or 4 per log section), and the proportion and distribution of sapwood and heartwood in the section should also be stated.

Should the offers appear to be advantageous the company would then request shippers to send them two or three ties as samples before giving an order.

The French state railway management prefers for its soft-wood ties the species of pine trees (Pinus, Baltic redwood) to the species of fir trees (Abies vel picea excelsa, red pine or spruce fir), and it prizes more highly those in which sapwood predominates than those which have a greater quantity of heartwood.

Price quotations can easily be made by adding to the wholesale local price of ties (1) the cost of transportation in the United States, and loading on steamer at New York; (2) the freight from New York, which can be obtained either at the Maritime Exchange or at the offices of the French line, No. 19 State street; (3) the possible cost of discharge (*a*) on the quay, and (*b*) in cars, and (4) the French customs duty.

[The types and sizes of ties used by the state railways, the address of the chef de service, the addresses of the proper persons to whom to reach other French railways interested in the purchase of foreign ties, and the addresses of contractors desirous of receiving quotations for American ties are on file in the Bureau of Manufactures.]

TEXTILES.

CARAVONICA COTTON IN MEXICO.

EXPERIMENTS APPARENTLY SUCCESSFUL—HIGH-CLASS FIBER.

Special Agent W. A. Graham Clark, who is in Mexico investigating textile trade conditions, makes the following report on the progress being made there in growing the new tropical Caravonica tree cotton:

Much has been written in the last few years in regard to the raising of Caravonica cotton in Australia and Mexico. As yet everything has been in the nature of experiments, and Caravonica cotton has not reached the commercial stage, but in the limited sections in which it can be grown there seems to be a prospect of good profits from its cultivation.

Caravonica is a tree cotton and was produced by the crossing of a fine long-stapled Mexican cotton with a coarse long-stapled Peruvian cotton. This hybridization was carried out in Queensland some 10 years ago by an Italian scientist—Dr. David Thomatis—and since then seed from the resulting plants have been tried in all parts of the world. It is now being experimented with in Mexico, India, Egypt, French New Caledonia, and the Kongo. Experiments in upper Mexico and the United States have proved failures, but in lower Mexico the plant grows well. It has been demonstrated that the plant will grow only in a hot climate with not too much rainfall. The seed were introduced into Mexico in June, 1906, by Dr. Pehr Olssen-Seffer, who planted them at La Zacualpa Botanical Station on the Pacific coast, and who, finding that climate suitable, has since planted 75 hectares (185 acres) and expects largely to increase this area later. He estimates that the land especially adapted to this plant in Mexico is some 100,000 hectares (247,104 acres) on the southwestern coast, lying between Manzanillo on the north and the Guatemalan border on the south. This land is now worth $5 to $10 gold an acre.

There is no gin in this section and the seed at present goes to a small roller gin at Puebla, but Doctor Olssen-Seffer will erect a gin next season. Caravonica cotton has black seed similar to that of Egyptian cotton, and the seed comes out clean and flossless from the gin. Being long staple, only the roller gin is suitable for handling it. There are two varieties of the Caravonica cotton, one known as "wool Caravonica," which is adapted for mixing with wool, and the other, which is more valuable, known as "silk Caravonica," which has a long silky fiber of great strength, that can be mixed without detection with some qualities of silk.

CULTURAL ADVANTAGES.

The advantages claimed for Caravonica are its large production per acre, its large yield of lint, and the fact that it is a perennial.

The Caravonica tree, or rather bush, will grow to 20 feet or more in height, but it usually trimmed every year. It will begin to bear at 7 to 8 months after sowing, and will yield profitably without replanting for 5 to 8 years. In starting a plantation the land has to be very carefully prepared, but after that it needs little cultivation beyond weeding under the trees.

Trees are planted in rows, 7 feet apart each way, which gives about 900 trees to the acre. With 300 to 500 bolls, each tree bears from 4 to 7 pounds seed cotton, or about $1\frac{1}{3}$ to $2\frac{1}{3}$ pounds clean lint. Under favorable circumstances Caravonica cotton in Mexico has yielded 2,356 pounds seed cotton and from this have been obtained 1,200 pounds clean lint per acre. The yield of lint in this cotton is remarkable, varying from 48 to 62 per cent. The cotton is gathered from January to May. Picking in the first years is performed by pulling down the branches, but when the tree is full grown it has to be done from stepladders. The bolls on large trees run about 50 to a pound, and this large size of bolls diminishes the difficulty of picking from such high bushes.

This tree cotton has been found to be very healthy and highly resistant to pests of all kinds. In experimental lots of silk Caravonica that have been shipped to Liverpool a slightly higher price than that paid for sea island has been obtained.

ESTIMATED RETURNS FROM AN ACRE.

As a result of the experiments with increased acreage, now being carried out by Doctor Olssen-Seffer, estimates of the cost of raising Caravonica in Mexico and the profits from 1 acre at present prices in United States currency are given as follows:

Expenses first year.	
Clearing, burning, and stumping	$29.00
Breaking land flush	2.25
Harrowing	.75
Marking and bedding	.85
Planting	.40
Seed	2.75
First working	1.25
Second working	6.00
Cultivation	1.00
Superintendence	.60
Wear and tear of implements	12.00
Picking 2,500 pounds seed cotton	1.10
Carting to ginhouse	3.60
Ginning, packing, and baling with gunnies and ties	3.50
Freight and insurance on 1,200 pounds	1.00
Interest and taxes	1.25
Total	67.30

Returns.	
1,000 pounds ginned cotton, at 22 cents	$220.00
21 gallons crude oil, at 20 cents	4.20
350 pounds cotton-seed meal, at $16.20 per ton	2.45
400 pounds hulls, at $2.40 per ton	.45
Total returns per acre	227.10
Less expenses	67.30
Net profit per acre first year	159.80
Second year.	
Returns	227.10
Cost, including pruning	35.50
Total	191.60

NORTHEASTERN MEXICO.

GROWING CARAVONICA COTTON IN THE RIO GRANDE VALLEY.

Consul Clarence A. Miller, of Matamoros, which is at the mouth of the Rio Grande, opposite Brownsville, Tex., writes as follows in regard to growing the Caravonica cotton there:

My attention was recently called to two of these cotton trees which had grown up in Matamoros. No attention had been given to them, yet they were doing fairly well, and the cotton on them would be picked about June 1. This early maturity is supposed to be the best preventive against the boll weevil. The cotton produced was of a short-staple variety, about one-half or three-fourths of an inch long, but the fiber was strong and the seeds clean and black.

Later I learned of trees on the Texas side of the river, some of them at the Kingville station of the St. Louis, Brownsville and Mexico Railroad, and a considerable number of them on the place of Mr. Ramon Vela, at Chihuahua, near Hidalgo, Tex. These trees all seemed to be doing well. During the winter we had two or three frosts more severe than common, and though the trees seemed to be affected they apparently have fully recovered this spring, those in Matamoros doing as well as ever, while as to the others I am not informed.

Conditions in this valley are the same as those described by Doctor Olssen-Seffer as being favorable for the cultivation of this species of cotton. The climate is dry and hot. The winters are very mild, and the experience of the past winter, which was cooler than ordinary, would seem to show that the tree will not be seriously injured by cold. These facts, together with the early maturity of the product, would indicate that experiments with the cultivation of this tree are warranted.

The success of its cultivation in Mexico has already been demonstrated, and the product is of a much longer staple and better variety than that of the wild cotton trees in this vicinity. I have sent for some of the seeds of the better varieties and will have some experiments made with these this year in this locality. If 1,200, or even 1,000, pounds of cotton can be grown on land in this vicinity by means of these trees, which do not have to be planted every year, this community will be greatly benefited. It would seem worth while to conduct experiments on both sides of the river with this end in view.

COTTON AND WOOLEN INDUSTRIES.

AUSTRIA-HUNGARY.

A SUBSTITUTE FOR WRAPPING TWINE IN GERMANY, FRANCE, AND AUSTRIA.

In reply to a New York inquiry, Consul Joseph I. Brittain, of Prague, supplies the following information concerning the production of flat cotton wrapping tape in Bohemia similar to that made in the United States:

This tape is used in the leading fancy retail stores throughout Germany, France, and Austria, instead of the ordinary wrapping twine or cord. It is used principally by confectioners, stationery dealers, and dealers in perfumery and fancy articles. The tape is put up in spools containing 500 and 1,000 grams each (1,000 grams = 2.2 pounds). The number of spools packed in each case depends on the quantity desired, as no special number is designated. No quantity less than 6,000 meters (19,685 feet) is printed. An advertisement may contain any number of words up to 100, and the number of impressions on each roll of tape depends upon the length of the advertisement. The smallest size, 2 millimeters wide, can not be printed,

but any other width can. The price for printing Nos. 3 and 4—that is to say, the sizes 3 and 4 millimeters wide—is 60 hellers per 1,000 meters (12.18 cents per 3,280 feet), and for printing the other widths 40 hellers per 1,000 meters (8.1 cents per 3,280 feet). A cash discount of 2 per cent is given. The following statement shows the widths, weights, and cost of the tape:

Width.	Weight.	Price.	Width.	Weight.	Price.
Millimeters.	*Pounds.*	*Per 1,000 meters.*	*Millimeters.*	*Pounds.*	*Per 1,000 meters.*
2.....	0.55	$0.57	8.....	2.53	$1.42
3.....	.77	.71	9.....	2.82	1.60
4.....	1.15	.85	10.....	3.13	1.79
5.....	1.37	.97	11.....	3.31	1.97
6.....	1.76	1.09	12.....	3.75	2.16
7.....	2.20	1.23			

[Samples of the tape may be seen at the Bureau of Manufactures.]

BRAZIL.

CONSUMPTION, OUTPUT, AND GENERAL TRADE CONDITIONS.

In connection with his report on the consumption tax levied on the products of the mills in the Federal District, Consul-General George E. Anderson, of Rio de Janeiro, draws attention to the peculiar conditions in the provinces where the cotton mills are shut out from profitable markets by excessive freight rates:

In order to equalize the taxes somewhat, and for revenue purposes generally, the Government imposes a system of consumption taxes upon products manufactured in Brazil, in competition with goods from abroad imported under the high tariff which prevails. Among goods thus taxed are cotton goods and various manufactures of cotton and wool. This tax is collected by affixing revenue stamps to each bundle of cloth as it is manufactured and prepared for the market, and it is therefore a complete record of such manufactures, since all stocks in mills as well as all stocks for sale in stores must have the stamps.

The return of these consumption taxes for the Federal District, which is practically Rio de Janeiro, for the past year shows that, besides a miscellaneous lot of remnants amounting to about 105,000 pounds, and 106,220 pieces of miscellaneous manufacture, such as shawls, capes, coverlets, etc., the mills of the district manufactured 83,914,110 meters (91,843,600 yards), upon which the manufacturers paid a tax of $525,068.

It is noteworthy that while the cotton mills in or near large cities are in the most prosperous condition of all lines of business in Brazil, some of the provincial mills are much depressed because of their inability to dispose of their output owing to excessive freights to markets where they should find sales for their goods, but wherein, owing to such freights, they can not profitably compete with the output of more favorably situated mills.

So great is the figure which want of reasonably low communications cuts in this trade that people living short distances from Bahia,

in the interior or along the coast, have to pay such exorbitant prices for cotton goods that, except clothing for special occasions, they have ceased buying cotton goods at all.

PRINT WORKS.

MANUFACTURE OF CALICOES STILL INADEQUATE TO DEMAND.

Great Britain is selling annually in Brazil about 50,000,000 yards of printed piece goods, although there are a number of printeries in the latter country, according to the following statement by the Revue Generale des Matieres Colorantes:

The 22,000,000 inhabitants of Brazil use considerable quantities of colored goods and the number of print works is increasing. They are, of course, protected by the tariff. The most important works is the Fabrica Votorantim with 35,000 spindles, 1,000 looms, and 6 printing machines. Other works (all of which manufacture as well as print) are the Bangu with 4 printing machines, the America Fabrica also with 4, the Fluminense with 3, the Industrial Brazileiro with 4, the Compagnie Industrial Bello-Horizonte and the Cachueira at Minas each with 1. Machines at present on order for the already existing works will bring the total number up to 30 by the end of this year.

The number of machines is much too small to meet the domestic demand for prints, considerable quantities of which are still imported from England, Italy, Germany, and Austria. The local works confine their attention to the treatment of ordinary calicoes, and though there are six and eight color machines in Brazil the Brazilian printers rarely turn out goods with more than three colors, their main object being to secure for themselves a large production in the simpler styles. The output from each machine is said to be from 6,000 to 8,000 meters per day of 10 hours. Cretonnes find no sale in the Brazilian markets, but shirtings and light dress cloths are in great demand.

The machines, the foremen, the engravers, and the printers all come from Manchester and the neighborhood.

UNITED KINGDOM.

GROWTH AND GET-UP OF THE PRODUCT FOR AMERICAN MARKET.

Consul Frederick I. Bright, of Huddersfield, furnishes the following from the Yorkshire Post, prepared by a well-known wool expert, as illustrating the pains taken by British producers to meet the demands of their foreign customers and showing American sheep farmers how the English prepare their wool for market:

It is a well-known fact that the Americans are by far the best customers to the English and Irish farmers when their wool is bred and got up in a suitable style.

It should be tub-washed with 2 pounds common soda to 1 pound soft soap, renewed each 20 sheep. As much as possible of the liquor should be kept from beginning to end, as the grease from the sheep improves the wash. In case of a large quantity of sheep two tubs should be used, lading off the liquor when the sediment is settled.

After leaving the tub the sheep should be put through a stream of clear water while wet or rinsed well with hose or watering can and run on grass as much as possible for 6 to 8 days. In housing the sheep for the night bed with green rye, nettles, or bean straw. When clipped, care should be taken in winding, by placing the best wool outside—that is, the breast and shoulders. Wind the fleeces 24 to 28 inches long, neatly and securely tieing in the center with twisted wool. Pack in a chamber clear of corn and chaff. Sheet well down.

The following breeds are the best for the American markets: Lincolns crossed by Wensleydales for bright wools. The same ewes crossed by Oxfords, Hampshire, or Shropshire Downs are the best class of halfbreds.

The farmer, by paying attention to the above conditions, will find he will be rewarded by making at least a profit of 100 per cent on his small extra outlay.

VEGETABLE FIBER IN WOOL.

CAUSES THEREOF AND RECOMMENDATIONS FOR ITS ELIMINATION.

Consul Erastus S. Day, of Bradford, in transmitting an article from the Yorkshire Observer on vegetable matter in woolen goods and the recommendations of the trade for their elimination, reports as follows:

The subject of vegetable fiber in wool has for a long time agitated the minds of manufacturers and merchants in this country, because of the persistency with which it has appeared in cloths of woolen and worsted manufacture. This has led to the trade forming a committee to investigate the cause of the trouble, the members of which have satisfied themselves that it arises, to a great extent, from the coverings in which the wool is packed, and from the insufficient care exercised in the process. The elimination of loose fibers of hemp or jute which get into the wool is very difficult, and their presence can not always be detected until after the yarn has been woven and dyed. In order to minimize the trouble, a series of recommendations has been adopted, and a copy thereof, as printed in the Yorkshire Observer, is transmitted herewith. These are to be disseminated among the wool growers and handlers throughout this country and the colonies. [The article from the Yorkshire Observer is on file in the Bureau of Manufactures.]

TRADE EXTENSION.

ADVICE TO TRAVELING SALESMEN.

Referring to the subject of American commercial travelers in Japan, Consul John H. Snodgrass, of Kobé, writes:

Since my arrival at this post, nearly seven months ago, a number of American traveling salesmen have passed through Kobé, but not one has ever appeared at this consulate. Mail has been directed to them through this office, but they chose to send messengers from the hotels for their letters rather than to call themselves. These facts are stated, not in a critical spirit, but as evidence that if manufacturers and exporters have requested their salesmen in Japan to call upon the consuls for advice and to exchange opinions their injunctions have not been carried out. It is to be hoped that the reading room at this consulate may attract this class, as well as other men of influence who journey through Japan.

AMERICAN GOODS IN GERMANY.

CONSULAR SUGGESTIONS FOR ENTERING ON A TRADE CAMPAIGN.

Consul Pendleton King, of Aix-la-Chapelle, advances the following plan for building up a trade in Germany:

The consideration, extending through several years, of a large number of letters of inquiry from manufacturers and merchants in the United States, north and south, east and west, shows that many of these have a greater expectation of selling directly to Germany than is likely to be fulfilled under present conditions. It is therefore desirable to point out certain peculiar features of the trade with Germany, as American exports to Germany can be greatly increased by pursuing proper methods.

The question of space in German shops is a much more important one than in the United States. The dealers can not afford to pay the rent necessary to keep a large and varied supply of goods on hand; they have, as a rule, small space and keep small supplies. It can not be expected that they will order small quantities of goods directly from the United States, involving various conditions that are to them vague and uncertain. For example, there is a feeling of uncertainty as to the total expenses, freight, etc., from the United States to their shops; there is also the difficulty of transacting business through a different language, and they do not want the trouble of the custom-house routine and fees when the goods arrive.

The dimensions and shapes used in the United States are frequently not those used in Germany. For example, the shapes of shoes most common in Germany differ considerably from those in the United States. In northwest Germany (the same probably applying to the

Netherlands, Belgium, and northern France), on account of the many rains, extending over several months of the year, a thicker sole is required than in the United States. No doubt this principle applies to hundreds of other articles of American goods. The German demands in each branch of business should be carefully studied in detail.

CANVASSING AND EXHIBITING.

A competent commercial traveler from the United States, who should speak German well, can learn more in a month about what is to be done in his particular branch in order to get German trade than a consul is likely to observe in years.

Machinery and building material must conform closely to the regulations of the German governments, imperial and city. The imperial laws are very strict in protecting the lives of the workingmen.

When it is practicable each branch of business should have an exhibit in Germany, where the merchants can see what the firm has to offer and where they can have an order promptly filled without writing to the United States. A number of branches could unite and offer a permanent American exhibit. This should be in charge of men who not only speak German well, but who can correspond in that language. Such an exhibit should be in a large city, preferably Berlin and Hamburg, because they are constantly visited by a large number of business men from all parts of Germany. The exhibit should be permanently advertised, especially by photographs and engravings. The exhibit should have the city directory of every city in Germany having 25,000 inhabitants. These contain classified lists of the different professions and trades.

On account of the well organized and cheap postal-package system, many articles of merchandise could be sent all over Germany for inspection at reasonable cost.

LARGER MARKET FOR AMERICAN CORN—CREDITS.

As an example of an opportunity to extend American trade, corn (maize) may be considered. It was with considerable difficulty that the growing of potatoes was introduced into Germany, but now they are one of the most important of all crops and indispensable to the German working people. Many palatable and delicious preparations may be made from maize, and with proper efforts the Germans also can be brought to appreciate them. Some years ago there was an exhibition of corn in Berlin, but there was not sufficient effort to interest the bakers, and it is with the bakers that a beginning must be made.

Some one should be sent here thoroughly capable of making bread and many other things from corn meal, and a commencement should be made with a baker. It should be made known that on a certain day or days of each week these preparations of corn can be seen and tasted at a certain baker's, and if necessary they should at first be given away or sold at a nominal sum. When once the business is on a good footing, in Berlin say, it can be extended to other cities. There is a great future for American corn meal in Germany when once the matter is taken up with intelligence and perseverance. Great results should not be expected at once. The business should be thoroughly organized and pushed in different directions and good results will eventually follow. [The export of corn meal from the United States to Germany amounted to $18,251 in the fiscal year 1904, $9,298 in 1905,

$434,969 in 1906, $1,021,689 in 1907, and $562,650 in 1908. The exports of corn thither have averaged about $8,000,000 annually.—Bureau of Manufactures.]

The time of credit allowed to purchasers must be well considered. In Germany it is common to give three months and frequently six months' credit. There is a system of passing the notes of debtors from one man to another, each man indorsing the note, and being thereby bound for its payment. Sometimes such a note passes through a dozen hands before being paid, all being regulated by law. These notes pass through banks in the same way.

This leads to a suggestion for consideration by American business men that a German-American bank be established in some large German city, doing business after the German methods.

AMERICAN TRADE IN FAR EAST.

PRACTICAL WAY IN WHICH ASIATIC COMMERCE CAN BE SECURED.

Consul-General William H. Michael, of Calcutta, submits the following trade campaign views of business men who have been successful in efforts to secure markets for their wares in Asia:

This consulate has just had a call from a commercial traveler who has spent twenty years selling American goods in China, the Straits Settlements, Burma, and India, most of his time having been spent in China. Asked what he thought of India as a future field for the sale of American goods as compared with China, he said he thought India offered better opportunities for trade on certain lines than China. When asked to point out those lines, he said he thought that the demand for drugs and druggists' supplies and hospital supplies in India was greater at this time than in China, and was capable of a development far beyond possibilities in China. He thought that India offers a better field for the sale of carriages, buggies, carts, and automobiles and motor cars; for harness, saddles, and leather; for hardware used in the manufacture and repair of vehicles and harness; for motor boats and small machinery, especially electrical machinery; for type and type-making machinery; for printers' supplies, such as printer's ink, typesetting machines, presses, etc.; for lines of notions, soaps, and perfumes.

DIFFICULTIES IN THE WAY.

He was asked for some of the difficulties in the way of American-made goods. He said that the main trouble was with the manufacturers themselves. They do not take a personal interest in finding out the styles, widths, and quality of goods required in the Far East and Orient; nor do they look carefully after the filling of orders and the packing of goods. In other words, the American manufacturer has had too much to do at home to pay much attention to the details and requirements of the far eastern and oriental trade. The result has been that goods have been sent to China and India that ought never to have been sent, and packed in a way to discredit the American exporter and to make it impossible in many cases to get a second order. Add to this the uncertainty of delivery, and a rather discouraging situation is presented. He thought that the United States should have a line of steamships, run on a regular schedule, to India

and to points in China, say once in two months. This would insure certainty of delivery and at the same time accustom the eastern peoples to the American flag and keep before them the opportunities of trade with the United States.

He also thought that an exposition warehouse in the large port cities of India would be excellent for the display of American goods suited to the requirements of the country, to be in charge of a capable and trustworthy man, with the necessary assistants to "talk" the goods and to take orders. In connection with this continuous exposition would be an advertising bureau, which could keep before merchants and others the American goods on display and the advantages offered to would-be buyers, etc. This plan is not new. In fact, much said by this experienced commercial salesman has been repeatedly set forth in reports, not only from this consulate but from others. It all goes to emphasize the need of adopting suggestions that proceed from the experience of persons who have occupied this field for years and know what they are talking about.

SEVEN SUGGESTIONS—AN OPENING LOST.

To sum up the suggestions of this man of experience would be—

(1) Honest goods suited in style to Indian trade.
(2) Fair prices that will meet competition.
(3) Personal exploitation of the goods.
(4) Packing that will land the goods in good order.
(5) Prompt delivery.
(6) A willingness on the part of manufacturers to meet the taste and demands of the East in style and quality.
(7) A determination of manufacturers to do exactly the politic and right thing toward their customers.

To enforce this suggestion the commercial man related an instance of "penny wise and pound foolish" business that came under his observation. A salesman sold 25 small locomotive engines on condition that the fire box should be altered to accommodate wood fuel. The manufacturers of the engine were cabled the order, with the provision. The answer that came back was that the alteration required would cost $17.50 for each locomotive, and that they would not accept the loss. The result was that the order was placed in Europe, and the commercial man lost the cost of the cable. Trade in the Far East and Orient can not be secured without some cost, any more than trade at home, and no doubt manufacturers will find this out when it is too late.

LETTER FROM A SUCCESSFUL TRAVELER.

To show that there is great unanimity of judgment among traveling salesmen representing American concerns, I submit the following letter written to me by a wide-awake American who has represented as many as fifteen manufacturers and export houses of the United States at the same time, and has made a success of his business by hard and intelligent work. I asked him to write me a letter on "How to get and hold trade in India." He says:

In securing and holding trade in the Far East and India, the only way Americans will ever get on the same footing with British and German merchants will be for the manufacturers in the United States to establish sample rooms in the principal cities where all goods can be shown under the supervision of a competent person who has lived and done business in both America and the East. Until such rooms are established American manufacturers will continue

to be handicapped. To do business at present one must call on a European merchant, who invariably has a connection in his own country for similar goods; and as he looks forward to going home some day to take charge of the home establishment, it is to his advantage to send orders to the home office and to pass the American agent by. If there were such sample rooms, where the native merchants could see American goods, it would put them on an independent basis.

You have no doubt heard other travelers complain how hard it is for them to secure sample orders for a new line in India. The simple reason for this is that the merchants here have never had any protection to insure them against complaints of poor packing, and in some instances of the way goods are shipped in a knocked-down state without furnishing all data and information as to putting them together on arrival. This is the fault of the American exporter and not the manufacturer, for in ninety-nine cases out of a hundred you will find that the order never goes direct to the manufacturer, but is placed by the exporter with some jobber who buys his goods in carload lots, packed for the home market in the original packing, and in turn the exporter forwards the goods in the same crates and boxes in which he received them. In most instances the export agent has never been in this part of the world and knows nothing regarding trade conditions, climate, or how goods are handled after arrival. Therefore, until this is remedied there will be complaints as to American poor packing, and, I must say, just ones.

HOW TO AVOID COMPLAINTS.

On the other hand, if the exporter would pass his orders on to the manufacturers direct this could all be overcome, for the manufacturers in that case would know for what place the goods were destined and would pack accordingly, thus insuring against complaints as to packing. It is hard enough for a traveling agent to secure an order, yet it is harder still for him to face his buyer after the goods have arrived and find a complaint awaiting him to adjust. This will give some idea why more "repeat" orders are not placed.

Furthermore, some exporters are the direct agents of the manufacturers, and lay themselves open to complaints in the following way: They will ship goods and not furnish full data and information, so that on arrival an expert must be called in to set the goods up. The expert generally is a European, and will there and then point out to the buyer how much better he could supply the goods.

If the manufacturers would establish a shipping office and warehouse, say in New York, where all goods destined for export could be sent and there repacked under proper supervision, it would be one of the greatest things possible to improve trade conditions. All complaints could be referred to this office and there adjusted, thus insuring the buyers against any loss through poor packing and the lack of full information as to the handling of the goods after arrival. Such an office could be made self-sustaining by making a small charge on all goods handled. I feel confident that the merchants in India and the Farther East would not object to such a charge. It would be simply the equivalent to what they now pay as packing charges on all goods they receive from Europe.

AMOY CATALOGUE INDEX.

REFERENCE LISTS OF PUBLICATIONS PREPARED FOR IMPORTERS' USE.

Consul Julean H. Arnold, of Amoy, has, with commendable enterprise, prepared a printed catalogue of American trade catalogues, business directories, and trade journals received at that consulate in China. He has sent a copy of this index catalogue to each importing firm in that district, together with the following letter:

I beg to inform you that all trade catalogues, business directories, and trade journals received at this consulate from American manufacturers and dealers are properly catalogued and placed in the commercial library of this office. I take the liberty to send you inclosed herewith a complete catalogue of all trade publications at present on file in this library, and cordially to invite you to call at any time during the office hours of this consulate to consult any of the publications therein enumerated. I shall be pleased indeed to be of any pos-

sible assistance to you in placing you in touch with American manufacturers and dealers, and respectfully request that when such assistance is desired you favor me by availing yourself of my services.

Mr. Arnold also adds that he has set aside a certain space in the consulate for the library of American trade publications, and has provided tables and writing materials for the use of those who wish to consult the library.

CHANGING CONDITIONS IN BERMUDA.

PRODUCERS TO CATER FOR VISITORS INSTEAD OF FOR NEW YORK.

Consul W. Maxwell Greene, of Hamilton, reports as follows concerning the changing conditions in Bermuda, where the producers find it more profitable to meet the wants of the increasing influx of visitors than to compete with the Gulf and South Atlantic truck farmers in the New York markets:

Hitherto the prosperity of this group of islands has been based entirely upon its ability to offer upon the New York market the earliest supply of new crop vegetables. The two staples have been the potato, of which three crops could be produced here before the eastern seaboard has come into bearing, while in some years a fourth crop has been shipped profitably, and the onion so successfully grown in these islands that the name Bermuda has come to be a designation of quality in that crop. Early green vegetables have occupied in the movement of trade a subsidiary but by no means unimportant place. The lily crop has reached proportions of great magnitude, but of a narrowly restricted season, being confined to Easter.

REASON FOR THE DECLINE IN PROFITS.

The persistent decline in the profits of these Bermuda crops is due to various causes. The thin soil has undergone depletion, and its area is so limited that it can not be permitted to rest between crops. Fungus infection has damaged the potato, a blight has seriously affected the onion, the lily has been allowed to deteriorate in quality, but the more serious factor in the depression is competition. The farmers have felt that they have been sacrificed in the New York produce markets by various interests, but the trouble is deeper than they imagine. It lies in the impossibility of the feeble maintaining a successful competition against the strong. In the 20 square miles of its area, Bermuda has only 2,000 arable acres. Such a speck can not hope to meet on even terms the thousands of square miles of Gulf and South Atlantic coast now prosperous in truck farming, and served by an all-rail transport at express speed.

The semiweekly shipments by steamer from Hamilton are always reported very nearly a week in advance of their appearance in New York, and through this system of crop reporting the Bermuda product can never hope to arrive upon a bull market, but must always find a bear one. The quality of the competing offerings from the South Atlantic truck fields is at least as good as those from Bermuda, in some respects better. In the case of the onion the Texas farmers in the San Antonio region have secured the best seed from Teneriffe, and have avoided the blight which accompanies deterioration in stock. The best-informed and the most progressive citizens of these islands have been forced to acknowledge that Bermuda has seen the

last of the prosperity relying upon its two staples, the potato and the onion.

CATERING TO THE DEMANDS OF VISITORS.

A far richer prosperity has been growing in Bermuda almost spontaneously and with little attention to its cultivation. This new prosperity, which in the season just closing taxed the resources of this community to care for, and which must increase still more with succeeding seasons, is based upon the fact that a sea voyage of but two days' duration carries the invalid and the comfort seeker away from the snow, the icicle, and the blizzard of northern winters to a land of spring and flowers. It is not a tropical paradise with its underlying penalty of enervation. It is a land of warm sun and of invigorating breeze.

Last season the tourist traffic approximated 2,500 visitors from the United States; this season there have been more than 9,000 visitors, and when the season was at its height there were more tourists lodged in Bermuda at one time than were cared for in the four months of the season of the preceding year. The hotels were taxed beyond their capacity and at the arrival of each incoming steamer it was found difficult to find lodging for its passengers. These new demands found the farmers of the islands wholly unprepared to meet the emergency. They had planted their staples for the potato and onion market, and were in no position to supply the call for fresh vegetables and fruit.

This season's experience has pointed the way to the future of a Bermuda once again prosperous, where the farmers who devote their fields to trucking are vending their produce daily instead of semiweekly, are supplying a home market where the returns are immediate, and are freed from the weight of the crop mortgage under which alone they were able to produce the former staples. Work has already been begun to enlarge the principal hotels to enable them to deal with the future tourist traffic, and new hotels will be erected during the coming summer. Both Bermudan and American capital is involved in these new works, for the investment is considered eminently sound. This may well be, since the most conservative estimate leads to the conclusion that the 9,000 visitors this year have brought to Bermuda at least $1,000,000 of American money. The transportation facilities so far have been good, and are susceptible of increase to meet the demand.

GERMAN-CANADIAN TRADE.

STEAMSHIP LINE BETWEEN HAMBURG AND CANADIAN PORTS.

Consul Gebhard Willrich, of St. John, New Brunswick, furnishes the following information concerning present movements and efforts for the enlargement of German-Canadian commercial relations:

That Germany is making a strong effort to increase its trade with Canada is clearly shown by the establishment of a new trans-Atlantic steamship line between Hamburg, Rotterdam, and the Canadian ports of St. John, New Brunswick, during the winter months and Montreal during the open season. It seems that three strong companies, the Hamburg-American Packet Company, the North German Lloyd, and the Holland-American Line, have combined to place a sufficient number of steamships on this new route, and that at least

three boats will run regularly between these ports, making weekly trips. The first of these vessels arrived at St. John a short time ago, with a small cargo consisting of about 60 tons of miscellaneous freight, and 400 steerage passengers mostly destined for western Canada. The steamer was in port about a week, and was able to secure a fairly good sized return cargo, in competition with the English boats, consisting of about 125,000 bushels of grain, 200 tons of agricultural implements, and 200 tons of general freight.

The appearance at this port for the first time of the German flag caused much comment, and the boat's departure right in the wake of the great Empress of Britain was suggestive of the perseverance of the German in seeking trade despite all discouragements in the past. It marks the beginning of better trade relations between Canada and Germany.

NEW GERMAN-CANADIAN TREATY OF COMMERCE.

That both countries begin to understand the need of a closer and more friendly commercial intercourse can be gathered from a number of recent occurrences. Acording to a special dispatch, cabled from Berlin and published at Montreal on April 7, negotiations for a commercial treaty between Canada and Germany have entered a favorable stage, Canada declaring itself willing to grant reductions on imports from Germany of high-class textile products, drugs, books, soaps, artificial flowers, feathers, wines, spirits, ready-made clothing, and porcelain, while Germany will grant Canada reduced rates on agricultural implements, typewriters, cattle, and agricultural products.

Anticipating the consummation of this treaty, it appears that an organization entitled the "German-Canadian Economic Association" has been formed, with the avowed object of improving the trade relations between Germany and the Dominion, and that this association intends to send a strong delegation to Canada during the coming summer to study its trade conditions and to utilize the information gained in furtherance of a greater and more profitable trade between these countries.

STATUS OF GERMAN-CANADIAN TRADE.

While Great Britain in the past has enjoyed the advantage of bringing her goods to Canada under the preferential tariff, all other countries, except Germany, paying either the intermediate or general tariff rates, Germany alone was compelled to pay a surtax over and above the duties under the general tariff schedule, such surtax being one-third of the duty specified in each case.

It may thus be readily understood why German trade with Canada has not been able to grow since the imposition of such surtax.

A summary statement of German-Canadian trade may be of interest in this connection. The latest official statistics of the Dominion give the following figures showing the imports into Canada from Germany and the exports from Canada to Germany:

	1904.	1905.	1906.	1908.
Imports	$8,028,544	$6,642,139	$7,040,091	$8,250,745
Exports	1,819,223	1,146,654	1,872,557	2,374,607
Total	9,847,767	7,788,793	8,912,648	10,625,352

From these figures it will be seen that, despite the surtax, Germany has not only held her own, but has recovered the ground lost during 1905 and 1906, and during 1908 exceeded the highest prior volume of her trade with Canada. The same holds true of Canada, so that the total trade of both countries shows an increase, despite the unsatisfactory commercial relations hitherto existing.

As to the trade between Canada and France, favored in many respects by advantageous treaties, and the sentiment of the two countries bound together by so many ties of blood and friendly intercourse, it is rather remarkable to note that it is not much greater than that of the Dominion with Germany, as the total trade of Canada with France in 1908 shows a value of $12,000,000 or $1,374,748 less than Canada's trade with Germany.

The most notable fact supplied by these few figures is that Canadian exports to Germany during 1908 exceeded those to France by over $500,000, and that Canada sold but little more to France in 1908 than in 1904.

That Germany is bound to become a stronger competitor of the other great commercial nations for a larger share of the Canadian trade, the moment the present restrictions upon her export trade with Canada shall have been removed, does not seem to admit of a doubt.

PRINCE EDWARD ISLAND TRADE.

AN AGRICULTURAL SALES AND EXCHANGE ASSOCIATION FORMED.

Consul Franklin D. Hale, of Charlottetown, sends the following information regarding an agricultural exchange enterprise for Prince Edward Island, Canada:

As a further evidence of a determined purpose on the part of progressive farmers and business men to enlarge the opportunities of the agriculturists of this Province and more fully develop that great industry, a company is being formed under the name of The Prince Edward Island Stock Yard Company, the object being to hold auction sales of live stock, produce, and seeds once or twice each month during the year; these sales to take place in different parts of the Province, covering during the year all sections.

At each sale the company purpose to have live stock, produce, seeds, etc., of their own to dispose of, and farmers in the vicinity having a surplus of stock or produce can have it sold by auction, thus realizing the best prices that can be obtained, absolute supply and demand fixing the price on each article.

Farmers who desire to be purchasers will have an opportunity of going to the stock yards, of attending the sales, of inspecting stock, produce, seeds, etc., and will be able to procure at fair and reasonable prices just what they want. These opportunities for sale and exchange of the products of the farms it is believed will awaken a new and greater interest among the farmers and add to their prosperity.

That which benefits the large farming community of Prince Edward Island helps, to a great extent, the local manufacturing industries, as well as industries outside this Province which find a market here for their products. The more active the circulation of money by reason of the exchange of commodities in one field the broader the vision and the greater the needs in another field.

TIME MARKETS IN FRANCE.

In calling attention to a previous report describing certain efforts which were being made to decide on the final steps to be taken regarding time markets in France, especially relating to wool, Consul Joseph E. Haven, of Roubaix, furnishes the following information:

Last year a second commission of inquiry was appointed by the Minister of Commerce. This commission has recently finished its work, and, among other things, states that "it is impossible to suppress the time market without violating an economic law; the time market is necessary."

In face of the general agitation and discussion of the subject, the Chambers of Commerce of Roubaix and Turcoing signed new rulings in regard to the time market for wool tops. They insisted on having a controller, to be appointed each year by the two chambers, after the acceptance of the Caisse de Liquidation. The duty of this controller will be to note all irregularities in business inscribed at the Caisse; also abuses of any nature, particularly those in offers and demands at the Corbeille—the official markets where the prices are made. Quotations will in future be made on nine months instead of twelve.

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